Planning Module Component 3M Section O
Public Notification

Tindy Run Sanitary Sewer Extension
Upper Providence Township
Montgomery County

Notice is hereby given that Upper Providence Township; Montgomery County will consider a Planning Module revision to the Township Sewage Facilities Plan for the Tindy Run Sanitary Sewer Extension project. The project will consist of extending public sewers to serve the existing properties located along Marshwood Drive, Old State Road, Brookdale Road, Rosemont Lane, Whitford Drive and Fruit Farm Road that are currently served by individual on-lot septic systems. This project will provide the opportunity for an additional one hundred seventeen (117) existing properties located along the proposed sanitary sewer alignment to connect to the public sewer system.

The average cost per property will be a total of $13,936 which includes the public improvement construction cost (benefit assessment) of $10,000, Township tapping fee of $1,266 and the regional sewer authority fee of $2,670. The property owner will also be liable for the costs of a plumbing contractor they must hire to make the connection from their home to the sewer lateral provided at the edge of the public right-of-way.

The annual user fee for residential sewer service in Upper Providence Township is $300.00 per year per equivalent dwelling unit. The Township bills the annual user fee on a quarterly basis at $75.00 per quarter.

A public comment period will extend for thirty (30) days after the date of publication of this notice. The planning module can be reviewed at the offices of Upper Providence Township, 1286 Black Rock Road, Phoenixville, Pennsylvania during normal business hours by appointment or at any time on the Township website: www.uprov-montco.org. Any and all comments should be directed to:

Upper Providence Township
1286 Black Rock Road
Phoenixville, Pennsylvania 19460
Attn: Mr. Timothy J. Tieperman, Manager

Upper Providence Township

FOR PUBLIC COMMENT

SEWAGE FACILITIES PLANNING MODULE FOR MINOR ACT 537 UPDATE REVISION – COMPONENT 3M

for the

TINDEY RUN
SANITARY SEWER EXTENSION PROJECT

G&A FILE NO. 18-11043T

PREPARED FOR:

UPPER PROVIDENCE TOWNSHIP
1286 BLACK ROCK ROAD
P.O. BOX 406
OAKS, PA 19456

APRIL 2020

Prepared By:

Gilmore & Associates, Inc.
Engineers • Land Surveyors • Planners • GIS Consultants
184 W. Main Street, Suite 300
Trappe, PA 19426
(610) 489-4949

Planning Module Component 3m

Table of Contents

SECTION 1

SEWAGE FACILITIES PLANNING MODULE
FOR
MINOR ACT 537 UPDATE REVISION
COMPONENT 3M

3800-FM-BPNPSM0353m 1/2013
Form

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

Code No.

SEWAGE FACILITIES PLANNING MODULE FOR MINOR ACT 537 UPDATE REVISION

Component 3m. Municipal or Authority Sponsored Minor Sewage Collection Project

(Return completed module package to appropriate municipality)

DEP USE ONLY				
DEP CODE #	CLIENT ID #	SITE ID #	APS ID #	AUTH ID #

This document provides a simplified planning format for municipalities and municipal authorities proposing the construction of a sewer extension primarily serving existing development. Typically, this format would be used for projects involving the extension of sewer service to no more than 100 equivalent dwelling units (EDUs) and where the majority of the project serves existing development. For projects where more than 50 percent of the proposed customers will result from new land development, a Component 3 Sewage Facilities Planning Module would typically be used. For larger projects or if the project would involve the construction or modification of a wastewater treatment facility, then a general Act 537 Update Revision, meeting all of the requirements of Title 25 Pennsylvania Code, Chapter 71 § 71.21, is appropriate.

DEP staff will make a final determination as to the appropriate type of planning for a given project based on the review of a plan of study. Eligibility for a grant to offset the cost of planning will be determined by DEP staff based upon review of a *Task/Activity Report* (3800-FM-BPNPSM0005). The project sponsor submits both documents. **DO NOT** use this form without coordinating with your local DEP staff. Refer to the instructions.

This planning document, along with any other documents specified in the cover letter, must be completed and submitted to the municipality with jurisdiction over the project site for review and approval. All required documentation must be attached for the Sewage Facilities Planning Module to be complete. Refer to the instructions for help in completing this component.

A. PROJECT INFORMATION (See Section A of instructions)

1. Project Name

   Tindey Run Sanitary Sewer Extension

2. Brief Project Description

   Extend public sanitary sewer services to the existing homes located in the Tindey Run area.

B. CLIENT (MUNICIPALITY) INFORMATION (See Section B of instructions)

Municipality Name	County	City	Boro	Twp
Upper Providence	Montgomery	☐	☐	☒

Municipality Contact - Last Name	First Name	MI	Suffix	Title
Tieperman	Timothy	J		Township Manager

Additional Individual - Last Name	First Name	MI	Suffix	Title

Municipality Mailing Address Line 1	Mailing Address Line 2
1286 Black Rock Road	P.O. Box 406

Address Last Line - City	State	ZIP+4
Oaks, PA	19456-0406	

Phone + Ext.	FAX (optional)	Email (optional)
610-933-9179	610-983-0355	ttieperman@uprov-montco.org

C. SITE INFORMATION (See Section C of instructions)

Site Name				
Tindey Run Sanitary Sewer Extension				
Site Location Line 1		Site Location Line 2		
Marshwood Drive / Old State Road / Brookdale Road		Rosemont Lane / Fruit Farm Road		
Site Location Last Line - City	State	ZIP+4	Latitude	Longitude
Royersford	PA	19468		

Detailed Written Directions to Site

From Route 422 take the Collegeville/Phoenixville/Route 29 exit of Route 422 to Route 29, proceed north on Route 29 for approximately 1.1 miles to Hopwood Road, turn left onto Hopwood Road and proceed west for approximately 1.4 miles. Continue onto Bechtel Road 0.7 miles and turn left onto Old State Road.

Description of Site

Existing paved roadway

Site Contact - Last Name	First Name	MI	Suffix	Phone	Ext.
Tieperman	Timothy	J		610-933-9179	

Site Contact Title	Site Contact Firm (if none, leave blank)
Township Manager	Upper Providence Township
FAX	Email
610-983-0355	ttieperman@uprov-montco-org
Mailing Address Line 1	Mailing Address Line 2
1286 Black Rock Road	P.O. Box 406

Mailing Address Last Line – City	State	ZIP+4
Oaks	PA	19456-0406

D. PROJECT CONSULTANT INFORMATION (See Section D of instructions)

Last Name	First Name	MI	Suffix
Dingman	William	K	P.E.

Title	Consulting Firm Name
Township Engineer	Gilmore & Associates, Inc.

Mailing Address Line 1	Mailing Address Line 2
184 W. Main Street	Suite 300

Address Last Line - City	State	ZIP+4	Country
Trappe	PA	19426-2049	United States

Email	Phone	Ext.	FAX
wdingman@gilmore-assoc.com	610-489-4949		610-489-8447

E. AVAILABILITY OF DRINKING WATER SUPPLY (See Section E of instructions)

The project will be provided with drinking water from the following source: (Check appropriate box)

☒ Individual wells or cisterns.

☐ A proposed public water supply.

☒ An existing public water supply.

If existing public water supply is to be used, provide the name of the water company and attach documentation from the water company stating that it will serve the project.

Name of water company: PAWA currently serves a portion of the area..

F. PROJECT NARRATIVE (See Section F of instructions)

☒ A narrative has been prepared as described in Section E of the instructions and is attached.

The applicant may choose to include additional information beyond that required by Section E of the instructions.

☒ G. SEWAGE DISPOSAL NEEDS IDENTIFICATION (See Section G of instructions)

Conduct sanitary and water supply surveys per DEP's publication entitled *Sewage Disposal Needs Identification*. This is highly recommended for all projects. It is required if PENNVEST funding is to be sought for the project, or if required by DEP as indicated by the checked box opposite this item.

H. EXISTING WASTEWATER FACILITIES (See Section H of instructions)

1. **COLLECTION SYSTEM**

Provide requested information concerning the existing treatment facility.

a. Name of existing collection system Iroquois Lane Collection Sewers

Clean Streams Law Permit Number 4608409

b. Name of interceptor Schuylkill River Interceptor

Clean Streams Law Permit Number 4608409

2. **WASTEWATER TREATMENT FACILITY**

Provide requested information concerning the existing treatment facility.

Name of existing facility Oaks Wastewater Treatment Plant

NPDES Permit Number for existing facility 26964

I. PROPOSED WASTEWATER FACILITIES (See Section I of instructions)

1. Provide an estimate of the immediate and five year projected flow from the proposed sewer extension. Address the capacity for this flow in the existing conveyance and treatment facilities in terms of the most recent wasteload management annual report for these facilities.

2. **PLOT PLAN**

The following information is to be submitted on a plot plan or map of the proposed project that clearly reflects the relationship between the proposed facilities and the identified features.

a. Existing and proposed buildings.

b. Lot lines and lot sizes.

c. Adjacent lots.

d. Existing and proposed sewerage facilities.

e. Show tap-in or sewer extension to the point of connection to existing collection system.

f. Existing and proposed water supplies and surface water (wells, springs, ponds, streams, etc.)

g. Existing and proposed rights-of-way.

h. Existing and proposed streets, roadways, access roads, etc.

i. Any designated recreational or open space area

j. Wetlands - from National Wetland Inventory Mapping and USGS Hydric Soils Mapping.

k. Flood plains or Floodprone area soils, floodways, watercourses, water bodies (from Federal Flood Insurance Mapping)

l. Prime Agricultural Land.

m. Any other facilities (pipelines, power lines, etc.)

n. Orientation to north.

I. PROPOSED WASTEWATER FACILITIES (continued)

3. WETLAND PROTECTION

	YES	NO	
a.	☒	☐	Are there wetlands in the project area? If yes, indicate these areas on the plot plan as shown in the mapping or through on-site delineation.
b.	☒	☐	Are there any construction activities (encroachments, or obstructions) proposed in, along, or through the wetlands? If yes, Identify any proposed encroachments on wetlands and identify whether a General Permit or a full encroachment permit will be required. If a full permit is required, address time and cost impacts on the project. Note that wetland encroachments should be avoided where feasible. Also note that a feasible alternative **MUST BE SELECTED** to an identified encroachment on an exceptional value wetland as defined in Chapter 105. Identify any project impacts on HQ or EV streams and address impacts of the permitting requirements of said encroachments on the project.

4. PRIMARY AGRICULTURAL LAND PROTECTION

a.	☐	☒	Will your project involve the disturbance of any prime agricultural lands? If "yes" indicate any alternatives to this disturbance that were considered and the reasons they were not deemed feasible. Identify any primary or secondary impacts of the project on the Commonwealth's prime agricultural lands. Evaluate alternatives to avoid or mitigate undesirable impacts. The selected sewage facilities plan must be consistent with local measures in place to protect prime agricultural lands.

5. STORMWATER MANAGEMENT IMPACTS:

a.	☐	☒	Will the project impact an area covered by a DEP approved County Stormwater Management Plan? If yes show that the proposed facilities are consistent with that plan.

6. PENNSYLVANIA NATURAL DIVERSITY INDEX (PNDI) CONSISTENCY:

Check one:

☒ The "Pennsylvania Natural Diversity Inventory (PNDI) Project Environmental Review Receipt" resulting from my search of the PNDI database and all supporting documentation from jurisdictional agencies (when necessary) is/are attached.

☐ A completed "Pennsylvania Natural Diversity Inventory (PNDI) Project Planning & Environmental Review Form," (PNDI Form) available at www.naturalheritage.state.pa.us , and all required supporting documentation is attached. I request DEP staff to complete the required PNDI search for my project. I realize that my planning module will be considered incomplete upon submission to the Department and that the DEP review will not begin, and that processing of my planning module will be delayed, until a "PNDI Project Environmental Review Receipt" and all supporting documentation from jurisdiction agencies (when necessary) is/are received by DEP.

Applicant or Consultant Initials MMM

7. COMPREHENSIVE PLAN CONSISTENCY:

☒ A narrative and mapping to show that the proposed project is consistent with any comprehensive plan developed under the Pennsylvania Municipalities Planning Code (Act 247) is attached. Document that the proposed project is consistent with land use and all other requirements stated in the comprehensive plan.

8. COOPERATION WITH PA. HISTORICAL AND MUSEUM COMMISSION (PHMC):

☒ A copy of DEP's "Cultural Resource Notice" and map which were sent to the Commission and a copy of the Commission's response are attached. Note that the Commission may require archeological surveys if federal funds, including PENNVEST, will be used in the project. If PENNVEST funds are to be used, DEP cannot recommend the project to PENNVEST for consideration until any required surveys have been done and the project has been "cleared" by the Commission.

9. **ADDITIONAL REQUIREMENTS FOR PENNVEST PROJECTS:**

☐ A copy of the additional information is attached. If PENNVEST funding is to be sought for the project, address these additional items in terms of any project impacts and measures to avoid or mitigate same.

- Cost Effectiveness
- Air quality
- Floodplains
- Wild and scenic rivers
- Coastal zone management
- Socio-economic impacts
- Water supplies
- Other environmentally sensitive areas

J. ALTERNATIVE SEWAGE FACILITIES ANALYSIS (See Section J of instructions)

☒ An alternative sewage facilities analysis has been prepared as described in Section J of the instructions and is attached.

The applicant may choose to include additional information beyond that required by Section J of the instructions.

K. CHAPTER 94 CONSISTENCY DETERMINATION (See Section K of instructions)

☒ Projects that propose the use of existing municipal collection, conveyance or wastewater treatment facilities, or the construction of collection and conveyance facilities to be served by existing municipal wastewater treatment facilities must be consistent with the requirements of Chapter 94 of DEP's rules and regulations (relating to Municipal Wasteload Management). If more than one municipality or authority will be affected by the project, please obtain the information required in this section for each. Additional sheets may be attached for this purpose.

1. Project Flows 36270 gpd

2. Total Sewage Flows to Facilities

   a. Enter average and peak sewage flows for each proposed or existing facility as designed or permitted.

   b. Enter the present average and peak sewage flows for the critical sections of existing facilities.

   c. Enter the average and peak sewage flows projected for 5 years through the critical sections of existing facilities which includes existing, proposed, or future projects.

   To complete the table, refer to Section K of instructions.

	a. Design and/or Permitted Capacity (gpd)		b. Present Flows (gpd)		c. Projected Flows in 5 years (gpd)	
	Average	**Peak**	**Average**	**Peak**	**Average**	**Peak**
Collection	137250	549000	38750	155000	75020	327800
Conveyance	1940000	4850000	430000	1075000	469000	1175000
Treatment	14250000	26000000	8600000	10600000	9100000	11300000

3. Collection and Conveyance Facilities

The questions below are to be answered by the sewer authority, municipality, or agency responsible for completing the Chapter 94 report for the collection and conveyance facilities. These questions should be answered in coordination with the latest Chapter 94 annual report and the above table.

This project proposes sewer extensions or tap-ins. Will these actions create a hydraulic overload within five years on any existing collection or conveyance facilities that are part of the system? ☐ Yes ☒ No

   a. If yes, this sewage facilities planning module will not be accepted for review by the municipality, delegated local agency and/or DEP until all inconsistencies with Chapter 94 are resolved or unless there is an approved plan and schedule granting an allocation for this project. A letter granting allocations to this project under the plan and schedule must be attached to the module package.

b. If no, the sewer authority, municipality, or agency responsible for completing the Chapter 94 report for the collection and conveyance facilities must sign below to indicate that the collection and conveyance facilities have adequate capacity and are able to provide service to the proposed development in accordance with Chapter 94 requirements and that this proposal will not affect this status.

c. Collection System

Name of Agency, Authority, Municipality Upper Providence Township

Name of Responsible Agent Mr. Timothy J. Tieperman, Township Manager

Agent Signature _____

Date _____

d. Conveyance System

Name of Agency, Authority, Municipality Upper Providence Township

Name of Responsible Agent Mr. Timothy J. Tieperman, Township Manager

Agent Signature _____

Date _____

K. CHAPTER 94 CONSISTENCY DETERMINATION (continued)

4. Treatment Facility

The questions below are to be answered by the facility permittee in coordination with the information in the table and the latest Chapter 94 report.

This project proposes the use of an existing wastewater treatment plant for the disposal of sewage. Will this action create a hydraulic or organic overload within 5 years at that facility? ☐ Yes ☒ No

a. If yes, this planning module for sewage facilities will not be reviewed by the municipality, delegated local agency and/or DEP until this inconsistency with Chapter 94 is resolved or unless there is an approved plan and schedule granting an allocation for this project. A letter granting allocations to this project under the plan and schedule must be attached to the planning module.

b. If no, the treatment facility permittee must sign below to indicate that this facility has adequate treatment capacity and is able to provide wastewater treatment services for the proposed development in accordance with Chapter 94 requirements and that this proposal will not impact this status

c. Name of Agency, Authority, Municipality LPVRSA Oaks Wastewater Treatment Plant

Name of Responsible Agent Mr. Michael McGann, Manager

Agent Signature _____

Date 4/28/2020

L. INSTITUTIONAL EVALUATION (See Section L of instructions)

☒ An institutional evaluation is attached. Identify the entity which will design, obtain necessary permits, construct, own and operate the proposed facilities. If a low pressure vacuum or effluent sewer are proposed, discuss purchase, installation, operation and maintenance responsibilities for the individual pumping, valves, tanks, etc.

b. If no, the sewer authority, municipality, or agency responsible for completing the Chapter 94 report for the collection and conveyance facilities must sign below to indicate that the collection and conveyance facilities have adequate capacity and are able to provide service to the proposed development in accordance with Chapter 94 requirements and that this proposal will not affect this status.

c. Collection System

Name of Agency, Authority, Municipality Upper Providence Township

Name of Responsible Agent Mr. Timothy J. Tieperman, Township Manager

Agent Signature

Date MAY 20, 2020

d. Conveyance System

Name of Agency, Authority, Municipality Upper Providence Township

Name of Responsible Agent Mr. Timothy J. Tieperman, Township Manager

Agent Signature

Date MAY 20, 2020

K. CHAPTER 94 CONSISTENCY DETERMINATION (continued)

4. Treatment Facility

The questions below are to be answered by the facility permittee in coordination with the information in the table and the latest Chapter 94 report.

This project proposes the use of an existing wastewater treatment plant for the disposal of sewage. Will this action create a hydraulic or organic overload within 5 years at that facility? ☐ Yes ☒ No

a. If yes, this planning module for sewage facilities will not be reviewed by the municipality, delegated local agency and/or DEP until this inconsistency with Chapter 94 is resolved or unless there is an approved plan and schedule granting an allocation for this project. A letter granting allocations to this project under the plan and schedule must be attached to the planning module.

b. If no, the treatment facility permittee must sign below to indicate that this facility has adequate treatment capacity and is able to provide wastewater treatment services for the proposed development in accordance with Chapter 94 requirements and that this proposal will not impact this status

c. Name of Agency, Authority, Municipality LPVRSA Oaks Wastewater Treatment Plant

Name of Responsible Agent Mr. Michael McGann, Manager

Agent Signature

Date

L. INSTITUTIONAL EVALUATION (See Section L of instructions)

☒ An institutional evaluation is attached. Identify the entity which will design, obtain necessary permits, construct, own and operate the proposed facilities. If a low pressure vacuum or effluent sewer are proposed, discuss purchase, installation, operation and maintenance responsibilities for the individual pumping, valves, tanks, etc.

M. PROJECT COST AND FUNDING ANALYSIS (See Section M of instructions)

☒ A detailed cost estimate and present worth analysis for the project is attached. Provide a financing plan for the project, identifying the funding source(s) and identifying estimated tap fees and user rates. For projects proposing the use of PENNVEST funds, see Section I. 9. **ADDITIONAL REQUIREMENTS FOR PENNVEST PROJECTS**. Complete the following table:

Cost and Funding Information (Estimated)	
COST	
Construction cost	$ 6500000
Administrative, legal, engineering cost	$ 500000
Total project cost	$ 7000000
Annual O/M cost	$ 0
FUNDING	
Tap-in fees ($ per EDU X no. EDUs)	$ 0
Proceeds from primary funding source	$ 7000000
Proceeds from other funding sources	$ 0
USER COSTS	
Initial user base	117 EDUs
Monthly debt service per EDU	$ 0
Monthly O/M cost per EDU	$ 25
Total estimated monthly user cost per EDU	$ 25

N. PROJECT IMPLEMENTATION SCHEDULE (See Section N of instructions)

☒ A project implementation schedule showing milestone dates for submission of DEP permit applications, initiation and completion of construction and any other milestones significant to this particular project is attached to this component

O. PUBLIC NOTIFICATION REQUIREMENT (See Section O of instructions)

☒ Attached is a copy of the public notice. All comments received as a result of the notice are attached.

☐ Municipal response to these comments is attached.

☐ No comments were received. A copy of the public notice is attached.

☐ P. ADDITIONAL CHAPTER 71 PLANNING ELEMENTS (See Section P of instructions)

a. Additional planning elements are required by DEP.

- _____
- _____
- _____
- _____
- _____

Q. PLANNING AGENCY REVIEW (See Section Q of instructions)

☒ Local Planning Commission comments or Component 4a are attached.

☒ County, Area, Or Region Planning Commission comments or Component 4b are attached.

☒ County or Joint County Health Department comments (if appropriate) or Component 4c are attached.

R. RESOLUTION OF ADOPTION (See Section R of instructions)

☒ An **original**, **signed**, and **sealed** Resolution of Adoption is attached.

SECTION 2

PROJECT NARRATIVE

Planning Module Component 3M Section F
Project Narrative

Tindy Run Sanitary Sewer Extension
Upper Providence Township
Montgomery County

Upper Providence Township, Montgomery County is completing a Pennsylvania Department of Environmental Protection Sewage Facilities Planning Module for Minor Act 537 Update Revision for the Tindy Run Sanitary Sewer Extension project. This project will include extending public sanitary sewer service to the existing homes located along Marshwood Drive, Old State Road, Brookdale Road, Rosemont Lane, Whitford Drive and Fruit Farm Road.

The Tindy Run sanitary sewer extension will be located along the Tindy run and within the paved roadways of Marshwood Drive, Old State Road, Brookdale Road, Rosemont Lane, Whitford Drive and Fruit Farm Road. The collection sewer flow will be conveyed via 8" trunk sewer, located along the Tindy Run, to a proposed 120 gallon per minute duplex submersible pump station. The proposed flow will then be conveyed via 4" force main to existing sanitary sewer manhole located in Iroquois Drive. The Tindy Run Sanitary Sewer Extension project will consist of the installation of approximately 14,500 linear feet of eight (8) inch diameter gravity sanitary sewer main, including collector and trunk sewer, along with manholes and associated appurtenances and the installation of six (6) inch diameter sanitary sewer laterals to the road right-of-way line to serve each of the existing properties along the proposed sanitary sewer alignment. The extension of the sanitary sewers in Marshwood Drive, Old State Road, Brookdale Road, Rosemont Lane, Whitford Drive and Fruit Farm Road will provide access to the public sanitary sewer system to one hundred seventeen (117) additional existing properties. The proposed Tindy Run Sanitary Sewer Extension project will encompass an area of approximately 160 acres with a disturbed area of approximately seven acres. General Permit GP-5 (Utility Line Stream Crossing) will be required for stream and wetland crossings. Wetland crossings have been avoided where feasible. No exceptional value wetlands were identified within the project area.

The Tindy Run Sanitary Sewer Extension project will extend the public sanitary sewer to serve up to an additional one hundred seventeen existing single-family residences located along the proposed route of the sanitary sewer extension. These one hundred seventeen existing residences are currently served by public water or on-lot wells and on-lot septic systems. Based on public inquiries regarding the availability of connection to the Township public sanitary sewer system it is anticipated the properties will connect to the sewer system in the next 5 years, therefore planning approval is being requested for one hundred seventeen EDU or 36,270 gallons per day based on 310 gallons per day/EDU.

The Township proposes to install the sewer mains and service laterals in the road prior to the Township completing road improvements.

The 2010 Census by the U.S. Census Bureau indicates the average household size in Upper Providence Township to be 2.77 persons. Based on this figure, the projected population served by this project would be 324 persons.

The Tindy Run Sanitary Sewer Extension project will connect into the existing Iroquois Drive Collection Sewers at an existing manhole. This connection will be completed by core drilling the existing manhole and inserting the sanitary sewer pipe with a link seal to provide a water tight connection. The proposed sanitary sewer project will not create any hydraulic overloads within five years on any existing collection or conveyance facilities that are part of the system. The existing collection sewer system is the Iroquois Drive Collection Sewer which has a peak design capacity of 0.55 MGD. The five-year peak projected flow for this collection sewer including the addition of the one hundred seventeen (117) homes is 0.26 MGD. The existing conveyance sewer system is the Schuylkill River Interceptor which discharges to the Lower Perkiomen Valley Regional Sewer Authority Oaks Wastewater Treatment Plant, both of which have adequate capacity.

Upon completion of the construction of the Tindy Run Sanitary Sewer Extension project, the existing residents will be able to connect to the public sanitary sewer system. Upper Providence Township will not require mandatory connections to new sanitary sewers by the existing residents provided their on-lot system is deemed to be functioning properly and not posing any danger to the health, safety and welfare of the public.

SECTION 3

SEWAGE DISPOSAL NEEDS IDENTIFICATION

Planning Module Component 3M Section G
Sewage Disposal Needs Identification

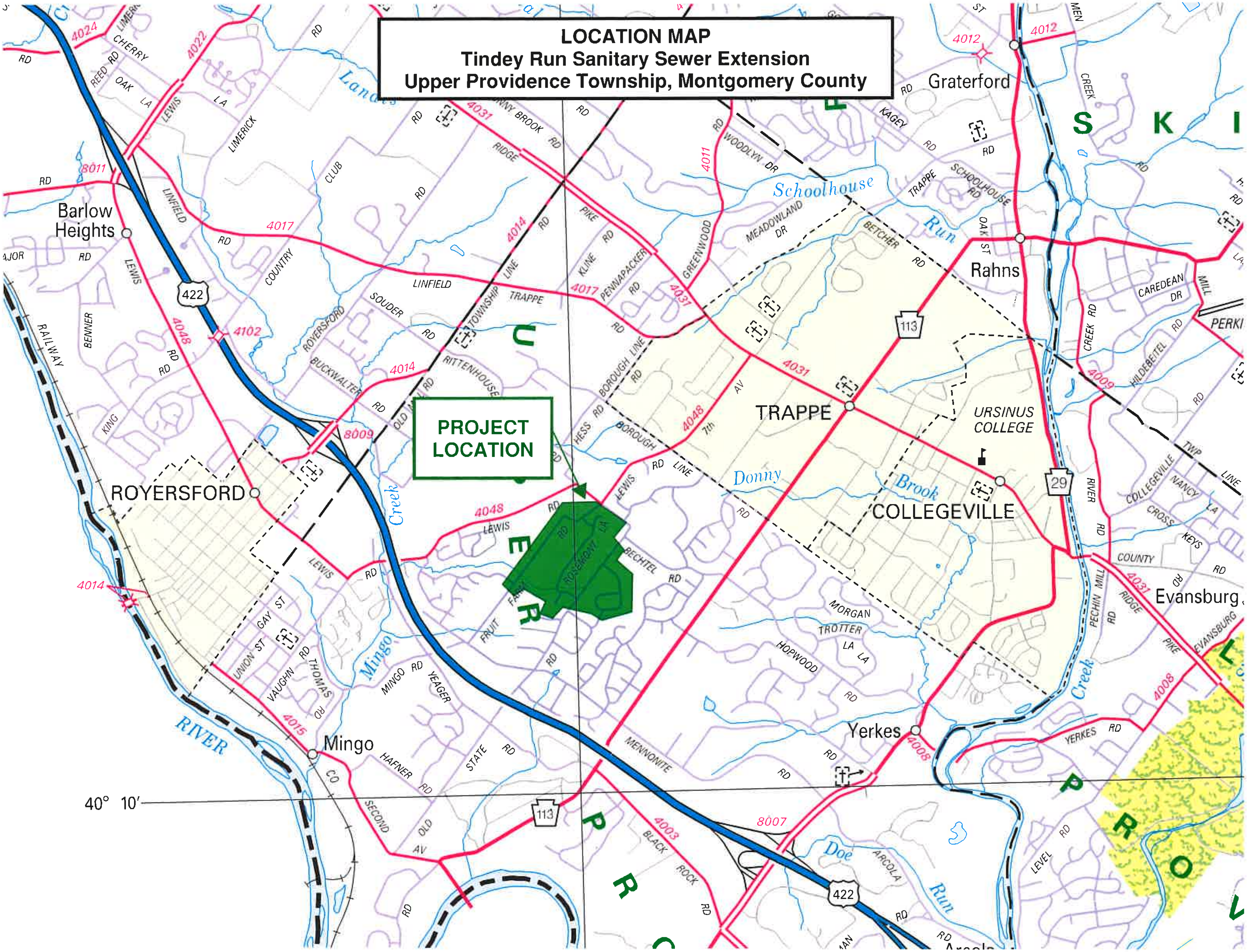
Tindey Run Sanitary Sewer Extension
Upper Providence Township
Montgomery County

Upper Providence Township, Montgomery County recently has received inquiries regarding the possibility of connection to the Township public sanitary sewer system from some of the residents living in the Tindey Run development, not currently served by public sewers. There are one hundred seventeen properties in the Tindey Run development that are currently served by individual on-lot septic systems. Property owners have sent emails to Township inquiring about the feasibility of connection to the Township public sanitary sewer system.

A copy of the resident email inquiring about being connected to the Township public sanitary sewer system is attached.

SECTION 4

LOCATION MAP



LOCATION MAP
Tindey Run Sanitary Sewer Extension
Upper Providence Township, Montgomery County
PROJECT LOCATION
ROYERSFORD
TRAPPE
COLLEGEVILLE
URSINUS COLLEGE
Barlow Heights
Graterford
Rahns
Mingo
Yerkes
Evansburg
40° 10′

SECTION 5

PLOT PLAN

Tindey Run Sanitary Sewer Extension

EXHIBITS

SFPM EXHIBIT - OVERALL SIE PLAN

TINDY RUN SANITARY SEWER PROJECT

UPPER PROVIDENCE TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 04/06/2020

SHEET NO. 1 OF XX

OWNER: UPPER PROVIDENCE TOWNSHIP, 1286 BLACK ROCK ROAD, PHOENIXVILLE, PA 19460, 610 933 9179

JOB NO.: 2018110437

TAX MAP PARCEL NO.:

MUNICIPAL FILE NO.:

TOTAL AREA | TOTAL LOTS | DATE | SCALE | DESIGNED BY | DRAWN BY | CHECKED BY

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL AND RELIED UPON BY USER. THIS PLAN IS PREPARED SPECIFICALLY FOR THE CLIENT AND PROJECT DESIGNATED HEREON. MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.

SECTION 6

PENNSYLVANIA NATURAL DIVERSITY INDEX CONSISTENCY (PNDI)

1. PROJECT INFORMATION

Project Name: **Tindey Run Sanitary Sewer Extension 2**
Date of Review: **9/18/2019 11:30:53 AM**
Project Category: **Waste Transfer, Treatment, and Disposal, Liquid waste/Effluent, Sewage module/Act 537 plan**
Project Area: **14.95 acres**
County(s): **Montgomery**
Township/Municipality(s): **UPPER PROVIDENCE**
ZIP Code: **19426; 19468**
Quadrangle Name(s): **COLLEGEVILLE; PHOENIXVILLE**
Watersheds HUC 8: **Schuylkill**
Watersheds HUC 12: **Mingo Creek-Schuylkill River**
Decimal Degrees: **40.182753, -75.497832**
Degrees Minutes Seconds: **40° 10' 57.9093" N, 75° 29' 52.1953" W**

2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	No Known Impact	No Further Review Required
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate no known impacts to threatened and endangered species and/or special concern species and resources within the project area. Therefore, based on the information you provided, no further coordination is required with the jurisdictional agencies. This response does not reflect potential agency concerns regarding impacts to other ecological resources, such as wetlands.

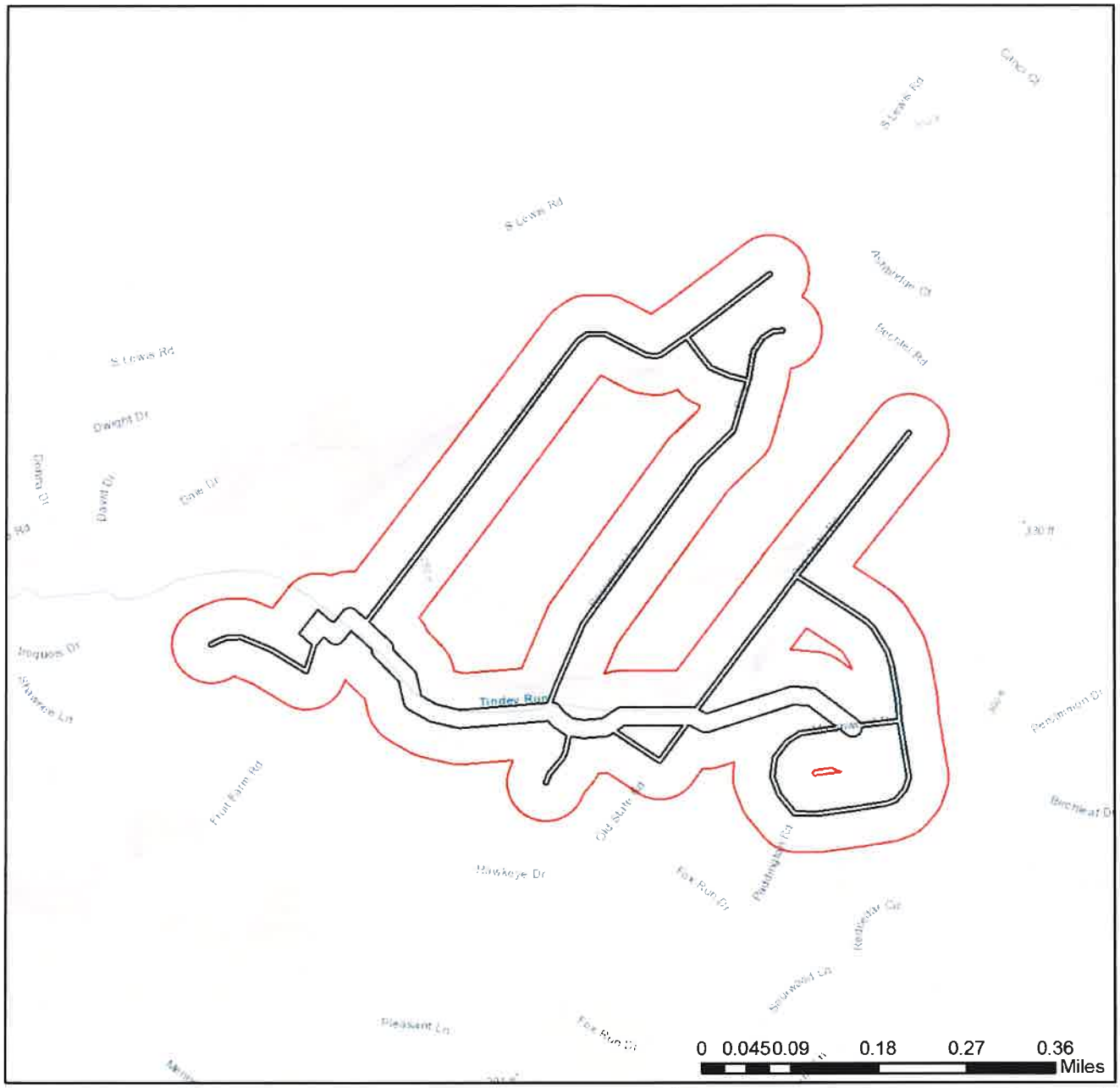
Note that regardless of PNDI search results, projects requiring a Chapter 105 DEP individual permit or GP 5, 6, 7, 8, 9 or 11 must comply with the bog turtle habitat screening requirements of the PASPGP.

Tindey Run Sanitary Sewer Extension 2

Project Boundary

Buffered Project Boundary

Tindey Run Sanitary Sewer Extension 2



Project Boundary

Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS,

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jursidictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission
RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Department of Conservation and Natural Resources
RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission
RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

U.S. Fish and Wildlife Service
RESPONSE:

No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq. is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at https://conservationexplorer.dcnr.pa.gov/content/resources.

5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources
Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service
Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
NO Faxes Please

PA Fish and Boat Commission
Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission
Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Mark M. Mottucci
Company/Business Name: Gilmore & Associates, Inc.
Address: 184 West Main Street, Suite 300
City, State, Zip: Trappe, PA 19426
Phone: (610) 489-4949 Fax: (610) 489-8447
Email: mmottucci@gilmore-assoc.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

Mark M. Mottucci
applicant/project proponent signature

9-18-19
date

SECTION 7

PHMC CULTURAL RESOURCE NOTICE AND COMMENTS

Pennsylvania Historical & Museum Commission

PROJECT REVIEW FORM

Request to Initiate SHPO Consultation on State and Federal Undertakings

SHPO USE ONLY	Reviewers: ___/___
DATE RECEIVED: 9/23/19	DATE DUE: 10/7/19
ER NUMBER: 2019-2316-091-A	HRSF: ___

REV: 06/2018

SECTION A: PROJECT NAME & LOCATION

Is this a new submittal? (•) YES ( ) NO OR ( ) This is additional information for ER Number:

Project Name	Tindey Run Sewer Extension Project	County	Montgomery	Municipality	Upper Providence Township
Project Address	Fruit Farm Road, Rosemont Lane	City/State/ Zip	Oaks	PA	19456

SECTION B: CONTACT INFORMATION & MAILING ADDRESS

Name	Mark M. Mattucci, Project Manager	Phone	(610) 489-4949
Company	Gilmore & Associates, Inc.	Fax	(610) 489-8447
Street/PO Box	184 West Main Street, Suite 300	Email	mmattucci@gilmore-assoc.com
City/State/Zip	Trappe PA 19426		

SECTION C: PROJECT DESCRIPTION

This project is located on: (check all that apply) ☐ Federal property ☐ State property ☑ Municipal property ☑ Private property

List all federal and state agencies and programs providing funds, permits, licenses.

Agency Type	Agency/Program/Permit Name	Project/Permit/Tracking Number (if applicable)
State	PADEP	Spring Mill Estates Sanitary Sewer Planning Module

Proposed Work – Attach project description, scope of work, site plans, and/or drawings

Project includes (check all that apply): ☑ Construction ☐ Demolition ☐ Rehabilitation ☐ Disposition

Total acres of project area: 15.00 Total acres of earth disturbance: 2.15

Are there any buildings or structures within the project area? (•) Yes ( ) No Approximate age of buildings: 30 Years

Does this project involve properties listed in or eligible for the National Register of Historic Places, or designated as historic by a local government?	Yes	No	Unsure	Name of historic property or historic districts
	( )	(•)	( )	

Please print and mail completed form and all attachments to:

PHMC
State Historic Preservation Office
400 North St.
Commonwealth Keystone Building, 2nd Floor
Harrisburg, PA 17120-0093

Attachments – Please include the following information with this form

- ☑ **Map** – 7.5' USGS quad showing project boundary and Area of Potential Effect
- ☑ **Description/Scope** – Describe the project, including any ground disturbance and previous land use
- ☑ **Site Plans/Drawings** – Indicate past and present land use, location and dates of buildings, and proposed improvements
- ☑ **Photographs** – Attach prints or digital photographs showing the project site, including images of all buildings and structures keyed to a site plan

SHPO DETERMINATION (SHPO USE ONLY)

- ___ There are **NO HISTORIC PROPERTIES** in the Area of Potential Effect
- X The project will have **NO EFFECT** on historic properties
- ___ The project will have **NO ADVERSE EFFECTS** on historic properties:
- ___ The project will have **NO ADVERSE EFFECTS WITH CONDITIONS** (see attached)
- ___ **SHPO REQUESTS ADDITIONAL INFORMATION** (see attached)

SHPO REVIEWER: B. Gredler **DATE:** 9/30/19

GILMORE & AS
ENGINEERING &

■ Ensure items 1, 2, and 3 are completed.
■ Attach this card to the back of the mailpiece, or on the front if space permits.

A. Signature: (☐ Addressee or ☐ Agent)
X

B. Received by (Printed Name) SEP 23 2019 C. Date of Delivery SEP 23 2019

1. Article Addressed to:
PHMCState Historic Preservation Office
Commonwealth Keystone Bldg, 2nd Floor
400 North St
Harrisburg PA 17120-0093

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☑ Certified Mail®

9490 9118 9956 1517 1051 47

2. Article Number (Transfer from service label)
9402 7118 9956 1517 1051 93

PS Form 3811 Facsimile, July 2015 (SDC 3930) Domestic Return Receipt

CERTIFIED MAIL
Return Receipt Requested

September 20, 2019

File No.: 18-11043T

PHMC
State Historic Preservation Off
400 North Street
Commonwealth Keystone Buil
Harrisburg, PA 17120-0093

Reference: Tindey Run Sewer Extension project
PADEP Sewage Facilities Planning Module – Component 3M
Upper Providence Township, Montgomery County, Pennsylvania

Ladies & Gentlemen:

Upper Providence Township, Montgomery County is completing the PADEP Sewage Facilities Planning Module Component 3M for the Tindey Run Sanitary Sewer Extension project. The Spring Mill Estates Sanitary Sewer Extension project will consist of the installation of approximately 15,600 linear feet of eight (8) inch diameter PVC pipe gravity sanitary sewer main along with manholes and associated appurtenances and the installation of six (6) inch diameter PVC sanitary sewer laterals to the road right-of-way line to serve each of the existing properties along the proposed sanitary sewer alignment. Approximately 12,200 feet of the proposed sanitary sewer pipe will be constructed entirely within the existing paved cartways of Marshwood Drive, Old State Road, Brookdale Road, Rosemont Lane, and Fruit Farm Road. The remaining approximately 3,400 feet of the proposed sanitary sewer will be constructed along the Tindey Run to a proposed pump station located north of Fruit Farm Road. The pump station flow will be conveyed by force main to an existing manhole located in Iroquois Drive. The total area of the project is approximately 15 acres with a disturbed area of approximately 2.15 acres.

Enclosed for your review please find the PADEP Cultural Resource Notice complete with Project Review Form, project narrative and location map and twelve (12) photos taken on September 19, 2019. Should you have any questions or require additional information please contact our office.

Very truly yours,

Mark M. Mattucci
Project Manager
Gilmore & Associates, Inc.

Enclosure

pc: Mr. Bryan Bortnichak, UPT Assistant Manager (w/encl)

Planning Module Component 3M Section F
Project Narrative

Tindy Run Sanitary Sewer Extension
Upper Providence Township
Montgomery County

Upper Providence Township, Montgomery County is completing a Pennsylvania Department of Environmental Protection Sewage Facilities Planning Module for Minor Act 537 Update Revision for the Tindy Run Sanitary Sewer Extension project. This project will include extending public sanitary sewer service to the existing homes located along Marshwood Drive, Old State Road, Brookdale Road, Rosemont Lane, Whitford Drive and Fruit Farm Road.

The Tindy Run sanitary sewer extension will be located along the Tindy run and within the paved roadways of Marshwood Drive, Old State Road, Brookdale Road, Rosemont Lane, Whitford Drive and Fruit Farm Road. The collection sewer flow will be conveyed via 8" trunk sewer, located along the Tindy Run, to a proposed 120 gallon per minute duplex submersible pump station. The proposed flow will then be conveyed via 4" force main to existing sanitary sewer manhole located in Iroquois Drive. The Tindy Run Sanitary Sewer Extension project will consist of the installation of approximately 14,500 linear feet of eight (8) inch diameter gravity sanitary sewer main, including collector and trunk sewer, along with manholes and associated appurtenances and the installation of six (6) inch diameter sanitary sewer laterals to the road right-of-way line to serve each of the existing properties along the proposed sanitary sewer alignment. The extension of the sanitary sewers in Marshwood Drive, Old State Road, Brookdale Road, Rosemont Lane, Whitford Drive and Fruit Farm Road will provide access to the public sanitary sewer system to one hundred seventeen (117) additional existing properties. The proposed Tindy Run Sanitary Sewer Extension project will encompass an area of approximately 160 acres with a disturbed area of approximately seven acres. General Permit GP-5 (Utility Line Stream Crossing) will be required for stream and wetland crossings. Wetland crossings have been avoided where feasible. No exceptional value wetlands were identified within the project area.

The Tindy Run Sanitary Sewer Extension project will extend the public sanitary sewer to serve up to an additional one hundred seventeen existing single-family residences located along the proposed route of the sanitary sewer extension. These one hundred seventeen existing residences are currently served by public water or on-lot wells and on-lot septic systems. Based on public inquiries regarding the availability of connection to the Township public sanitary sewer system it is anticipated the properties will connect to the sewer system in the next 5 years, therefore planning approval is being requested for one hundred seventeen EDU or 36,270 gallons per day based on 310 gallons per day/EDU.

The Township proposes to install the sewer mains and service laterals in the road prior to the Township completing road improvements.

The 2010 Census by the U.S. Census Bureau indicates the average household size in Upper Providence Township to be 2.77 persons. Based on this figure, the projected population served by this project would be 324 persons.

The Tindy Run Sanitary Sewer Extension project will connect into the existing Iroquois Drive Collection Sewers at an existing manhole. This connection will be completed by core drilling the existing manhole and inserting the sanitary sewer pipe with a link seal to provide a water tight connection. The proposed sanitary sewer project will not create any hydraulic overloads within five years on any existing collection or conveyance facilities that are part of the system. The existing collection sewer system is the Iroquois Drive Collection Sewer which has a peak design capacity of 0.55 MGD. The five-year peak projected flow for this collection sewer including the addition of the one hundred seventeen (117) homes is 0.26 MGD. The existing conveyance sewer system is the Schuylkill River Interceptor which discharges to the Lower Perkiomen Valley Regional Sewer Authority Oaks Wastewater Treatment Plant, both of which have adequate capacity.

Upon completion of the construction of the Tindy Run Sanitary Sewer Extension project, the existing residents will be able to connect to the public sanitary sewer system. Upper Providence Township will not require mandatory connections to new sanitary sewers by the existing residents provided their on-lot system is deemed to be functioning properly and not posing any danger to the health, safety and welfare of the public.

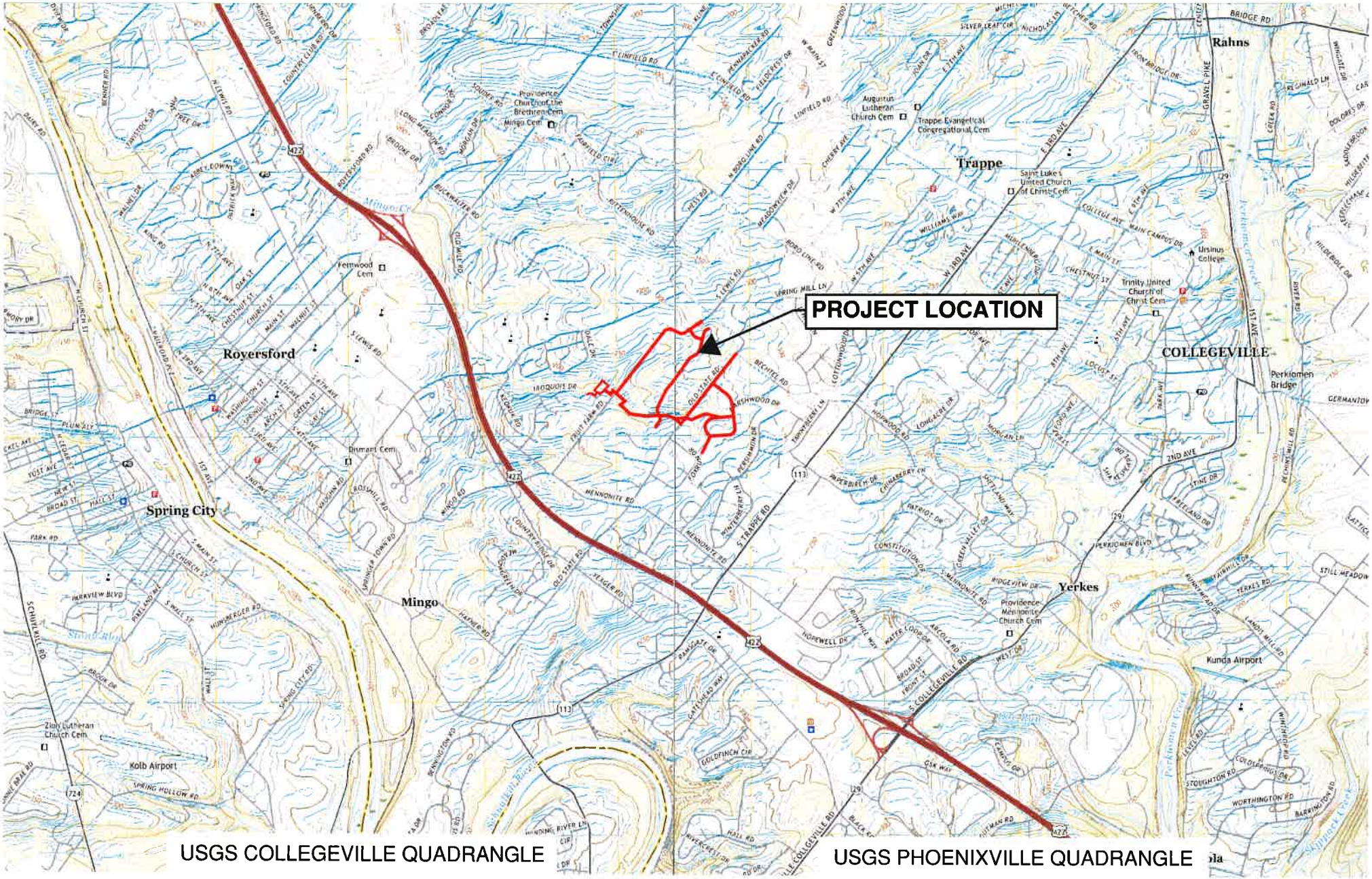

PROJECT LOCATION
Royersford
Spring City
Mingo
Trappe
COLLEGEVILLE
Rahns
Yerkes
Perkiomen Bridge
Fernwood Cem
Dismant Cem
Providence Church of the Brethren Cem
Mingo Cem
Augustus Lutheran Church Cem
Trappe Evangelical Congregational Cem
Saint Luke's United Church of Christ Cem
Trinity United Church of Christ Cem
Ursinus College
Providence Mennonite Church Cem
Ziory Lutheran Church Cem
Kolb Airport
Kunda Airport
USGS COLLEGEVILLE QUADRANGLE
USGS PHOENIXVILLE QUADRANGLE

PHOTO #1
LOCATED ON FRUIT FARM ROAD
LOOKING UPSTREAM ON TINDEY RUN

PHOTO #2
LOCATED ON FRUIT FARM ROAD
LOOKING DOWNSTREAM ON TINDEY RUN

PHOTO #3
LOCATED AT TINDEY RUN
LOOKING NORTH ON FRUIT FARM ROAD

PHOTO #4
LOCATED AT TINDEY RUN
LOOKING SOUTH ON FRUIT FARM ROAD

PHOTO #5
LOCATED AT WHITFORD DRIVE
LOOKING NORTH ON ROSEMONT LANE

PHOTO #6
LOCATED AT WHITFORD DRIVE
LOOKING SOUTH ON ROSEMONT LANE

PHOTO #7
LOCATED ON ROSEMONT DRIVE
LOOKING UPSTREAM ON TINDEY RUN

PHOTO #8
LOCATED AT TINDEY RUN
LOOKING NORTH ON ROSEMONT LANE

PHOTO #9
LOCATED AT TINDEY RUN
LOOKING SOUTH ON ROSEMONT LANE

PHOTO #10
LOCATED ON ROSEMONT LANE
LOOKING SOUTH ON BROOKDALE DRIVE

PHOTO #11
LOCATED AT ROSEMONT LANE
LOOKING SOUTH ON OLD STATE ROAD

PHOTO #12
LOCATED AT ROSEMONT LANE
LOOKING NORTH ON OLD STATE ROAD

SECTION 8

ALTERNATIVE SEWAGE FACILITIES ANALYSIS

Planning Module Component 3M Section J
Alternative Sewage Facilities Analysis

Tindey Run Sanitary Sewer Extension
Upper Providence Township
Montgomery County

Proposed Method Of Disposal

The Tindey Run sanitary sewer extension will be located within the paved roadways of Marshwood Drive, Old State Road, Brookdale Road, Rosemont Lane, Whitford Drive, and Fruit Farm Road. The collection sewer flow will be conveyed via 8" trunk sewer, located along the Tindey Run, to a proposed pump station. The proposed flow will then be conveyed via 4" force main to existing sanitary sewer manhole #S-181I39 located in Iroquois Drive.

The sewage flows generated from the Tindey Run sanitary sewer extension project will be conveyed to the Lower Perkiomen Valley Regional Sewer Authority's (LPVRSA) Oaks Wastewater Treatment Plant via the Iroquois Lane Collection Sewers to the Mingo Run Pump Station and the Schuylkill River Interceptor. The Iroquois Lane Collection Sewers are owned and maintained by Upper Providence Township. The Perkiomen Creek Interceptor is owned and maintained by the Lower Perkiomen Valley Regional Sewer Authority's (LPVRSA). The Tindey Run Sanitary Sewer Extension project is expected to generate 36,270 gallons per day of sewage flow. Upper Providence Township and the Lower Perkiomen Valley Regional Sewer Authority have indicated there is adequate capacity in their respective collection, conveyance and treatment facilities to handle these flows without causing any hydraulic overloads within the next five years.

Upon completion of the construction of the Tindey Run Sanitary Sewer Extension, the system will be owned, operated and maintained by Upper Providence Township. This method of sanitary sewer service is intended to be the long term, ultimate method of disposal.

Adjacent Land Use

North of the Project Area
To the north of the project is a PECO right-of-way.

South of the Project Area
To the south of the project are single family residential units located along both sides of Hawkeye Drive and Old State Road. The residences along Hawkeye Drive are served by public sewer and public water. The residences are served by public sewers and public water.

East of the Project Area
The properties to the immediate east of the project area are single family residential units located along Bechtel Road. These single family residential units are served by public sewer.

West of the Project Area
To the west of the project are single family residential units located along both sides of Fruit Farm Road. These residences are served by public sewer.

Alternate Sewage Disposal

Private On-Lot Disposal
Soil testing on site has not been conducted to determine the feasibility of replacement on site septic systems however soils mapping has been completed for the project area. A review of the soils mapping shows the project area is predominantly comprised of Penn silt loam, Readington silt loam, Rowland silt loam and Urban land-Udorthents shale and sandstone complex. These soils are very limited for use with on-lot systems due to seasonal high water tables, shallow bedrock and slow percolation. The soils mapping shows that the soils of the project area are very limited for Septic System At-Grade Beds, Septic System In-Ground Beds and Septic System sand Mound Beds or Trench. Therefore, replacement on lot septic systems for sanitary sewer disposal in the short term or the long term would not be a reasonable option. A detailed Soil Resource Report for the project area is attached.

The one hundred seventeen (117) existing homes to be served by this project are comprised of lots approximately 1.00 acres in size. Although the Montgomery County Health Department records do not indicate problems with the on-lot septic systems in the area, the limiting soil types and the lot size leave little area for replacement on-lot systems should the existing on-lot system fail, therefore, public sanitary sewers are the best long-term alternative for sanitary sewage disposal in the proposed project area.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Montgomery County, Pennsylvania

August 21, 2019

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Montgomery County, Pennsylvania
Survey Area Data: Version 13, Sep 19, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 25, 2014—Aug 11, 2014

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AbB	Abbottstown silt loam, 3 to 8 percent slopes	9.7	5.5%
Bo	Bowmansville-Knauers silt loams	13.3	7.6%
BwA	Buckingham silt loam, 0 to 3 percent slopes	5.1	2.9%
KlC	Klinesville channery silt loam, 8 to 15 percent slopes	0.4	0.2%
PeB	Penn silt loam, 3 to 8 percent slopes	11.5	6.6%
PeC	Penn silt loam, 8 to 15 percent slopes	16.8	9.6%
PkD	Penn-Klinesville channery silt loams, 15 to 25 percent slopes	4.7	2.7%
ReA	Readington silt loam, 0 to 3 percent slopes	3.2	1.8%
ReB	Readington silt loam, 3 to 8 percent slopes	24.5	14.0%
ReC	Readington silt loam, 8 to 15 percent slopes	6.5	3.7%
RhB	Reaville silt loam, 3 to 8 percent slopes	1.3	0.8%
RhC	Reaville silt loam, 8 to 15 percent slopes	4.4	2.5%
RwB	Rowland silt loam, 3 to 8 percent slopes	0.0	0.0%
UusB	Urban land-Udorthents, shale and sandstone complex, 0 to 8 percent slopes	34.4	19.6%
UusD	Urban land-Udorthents, shale and sandstone complex, 8 to 25 percent slopes	39.2	22.4%
Totals for Area of Interest		**175.2**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic

class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Montgomery County, Pennsylvania

AbB—Abbottstown silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2v7gd
Elevation: 130 to 660 feet
Mean annual precipitation: 40 to 48 inches
Mean annual air temperature: 52 to 57 degrees F
Frost-free period: 190 to 210 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Abbottstown and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Abbottstown

Setting

Landform: Hillslopes
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Parent material: Acid reddish brown residuum weathered from shale and siltstone

Typical profile

Ap - 0 to 10 inches: silt loam
Bt - 10 to 20 inches: silt loam
Bx - 20 to 39 inches: channery silt loam
BCg - 39 to 48 inches: channery silt loam
R - 48 to 58 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 18 to 22 inches to fragipan; 40 to 60 inches to lithic bedrock
Natural drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Klinesville

Percent of map unit: 5 percent

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Hydric soil rating: No

Croton

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Penn

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Bo—Bowmansville-Knauers silt loams

Map Unit Setting

National map unit symbol: 2lh87
Elevation: 150 to 900 feet
Mean annual precipitation: 36 to 50 inches
Mean annual air temperature: 45 to 57 degrees F
Frost-free period: 150 to 210 days
Farmland classification: Not prime farmland

Map Unit Composition

Bowmansville and similar soils: 40 percent
Knauers and similar soils: 40 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bowmansville

Setting

Landform: Flood plains
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Head slope
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Parent material: Recent alluvial deposits weathered from sandstone and siltstone

Typical profile

Ap - 0 to 7 inches: silt loam
Bg - 7 to 26 inches: silty clay loam
Cg - 26 to 43 inches: fine sandy loam
2Cg - 43 to 65 inches: stratified gravel to sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 72 to 99 inches to lithic bedrock
Natural drainage class: Somewhat poorly drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 0 to 18 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Available water storage in profile: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: C/D
Hydric soil rating: No

Description of Knauers

Setting

Landform: Flood plains
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Recent alluvium derived from sandstone and shale

Typical profile

A - 0 to 8 inches: silt loam
Bg1 - 8 to 17 inches: silt loam
Bg2 - 17 to 24 inches: gravelly sandy loam
2Cg - 24 to 60 inches: stratified sand to gravelly sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 72 to 99 inches to lithic bedrock
Natural drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 0 inches
Frequency of flooding: Occasional
Frequency of ponding: Frequent
Available water storage in profile: Low (about 5.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: C/D
Hydric soil rating: Yes

Minor Components

Rowland

Percent of map unit: 20 percent
Landform: Flood plains
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

BwA—Buckingham silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2dvtx
Elevation: 150 to 950 feet
Mean annual precipitation: 38 to 48 inches
Mean annual air temperature: 46 to 57 degrees F
Frost-free period: 150 to 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Buckingham and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Buckingham

Setting

Landform: Drainageways
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Head slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Parent material: Fine-loamy colluvium and old alluvium derived from shale and siltstone

Typical profile

A - 0 to 16 inches: silt loam
Bt - 16 to 40 inches: silt loam
Btx1 - 40 to 48 inches: silty clay loam
Btx2 - 48 to 62 inches: gravelly silt loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 20 to 40 inches to fragipan; 80 to 99 inches to lithic bedrock
Natural drainage class: Somewhat poorly drained
Runoff class: Very high

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.60 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: B/D
Hydric soil rating: No

Minor Components

Penn

Percent of map unit: 13 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Croton

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Knauers

Percent of map unit: 2 percent
Landform: Flood plains
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Tread
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: Yes

KIC—Klinesville channery silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2dz98
Elevation: 250 to 1,300 feet
Mean annual precipitation: 36 to 55 inches
Mean annual air temperature: 46 to 57 degrees F
Frost-free period: 130 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Klinesville and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Klinesville

Setting

Landform: Hillslopes
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Interfluve, nose slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Red residuum weathered from shale and siltstone

Typical profile

Ap - 0 to 6 inches: channery silt loam
Bw - 6 to 10 inches: very channery silt loam
C - 10 to 15 inches: very channery silt loam
R - 15 to 23 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Natural drainage class: Somewhat excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Penn

Percent of map unit: 15 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Reaville

Percent of map unit: 5 percent
Landform: Hillslopes, hills
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Interfluve, base slope
Down-slope shape: Linear, concave

Across-slope shape: Linear, concave
Hydric soil rating: No

PeB—Penn silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2v7gc
Elevation: 70 to 950 feet
Mean annual precipitation: 38 to 53 inches
Mean annual air temperature: 43 to 57 degrees F
Frost-free period: 170 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Penn and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Penn

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Triassic residuum weathered from shale and siltstone and/or triassic residuum weathered from mudstone and/or triassic residuum weathered from sandstone

Typical profile

Ap - 0 to 10 inches: silt loam
Bt1 - 10 to 15 inches: silt loam
Bt2 - 15 to 19 inches: silt loam
Bt3 - 19 to 22 inches: channery loam
Cr - 22 to 28 inches: bedrock
R - 28 to 38 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 20 to 27 inches to paralithic bedrock; 27 to 33 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.28 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Reaville

Percent of map unit: 5 percent
Landform: Hills, depressions
Landform position (two-dimensional): Shoulder, backslope, footslope
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Klinesville

Percent of map unit: 5 percent
Landform: Interfluves, hills
Landform position (two-dimensional): Backslope, shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Convex
Hydric soil rating: No

Readington

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, head slope, side slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: No

PeC—Penn silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2v7gy
Elevation: 70 to 950 feet
Mean annual precipitation: 38 to 53 inches
Mean annual air temperature: 43 to 57 degrees F
Frost-free period: 170 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Penn and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Penn

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Triassic residuum weathered from shale and siltstone and/or sandstone and/or mudstone

Typical profile

Ap - 0 to 10 inches: silt loam
Bt1 - 10 to 15 inches: silt loam
Bt2 - 15 to 19 inches: silt loam
Bt3 - 19 to 22 inches: channery loam
C - 22 to 28 inches: very channery loam
R - 28 to 80 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.28 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Reaville

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Klinesville

Percent of map unit: 5 percent
Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Readington

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

PkD—Penn-Klinesville channery silt loams, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2dy73
Elevation: 200 to 1,300 feet
Mean annual precipitation: 36 to 55 inches
Mean annual air temperature: 46 to 57 degrees F
Frost-free period: 130 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Penn and similar soils: 47 percent
Klinesville and similar soils: 40 percent
Minor components: 13 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Penn

Setting

Landform: Hillslopes
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Parent material: Residuum weathered from shale and siltstone

Typical profile

Ap - 0 to 8 inches: channery silt loam
Bt - 8 to 21 inches: channery silt loam
C - 21 to 34 inches: very channery silt loam
R - 34 to 44 inches: bedrock

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Available water storage in profile: Low (about 4.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Hydric soil rating: No

Description of Klinesville

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Red residuum weathered from shale and siltstone

Typical profile

Ap - 0 to 8 inches: channery silt loam
Bw - 8 to 14 inches: very channery silt loam
C - 14 to 18 inches: extremely channery silt loam
R - 18 to 28 inches: bedrock

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Natural drainage class: Somewhat excessively drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 1.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Croton

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Lansdale

Percent of map unit: 4 percent
Landform: Hillsides
Landform position (two-dimensional): Summit, shoulder, backslope

Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Reaville

Percent of map unit: 4 percent
Landform: Hillslopes
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope, interfluve
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

ReA—Readington silt loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: l56l
Elevation: 200 to 1,000 feet
Mean annual precipitation: 36 to 55 inches
Mean annual air temperature: 46 to 57 degrees F
Frost-free period: 160 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Readington and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Readington

Setting

Landform: Hillslopes
Landform position (two-dimensional): Footslope, backslope
Landform position (three-dimensional): Base slope, head slope, side slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Parent material: Residuum weathered from shale and siltstone

Typical profile

Ap - 0 to 8 inches: silt loam
Bt - 8 to 29 inches: silt loam
Btx - 29 to 58 inches: channery silt loam
R - 58 to 68 inches: bedrock

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 20 to 36 inches to fragipan; 40 to 70 inches to lithic bedrock
Natural drainage class: Moderately well drained

Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Penn

Percent of map unit: 8 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Reaville

Percent of map unit: 4 percent
Landform: Hillslopes
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope, interfluve
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

Croton

Percent of map unit: 3 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: Yes

ReB—Readington silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w05x
Elevation: 70 to 950 feet
Mean annual precipitation: 38 to 55 inches
Mean annual air temperature: 43 to 57 degrees F
Frost-free period: 170 to 240 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Readington and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Readington

Setting

Landform: Hills
Landform position (two-dimensional): Footslope, backslope
Landform position (three-dimensional): Base slope, head slope, side slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Parent material: Triassic colluvium derived from shale and siltstone and/or triassic residuum weathered from shale and siltstone

Typical profile

Ap - 0 to 10 inches: silt loam
Bt1 - 10 to 17 inches: silt loam
Bt2 - 17 to 34 inches: silty clay loam
Btx - 34 to 48 inches: clay loam
C - 48 to 58 inches: channery silt loam
R - 58 to 68 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent
Percent of area covered with surface fragments: 0.0 percent
Depth to restrictive feature: 20 to 36 inches to fragipan; 40 to 60 inches to lithic bedrock
Natural drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low (0.00 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Penn

Percent of map unit: 5 percent
Landform: Ridges
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Hydric soil rating: No

Reaville

Percent of map unit: 5 percent
Landform: Depressions
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: No

Abbottstown

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: No

ReC—Readington silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2dy76
Elevation: 200 to 1,000 feet
Mean annual precipitation: 36 to 55 inches
Mean annual air temperature: 46 to 57 degrees F
Frost-free period: 160 to 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Readington and similar soils: 86 percent
Minor components: 14 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Readington

Setting

Landform: Hillslopes
Landform position (two-dimensional): Footslope, backslope
Landform position (three-dimensional): Base slope, head slope, side slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Parent material: Residuum weathered from shale and siltstone

Typical profile

Ap - 0 to 11 inches: silt loam
Bt - 11 to 29 inches: silt loam
Btx - 29 to 58 inches: channery silt loam
R - 58 to 68 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 36 inches to fragipan; 40 to 70 inches to lithic bedrock
Natural drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Penn

Percent of map unit: 7 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Reaville

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope, interfluve
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: No

Croton

Percent of map unit: 2 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: Yes

RhB—Reaville silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2dy7c
Elevation: 200 to 1,300 feet
Mean annual precipitation: 36 to 55 inches
Mean annual air temperature: 46 to 57 degrees F
Frost-free period: 130 to 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Reaville and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Reaville

Setting

Landform: Hills, hillslopes
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope, interfluve
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Red triassic residuum weathered from sandstone and shale

Typical profile

Ap - 0 to 8 inches: silt loam
Bt - 8 to 19 inches: channery silty clay loam
C - 19 to 32 inches: very channery silt loam
R - 32 to 42 inches: bedrock

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Klinesville

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Interfluve, nose slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Penn

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Readington

Percent of map unit: 3 percent
Landform: Hillslopes
Landform position (two-dimensional): Footslope, backslope
Landform position (three-dimensional): Base slope, head slope, side slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: No

Croton

Percent of map unit: 2 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: Yes

RhC—Reaville silt loam, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2dy7h
Elevation: 250 to 1,300 feet
Mean annual precipitation: 36 to 55 inches
Mean annual air temperature: 46 to 57 degrees F
Frost-free period: 130 to 200 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Reaville and similar soils: 85 percent

Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Reaville

Setting

Landform: Hills, hillslopes
Landform position (two-dimensional): Footslope, summit
Landform position (three-dimensional): Base slope, interfluve
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Red triassic residuum weathered from sandstone and shale

Typical profile

Ap - 0 to 8 inches: silt loam
Bt - 8 to 20 inches: channery silty clay loam
C - 20 to 33 inches: very channery silt loam
R - 33 to 42 inches: bedrock

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Natural drainage class: Moderately well drained
Runoff class: Very high
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 6 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: D
Hydric soil rating: No

Minor Components

Readington

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Footslope, backslope
Landform position (three-dimensional): Base slope, head slope, side slope
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: No

Penn

Percent of map unit: 4 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Klinesville

Percent of map unit: 3 percent
Landform: Hillslopes
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Interfluve, nose slope
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Croton

Percent of map unit: 3 percent
Landform: Depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: Yes

RwB—Rowland silt loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: l56x
Elevation: 150 to 1,000 feet
Mean annual precipitation: 36 to 50 inches
Mean annual air temperature: 46 to 57 degrees F
Frost-free period: 150 to 200 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Rowland and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rowland

Setting

Landform: Flood plains
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Head slope, base slope
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Parent material: Alluvium derived from sandstone and shale

Typical profile

A - 0 to 7 inches: silt loam
Bw - 7 to 40 inches: gravelly silt loam
C - 40 to 52 inches: gravelly silt loam

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: 60 to 99 inches to lithic bedrock
Natural drainage class: Moderately well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water storage in profile: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w
Hydrologic Soil Group: C
Hydric soil rating: No

Minor Components

Knauers

Percent of map unit: 5 percent
Landform: Flood plains
Landform position (two-dimensional): Toeslope, footslope
Landform position (three-dimensional): Tread
Down-slope shape: Linear, concave
Across-slope shape: Linear, concave
Hydric soil rating: Yes

Abbottstown

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave, linear
Across-slope shape: Linear, concave
Hydric soil rating: No

UusB—Urban land-Udorthents, shale and sandstone complex, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2dtz9
Elevation: 250 to 950 feet
Mean annual precipitation: 38 to 48 inches
Mean annual air temperature: 48 to 57 degrees F
Frost-free period: 161 to 215 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 80 percent
Udorthents, shale and sandstone, and similar soils: 15 percent

Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting
Landform: Hills
Parent material: Pavement, buildings and other artifically covered areas

Typical profile
C - 0 to 6 inches: variable

Properties and qualities
Slope: 0 to 8 percent
Depth to restrictive feature: 10 to 99 inches to lithic bedrock
Available water storage in profile: Very low (about 0.0 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

Description of Udorthents, Shale And Sandstone

Setting
Landform: Ridges
Landform position (two-dimensional): Backslope, shoulder, summit
Landform position (three-dimensional): Side slope, nose slope, interfluve
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Parent material: Graded areas of sandstone and shale

Typical profile
A - 0 to 6 inches: very channery loam
C - 6 to 60 inches: very channery silt loam

Properties and qualities
Slope: 0 to 8 percent
Depth to restrictive feature: 20 to 99 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 2.9 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7s
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Penn
Percent of map unit: 5 percent
Landform: Hillslopes

Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Hydric soil rating: No

UusD—Urban land-Udorthents, shale and sandstone complex, 8 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2dtzb
Elevation: 250 to 950 feet
Mean annual precipitation: 38 to 48 inches
Mean annual air temperature: 50 to 57 degrees F
Frost-free period: 160 to 200 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 80 percent
Udorthents, shale and sandstone, and similar soils: 15 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Urban Land

Setting

Landform: Hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Parent material: Pavement, buildings and other artifically covered areas

Typical profile

C - 0 to 6 inches: variable

Properties and qualities

Slope: 8 to 25 percent
Depth to restrictive feature: 10 to 99 inches to lithic bedrock
Available water storage in profile: Very low (about 0.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

Description of Udorthents, Shale And Sandstone

Setting

Landform: Hills

Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Parent material: Graded areas of sandstone and shale

Typical profile

Ap - 0 to 6 inches: very channery loam
C - 6 to 60 inches: very channery silty clay loam

Properties and qualities

Slope: 8 to 25 percent
Depth to restrictive feature: 20 to 99 inches to lithic bedrock
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water storage in profile: Very low (about 2.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: A
Hydric soil rating: No

Minor Components

Penn

Percent of map unit: 5 percent
Landform: Hillslopes
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope, nose slope
Down-slope shape: Linear, convex
Across-slope shape: Convex, linear
Hydric soil rating: No

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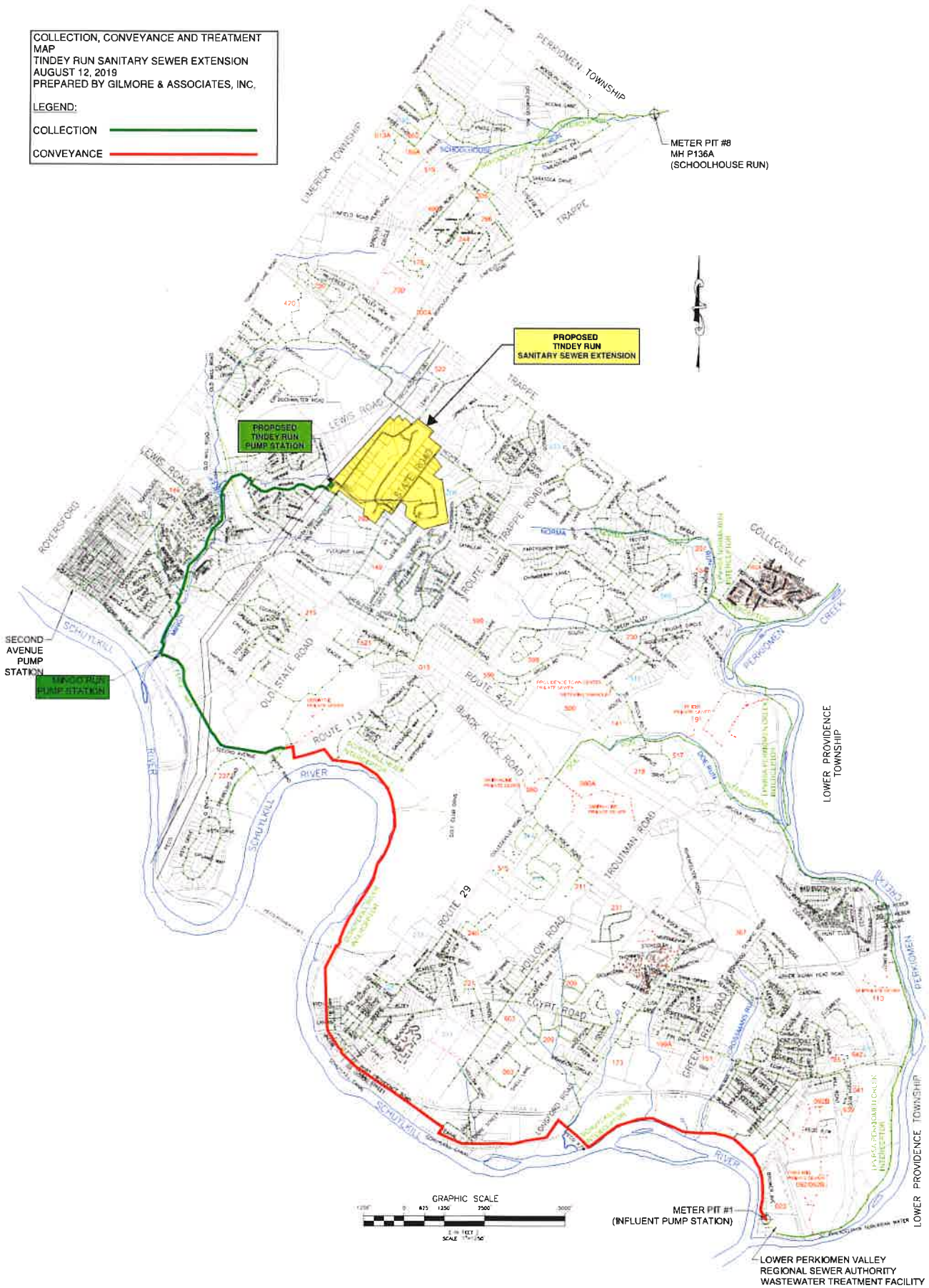
SECTION 9

CHAPTER 94 CONSISTENCY

COLLECTION, CONVEYANCE AND TREATMENT MAP



TINDEY RUN SANITARY SEWER EXTENSION
COLLECTION, CONVEYANCE AND TREATMENT MAP
AUGUST, 2019

SECTION 10

INSTITUTIONAL EVALUATION

Planning Module Component 3M Section L
Institutional Evaluation

Tindey Run Sanitary Sewer Extension
Upper Providence Township
Montgomery County

The proposed sewer main, sanitary sewer appurtenances and pump station to be constructed are proposed to be owned, operated and maintained by Upper Providence Township. Facilities outside of the public right-of-way, such as building sewers are to be owned, operated and maintained by the individual homeowner.

The Township proposes to fund approximately 100 percent of the construction cost of the sanitary sewer installation. The individual property owner will pay a $10,000 assessment and connection and capacity fees upon connection to the sewer.

Upper Providence Township proposes to obtain necessary permits and prepare necessary designs for the project. While the Township will own and maintain the pump station, force main, and gravity sanitary sewer main in the public road right-of-way and easements; each homeowner will be required to hire a plumber to run their individual building sewer from the connection point at the public right-of-way to their dwelling unit.

SECTION 11

PROJECT COST FUNDING ANALYSIS

Planning Module Component 3M Section M
Project Cost and Funding Analysis

Tindy Run Sanitary Sewer Extension
Upper Providence Township
Montgomery County

Project Summary – April, 2020

1. **Project Description:**

Upper Providence Township, Montgomery County is completing a Pennsylvania Department of Environmental Protection Sewage Facilities Planning Module for Minor Act 537 Update Revision for the Tindy Run Sanitary Sewer Extension project. This project will include extending public sanitary sewers along Marshwood Drive, Old State Road, Brookdale Road, Rosemont Lane, Whitford Drive and Fruit Farm Road.

The sanitary sewer extension will be located along Tindy Run and within the paved roadways of Marshwood Drive, Old State Road, Brookdale Road, Rosemont Lane, Whitford Drive, and Fruit Farm Road. The collection sewer flow will be conveyed via 8" trunk sewer, located along the Tindy Run, to a proposed pump station. The proposed flow will then be conveyed via 4" force main to existing sanitary sewer manhole #S-181I39 located in Iroquois Drive. The Tindy Run Sanitary Sewer Extension project will consist of the installation of approximately 15,600 LF of eight (8) inch diameter gravity sanitary sewer main along with manholes and associated appurtenances and the installation of six (6) inch diameter PVC sanitary sewer laterals to the road right-of-way line to serve each of the existing properties along the proposed sanitary sewer alignment and a 120 gallon per minute duplex submersible pump station with a four inch diameter force main. The extension of the sanitary sewers in will provide access to the public sanitary sewer system to one hundred seventeen (117) additional existing properties.

The project will also include the pavement restoration of affected roadways and the restoration of all disturbed non-paved areas and providing the required traffic control and erosion and sediment control measures for the duration of the project.

2. **Sanitary Sewer Ext. Construction Cost Estimate:**

- Estimated Construction Cost $6,500,000

3. **Township Contribution of Sanitary Sewer Project Cost**

- 100% of the Project Cost

4. **Estimated Average Cost per Property**

a) LPVRSA - Treatment Capacity Fee = $2,670/property

b)	Upper Providence Township Tapping Fee	= $1,266/property
c)	Upper Providence Twp. Collection System Assessment	= $10,000/property
	Subtotal	$13,936/property

d) The property owner will also be liable for the costs of a plumbing contractor they must hire to make the connection from their home to the sewer lateral provided at the edge of the road.

SECTION 12

PROJECT IMPLEMENTATION SCHEDULE

Planning Module Component 3M Section N
Project Implementation Schedule

Tindey Run Sanitary Sewer Extension
Upper Providence Township
Montgomery County

- July 2020 – Submit planning approval request to PADEP
- September 2020 – Receive planning approval from PADEP
- September 2020 – Submit PADEP Part 2 Water Quality Management Permit Application
- September 2020 - Complete Engineering design plans and prepare Project Manual and bidding documents.
- November 2020 - Advertise project for bidding.
- December 2020 - Open bids received for project.
- January 2021 - Award project construction.
- March 2021 - Begin construction of sanitary sewer main
- March 2022 –Complete construction and testing of sanitary sewer main.
- April 2022 – Allow residents to connect to the sewer main in the road
- June 2022 – Complete road restoration of the road.
- August 2022 – Project Complete

SECTION 13

PUBLIC NOTIFICATION

Planning Module Component 3M Section O
Public Notification

Tindy Run Sanitary Sewer Extension
Upper Providence Township
Montgomery County

Notice is hereby given that Upper Providence Township; Montgomery County will consider a Planning Module revision to the Township Sewage Facilities Plan for the Tindy Run Sanitary Sewer Extension project. The project will consist of extending public sewers to serve the existing properties located along Marshwood Drive, Old State Road, Brookdale Road, Rosemont Lane, Whitford Drive and Fruit Farm Road that are currently served by individual on-lot septic systems. This project will provide the opportunity for an additional one hundred seventeen (117) existing properties located along the proposed sanitary sewer alignment to connect to the public sewer system.

The average cost per property will be a total of $13,936 which includes the public improvement construction cost (benefit assessment) of $10,000, Township tapping fee of $1,266 and the regional sewer authority fee of $2,670. The property owner will also be liable for the costs of a plumbing contractor they must hire to make the connection from their home to the sewer lateral provided at the edge of the public right-of-way.

The annual user fee for residential sewer service in Upper Providence Township is $300.00 per year per equivalent dwelling unit. The Township bills the annual user fee on a quarterly basis at $75.00 per quarter.

A public comment period will extend for thirty (30) days after the date of publication of this notice. The planning module can be reviewed at the offices of Upper Providence Township, 1286 Black Rock Road, Oaks, Pennsylvania during normal business hours. Any and all comments should be directed to:

Upper Providence Township
1286 Black Rock Road
Oaks, Pennsylvania 19456
Attn: Mr. Timothy J. Tieperman, Manager

Upper Providence Township

SECTION 14

COMPONENT 4A – MUNICIPAL PLANNING AGENCY REVIEW

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

HAND DELIVERED

June 3, 2020

File No.: 18-11043T

Mr. Geoff Grace, Zoning Officer / Director of Planning
Upper Providence Township
1286 Black Rock Road
P.O. Box 406
Oaks, PA 19456

Reference: Tindey Run Sanitary Sewer Extension Project
Upper Providence Township, Montgomery County, Pennsylvania
PADEP Sewage Facilities Planning Module – Component 3m Review

Dear Geoff:

Upper Providence Township, Montgomery County is proposing the Tindey Run Sanitary Sewer Extension project. This sanitary sewer extension project consists of the extension of the existing public sanitary sewer system within the Tindey Run development, including Marshwood Drive, Whitford Drive, Old State Road, Brookdale Road, Rosemont Lane and Fruit Farm Road. Prior to any sanitary sewer connections being made to the sanitary sewer extension, Upper Providence Township must obtain PADEP Planning Module approval.

Attached to this letter please find the Component 4A and a copy of the Sewage Facilities Planning Module For Minor Act 537 Update Revision Component 3m for the Tindey Run Sanitary Sewer Extension project. As part of the planning module approval process, the local Municipal Planning Agency must review the planning module and complete the attached Component 4A within 60 days of receipt. Upon completion of the Municipal Planning Agency review please complete and sign Component 4A and return it to the following address with any comments regarding the project:

Gilmore & Associates, Inc.
184 W. Main Street, Suite 300
Trappe, PA 19426
Attention: Mark M. Mattucci

Please place this on the next available Township Planning Commission meeting agenda for review and approval by the Township Planning Commission. Should you have any questions or require additional information please contact our office.

Very truly yours,

Mark M. Mattucci
Project Manager
Gilmore & Associates, Inc.

Enclosure

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

DEP Code #:

SEWAGE FACILITIES PLANNING MODULE
COMPONENT 4A - MUNICIPAL PLANNING AGENCY REVIEW

Note to Project Sponsor: To expedite the review of your proposal, one copy of your completed planning module package and one copy of this *Planning Agency Review Component* should be sent to the local municipal planning agency for their comments.

SECTION A. PROJECT NAME (See Section A of instructions)

Project Name

Tindey Run Sanitary Sewer Extension

SECTION B. REVIEW SCHEDULE (See Section B of instructions)

1. Date plan received by municipal planning agency _____
2. Date review completed by agency _____

SECTION C. AGENCY REVIEW (See Section C of instructions)

Yes	No		
☐	☐	1.	Is there a municipal comprehensive plan adopted under the Municipalities Planning Code (53 P.S. 10101, *et seq.*)?
☐	☐	2.	Is this proposal consistent with the comprehensive plan for land use? If no, describe the inconsistencies _____
☐	☐	3.	Is this proposal consistent with the use, development, and protection of water resources? If no, describe the inconsistencies _____
☐	☐	4.	Is this proposal consistent with municipal land use planning relative to Prime Agricultural Land Preservation?
☐	☐	5.	Does this project propose encroachments, obstructions, or dams that will affect wetlands? If yes, describe impacts _____
☐	☐	6.	Will any known historical or archaeological resources be impacted by this project? If yes, describe impacts _____
☐	☐	7.	Will any known endangered or threatened species of plant or animal be impacted by this project? If yes, describe impacts _____
☐	☐	8.	Is there a municipal zoning ordinance?
☐	☐	9.	Is this proposal consistent with the ordinance? If no, describe the inconsistencies _____
☐	☐	10.	Does the proposal require a change or variance to an existing comprehensive plan or zoning ordinance?
☐	☐	11.	Have all applicable zoning approvals been obtained?
☐	☐	12.	Is there a municipal subdivision and land development ordinance?

SECTION C. AGENCY REVIEW (continued)

Yes	No	
☐	☐	13. Is this proposal consistent with the ordinance? If no, describe the inconsistencies _____
☐	☐	14. Is this plan consistent with the municipal Official Sewage Facilities Plan? If no, describe the inconsistencies _____
☐	☐	15. Are there any wastewater disposal needs in the area adjacent to this proposal that should be considered by the municipality? If yes, describe _____
☐	☐	16. Has a waiver of the sewage facilities planning requirements been requested for the residual tract of this subdivision?
☐	☐	If yes, is the proposed waiver consistent with applicable ordinances? If no, describe the inconsistencies _____

17. Name, title and signature of planning agency staff member completing this section:

Name: Robert Heist

Title: Chairman, Upper Providence Township Planning Commission

Signature: _____

Date: _____

Name of Municipal Planning Agency: Upper Providence Township Planning Commission

Address 1286 Black Rock Road, P.O. Box 406, Oaks, Pennsylvania 19456

Telephone Number: 610-933-9179

SECTION D. ADDITIONAL COMMENTS (See Section D of instructions)

This component does not limit municipal planning agencies from making additional comments concerning the relevancy of the proposed plan to other plans or ordinances. If additional comments are needed, attach additional sheets.

The planning agency must complete this component within 60 days.

This component and any additional comments are to be returned to the applicant.

SECTION 15

COMPONENT 4B – COUNTY PLANNING AGENCY REVIEW

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

FEDERAL EXPRESS DELIVERY

June 3, 2020

File No.: 18-11043T

Montgomery County Planning Commission
425 Swede Street, Suite 201
Norristown, PA 19404-0311

Reference: Tindey Run Sanitary Sewer Extension Project
Upper Providence Township, Montgomery County, Pennsylvania
PADEP Sewage Facilities Planning Module – Component 3m Review

Ladies and Gentlemen:

Upper Providence Township, Montgomery County is proposing the Tindey Run Sanitary Sewer Extension project. This sanitary sewer extension project consists of the extension of the existing public sanitary sewer system within the Tindey Run development, including Marshwood Drive, Whitford Drive, Old State Road, Brookdale Road, Rosemont Lane and Fruit Farm Road. Prior to any sanitary sewer connections being made to the sanitary sewer extension, Upper Providence Township must obtain PADEP Planning Module approval.

Attached to this letter please find the Component 4B and a copy of the Sewage Facilities Planning Module For Minor Act 537 Update Revision Component 3m for the Tindey Run Sanitary Sewer Extension project. As part of the planning module approval process, the local Municipal Planning Agency must review the planning module and complete the attached Component 4B within 60 days of receipt. Upon completion of the Municipal Planning Agency review please complete and sign Component 4B and return it to the following address with any comments regarding the project:

Gilmore & Associates, Inc.
184 W. Main Street, Suite 300
Trappe, PA 19426
Attention: Mark M. Mattucci

Should you have any questions or require additional information please contact our office.

Very truly yours,

Mark M. Mattucci
Project Manager
Gilmore & Associates, Inc.

Enclosure

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

INSTRUCTIONS FOR COMPLETING COMPONENT 4B
COUNTY PLANNING AGENCY REVIEW
(or Planning Agency with Areawide Jurisdiction)

Remove and recycle these instructions prior to mailing component to the approving agency.

Background

This component, Component 4, is used to obtain the comments of planning agencies and/or health departments having jurisdiction over the project area. It is used in conjunction with other planning module components appropriate to the characteristics of the project proposed.

Who Should Complete the Component?

The component should be completed by any existing municipal planning agency, county planning agency, planning agency with areawide jurisdiction, and/or health department having jurisdiction over the project site. It is divided into sections to allow for convenient use by the appropriate agencies.

The project sponsor must forward copies of this component, along with supporting components and data, to the appropriate planning agency(ies) and health department(s) (if any) having jurisdiction over the development site. These agencies are responsible for responding to the questions in their respective sections of Component 4, as well as providing whatever additional comments they may wish to provide on the project plan. After the agencies have completed their review, the component will be returned to the applicant. The agencies have 60 days in which to provide comments to the applicant. If the agencies fail to comment within this 60 day period, the applicant may proceed to the next stage of the review without the comments. The use of registered mail or certified mail (return receipt requested) by the applicant when forwarding the module package to the agencies will document a date of receipt.

After receipt of the completed Component 4 from the planning agencies, or following expiration of the 60 day period without comments, the applicant must submit the entire component package to the municipality having jurisdiction over the project area for review and action. If approved by the municipality, the proposed plan, along with the municipal action, will be forwarded to the approving agency (Department of Environmental Protection or delegated local agency). The approving agency, in turn, will either approve the proposed plan, return it as incomplete, or disapprove the plan, based upon the information provided.

Instructions for Completing Planning Agency and/or Health Department Review Component

Section A. Project Name

Enter the project name as it appears on the accompanying sewage facilities planning module component (Component 2, 3, 3s or 3m).

Section B. Review Schedule

Enter the date the package was received by the reviewing agency, and the date that the review was completed.

Section C. Agency Review

1. Answer the yes/no questions and provide any descriptive information necessary on the lines provided. Attach additional sheets, if necessary.

2. Complete the name, title, and signature block.

Section D. Additional Comments

The Agency may provide whatever additional comment(s) it deems necessary, as described in the form. Attach additional sheets, if necessary.

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

DEP Code #:

SEWAGE FACILITIES PLANNING MODULE
COMPONENT 4B - COUNTY PLANNING AGENCY REVIEW

(or Planning Agency with Areawide Jurisdiction)

Note to Project Sponsor: To expedite the review of your proposal, one copy of your completed planning package and one copy of this *Planning Agency Review Component* should be sent to the county planning agency or planning agency with areawide jurisdiction for their comments.

SECTION A. PROJECT NAME (See Section A of instructions)

Project Name

Tindey Run Sanitary Sewer Extension

SECTION B. REVIEW SCHEDULE (See Section B of instructions)

1. Date plan received by county planning agency _____
2. Date plan received by planning agency with areawide jurisdiction _____

   Agency name _____
3. Date review completed by agency _____

SECTION C. AGENCY REVIEW (See Section C of instructions)

Yes	No		
☐	☐	1.	Is there a county or areawide comprehensive plan adopted under the Municipalities Planning Code (53 P.S. 10101 *et seq.*)?
☐	☐	2.	Is this proposal consistent with the comprehensive plan for land use?
☐	☐	3.	Does this proposal meet the goals and objectives of the plan? If no, describe goals and objectives that are not met _____
☐	☐	4.	Is this proposal consistent with the use, development, and protection of water resources? If no, describe inconsistency _____
☐	☐	5.	Is this proposal consistent with the county or areawide comprehensive land use planning relative to Prime Agricultural Land Preservation? If no, describe inconsistencies: _____
☐	☐	6.	Does this project propose encroachments, obstructions, or dams that will affect wetlands? If yes, describe impact _____
☐	☐	7.	Will any known historical or archeological resources be impacted by this project? If yes, describe impacts _____
☐	☐	8.	Will any known endangered or threatened species of plant or animal be impacted by the development project? If yes, describe impacts _____
☐	☐	9.	Is there a county or areawide zoning ordinance?
☐	☐	10.	Does this proposal meet the zoning requirements of the ordinance? If no, describe inconsistencies _____

SECTION C. AGENCY REVIEW (continued)

Yes	No		
☐	☐	11.	Have all applicable zoning approvals been obtained?
☐	☐	12.	Is there a county or areawide subdivision and land development ordinance?
☐	☐	13.	Does this proposal meet the requirements of the ordinance?
			If no, describe which requirements are not met _____
☐	☐	14.	Is this proposal consistent with the municipal Official Sewage Facilities Plan?
			If no, describe inconsistency _____
☐	☐	15.	Are there any wastewater disposal needs in the area adjacent to this proposal that should be considered by the municipality?
			If yes, describe _____
☐	☐	16.	Has a waiver of the sewage facilities planning requirements been requested for the residual tract of this subdivision?
☐	☐		If yes, is the proposed waiver consistent with applicable ordinances.
			If no, describe the inconsistencies _____
☐	☐	17.	Does the county have a stormwater management plan as required by the Stormwater Management Act?
☐	☐		If yes, will this project plan require the implementation of storm water management measures?
		18.	Name, Title and signature of person completing this section:
			Name: _____
			Title: _____
			Signature: _____
			Date: _____
			Name of County or Areawide Planning Agency: _____
			Address: _____
			Telephone Number: _____

SECTION D. ADDITIONAL COMMENTS (See Section D of instructions)

This component does not limit county planning agencies from making additional comments concerning the relevancy of the proposed plan to other plans or ordinances. If additional comments are needed, attach additional sheets.

The county planning agency must complete this component within 60 days.

This component and any additional comments are to be returned to the applicant.

Planning Module Component 3M Section F
Project Narrative

Tindy Run Sanitary Sewer Extension
Upper Providence Township
Montgomery County

Upper Providence Township, Montgomery County is completing a Pennsylvania Department of Environmental Protection Sewage Facilities Planning Module for Minor Act 537 Update Revision for the Tindy Run Sanitary Sewer Extension project. This project will include extending public sanitary sewer service to the existing homes located along Marshwood Drive, Old State Road, Brookdale Road, Rosemont Lane, Whitford Drive and Fruit Farm Road.

The Tindy Run sanitary sewer extension will be located along the Tindy run and within the paved roadways of Marshwood Drive, Old State Road, Brookdale Road, Rosemont Lane, Whitford Drive and Fruit Farm Road. The collection sewer flow will be conveyed via 8" trunk sewer, located along the Tindy Run, to a proposed 120 gallon per minute duplex submersible pump station. The proposed flow will then be conveyed via 4" force main to existing sanitary sewer manhole located in Iroquois Drive. The Tindy Run Sanitary Sewer Extension project will consist of the installation of approximately 14,500 linear feet of eight (8) inch diameter gravity sanitary sewer main, including collector and trunk sewer, along with manholes and associated appurtenances and the installation of six (6) inch diameter sanitary sewer laterals to the road right-of-way line to serve each of the existing properties along the proposed sanitary sewer alignment. The extension of the sanitary sewers in Marshwood Drive, Old State Road, Brookdale Road, Rosemont Lane, Whitford Drive and Fruit Farm Road will provide access to the public sanitary sewer system to one hundred seventeen (117) additional existing properties. The proposed Tindy Run Sanitary Sewer Extension project will encompass an area of approximately 160 acres with a disturbed area of approximately seven acres. General Permit GP-5 (Utility Line Stream Crossing) will be required for stream and wetland crossings. Wetland crossings have been avoided where feasible. No exceptional value wetlands were identified within the project area.

The Tindy Run Sanitary Sewer Extension project will extend the public sanitary sewer to serve up to an additional one hundred seventeen existing single-family residences located along the proposed route of the sanitary sewer extension. These one hundred seventeen existing residences are currently served by public water or on-lot wells and on-lot septic systems. Based on public inquiries regarding the availability of connection to the Township public sanitary sewer system it is anticipated the properties will connect to the sewer system in the next 5 years, therefore planning approval is being requested for one hundred seventeen EDU or 36,270 gallons per day based on 310 gallons per day/EDU.

The Township proposes to install the sewer mains and service laterals in the road prior to the Township completing road improvements.

The 2010 Census by the U.S. Census Bureau indicates the average household size in Upper Providence Township to be 2.77 persons. Based on this figure, the projected population served by this project would be 324 persons.

The Tindy Run Sanitary Sewer Extension project will connect into the existing Iroquois Drive Collection Sewers at an existing manhole. This connection will be completed by core drilling the existing manhole and inserting the sanitary sewer pipe with a link seal to provide a water tight connection. The proposed sanitary sewer project will not create any hydraulic overloads within five years on any existing collection or conveyance facilities that are part of the system. The existing collection sewer system is the Iroquois Drive Collection Sewer which has a peak design capacity of 0.55 MGD. The five-year peak projected flow for this collection sewer including the addition of the one hundred seventeen (117) homes is 0.26 MGD. The existing conveyance sewer system is the Schuylkill River Interceptor which discharges to the Lower Perkiomen Valley Regional Sewer Authority Oaks Wastewater Treatment Plant, both of which have adequate capacity.

Upon completion of the construction of the Tindy Run Sanitary Sewer Extension project, the existing residents will be able to connect to the public sanitary sewer system. Upper Providence Township will not require mandatory connections to new sanitary sewers by the existing residents provided their on-lot system is deemed to be functioning properly and not posing any danger to the health, safety and welfare of the public.

EXHIBITS

SFPM EXHIBIT – OVERALL SIE PLAN

TINDY RUN SANITARY SEWER PROJECT

UPPER PROVIDENCE TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE: 04/06/2020

OWNER: UPPER PROVIDENCE TOWNSHIP, 1286 BLACK ROCK ROAD, PHOENIXVILLE, PA 19460

JOB NO.:

TAX MAP PARCEL NO.:

MUNICIPAL FILE NO.:

SCALE: 1"=50'

SHEET NO.: 1 OF XX

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

ONLY THOSE PLANS INCORPORATING THE PROFESSIONAL SEAL SHOULD BE CONSIDERED OFFICIAL AND RELIED UPON BY USER. THIS PLAN IS PREPARED SPECIFICALLY FOR THE CLIENT AND PROJECT DESIGNATED HEREON. MODIFICATION, REVISION, DUPLICATION OR USE WITHOUT THE CONSENT OF GILMORE & ASSOCIATES, INC. IS PROHIBITED.

NOT APPROVED FOR CONSTRUCTION

Tindey Run - Public Sanitary Sewer Concept Plan
September, 2019

Estimated Trunk Sewer Pipe Length = 3,400 LF
Estimated Collection Sewer Pipe Length = 12,200 LF
Estimated Number of Manholes = 50
Additional Homes Served = 117

Estimated Construction Cost = $6.5 Million

SECTION 16

COMPONENT 4C – COUNTY HEALTH DEPARTMENT REVIEW

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

FEDERAL EXPRESS DELIVERY

June 3, 2020

File No.: 18-11043T

Montgomery County Health Department
364 King Street
Pottstown, PA 19464

Reference: Tindey Run Sanitary Sewer Extension Project
Upper Providence Township, Montgomery County, Pennsylvania
PADEP Sewage Facilities Planning Module – Component 3m Review

Ladies and Gentlemen:

Upper Providence Township, Montgomery County is proposing the Tindey Run Sanitary Sewer Extension project. This sanitary sewer extension project consists of the extension of the existing public sanitary sewer system within the Tindey Run development, including Marshwood Drive, Whitford Drive, Old State Road, Brookdale Road, Rosemont Lane and Fruit Farm Road. Prior to any sanitary sewer connections being made to the sanitary sewer extension, Upper Providence Township must obtain PADEP Planning Module approval.

Attached to this letter please find the Component 4C and a copy of the Sewage Facilities Planning Module For Minor Act 537 Update Revision Component 3m for the Tindey Run Sanitary Sewer Extension project. As part of the planning module approval process, the local Municipal Planning Agency must review the planning module and complete the attached Component 4C within 60 days of receipt. Upon completion of the Municipal Planning Agency review please complete and sign Component 4C and return it to the following address with any comments regarding the project:

Gilmore & Associates, Inc.
184 W. Main Street, Suite 300
Trappe, PA 19426
Attention: Mark M. Mattucci

Should you have any questions or require additional information please contact our office.

Very truly yours,

Mark M. Mattucci
Project Manager
Gilmore & Associates, Inc.

Enclosure

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

INSTRUCTIONS FOR COMPLETING COMPONENT 4C
COUNTY OR JOINT HEALTH DEPARTMENT REVIEW

Remove and recycle these instructions prior to mailing component to the approving agency.

Background

This component, Component 4, is used to obtain the comments of planning agencies and/or health departments having jurisdiction over the project area. It is used in conjunction with other planning module components appropriate to the characteristics of the project proposed.

Who Should Complete the Component?

The component should be completed by any existing municipal planning agency, county planning agency, planning agency with areawide jurisdiction, and/or health department having jurisdiction over the project site. It is divided into sections to allow for convenient use by the appropriate agencies.

The project sponsor must forward copies of this component, along with supporting components and data, to the appropriate planning agency(ies) and health department(s) (if any) having jurisdiction over the development site. These agencies are responsible for responding to the questions in their respective sections of Component 4, as well as providing whatever additional comments they may wish to provide on the project plan. After the agencies have completed their review, the component will be returned to the applicant. The agencies have 60 days in which to provide comments to the applicant. If the agencies fail to comment within this 60 day period, the applicant may proceed to the next stage of the review without the comments. The use of registered mail or certified mail (return receipt requested) by the applicant when forwarding the module package to the agencies will document a date of receipt.

After receipt of the completed Component 4 from the planning agencies, or following expiration of the 60 day period without comments, the applicant must submit the entire component package to the municipality having jurisdiction over the project area for review and action. If approved by the municipality, the proposed plan, along with the municipal action, will be forwarded to the approving agency (Department of Environmental Protection or delegated local agency). The approving agency, in turn, will either approve the proposed plan, return it as incomplete, or disapprove the plan, based upon the information provided.

Instructions for Completing Planning Agency and/or Health Department Review Component

Section A. Project Name

Enter the project name as it appears on the accompanying sewage facilities planning module component (Component 2, 2m, 3, 3s or 3m).

Section B. Review Schedule

Enter the date the package was received by the reviewing agency, and the date that the review was completed.

Section C. Agency Review

1. Answer the yes/no questions and provide any descriptive information necessary on the lines provided. Attach additional sheets, if necessary.

2. Complete the name, title, and signature block.

Section D. Additional Comments

The Agency may provide whatever additional comment(s) it deems necessary, as described in the form. Attach additional sheets, if necessary.

3850-FM-BCW0362C 6/2016

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF CLEAN WATER

DEP Code #:

SEWAGE FACILITIES PLANNING MODULE
COMPONENT 4C - COUNTY OR JOINT HEALTH DEPARTMENT REVIEW

Note to Project Sponsor: To expedite the review of your proposal, one copy of your completed planning module package and one copy of this *Planning Agency Review Component* should be sent to the county or joint county health department for their comments.

SECTION A. PROJECT NAME (See Section A of instructions)

Project Name

Tindey Run Sanitary Sewer Extension

SECTION B. REVIEW SCHEDULE (See Section B of instructions)

1. Date plan received by county or joint county health department _____

   Agency name _____

2. Date review completed by agency _____

SECTION C. AGENCY REVIEW (See Section C of instructions)

Yes	No		
☐	☐	1.	Is the proposed plan consistent with the municipality's Official Sewage Facilities Plan?
			If no, what are the inconsistencies? _____
☐	☐	2.	Are there any wastewater disposal needs in the area adjacent to this proposal that should be considered by the municipality?
			If yes, describe _____
☐	☐	3.	Is there any known groundwater degradation in the area of this proposal?
			If yes, describe _____
☐	☐	4.	The county or joint county health department recommendation concerning this proposed plan is as follows: _____
		5.	Name, title and signature of person completing this section:
			Name: _____
			Title: _____
			Signature: _____
			Date: _____
			Name of County Health Department: _____
			Address: _____
			Telephone Number: _____

SECTION D. ADDITIONAL COMMENTS (See Section D of instructions)

This component does not limit county planning agencies from making additional comments concerning the relevancy of the proposed plan to other plans or ordinances. If additional comments are needed, attach additional sheets.

The county planning agency must complete this component within 60 days.
This component and any additional comments are to be returned to the applicant.

SECTION 17

RESOLUTION OF ADOPTION

TOWNSHIP OF UPPER PROVIDENCE

RESOLUTION FOR PLAN REVISION

RESOLUTION OF THE SUPERVISORS of UPPER PROVIDENCE TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA (hereinafter "the municipality")

WHEREAS Section 5 of the Act of January 24, 1966, P.L. 1535, No. 537 known as the Pennsylvania Sewage Facilities Act", as Amended, and the rules and Regulations of the Pennsylvania Department of Environmental Protection (Department) adopted thereunder, Chapter 71 of Title 25 of the Pennsylvania Code, requires the municipality to adopt an Official Sewage Facilities Plan providing for sewage services adequate to prevent contamination of waters of the Commonwealth and/or environmental health hazards from sewage wastes, and to revise said plan whenever it is necessary to meet sewage disposal need of the municipality, and

WHEREAS, Upper Providence Township has prepared a Plan Revision which provides for sewage facilities in a portion of Upper Providence Township, and

The alternative of choice to be implemented is a gravity sanitary sewer line extension and pump station. The key implementation activities/dates include the construction/installation of the Tindey Run Sanitary Sewer Extension, beginning construction in 2021 and ending in 2022.

WHEREAS, Upper Providence Township finds that the Facility Plan described above conforms to applicable zoning, subdivision and other municipal ordinances and plans, and to a comprehensive program of pollution control and water quality management.

NOW, THEREFORE, BE IT RESOLVED, that the Supervisors of the Township of Upper Providence hereby adopts and submits to the Department of Environmental Protection for its approval as a revision to the "Official Plan" of the municipality the above referenced Facility Plan. The municipality hereby assures the Department of the complete and timely implementation of the said plan as required by law. (Section 5, Pennsylvania Sewage Facilities Act as amended).

I, Timothy J. Tieperman, Secretary, Upper Providence Township Board of Supervisors hereby

certify that the foregoing is a true copy of Resolution No. 2020-_____, adopted_____.

AUTHORIZED SIGNATURE

_____

Township Manager-Secretary

MUNICIPAL SEAL

Planning Module Component 3M Section F
Project Narrative

Tindy Run Sanitary Sewer Extension
Upper Providence Township
Montgomery County

Upper Providence Township, Montgomery County is completing a Pennsylvania Department of Environmental Protection Sewage Facilities Planning Module for Minor Act 537 Update Revision for the Tindy Run Sanitary Sewer Extension project. This project will include extending public sanitary sewer service to the existing homes located along Marshwood Drive, Old State Road, Brookdale Road, Rosemont Lane, Whitford Drive and Fruit Farm Road.

The Tindy Run sanitary sewer extension will be located along the Tindy run and within the paved roadways of Marshwood Drive, Old State Road, Brookdale Road, Rosemont Lane, Whitford Drive and Fruit Farm Road. The collection sewer flow will be conveyed via 8" trunk sewer, located along the Tindy Run, to a proposed 120 gallon per minute duplex submersible pump station. The proposed flow will then be conveyed via 4" force main to existing sanitary sewer manhole located in Iroquois Drive. The Tindy Run Sanitary Sewer Extension project will consist of the installation of approximately 14,500 linear feet of eight (8) inch diameter gravity sanitary sewer main, including collector and trunk sewer, along with manholes and associated appurtenances and the installation of six (6) inch diameter sanitary sewer laterals to the road right-of-way line to serve each of the existing properties along the proposed sanitary sewer alignment. The extension of the sanitary sewers in Marshwood Drive, Old State Road, Brookdale Road, Rosemont Lane, Whitford Drive and Fruit Farm Road will provide access to the public sanitary sewer system to one hundred seventeen (117) additional existing properties. The proposed Tindy Run Sanitary Sewer Extension project will encompass an area of approximately 160 acres with a disturbed area of approximately seven acres. General Permit GP-5 (Utility Line Stream Crossing) will be required for stream and wetland crossings. Wetland crossings have been avoided where feasible. No exceptional value wetlands were identified within the project area.

The Tindy Run Sanitary Sewer Extension project will extend the public sanitary sewer to serve up to an additional one hundred seventeen existing single-family residences located along the proposed route of the sanitary sewer extension. These one hundred seventeen existing residences are currently served by public water or on-lot wells and on-lot septic systems. Based on public inquiries regarding the availability of connection to the Township public sanitary sewer system it is anticipated the properties will connect to the sewer system in the next 5 years, therefore planning approval is being requested for one hundred seventeen EDU or 36,270 gallons per day based on 310 gallons per day/EDU.

The Township proposes to install the sewer mains and service laterals in the road prior to the Township completing road improvements.

The 2010 Census by the U.S. Census Bureau indicates the average household size in Upper Providence Township to be 2.77 persons. Based on this figure, the projected population served by this project would be 324 persons.

The Tindy Run Sanitary Sewer Extension project will connect into the existing Iroquois Drive Collection Sewers at an existing manhole. This connection will be completed by core drilling the existing manhole and inserting the sanitary sewer pipe with a link seal to provide a water tight connection. The proposed sanitary sewer project will not create any hydraulic overloads within five years on any existing collection or conveyance facilities that are part of the system. The existing collection sewer system is the Iroquois Drive Collection Sewer which has a peak design capacity of 0.55 MGD. The five-year peak projected flow for this collection sewer including the addition of the one hundred seventeen (117) homes is 0.26 MGD. The existing conveyance sewer system is the Schuylkill River Interceptor which discharges to the Lower Perkiomen Valley Regional Sewer Authority Oaks Wastewater Treatment Plant, both of which have adequate capacity.

Upon completion of the construction of the Tindy Run Sanitary Sewer Extension project, the existing residents will be able to connect to the public sanitary sewer system. Upper Providence Township will not require mandatory connections to new sanitary sewers by the existing residents provided their on-lot system is deemed to be functioning properly and not posing any danger to the health, safety and welfare of the public.

EXHIBITS

SFPM EXHIBIT – OVERALL SIE PLAN

TINDY RUN SANITARY SEWER PROJECT

UPPER PROVIDENCE TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

DATE 04/06/2020

SHEET NO. 1 OF XX

REV.	DESCRIPTION	DATE	BY

OWNER:
UPPER PROVIDENCE TOWNSHIP
1286 BLACK ROCK ROAD
PHOENIXVILLE, PA 19460

JOB NO.: 2018110431	TAX MAP PARCEL NO.: 1
MUNICIPAL FILE NO.:	

SCALE: 50 0 150 300 FEET

DATE:	SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
04/06/2020	1" = 50'	CRE H	CRE H	MKD

G&A

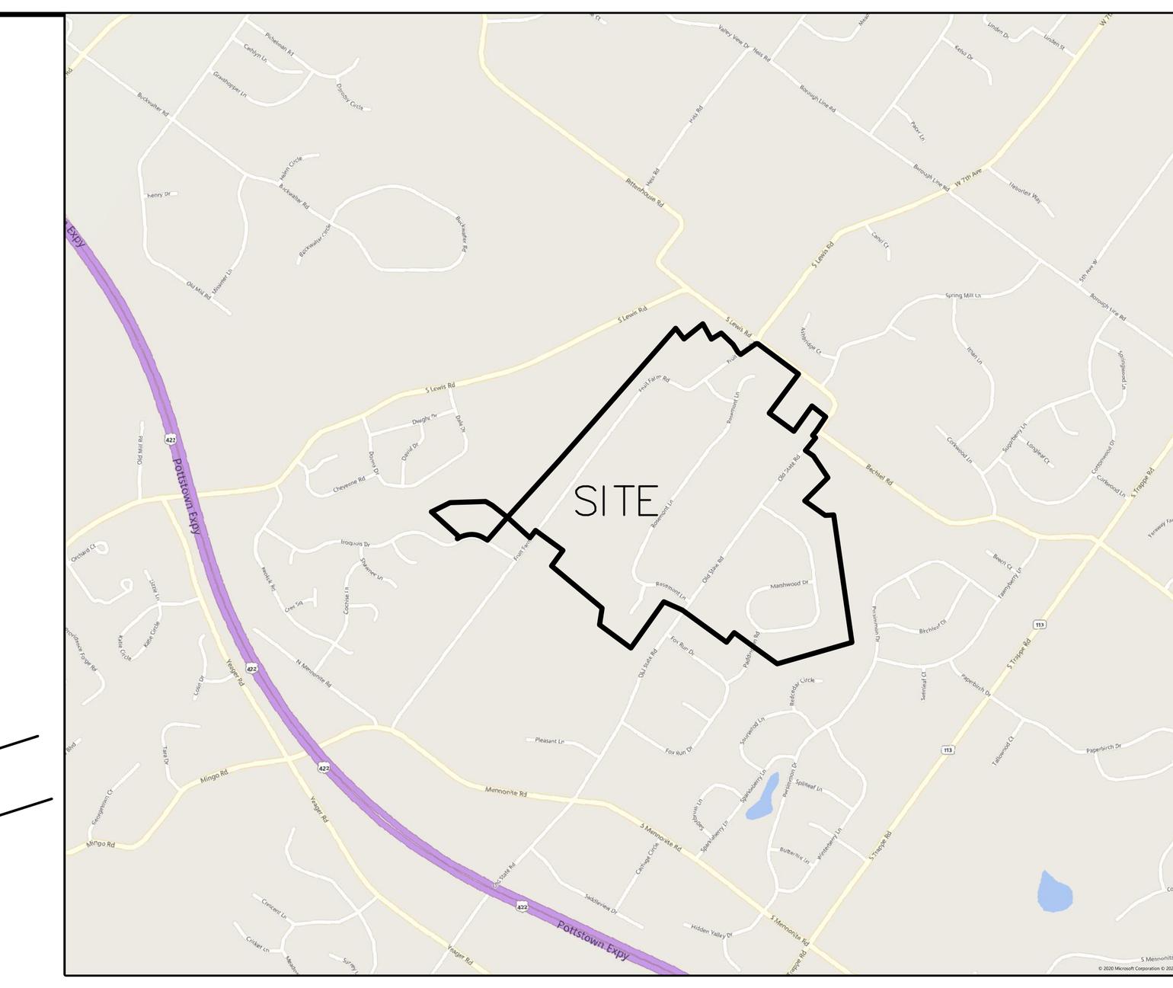
GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

NOT APPROVED FOR CONSTRUCTION

Tindey Run - Public Sanitary Sewer Concept Plan
September, 2019

Estimated Trunk Sewer Pipe Length = 3,400 LF
Estimated Collection Sewer Pipe Length = 12,200 LF
Estimated Number of Manholes = 50
Additional Homes Served = 117

Estimated Construction Cost = $6.5 Million



LOCATION MAP

2000 | 00 | 2000 | 4000
SCALE | IN | FEET

SCALE: 1"=2000'

GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

184 WEST MAIN STREET, SUITE 300, TRAPPE, PA 19426 • (610) 489-4949 • www.gilmore-assoc.com

NOT APPROVED FOR CONSTRUCTION

JOB NO.: 201811043T	TAX MAP PARCEL NO.: .
MUNICIPAL FILE NO.: .	
SCALE: 150 0 150 300 IN FEET	
DESIGNED BY: CRE III	DRAWN BY: CRE III
CHECKED BY: WKD	

OWNER:
UPPER PROVIDENCE TOWNSHIP
1286 BLACK FROCK ROAD
PHOENIXVILLE, PA 19460
610 933 9179

TOTAL AREA:	TOTAL LOTS:
----	117
DATE: 04/06/2020	SCALE: 1"=150'

EXHIBITS

SFPM EXHIBIT – OVERALL SITE PLAN

TINDY RUN SANITARY SEWER PROJECT

UPPER PROVIDENCE TOWNSHIP, MONTGOMERY COUNTY, PENNSYLVANIA

REV.	DESCRIPTION	DATE	BY
1	Update Exhibit	06/09/20	CRE, III

SHEET NO.:
1 OF 1

PENNSYLVANIA ONE CALL SYSTEM, INC.

925 Irwin Run Road
West Mifflin, Pennsylvania
15122 – 1078

BEFORE YOU DIG ANYWHERE IN PENNSYLVANIA! CALL 1–800–242–1776

NON–MEMBERS MUST BE CONTACTED DIRECTLY

PA LAW REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL, BLAST OR DEMOLISH

DATE: 06/09/2020

N:\Trappe C3D Projects\2018\1811043T Tindy Run\DESIGN\CAD\Production Drawings\1811043 SFPM Exhibit.dwg Layout: Overall Site Plan Plotted By: cenglish, on Tue Jun 09, 2020 at 4:24pm