
EXHIBIT P9

EDGMONT BOROUGH ACT 537 PLAN

FEB 04 '14

EDGMONT TOWNSHIP

DELAWARE COUNTY

1000 Gradyville Road
Gradyville, PA 19039

**COMPONENT 3m MINOR ACT 537 PLAN
UPDATE REVISION**

JANUARY 2014

Prepared by:

Bradford Engineering Associates, Inc.

2710 Concord Road, Suite 3
Aston, PA 19014
610.497.6200
610.500.5677 fax
info@bea-inc.com



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**

DEP - RECEIVED
SOUTHEAST REGION

FEB 04 '14

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

CRUM CREEK SEWER DISTRICT.

2. Brief Project Description

SANITARY SEWER PROJECT FOR THE CRUM CREEK WATERSHED SECTION OF THE TOWNSHIP.

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

Municipality Name	County	City	Boro	Twp
EDGMONT TOWNSHIP	DELAWARE	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Municipality Contact - Last Name	First Name	MI	Suffix	Title
Ronald	GRAVINA			Supervisor, Chairman
Additional Individual - Last Name	First Name	MI	Suffix	Title
Reiner	Samantha			Manager
Municipality Mailing Address Line 1	Mailing Address Line 2			
1000 Gradyville Rd				
Address Last Line - City	State	ZIP+4		
Gradyville	PA	19039		
Phone + Ext.	FAX (optional)	Email (optional)		
610 459-1662	610 459-3760			

C. SITE INFORMATION (See Section C of instructions)

Site Name

Crum Creek Sewer Project

Site Location Line 1

Western West Chester Pike

Site Location Line 2

Castle Rock

Site Location Last Line - City

State

ZIP+4

Latitude

Longitude

Newtown Square

PA

19073

39deg 58' 21"

75deg 26' 54"

Detailed Written Directions to Site

A. INTERSECTION OF WEST CHESTER PIKE AND PROVIDENCE ROAD WEST TO TWP. LINE. B. CASTLE ROCK IS LOCATED SOUTH OF WEST CHESTER PIKE AT CRUM CREEK.

Description of Site

PROVIDE PUBLIC SEWER SERVICE TO NORTH EAST SECTION OF THE TOWNSHIP. THIS UPDATE REVISION IS FOR IMPLEMENTATING SERVICE OPTIONS DIFFERING FROM THE CURRENT ACT 537 PLAN.

Site Contact - Last Name

First Name

MI

Suffix

Phone

Ext.

SAME

Site Contact Title

Site Contact Firm (if none, leave blank)

FAX

Email

Mailing Address Line 1

Mailing Address Line 2

Mailing Address Last Line - City

State

ZIP+4

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

Last Name

First Name

MI

Suffix

FAZLER

WALTER

A

Title

Consulting Firm Name

PRESIDENT

BRADFORD ENGINEERING ASSOCIATES, INC.

Mailing Address Line 1

2710 CONCORD ROAD

Mailing Address Line 2

SUITE 3

Address Last Line - City

State

ZIP+4

Country

ASTON

PA

19014

USA

Email

Phone

Ext.

FAX

WFAZLER@BEA-INC.COM 610-497-6200

111

610-500-5677

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: _____

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 _____

Clean Streams Law Permit Number _____

b. Name of interceptor _____

Clean Streams Law Permit Number _____

2. WASTEWATER TREATMENT FACILITY

Provide requested information concerning the existing treatment facility.

Name of existing facility _____

NPDES Permit Number for existing facility _____

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. | h. Existing and proposed streets, roadways, access roads, etc. |
| b. Lot lines and lot sizes. | i. Any designated recreational or open space area |
| c. Adjacent lots. | j. Wetlands - from National Wetland Inventory Mapping and USGS Hydric Soils Mapping. |
| d. Existing and proposed sewerage facilities. | k. Flood plains or Floodprone area soils, floodways, watercourses, water bodies (from Federal Flood Insurance Mapping) |
| e. Show tap-in or sewer extension to the point of connection to existing collection system. | l. Prime Agricultural Land. |
| f. Existing and proposed water supplies and surface water (wells, springs, ponds, streams, etc.) | m. Any other facilities (pipelines, power lines, etc.) |
| g. Existing and proposed rights-of-way. | 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 _____

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 _____ gpd **NO CHANGE IN FLOW FROM ORIGINAL PLAN**

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	NO CHANGE IN FLOW FROM ORIGINAL PLAN					
Conveyance						
Treatment						

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 _____

Name of Responsible Agent _____

Agent Signature _____

Date _____

d. Conveyance System

Name of Agency, Authority, Municipality _____

Name of Responsible Agent _____

Agent Signature _____

Date _____

K. CHAPTER 94 CONSISTENCY DETERMINATION (continued)

4. Treatment Facility NO CHANGE IN FLOW FROM ORIGINAL PLAN

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 _____

Name of Responsible Agent _____

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)	NO SUBSTANTIAL CHANGE IN COST TO USER
COST	
Construction cost	\$
Administrative, legal, engineering cost	\$
Total project cost	\$
Annual O/M cost	\$
FUNDING	
Tap-in fees (\$ per EDU X no. EDUs)	\$
Proceeds from primary funding source	\$
Proceeds from other funding sources	\$
USER COSTS	
Initial user base	EDUs
Monthly debt service per EDU	\$
Monthly O/M cost per EDU	\$
Total estimated monthly user cost per EDU	\$

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 **NO CHANGE IN SCHEDULE FROM ORIGINAL PLAN**

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.

**EDGMONT TOWNSHIP
DELAWARE COUNTY, PENNSYLVANIA**

RESOLUTION NO. 2014-11

**RESOLUTION OF THE BOARD OF SUPERVISORS OF EDGMONT TOWNSHIP,
DELAWARE COUNTY, PENNSYLVANIA, AMENDING THE TOWNSHIP'S OFFICIAL
SEWAGE FACILITIES PLAN (ACT 537 PLAN) FOR DISTRICT C1 AND DISTRICT D IN THE
CRUM CREEK SEWER DISTRICT.**

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 Department of Environmental Protection ("Department") adopted there under, Chapter 71 of Title 25 of the **Pennsylvania Code**, requires Edgmont Township (the "Township") to adopt an Official Sewage Facilities Plan ("Act 537 Plan") providing for sewage services adequate to prevent contamination of waters and/or environmental health hazards with sewage wastes, and to revise said plan whenever it is necessary to meet the sewage disposal needs of the municipality; and

WHEREAS, the Township, has heretofore adopted an Act 537 Plan for properties located within the municipal boundaries of the Township; and

WHEREAS, Bradford Engineering Associates, Inc. has prepared a Minor Act 537 Plan Revision (the "Minor Act 537 Plan Revision") which proposes to amend the Act 537 Plan to: (a) adopt and implement the alternative of choice to change from conventional gravity sewer to low pressure sewer in District C1; and (b) adopt and implement the alternative of choice to change from low pressure sewer to conventional gravity sewers in District D of the Crum Creek Sewer District; and

WHEREAS, the Minor Act 537 Plan Revision will not alter the implementation activities/dates from those in the approved Act 537 Plan 2010 Special Study; and

WHEREAS, the Township finds that the Minor Act 537 Plan Revision conforms to applicable zoning, subdivision, other Township ordinances and plans and to a comprehensive program of pollution control and water quality management.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors of the Township of Edgmont hereby adopts and submits to the Department for its approval as a revision to the Act 537 Plan, the above referenced Minor Act 537 Plan Revision; and be it further

RESOLVED, the Township 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).



TOWNSHIP OF EDMONT

1000 Gradyville Road

PO Box 267

Gradyville, Pennsylvania 19039

610-459-1662 phone 610-459-3760 fax

January 23, 2014

PA Department of Environmental Protection
Division of Planning and Permits
RCSOB - 11th Floor
P.O. Box 8774
Harrisburg, PA 17105


**Re: Act 537 2010 Special Study
Minor Act 537 Plan Revision 2014
Edgmont Township, Delaware County**

To Whom It May Concern,

Per the requirements of the Minor Act 537 Plan Revision application, a 30-day public comment period was advertised by the Township. During that time, there were no public comments received by the Edgmont Township Planning Commission relative to the above reference matter.

If you require anything further please feel free to contact the Township office at (610) 459-1662. Thank you.

Very truly yours,



Elmer "Chip" Miller III
Edgmont Township Planning Commission
Chairman

EDGMONT TOWNSHIP
2013 MINOR ACT 537 PLAN UPDATE REVISION
ATTACHMENTS TO COMPONENT 3m

SECTION F - PROJECT NARRATIVE

BACKGROUND

Edgmont Township is a township of the second class located in the north central portion of Delaware County Pennsylvania. Total area is approximately 9.7 square miles. Its northern boundary is on the Delaware County-Chester County line where it lies adjacent to Westtown and Willistown Townships, Chester County. In Delaware County it is bordered by Thornbury Township on the west, Middletown Township on the south, and Upper Providence Township on the southeast. On the east, the Township is bordered by Crum Creek, the Springton Reservoir, and Newtown Township.

The Crum Creek Sewer District was the focus of a 2010 Special Study. It is located in the northeast section of the Township. Broadly described, the District is bounded to the north by Chester County, to the east by Newtown Township, to the South by Upper Providence Township and to the west by the Ridley Creek State Park.

The 2010 Special Study revised and updated the 2007 Act 537 Plan and provided for the adoption of the following items:

Alternate 2. All of Service District C and District F (West Chester Pike corridor West) will be formally included in the Crum Creek District.

Conveyance of wastewater to the CDCA system will be implemented via adoption of **Alternates 1D and 1G**. These alternates provide for an internal collection system comprised of conventional gravity collection system, low-pressure system and pump station and force mains for Districts A-E. These districts will convey the flow to a regional pump station to be constructed by Edgmont on the West side of the Geist reservoir. The main pump station would discharge to the CDCA system via a route through Newtown Township along Gradyville Road. Please refer to the 2010 Special Study for further details.

Edgmont Township is in the process of implementing 2007 Plan and the 2010 Special Study for the Crum Creek Watershed. During the course of completing the final design tasks, it was determined that certain areas of the project would be better served by an alternative method of sewage disposal. The general scope of the previous 2 plans has not changed; that is to provide public sewer to the Crum Creek Watershed. Only the method of providing sewage disposal will be changed or modified.

SCOPE

The scope of this Minor Update Revision is to formally revise the service methods to two specific parts of the project. The first area includes Western West Chester Pike from the intersection of Providence Road to the western Township Line. The second area is the Castle Rock residential section located just south of West Chester Pike at Crum Creek.

PROPOSED SERVICE TYPE MODIFICATIONS

1. Western West Chester Pike (Route 3) also known as District C1 - This section consists mainly of commercial establishments located on both sides of West Chester Pike. There are approximately 105 EDUS which will generate 27,500 gpd of sewage. The proposed type of sewer service will be changed from conventional gravity sewers with a pump station to low pressure (LP) sewers with individual grinder pumps. Cost analysis of the two options indicated that the LP will be significantly cheaper in both initial capital costs and annual O & M expenses.
2. Castle Rock also known as District D - Castle Rock is a residential section located just south of West Chester Pike at Crum Creek. There are 65 EDUS which will generate approximately 17,000 gpd of sewage. The area was originally designated for low pressure (LP) sewers with individual grinder pumps due to assumed presence of rock. Test borings conducted for the design stage of the project indicated that the anticipated rock excavation is not as severe as initially assumed. Estimated project costs indicate that a conventional gravity sewer system can be installed economically and the stated consensus of area residents is that they would prefer the conventional gravity sewer system.

A copy of the 2007 Act 537 Plan along with a Plan detailing the Minor Act 537 Plan revision are attached to this Plan. Additionally, a capital cost comparison is attached. Since the resulting capital costs are lower, the overall user costs will be reduced as a result of this Minor Update Revision

PLAN OF CHOICE

Based on the above considerations the Township Act 537 Plan will be updated to provide for the proposed revisions to the sewer service as noted above.

SECTIONS G THROUGH Q

The sections noted above are all addressed in the latest Township Act 537 Plan and Special Studies for the Crum Creek Project. The information contained therein is up to date and will not be duplicated here. The current Plan is included as part of this update by reference.

DELCORA - Edgmont Township Crum Creek Project

Castle Rock

Castle Rock - Gravity Option

Item No.	Description	Quantity	Unit	Unit Price	Total Price
1	8" PVC Sewer (0'-8')	3203	lf	\$ 85.00	\$272,255.00
2	8" PVC Sewer (8'-10')	137	lf	\$ 91.90	\$12,590.30
3	4" & 6" Wyes	48	ea	\$ 107.34	\$5,152.32
4	4" Laterals	960	lf	\$ 75.00	\$72,000.00
5	4" Terminal Cleanout	48	ea	\$ 130.30	\$6,254.40
6	Manholes (0'-8')	20	ea	\$ 3,500.00	\$70,000.00
7	Manhole Drop	29.8	vf	\$ 375.00	\$11,175.00
8	Type II Bedding	4320	lf	\$ 7.46	\$32,227.20
9	Select Backfill	950	ton	\$ 20.00	\$19,000.00
10	Lawn Restoration	696	lf	\$ 8.61	\$5,992.56
11	Twp Rd Rest (main)	3360	lf	\$ 40.75	\$136,920.00
12	Twp Rd Rest (Lateral)	240	lf	\$ 43.05	\$10,332.00
13	LP Tee & House Connections	10	ea	\$ 2,500.00	\$25,000.00
14	Flushing Station	1	ea	\$ 4,250.00	\$4,250.00
15	2" HDPE	540	lf	\$ 55.00	\$29,700.00
16	1.25" HDPE Lateral	200	lf	\$ 50.00	\$10,000.00
17	Grinder Pumps	10	ea	\$ 5,200.00	\$52,000.00
Total Construction					\$774,848.78
Construction Supervision					\$38,742.44
10% Contingency					\$77,484.88
Right of Way Acquisition					\$0.00
Total Project Cost					\$891,076.10

Castle Rock - Low Pressure Option

Item No.	Description	Quantity	Unit	Unit Price	Total Price
1	2" HDPE	3855	lf	\$ 55.00	\$212,025.00
2	1.25" HDPE Lateral	1160	lf	\$ 50.00	\$58,000.00
3	Tee And Lp Conn.	65	ea	\$ 2,500.00	\$162,500.00
4	Endline Flushing Station	4	lf	\$ 4,250.00	\$17,000.00
5	Drill Pits	8	ea	\$500.00	\$4,000.00
6	Air Relief Valve	1	vf	\$4,500.00	\$4,500.00
7	Type II Bedding	160	lf	\$ 7.46	\$1,193.60
8	Select Backfill	40	ton	\$ 20.00	\$800.00
9	Lawn Restoration	80	lf	\$ 8.61	\$688.80
10	Twp Rd Rest.	80	lf	\$ 40.75	\$3,260.00
Total Construction					\$463,967.40
Construction Supervision					\$46,396.74
10% Contingency					\$46,396.74
Grinder Pump Unit					\$338,000.00
Right of Way Acquisition					\$0.00
Total Project Cost					\$894,760.88



DELAWARE COUNTY TIMES
P.O. BOX 347
PRIMOS, PA 19018

Address Service Requested

CLASSIFIED ADVERTISING INVOICE

ACCOUNT INFORMATION

PHONE NO: 610-497-6200
ACCOUNT NO: 893-0659874
DATE: 12/23/2013
TERMS: PAYABLE ON RECEIPT

CLE

Page 1 of 1

CUSTOMER NAME AND ADDRESS:

BRADFORD ENGINEERING
2710 CONCORD RD. SUITE 3
ASTON, PA 19014

FIRST NOTICE

INVOICE NO.	REP	CLASS	DESCRIPTION	DOCKET / PO NUMBER	START DATE	STOP DATE	TIMES	LINES	AMOUNT
00421530	MTW	086	NOTICETHE BOARD OF SUPERV 2931837, MTW, WALTER FAZLER EMAIL DCT DCW BRADFORD ENGINEERING	special study	12/23/13	12/23/13	02	59.00	208.36
									TOTAL
									\$208.36

*** THANK YOU FOR YOUR PROMPT PAYMENT ***

BILLING INQUIRIES 877-573-0236 MON-FRI 8:30 AM - 5PM
CLASSIFIED ADVERTISING 610-622-8800 MON-FRI 8:30 AM - 5PM
DISPLAY ADVERTISING 610-622-8865 MON-FRI 9:00 AM - 5PM
SUBSCRIPTIONS 888-799-6299 MON-FRI 6:00 AM - 5PM SAT/SUN 6-12:00PM
WEB SITE DELCOTIMES.COM

TOTAL AMOUNT INCLUDES SURCHARGE OF \$8.00 PER PROOF.

Detach and return this portion with your payment.

FIRST NOTICE

Please do NOT include correspondence
or write on this remittance form.

PHONE NO: 610-497-6200
ACCOUNT NO: 893-0659874
ACCOUNT NAME: BRADFORD ENGINEERING

AMOUNT PAID: \$
CHECK #

CLE



DELAWARE COUNTY TIMES
P.O. BOX 347
PRIMOS, PA 19018

MAIL PROMPTLY TO:

DELAWARE COUNTY DAILY TIMES
P.O. BOX 1877
ALBANY, NY 12201-1877

893000CLE000000659874000000659874000000421530000020636000020636122320134

Proof of Publication of Notice in Delaware County Daily Times

Under Newspaper Advertising Act, No. 587, Approved May 16, 1929

State of Pennsylvania,
County of Delaware,

}

ss.

Legal Notices -

Notice

The Board of Supervisors of Edgmont Township, Delaware County is considering adopting the 2013 Special Study, which is an updated revision to the Township's Sewage Facilities (ACT 537) Plan. The Township is accepting comments on the Plan for a period of thirty (30) days beginning December 23, 2013.

The plan of choice will remain unchanged as outlined in the original Act 537 Plan; that is to provide public sewers to the Crum Creek Section of Edgmont Township. This Special Study will document the changes to the method of sewage disposal in two sections of the Crum Creek District only.

Specifically, the 2013 Special Study addresses the following two items:

1. West Chester Pike - The current method of sewage disposal for the properties on West Chester Pike, west of Providence Road is a gravity collection system and a sewage pump station. The proposed method of sewage disposal for these properties is a low-pressure sewer system with individual grinder pumps.
2. Castle Rock - The current method of sewage disposal for the Castle Rock section of the Township is a low-pressure sewer system with individual grinder pumps. The proposed method of sewage disposal is a gravity sewer system.

The Act 537 Plan can be reviewed in its entirety at the Edgmont Township Municipal Building, 1000 Gradyville Road between the hours of 8:30 AM and 4:30 PM. Comments will be accepted at the Township Building during the thirty (30) day public review period.

Samantha Reiner,
Township Manager

LYNN D. BETTCHER

designated agent of CENTRAL STATES PUBLISHING, INC.,

being duly sworn, deposes and says that the DELAWARE COUNTY DAILY TIMES, a daily newspaper of general circulation as defined in the above-mentioned Act, published at Primus, Delaware County, Pennsylvania, was established September 7, 1876, and issued and published continuously thereafter for a period of 100 years and for a period of more than six months immediately prior hereto, (under the name Chester Times prior to November 2, 1959) in the City of Chester, County of Delaware and further says that the printed notice or publication attached hereto is an exact copy of a notice or publication printed and published in the regular edition and issues of the DELAWARE COUNTY DAILY TIMES on the following dates,

viz.,

December

23,

A.D. 20 13

and that said advertising was inserted in all respects as ordered.

Affiant further deposes that he is the proper person duly authorized by CENTRAL STATES PUBLISHING, INC. publisher of said DELAWARE COUNTY DAILY TIMES, a newspaper of general circulation, to verify the foregoing statement under oath and that affiant is not interested in the subject matter of the aforesaid notice or advertisement, and that all allegations in the foregoing statements as to time, place and character of publication are true.



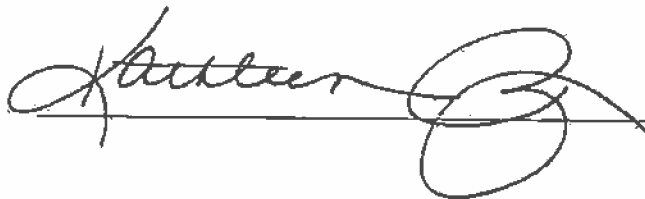
Sworn to and subscribed before me this

23rd

day of

December

20 13



Notary Public

COMMONWEALTH OF PENNSYLVANIA

Notarial Seal

Kathleen Ragni, Notary Public
Upper Darby Twp., Delaware County
My Commission Expires March 2, 2015

MEMBER PENNSYLVANIA ASSOCIATION OF NOTARIES



TOWNSHIP OF EDGMONT

1000 Gradyville Road

PO Box 267

Gradyville, Pennsylvania 19039

610-459-1662 phone 610-459-3760 fax

January 23, 2014

PA Department of Environmental Protection
Division of Planning and Permits
RC50B - 11th Floor
P.O. Box 8774
Harrisburg, PA 17105

**Re: Act 537 2010 Special Study
Minor Act 537 Plan Revision 2014
Edgmont Township, Delaware County**

To Whom It May Concern,

Per the requirements of the Minor Act 537 Plan Revision application, a 30-day public comment period was advertised by the Township. During that time, there were no public comments received by the Edgmont Township Planning Commission relative to the above reference matter.

If you require anything further please feel free to contact the Township office at (610) 459-1662. Thank you.

Very truly yours,

Elmer "Chip" Miller III
Edgmont Township Planning Commission
Chairman



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

SOUTHEAST REGIONAL OFFICE

MAR 26 2014

Ms. Samantha Reiner, Manager
Edgmont Township
1000 Gradyville Road
P.O. Box 67
Gradyville, PA 19039

Re: Component 3m, Minor Act 537 Plan Update Revision
Edgmont Township, Delaware County
APS ID.500868, AUTH ID 1012836
Status: ISSUED

Dear Ms. Reiner:

We have completed our review of the Component 3m, Minor Act 537 Plan Update Revision ("January 2014 revision"), for Edgmont Township ("Township"), Delaware County, as prepared by Bradford Engineering Associates, Inc., dated January 2014. The review was conducted in accordance with the provisions of the Pennsylvania Sewage Facilities Act.

The January 2014 revision proposes to change the sewage facilities previously approved for Districts C1 and D as part of the Township's August 2010 Act 537 Plan submission ("2010 Plan"). The 2010 Plan, which the Department of Environmental Protection ("DEP") approved on July 19, 2011, proposed a gravity sewer system and pump station to serve District C1. The 2010 plan proposed individual grinder pumps and a low-pressure sewer system to serve District D.

Per the January 2014 revision, District C1 will now be served by individual grinder pump stations and a low-pressure sewer system. The pumping station previously proposed to serve District C1 is no longer required. District D will be served by a gravity sewer system.

The proposed revisions, as described above, are hereby approved. This approval amends DEP's July 19, 2011, approval with respect to Districts C1 and D, only. Please be advised, as a result of the above-referenced changes, either the Township or the Delaware County Regional Water Quality Control Authority must obtain a Clean Streams Law permit from DEP for the construction and operation of the proposed low-pressure sewer system.

Operation and maintenance requirements for the grinder pump stations proposed to serve District C1 will be provided through individual agreements or through a Township ordinance. DEP requests that the final, signed agreements and/or executed ordinance be submitted with the Water Quality Management permit application.

All other elements of the 2010 Plan, including the District C1 and D service areas, are not subject to amendment or revision and remain unchanged.

MAR 26 2014

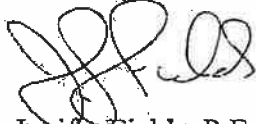
Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717.787.3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800.654.5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at 717.787.3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE; HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717.787.3483) FOR MORE INFORMATION.

If you have any questions, please contact Ms. Kelly A. Sweeney of this office at the phone number located in the first page footer.

Sincerely,



Jenifer Fields, P.E.
Regional Manager
Clean Water

cc: Delaware County Planning Department
Mr. Fazler – Bradford Engineering Associates, Inc.
Mr. Salvucci – DELCORA
Mr. Dudley
Ms. Sweeney
Ms. Maisey
Mr. McHale - RCSOB, 11th Floor, Sewage Facilities
Planning Section
Re 30 (GJE14CLW)072-3



TOWNSHIP OF EDMONT

1000 Gradyville Road
PO Box 267
Gradyville, Pennsylvania 19039
610-459-1662 phone 610-459-3760 fax

DEP - RECEIVED
SOUTHEAST REGION
MAR 07 '14

March 6, 2014

Ms. Kelly A. Sweeney
Sewage Planning Specialist 2
Clean Water
DEP - Southeast Regional Office
2 East Main Street
Norristown, Pennsylvania 19401-4915

Re: Edgmont Township Delaware County
Minor Act 537 Update Revision
Crum Creek Sewer District
APS ID 500868, SITE ID 1012836

Dear Ms. Sweeney:

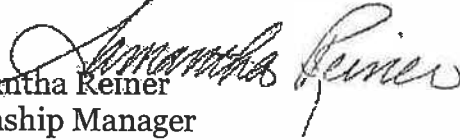
This is in reply to your correspondence of February 10, 2014. I will attempt to respond and supply information relative to your comments following your numbering scheme:

1. Confirmed.
 - a. Each property will be severed with its own grinder pump.
 - b. Lot or property owners will be the responsible party for each individual or common grinder pump.
 - c. We are in receipt of a draft ordinance from you. The Township is planning to make the provisions in this draft part of an overall Duty to Connect Ordinance (now in draft form). The Township is planning to adopt this Ordinance in the next 90 days. We ask that the Department approve this plan with adoption of the Ordinance made part of the implementation schedule.
2. We agree; enclosed you will find an amended implementation schedule, similar to that which we have been providing the public via our website and public informational monthly meetings.
3. An original, signed and sealed Resolution of Adoption of the Minor Act 537 Updated Revision is enclosed.

Kindly continue to process the original application. If you have any further questions or require any additional confirmation or information, please do not hesitate to contact me. Thank you.

Very truly yours,

Samantha Reiner
Township Manager

A handwritten signature in cursive script, appearing to read "Samantha Reiner", written in dark ink.

Enclosures



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

SOUTHEAST REGIONAL OFFICE

SEP 09 2014

Ms. Samantha Reiner, Manager
Edgmont Township
1000 Gradyville Road
P.O. Box 67
Gradyville, PA 19039

Re: Component 3m, Minor Act 537 Plan Update Revision
Edgmont Township, Delaware County
APS ID 500868, AUTH ID 1039853
Status: ISSUED

Dear Ms. Reiner:

We have completed our review of the Component 3m, Minor Act 537 Plan Update Revision ("July 2014 revision"), for Edgmont Township ("Township"), Delaware County, as prepared by Bradford Engineering Associates, Inc., dated July 2014. The review was conducted in accordance with the provisions of the Pennsylvania Sewage Facilities Act.

The July 2014 revision proposes to change the sewage facilities previously approved for the Mallard Way and Knights Way areas in District E and a portion of South Providence Road in District B as part of the Township's August 2010 Act 537 Plan submission ("2010 Plan"). These areas are shown on the figure entitled *Crum Creek Sewer District, Minor Act 537 Plan Revision, July 2014*. The 2010 Plan, which the Department of Environmental Protection ("DEP") approved on July 19, 2011, proposed that the Mallard Way, Knights Way and South Providence Road areas be served by a gravity sewer system.

Per the July 2014 revision, the Mallard Way, Knights Way and South Providence Road areas will now be served by individual grinder pump stations and a low-pressure sewer system.

The proposed revisions, as described above, are hereby approved. This approval amends DEP's July 19, 2011, approval (as previously amended on March 26, 2014) with respect to the Mallard Way, Knights Way, and South Providence Road areas only. Please be advised, as a result of the above-referenced changes, either the Township or the Delaware County Regional Water Quality Control Authority must obtain a Clean Streams Law permit from the DEP for the construction and operation of the proposed low-pressure sewer system.

Operation and maintenance requirements for the grinder pump stations proposed to serve these areas will be provided through individual agreements or through a Township ordinance. DEP requests that the final, signed agreements and/or executed ordinance be submitted with the Water Quality Management permit application.

SEP 09 2014

All other elements of the 2010 Plan (as amended by the January 2014 submission) are not subject to amendment or revision and remain unchanged.

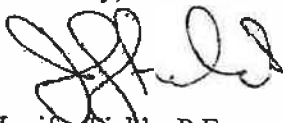
Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717.787.3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800.654.5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at 717.787.3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717.787.3483) FOR MORE INFORMATION.

If you have any questions, please contact Ms. Kelly A. Sweeney of this office.

Sincerely,



Jenifer Fields, P.E.
Regional Manager
Clean Water

cc: Delaware County Planning Department
Mr. Fazler - Bradford Engineering Associates, Inc.
Mr. Salvucci - DELCORA
Mr. Dudley
Ms. Sweeney
Ms. Maisey
Mr. McHale - RCSOB, 11th Floor, Sewage Facilities
Planning Section
Re 30(GJE14CLW)247-5

Project Name

Municipality

POS Pulled?

Entered in database?

Crum Creek Sewer District
Edgmont Twp.

Date Received

Admin Review Due

8.20.14

9.4.14

incomplete

complete

Date of Incom Letter

Date Response Due

Resubmission Date

Admin 2 Review Due

Date of Review

Date of Complete Letter

incomplete (retn)

complete

CLOCK STARTS

Date Soils Review Due

Date Hydro Review Due

Tech Review Due 120

deficient

approve

Date of Tech Letter

Response to Tech Due

Date of Response

Tech 2 Review Due

approve

deny

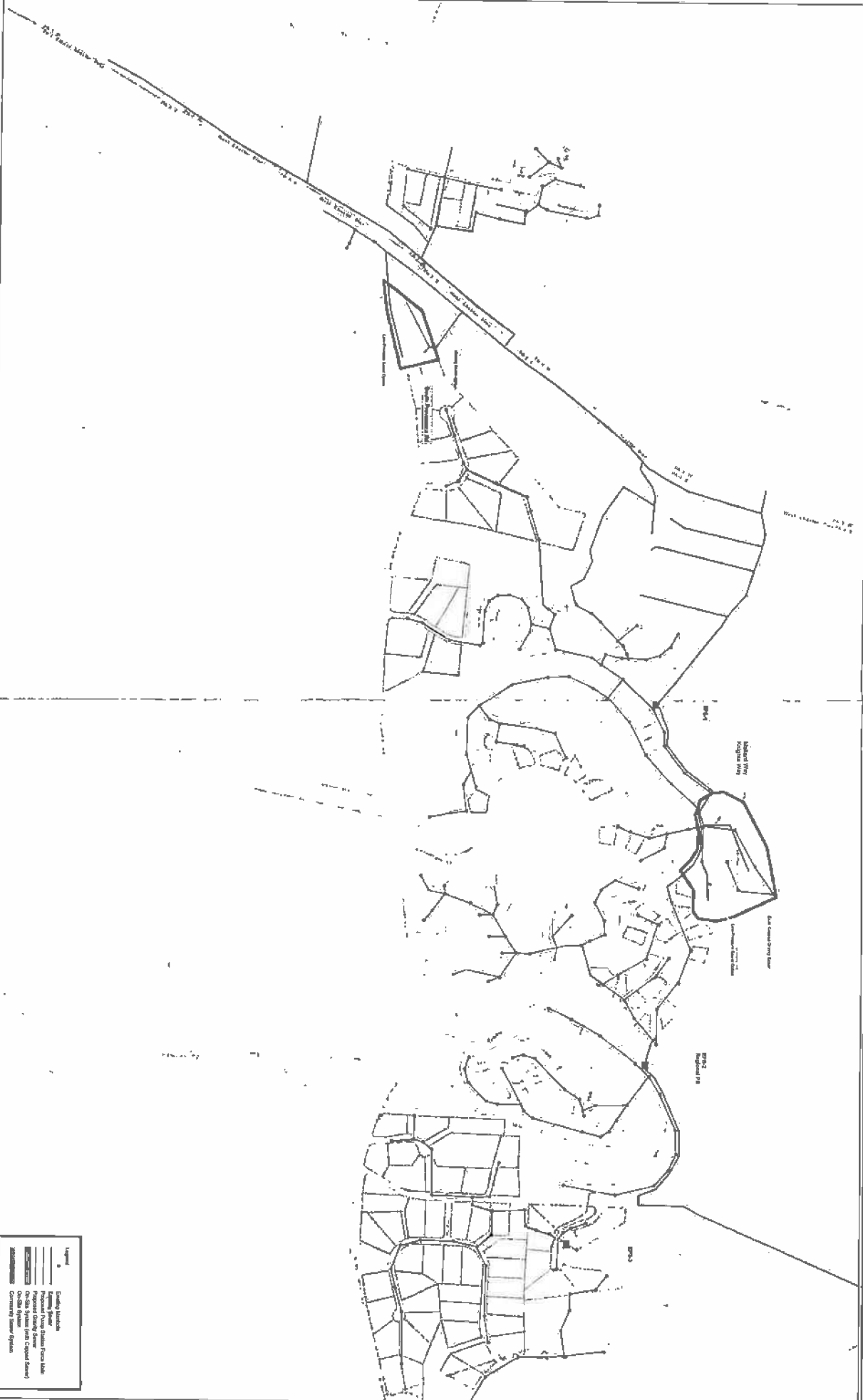
FINAL ACTION: 180 days

Edgemont Township, Delaware County
 1000 Locust Street
 Philadelphia, PA 19103

Crum Creek Sewer District
 Minor A-6337 Plan Revision
 July 2014

Bradford Engineering Associates, Inc.
 2718 Concord Road, Suite 3
 Aston, Pa 19014
 (610) 497-6300

Legend	
Existing Sewer	—
Proposed Pump Station Pits (44in)	—
Proposed Gravity Sewer	—
Existing Gravity Sewer	—
Proposed Storm System	—





TOWNSHIP OF EDGMONT

1000 Gradyville Road

PO Box 267

Gradyville, Pennsylvania 19039

610-459-1662 phone 610-459-3760 fax

SERO
RECEIVED
AUG 20 2014

August 19, 2014

Kelly A. Sweeney
Water Management
Penna. Dept. of Environmental Protection
Southeast Regional Office
2 East Main Street
Norristown, PA 19401-4915

Re: Act 537 Plan Update
Edgmont Township Delaware County
APS ID 500868
AUTH ID 859999

Dear Ms. Sweeney:

Enclosed please find a Component 3M Minor Act 537 Plan Update Revision, in duplicate, for your review. This component amends the Act 537 Plan approval issued on July 19, 2011.

Kindly process this application at your earliest convenience, as it applies to an imminent project with applicable state grand funding.

If you require any additional information or have any questions concerning this material, please do not hesitate to contact me.

Very truly yours,

Samantha Reiner, Manager
Edgmont Township

enclosure

EDGMONT TOWNSHIP

DELAWARE COUNTY

1000 Gradyville Road
Gradyville, PA 19039

**COMPONENT 3m MINOR ACT 537 PLAN
UPDATE REVISION**

July 2014

Prepared by:

Bradford Engineering Associates, Inc.
2710 Concord Road, Suite 3
Aston, PA 19014
610.497.6200
610.500.5677 fax
info@bea-inc.com



**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

CRUM CREEK SEWER DISTRICT.

2. Brief Project Description

SANITARY SEWER PROJECT FOR THE CRUM CREEK WATERSHED SECTION OF THE TOWNSHIP.

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

Municipality Name	County	City	Boro	Twp
EDGMONT TOWNSHIP	DELAWARE	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Municipality Contact - Last Name	First Name	MI	Suffix	Title
Ronald	Gravina			Supervisor, Chairman
Additional Individual - Last Name	First Name	MI	Suffix	Title
Reiner	Samantha			Manager
Municipality Mailing Address Line 1	Mailing Address Line 2			
1000 Gradyville Rd				
Address Last Line - City	State	ZIP+4		
Gradyville	PA	19039		
Phone + Ext.	FAX (optional)	Email (optional)		
610 459-1662	610 459-3760			

C. SITE INFORMATION (See Section C of instructions)

Site Name

Crum Creek Sewer Project

Site Location Line 1

Western West Chester Pike

Site Location Line 2

Castle Rock

Site Location Last Line - City

State

ZIP+4

Latitude

Longitude

Newtown Square

PA

19073

39deg 58' 21"

75deg 26' 54"

Detailed Written Directions to Site

A. INTERSECTION OF WEST CHESTER PIKE AND PROVIDENCE ROAD SOUTH 500 FEET ALONG PROVIDENCE ROAD, B. TRAVEL SOUTH ON PROVIDENCE ROAD TO CANTER DRIVE. TURN LEFT ON CHARTER OAK AND GO 0.5 MILES TO SITE.

Description of Site

PROVIDE PUBLIC SEWER SERVICE TO NORTH EAST SECTION OF THE TOWNSHIP. THIS UPDATE REVISION IS FOR IMPLEMENTATING SERVICE OPTIONS DIFFERING FROM THE CURRENT ACT 537 PLAN.

Site Contact - Last Name

First Name

MI

Suffix

Phone

Ext.

SAME

Site Contact Title

Site Contact Firm (if none, leave blank)

FAX

Email

Mailing Address Line 1

Mailing Address Line 2

Mailing Address Last Line - City

State

ZIP+4

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

Last Name

First Name

MI

Suffix

FAZLER

WALTER

A

Title

Consulting Firm Name

PRESIDENT

BRADFORD ENGINEERING ASSOCIATES, INC.

Mailing Address Line 1

2710 CONCORD ROAD

Mailing Address Line 2

SUITE 3

Address Last Line - City

State

ZIP+4

Country

ASTON

PA

19014

USA

Email

Phone

Ext.

FAX

WFAZLER@BEA-INC.COM 610-497-6200

111

610-500-5677

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: _____

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 _____

Clean Streams Law Permit Number _____

- b. Name of interceptor _____

Clean Streams Law Permit Number _____

2. WASTEWATER TREATMENT FACILITY

Provide requested information concerning the existing treatment facility.

Name of existing facility _____

NPDES Permit Number for existing facility _____

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. | h. Existing and proposed streets, roadways, access roads, etc. |
| b. Lot lines and lot sizes. | i. Any designated recreational or open space area |
| c. Adjacent lots. | j. Wetlands - from National Wetland Inventory Mapping and USGS Hydric Soils Mapping. |
| d. Existing and proposed sewerage facilities. | k. Flood plains or Floodprone area soils, floodways, watercourses, water bodies (from Federal Flood Insurance Mapping) |
| e. Show tap-in or sewer extension to the point of connection to existing collection system. | l. Prime Agricultural Land. |
| f. Existing and proposed water supplies and surface water (wells, springs, ponds, streams, etc.) | m. Any other facilities (pipelines, power lines, etc.) |
| g. Existing and proposed rights-of-way. | 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 _____

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 _____ 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						
Conveyance						
Treatment						

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 _____

Name of Responsible Agent _____

Agent Signature _____

Date _____

d. Conveyance System

Name of Agency, Authority, Municipality _____

Name of Responsible Agent _____

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 _____

Name of Responsible Agent _____

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)	NO SUBSTANTIAL CHANGE IN COST TO USER
COST	
Construction cost	\$
Administrative, legal, engineering cost	\$
Total project cost	\$
Annual O/M cost	\$
FUNDING	
Tap-in fees (\$ per EDU X no. EDUs)	\$
Proceeds from primary funding source	\$
Proceeds from other funding sources	\$
USER COSTS	
Initial user base	EDUs
Monthly debt service per EDU	\$
Monthly O/M cost per EDU	\$
Total estimated monthly user cost per EDU	\$ 0

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.
-

**EDGMONT TOWNSHIP
DELAWARE COUNTY, PENNSYLVANIA**

RESOLUTION NO. 2014-26

RESOLUTION OF THE BOARD OF SUPERVISORS OF EDGMONT TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA, AMENDING THE TOWNSHIP'S OFFICIAL SEWAGE FACILITIES PLAN (ACT 537 PLAN) FOR SOUTH PROVIDENCE ROAD, KNIGHTS WAY AND MALLARD WAY IN THE CRUM CREEK SEWER DISTRICT.

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 Department of Environmental Protection ("**Department**") adopted there under, Chapter 71 of Title 25 of the **Pennsylvania Code**, requires Edgmont Township (the "**Township**") to adopt an Official Sewage Facilities Plan ("**Act 537 Plan**") providing for sewage services adequate to prevent contamination of waters and/or environmental health hazards with sewage wastes, and to revise said plan whenever it is necessary to meet the sewage disposal needs of the municipality; and

WHEREAS, the Township, has heretofore adopted an Act 537 Plan for properties located within the municipal boundaries of the Township; and

WHEREAS, Bradford Engineering Associates, Inc. has prepared a Minor Act 537 Plan Revision (the "**Minor Act 537 Plan Revision**") which proposes to amend the Act 537 Plan to: (a) adopt and implement the alternative of choice to change from conventional gravity sewer to low pressure sewer for the homes on South Providence Road, Knights Way and Mallard Way in the Crum Creek Sewer District; and

WHEREAS, Upon Department approval, the original implementation activities/dates have been updated and include:

- a) Begin Construction – August 2014
- b) Complete Construction – December 2015
- c) Facility Startup – December 2015

WHEREAS, the Township finds that the Minor Act 537 Plan Revision conforms to applicable zoning, subdivision, other Township ordinances and plans and to a comprehensive program of pollution control and water quality management.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors of the Township of Edgmont hereby adopts and submits to the Department for its approval as a revision to the Act 537 Plan, the above referenced Minor Act 537 Plan Revision; and be it further

RESOLVED, the Township 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).

Proof of Publication of Notice in Delaware County Daily Times

Under Newspaper Advertising Act. No. 587, Approved May 16, 1929

State of Pennsylvania,
County of Delaware,

}

ss.

LYNN D. BETTCHER

designated agent of CENTRAL STATES PUBLISHING, INC.,

being duly sworn, deposes and says that the DELAWARE COUNTY DAILY TIMES, a daily newspaper of general circulation as defined in the above-mentioned Act, published at Primos, Delaware County, Pennsylvania, was established September 7, 1876, and issued and published continuously thereafter for a period of 100 years and for a period of more than six months immediately prior hereto, (under the name Chester Times prior to November 2, 1959) in the City of Chester, County of Delaware and further says that the printed notice or publication attached hereto is an exact copy of a notice or publication printed and published in the regular edition and issues of the DELAWARE COUNTY DAILY TIMES on the following dates,
Viz.

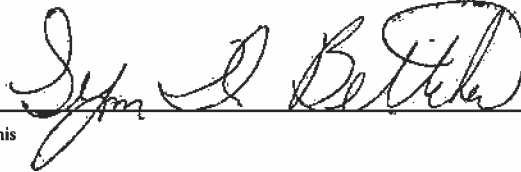
July

19,

A.D. 20 14

and that said advertising was inserted in all respects as ordered.

Affiant further deposes that he is the proper person duly authorized by CENTRAL STATES PUBLISHING, INC. publisher of said DELAWARE COUNTY DAILY TIMES, a newspaper of general circulation, to verify the foregoing statement under oath and that affiant is not interested in the subject matter of the aforesaid notice or advertisement, and that all allegations in the foregoing statements as to time, place and character of publication are true.



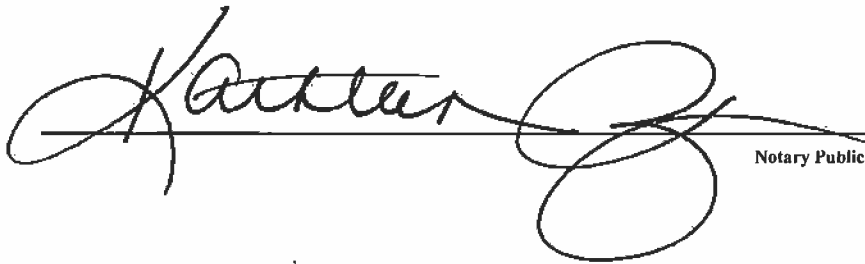
Sworn to and subscribed before me this

21st

day of

July

20 14



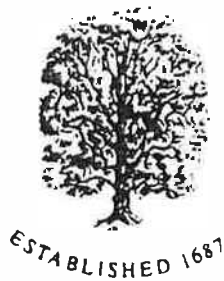
Notary Public

COMMONWEALTH OF PENNSYLVANIA

Notarial Seal

Kathleen Ragni, Notary Public
Upper Darby Twp., Delaware County
My Commission Expires March 2, 2015

MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES



TOWNSHIP OF EDGMONT

1000 Gradyville Road
PO Box 267
Gradyville, Pennsylvania 19039
610-459-1662 phone 610-459-3760 fax

July 28, 2014

Ronald Gravina, Chairman
Edgmont Township Board of Supervisors
P.O. Box 267
Gradyville, Pennsylvania 19039

Re: Edgmont Township Act 537 Official Sewage Facilities Plan
Component 3m Minor Amendment

Dear Mr. Gravina:

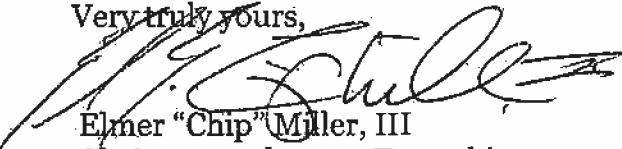
During their regularly advertised monthly meeting, held on July 28, 2014, the Edgmont Township Planning Commission reviewed an amendment to the Edgmont Township Act 537 Official Sewage Facilities Plan. Specifically this amendment outlines two areas of the sewer district that will now be serviced by low pressure force main and individual gringer pumps rather than the previously designed gravity sewers.

The Plan Amendment is advertised for public comment, and the Agenda of the Planning Commission containing this subject matter is published on the municipality's website.

There were no members of public in the audience to discuss this, there were no questions or comments other than discussion among the members of the planning commission to gain an understanding of the subject matter.

If you need anything further, or if you have any questions, please do not hesitate to contact me.

Very truly yours,



Elmer "Chip" Miller, III
Chairman, Edgmont Township
Planning Commission



DELAWARE COUNTY PLANNING DEPARTMENT

COURT HOUSE/GOVERNMENT CENTER
201 W. Front St. Media, PA 19063

RECEIVED
AUG 08 2014
EDGMONT TWP.

COUNCIL

THOMAS J. McGARRIGLE
CHAIRMAN

MARIO J. CIVERA, JR.
VICE CHAIRMAN

COLLEEN P. MORRONE
JOHN P. McBLAIN
DAVID J. WHITE

Office Location: Toal Building, 2nd & Orange Sts., Media, PA 19063
Phone: (610) 891-5200 FAX: (610) 891-5203
E-mail: planning_department@co.delaware.pa.us

LINDA F. HILL
DIRECTOR

August 8, 2014

Ms. Samantha Reiner, Township Manager
Edgmont Township
1000 Gradyville Road
Gradyville, PA 19039

RE: Minor Act 537 Plan Update Revision
Crum Creek Sewer District

Dear Ms. Reiner:

The Delaware County Planning Department (DCPD) has completed a review of Edgmont Township's proposed minor revision to its official Act 537 Sewage Facilities Plan to reflect improvements required to formally revise the service methods for two of the service areas noted in the Township's 2007 Act 537 Plan and 2010 Special Study. Specifically, these areas include Mallard Way and Knights Way in the Runnymede Subdivision (7 existing homes with 15 proposed single-family homes), and the area extending approximately 500 feet south on Providence Road, near the intersection of South Providence Road and West Chester Pike (6 homes).

This revision would "adopt and implement the alternative of choice to change from conventional gravity sewer to low pressure sewer for the homes on South Providence Road, Knights Way and Mallard Way in the Crum Creek Sewer District" and would also provide an update to the original implementation activities and dates to initiate construction in August 2014, with construction completion and facility start up scheduled for December 2015.

While U.S. Fish and Wildlife National Wetlands Inventory records did not reveal the presence of wetlands, a search conducted of the *Delaware County Natural Heritage Inventory* (2011) shows portions of Knights Way and Mallard Way to be either within or in proximity to the core habitat of Springton Reservoir, which was created in 1931 by impounding Crum Creek, and is used as a source of drinking water. This area of high significance is home to two species of concern, which have not been named at the request of the jurisdictional agencies overseeing their protection, and are located in the open water of the reservoir, the upland forest, and upstream riparian corridors. The other area proposed for revisions to its sewage method (located south of West Chester Pike, on South Providence Road), is within the supporting landscape of Springton Reservoir.

A review by the DCPD Historic Preservation section indicated that the areas of Knights Way and Mallard Way have a low to moderate potential for prehistoric sites, while the area located south of West Chester Pike, on South Providence Road, has greater potential for finding underground prehistoric and early historic resources due to its close proximity to historic undisturbed farmsteads in eastern Ridley Creek State Park. For your reference, I have attached the DCPD Historic Preservation section's final comments and findings to this letter. As is the case in most projects with ground-disturbing activity, it is recommended that if any potential artifacts are discovered

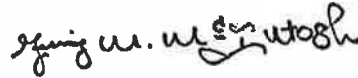


during project activity, to please contact Beverlee Barnes at the Delaware County Planning Department's Historic Preservation section for a short recordation process at (610) 891-5209.

DCPD generally supports the recommendations outlined in Edgmont Township's *Minor Act 537 Plan Update Revision* (July 2014). We trust that the actions taken by the Township will remain in compliance with all local, state and federal regulations and ordinances.

Should you have any additional questions or comments, please feel free to contact me at (610) 891-5215.

Sincerely,

A handwritten signature in black ink, appearing to read "Ginny M. McIntosh".

Ginny M. McIntosh
Planner

Enclosures: DCPD Historic Preservation Comments

Cc: PA Department of Environmental Protection
Walter Fazler, P.E., Bradford Engineering Associates, Inc.

To : Ginny McIntosh
From : Beverlee Barnes
Date : August 6, 2014
Subject : Act 537 Review
Project Name : Act 537 Minor Revision Review
Location : Crum Creek Sewer District: Mallard Way,
Knights Way; South Providence Road
Subdivision # : --
DEP# :
Municipality : Edgmont Township
Purpose : Minor revision of service methods for
two (02) areas in the Crum Creek Sewer District. Change
from conventional gravity sewer to low pressure sewer.

Findings :

The minor revisions to sewage service methods in this part of Edgmont Township should have no effect on historic resources.

The two sewer revision sites in the Crum Creek Sewer District are in areas that historically were open land with low-to-moderate potential for prehistoric sites.

Subdivision and residential development on the east side of Providence Road in this area occurred mostly post-1980. Residential development on Mallard Way and Knights Way in one of the two service areas dates circa 1985. This prior development would likely have uncovered significant archaeological deposits.

There is greater potential for finding underground prehistoric and early historic resources in the work area closest to South Providence Road. This work site does not appear to have any standing above ground structures and is in close proximity to historic undisturbed farmsteads in eastern Ridley Creek State Park.

We are promoting awareness of the potential for finding archaeological resources. We encourage the developers to notify the Planning Department for a minor documentation process if such artifacts are found.

Resource Statement :

Edgmont Township; Zone D - Open Land; Low-to-Moderate Sensitivity.

Information Sources :

CHRS, Inc. Delaware County Archeological Resources Inventory and Management Plan. June 1991.

Edgmont Township Historic Site Survey.
Ridley Creek State Park National Landmark Application

EDGMONT TOWNSHIP
2014 MINOR ACT 537 PLAN UPDATE REVISION
ATTACHMENTS TO COMPONENT 3m

SECTION F - PROJECT NARRATIVE

BACKGROUND

Edgmont Township is a township of the second class located in the north central portion of Delaware County Pennsylvania. Total area is approximately 9.7 square miles. Its northern boundary is on the Delaware County-Chester County line where it lies adjacent to Westtown and Willistown Townships, Chester County. In Delaware County it is bordered by Thornbury Township on the west, Middletown Township on the south, and Upper Providence Township on the southeast. On the east, the Township is bordered by Crum Creek, the Springton Reservoir, and Newtown Township.

The Crum Creek Sewer District was the focus of a 2010 Special Study. It is located in the northeast section of the Township. Broadly described, the District is bounded to the north by Chester County, to the east by Newtown Township, to the South by Upper Providence Township and to the west by the Ridley Creek State Park.

~~The 2010 Special Study revised and updated the 2007 Act 537 Plan and provided for the adoption of the following items:~~

Alternate 2. All of Service District C and District F (West Chester Pike corridor West) will be formally included in the Crum Creek District.

Conveyance of wastewater to the CDCA system will be implemented via adoption of **Alternates 1D and 1G**. These alternates provide for an internal collection system comprised of conventional gravity collection system, low-pressure system and pump station and force mains for Districts A-E. These districts will convey the flow to a regional pump station to be constructed by Edgmont on the West side of the Geist reservoir. The main pump station would discharge to the CDCA system via a route through Newtown Township along Gradyville Road. Please refer to the 2010 Special Study for further details.

Edgmont Township is in the process of implementing 2007 Plan and the 2010 Special Study for the Crum Creek Watershed. During the course of completing the final design tasks, it was determined that certain areas of the project would be better served by an alternative method of sewage disposal. The general scope of the previous 2 plans has not changed; that is to provide public sewer to the Crum Creek Watershed. Only the method of providing sewage disposal will be changed or modified.

SCOPE

The scope of this Minor Update Revision is to formally revise the service methods to two specific parts of the project. The first area includes Mallard Way and Knights Way in the Runnymede Subdivision. The second area is South Providence Road from West Chester Pike approximately 500 feet south on Providence Road.

PROPOSED SERVICE TYPE MODIFICATIONS

1. Mallard Way and Knights Way - This section consists of 7 existing residential single-family homes and 15 future single-family homes. Ultimate flow from this section will be 5,775 gpd of sewage. The proposed type of sewer service will be changed from conventional gravity sewers to low pressure (LP) sewers with individual grinder pumps. The cost of the low-pressure sewer option is attached. With the advent of the 2010 Special Study, the existing capped gravity sewer can not be used due to topographical restrictions and the inability to construct the sewer system along Crum Creek, which is owned by Aqua. Due to costs and the inability of obtaining easements from Aqua America, the alternative of choice is a low pressure sewer option.
2. South Providence Road - South Providence Road is a residential section located just south of West Chester Pike. There are 6 EDUS, which will generate approximately 1,575 gpd of sewage. The area was originally planned for a gravity sewer system. However due to the elevations of the existing homes, the sewer system in Providence Road would need to be in excess of 20 feet deep. We investigated two additional alternatives to provide public sewers to the homes. The first was a gravity sewer in the rear of the homes with easements out to the West Chester Pike sewer system. The second is a low

pressure sewer system with individual grinder pumps. The first alternative, although technically feasible, is cost prohibitive. In addition, the gravity sewer system would require construction in slopes in excess of 25% and would require easements from two unaffected property owners. Due to the costs and potential difficulty in obtaining required easements, the alternative of choice is the low-pressure sewer option.

A copy of the Plan detailing the Minor Act 537 Plan revision is attached to this Plan. Additionally, a capital cost comparison is attached. Since the resulting capital costs are lower, the overall user costs will be reduced as a result of this Minor Update Revision

PLAN OF CHOICE

Based on the above considerations the Township Act 537 Plan will be updated to provide for the proposed revisions to the sewer service as noted above.

SECTIONS G THROUGH M

These section were addressed were all addressed in the latest Township Act 537 Plan and Special Studies for the Crum Creek Project. The information contained therein is up to date and will not be duplicated here. The current Plan is included as part of this update by reference.

SECTION N – IMPLEMENTATION SCHEDULE

The following is an updated implementation schedule for the entire Crum Creek Sewer Project

Milestone	Date
Submit Plan to PaDEP	COMPLETE
Respond to PaDEP comments	COMPLETE
Receive DEP Approval	COMPLETE
Negotiate Agreement with DELCORA and Identify Capital Finance Plan	COMPLETE
Revise CDCA Agreement	COMPLETE
Start Survey	COMPLETE
Begin Detailed Design	COMPLETE

Submission of Plans for Permits	COMPLETE
Complete Design	COMPLETE
Solicit Bids for Construction	COMPLETE
Start Construction	AUGUST 2014
Substantial Completion Construction	DECEMBER 2015
Facility Start-up	DECEMBER 2015

South Providence Connections

Low Pressure

No.	Item	Quantity	Unit	Price	Total Price
1	2" HDPE	760	lf	\$ 26	\$ 19,760
2	1 1/4" Lateral	30	lf	\$ 56	\$ 1,680
3	LP Tee	6	ea	\$ 620	\$ 3,720
4	Endline Flushing Sta	1	ea	\$ 1,920	\$ 1,920
5	Easement Acquisition	0	ea		\$ -
6	Lawn restoration	50	lf	\$ 8	\$ 400
	Subtotal				\$ 27,480
	10% Contingency				\$ 2,748
	10% Engineering				\$ 2,748
	Total				\$ 32,976
Cost per Home					\$ 5,496

Gravity

No.	Item	Quantity	Unit	Price	Total Price
1	8" Pipe	801	lf	\$ 43	\$ 34,443
2	Manholes	5	ea	\$ 3,515	\$ 17,575
3	Lawn Restoration	570	lf	\$ 8	\$ 4,560
4	Road Restoration	250	lf	\$ 17	\$ 4,250
5	Lateral Rd Rest	0	lf	\$ 34	\$ -
6	Pipe Bedding	951	lf	\$ 12	\$ 11,412
7	Laterals	150	lf	\$ 59	\$ 8,850
8	Cleanouts	6	ea	\$ 320	\$ 1,920
9	Easement Aq	1	LS	\$ 10,000	\$ 10,000
	Subtotal				\$ 93,010
	20% Contingency				\$ 18,602
	15% Engineering				\$ 13,952
	Total				\$ 125,564
Cost per Home					\$ 20,927

**EDGMONT TOWNSHIP
DELAWARE COUNTY, PENNSYLVANIA**

RESOLUTION NO. 2014-11

RESOLUTION OF THE BOARD OF SUPERVISORS OF EDGMONT TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA, AMENDING THE TOWNSHIP'S OFFICIAL SEWAGE FACILITIES PLAN (ACT 537 PLAN) FOR DISTRICT C1 AND DISTRICT D IN THE CRUM CREEK SEWER DISTRICT.

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 Department of Environmental Protection ("**Department**") adopted there under, Chapter 71 of Title 25 of the **Pennsylvania Code**, requires Edgmont Township (the "**Township**") to adopt an Official Sewage Facilities Plan ("**Act 537 Plan**") providing for sewage services adequate to prevent contamination of waters and/or environmental health hazards with sewage wastes, and to revise said plan whenever it is necessary to meet the sewage disposal needs of the municipality; and

WHEREAS, the Township, has heretofore adopted an Act 537 Plan for properties located within the municipal boundaries of the Township; and

WHEREAS, Bradford Engineering Associates, Inc. has prepared a Minor Act 537 Plan Revision (the "**Minor Act 537 Plan Revision**") which proposes to amend the Act 537 Plan to: (a) adopt and implement the alternative of choice to change from conventional gravity sewer to low pressure sewer in District C1; and (b) adopt and implement the alternative of choice to change from low pressure sewer to conventional gravity sewers in District D of the Crum Creek Sewer District; and

WHEREAS, the Minor Act 537 Plan Revision will not alter the implementation activities/dates from those in the approved Act 537 Plan 2010 Special Study; and

WHEREAS, the Township finds that the Minor Act 537 Plan Revision conforms to applicable zoning, subdivision, other Township ordinances and plans and to a comprehensive program of pollution control and water quality management.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors of the Township of Edgmont hereby adopts and submits to the Department for its approval as a revision to the Act 537 Plan, the above referenced Minor Act 537 Plan Revision; and be it further

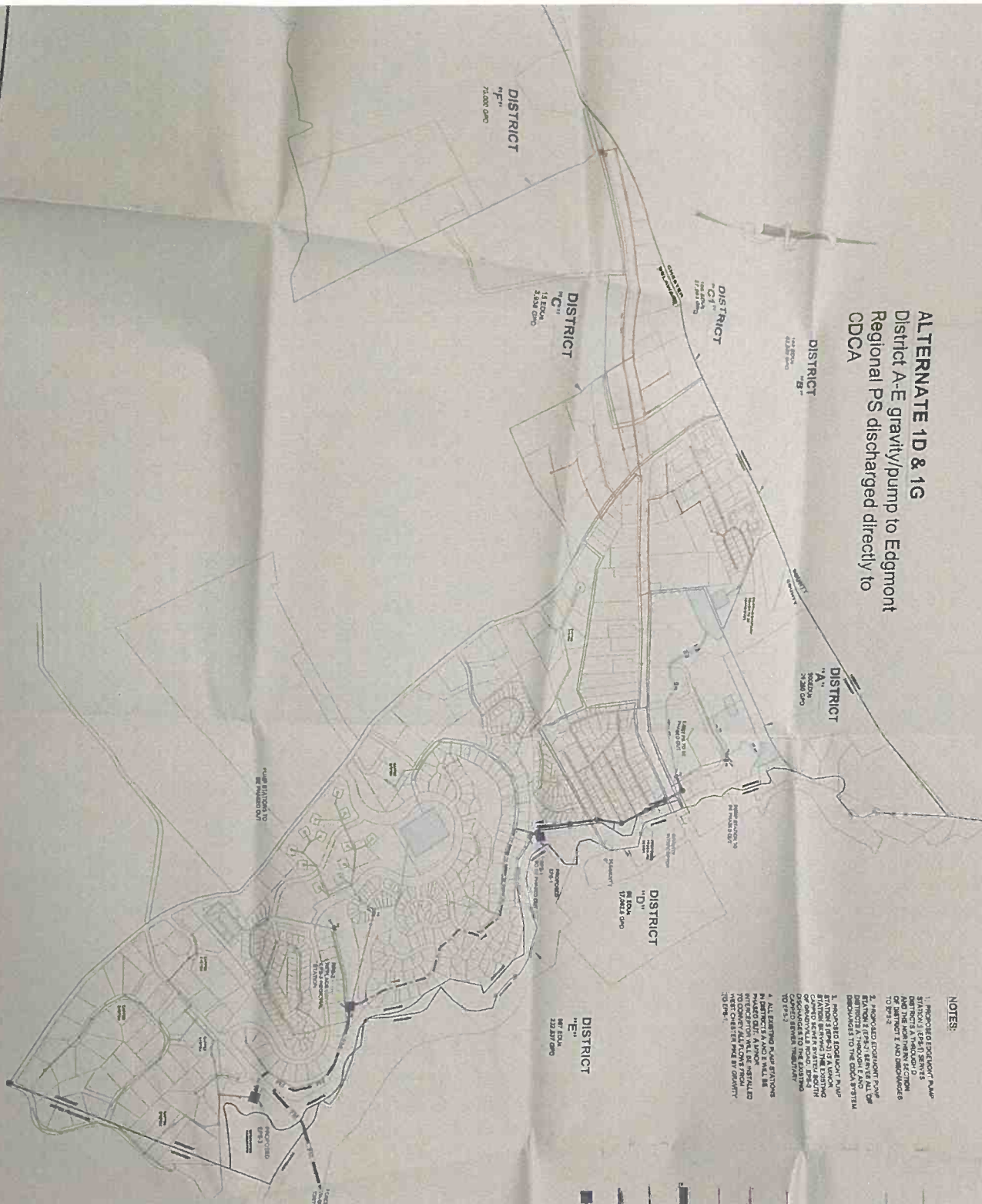
RESOLVED, the Township hereby assures the Department of the complete and timely implementation of the said plan as required by law (Section 5, Pennsylvania Sewage Facilities Act as amended).

Act 537 Plan - Crum Creek Sewer Project

Updated Implementation Schedule

Milestone	Date
Submit Plan to PaDEP	COMPLETE
Respond to PaDEP comments	COMPLETE
Receive DEP Approval	COMPLETE
Negotiate Agreement with DELCORA and Identify Capital Finance Plan	COMPLETE
Revise CDCA Agreement	COMPLETE
Start Survey	COMPLETE
Begin Detailed Design	COMPLETE
Submission of Plans for Permits	March 2014
Complete Design	March 2014
Solicit Bids for Construction	March 2014
Start Construction	July 2014
Substantial Completion Construction	November 2015
Facility Start-up	December 2015

ALTERNATE 1D & 1G District A-E gravity/pump to Edgmont Regional PS discharged directly to CDCA



NOTES:

1. PROPOSED "PUMP" PUMP STATION (P&S) SITES ARE SHOWN IN RED AND THE MAIN LINE SECTION OF SANITARY AND PRESSURE MAINS ARE SHOWN IN BLUE.
2. PROPOSED "PUMP" PUMP STATION (P&S) SITES ARE ALL OF DISTRICT A THROUGH DISTRICT E.
3. PROPOSED "PUMP" PUMP STATION (P&S) SITES ARE ALL OF DISTRICT A THROUGH DISTRICT E.
4. ALL EXISTING PUMP STATIONS ARE SHOWN IN RED AND THE MAIN LINE SECTION OF SANITARY AND PRESSURE MAINS ARE SHOWN IN BLUE.
5. ALL EXISTING PUMP STATIONS ARE SHOWN IN RED AND THE MAIN LINE SECTION OF SANITARY AND PRESSURE MAINS ARE SHOWN IN BLUE.

LEGEND

- EXISTING SANITARY SEWER
- EXISTING FORCE MAIN
- EXISTING PUMP STATION
- EXISTING ON-SITE SEPTIC FIELDS
- PROPOSED SANITARY SEWER
- PROPOSED FORCE MAIN
- PROPOSED PRESSURE SEWER
- SANITARY DISTRICT BOUNDARY
- TOWNSHIP BOUNDARY
- ALTERNATE SEWER OPTIONS
- ALTERNATE PUMP STATION

ALTERNATE 1D AND 1G SCALE



REV. 12-28-11, Entry EPR3 Discharge to Edgmont location shown in 2010.

THIS SHEET MUST BE USED IN CONJUNCTION WITH THE 2010 ACT 331 SPECIAL STUDY CRUM CREEK SEWER DISTRICT.

EDMONT TOWNSHIP
 DELAWARE COUNTY
 2010 ACT 331 SPECIAL STUDY
 CRUM CREEK SEWER DISTRICT

BRADFORD ENGINEERING ASSOCIATES, INC.
 2710 Concord Road, Suite 3
 Allentown, PA 18104
 (610) 497-4500 (610) 744-5627 fax
 info@bea-inc.com

DATE: 06-01-10

SCALE: AS NOTED

SHEET 4 OF 6



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

SOUTHEAST REGIONAL OFFICE

JUL 19 2011

Ms. Samantha Reiner, Manager
Edgmont Township
1000 Gradyville Road
P.O. Box 67
Gradyville, PA 19039

Re: Act 537 Plan Update
Edgmont Township
Delaware County
APS ID 500868
AUTH ID 859999
Status: ISSUED

Dear Ms. Reiner:

We have completed our review of your municipality's updated Official Sewage Facilities Plan entitled *Edgmont Township, Delaware County, Sewage Facilities Plan* (Plan), as prepared by Bradford Engineering Associates, Inc., dated August 2010 and revised February 2011. The review was conducted in accordance with the provisions of the Pennsylvania Sewage Facilities Act.

Edgmont Township's (Township) Crum Creek District Special Study (2009 Special Study) received the Department of Environmental Protection's (Department) approval on February 6, 2009. Key elements of that Plan, such as the Township's membership in the Central Delaware County Authority (CDCA), CDCA's commitment to construct improvements to its Crum Creek Interceptor and the Township's commitment to have the Delaware County Regional Authority (DELCORA) construct the sewer infrastructure necessary for the Plan's implementation have not changed.

Changes to the 2009 Special Study include the differentiation of District C1 from District C, the consideration of District F for future sanitary sewer service, and changes to the collection and conveyance alternatives for Districts A-E.

MAR 0 1 2010

EDGMONT TOWNSHIP

DELAWARE COUNTY

1000 Gradyville Road
Gradyville, PA 19039

SEWAGE FACILITIES PLAN

UNDER

PENNSYLVANIA ACT 537

2010 SPECIAL STUDY

AUGUST 2010

Revised FEBRUARY 2011

ORIGINAL

Prepared by:

Bradford Engineering Associates, Inc.
2710 Concord Road, Suite 3
Aston, PA 19014
610.497.6200
610.500.5677 fax
info@bea-inc.com

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Executive Summary For Edgmont Township Act 537 Plan 2010 Special Study

Edgmont Township is a township of the second class located in the north central portion of Delaware County Pennsylvania. Total area is approximately 9.7 square miles. Its northern boundary is on the Delaware County-Chester County line where it lies adjacent to Westtown and Willistown Townships, Chester County. In Delaware County it is bordered by Thornbury Township on the west, Middletown Township on the south, and Upper Providence Township on the southeast. On the east, the Township is bordered by Crum Creek, the Springton Reservoir, and Newtown Township.

The Crum Creek Sewer District is the focus of the 2010 Special Study. It is located in the northeast section of the Township. Broadly described, the District is bounded to the north by Chester County, to the east by Newtown Township, to the South by Upper Providence Township and to the west by the Ridley Creek State Park.

Previous Planning

An Act 537 Plan for the Crum Creek District was completed in 2007 (2007 Study) based on the potential for membership in the CDCA. The advantage of joining CDCA is the availability of a more extensive (350,000 gpd) disposal option that is cost effective, environmentally sound, and able to be implemented within a reasonable time frame to meet Edgmont's needs.

CDCA owns a conveyance system that discharges to the Delaware County Regional Water Quality Control Authority (DELCORA) system for final conveyance and treatment. DELCORA currently has the capacity available to meet Edgmont's needs and is willing to accept sewage flows from Edgmont Township. The plan outlined in the 2007 Study would provide for discharge to the CDCA facilities via the Newtown Township conveyance system.

2007 Study amends 2004 Plan:

1. Pursuant to the 2007 Study, Edgmont Township would enter an agreement with DELCORA to design, permit, finance, build, own, operate and maintain the proposed sewage facilities in the Crum Creek District and to accept, treat and dispose of the sewage from Edgmont Township. This is a change from the sewage treatment and land application contemplated under the 2004 (Aqua) Plan.
2. Edgmont Township would enter into an agreement with Newtown Township to accept and convey sewage to CDCA.
3. Edgmont Township would enter into an agreement with CDCA to accept and convey sewage to DELCORA.
4. Edgmont Township would adopt an ordinance establishing the Crum Creek Sewer District and require connection to the public sewer system.

Edgmont Township 2010 Special Study evaluates alternatives:

The current Special Study (2010 Study) is being undertaken to further develop and evaluate additional alternatives for both the collection system and conveyance methods to reach the CDCA system, as well as to provide for current sewage needs in the West Chester Pike corridor of Edgmont Township that exceed the Crum Creek District. The 2010 Study will look to identify cost effective options and alternatives that can be implemented in a time frame suitable to the needs of Edgmont Township. In addition to many internal service options, three major alternatives were reviewed for conveyance to the CDCA system. The conveyance options included pumping through Newtown Township in combination with Newtown flows, pumping through Newtown Township individually, and pumping through Upper Providence Township individually.

Alternatives Of Choice

The 2010 Special Study revises and updates the 2007 Plan and provides for the adoption of the following items:

Alternate 2. All of Service District C and District F (West Chester Pike corridor West) will be formally included in the Crum Creek District. Modifications to the CDCA service agreement will be required.

Conveyance of wastewater to the CDCA system will be implemented via adoption of **Alternates 1D and 1G**. These alternates provide for an internal collection system comprised of conventional gravity collection system, low-pressure system and pump station and force mains for Districts A-E. These districts will convey the flow to a regional pump station to be constructed by Edgmont on the West side of the Geist reservoir. The main pump station would discharge to the CDCA system via a route through Newtown Township along Gradyville Road.

Cost to Users

The above list comprises the revised Plan of Choice. The adoption of this plan replaces any prior plans approved by Edgmont Township. The estimated user costs based on implementation of the above Plan of Choice are as follows:

Initial connection costs (Tapping Fee) - \$5,000. to \$18,200.

Annual Costs (Sewer Rent) - \$450. to \$1,431.

The ranges are based on current construction cost estimates. The range of costs is due to the number of financial options available for implementing the project. These costs are further explained within the body of the text and are subject to completion of the detailed design and construction costs prevailing at the time of plan implementation. The costs may go up or down depending upon these conditions.

Municipal Commitments

Edgmont Township has a memorandum of understanding with DELCORA to provide all administrative, financial, technical, and operational tasks required to complete the selected plan. Under this memo DELCORA will finance the costs of membership to CDCA including buy-in and system upgrade costs. DELCORA will also provide financing for Edgmont's conveyance facilities in Newtown Township as required plus all costs necessary to complete the sewage facilities necessary for the Crum Creek District. In order to implement this plan, an agreement with DELCORA will need to be executed by Edgmont Township.

Implementation Schedule

The proposed implementation schedule below is based on estimated dates to complete the various milestones listed. Completion of many of the items listed is dependent upon the timely actions of other Municipalities and/or Agencies. Edgmont Township will make every effort to keep the project on track. Milestone completion dates will be adjusted periodically to reflect actual progress toward project completion.

Milestone	Date
Submit Plan to PaDEP	-60 days
Respond to PaDEP comments	-30 days
Receive DEP Approval	Time 0
Negotiate Agreement with DELCORA and Identify Capital Finance Plan	0 days
Revise CDCA Agreement	0 days
Start Survey	10 days
Begin Detailed Design	30 days
Submission of Plans for Permits	210 days
Complete Design	270 days
Solicit Bids for Construction	300 days
Start Construction	360 days
Substantial Completion Construction	900 days
Facility Start-up	930 days

Note: Times noted in days from approval of Plan by PaDEP

I. Background And Previous Planning

Official Plan Requirements: According to the Pennsylvania Sewage Facilities Act (Act 537), Municipalities are required to develop and implement a comprehensive official plans which provide for the resolution of existing sewage disposal problems, provide for the future sewage disposal needs of new land development and provide for the future sewage disposal needs of the municipality. Official plans shall be developed, submitted to the Pennsylvania Department of Environmental Protection (PaDEP) for approval and implemented by municipalities under the act.

Previous planning, undertaken during the 1960's and 1970's, studied the feasibility of a proposed gravity interceptor sewer along Crum Creek, extending the Central Delaware County Authority (CDCA) interceptor sewer from south of the Springton Reservoir in Upper Providence into Willistown Township, Chester County. This interceptor could have provided gravity sewer service to the Crum Creek Watershed area of Edgmont Township. For various environmental, economic, and engineering reasons, installation of this interceptor was never implemented and is not an active or feasible alternative.

Edgmont Township's official Act 537 Sewage Facilities Plan, adopted by the Township on August 4, 2003 and approved by the PADEP on February 25, 2004, (2004 Plan) provides the base sewage facility planning for the Crum Creek District. In accordance with the 2004 Plan, existing community sewage treatment systems were to be abandoned and removed. An investor-owned public utility company (Aqua Pennsylvania), working mainly with Newtown Township, was to provide sanitary sewer service for this District of Edgmont Township, with sewage treatment at a regional wastewater treatment facility and disposal via a land application system. The infrastructure was to be constructed by Aqua on property owned by the Garrett Williamson Foundation in Newtown Township. The plan provided for very limited Edgmont flows (under 100,000 gpd) and required an intergovernmental agreement with Newtown Township and coordination with Newtown Township's Act 537 Special

Study. For various environmental, economic, and engineering reasons, completion of this plan was never implemented and is not an active or feasible alternative.

PA Code Title 25 §71.12 Revision Plans: Municipalities shall review and revise their official plans whenever the municipality or the PaDEP determines that the plan is inadequate to meet the existing or future sewage disposal needs of the municipality or portion thereof. Special Study - a study, survey, investigation, inquiry, research report or analysis which is directly related to an update revision. The studies provide documentation or other support necessary to solve specific problems identified in the update revision.

Edgmont-Newtown Regional Plan: An Act 537 Special Study Plan for the Crum Creek District was completed in 2007 (2007 Study) based on the potential for membership in the CDCA. The advantage of joining CDCA is the availability of a more extensive (350,000 gpd) disposal option that is cost effective, environmentally sound, and able to be implemented within a reasonable time frame to meet Edgmont's needs.

CDCA owns a conveyance system that discharges to the Delaware County Regional Water Quality Control Authority (DELCORA) system for final conveyance and treatment. DELCORA currently has the capacity available to meet Edgmont's needs and is willing to accept sewage flows from Edgmont Township. The plan outlined in the 2007 Study would provide for discharge to the CDCA facilities via the Newtown Township conveyance system.

2007 Study amends 2004 Plan:

1. Pursuant to the 2007 Study, Edgmont Township would enter an agreement with DELCORA to design, permit, finance, build, own, operate and maintain the proposed sewage facilities in the Crum Creek District and to accept, treat and dispose of the sewage from Edgmont Township. This is a change from the sewage treatment and land application contemplated under the 2004 (Aqua) Plan.

2. Edgmont Township would enter into an agreement with Newtown Township to accept and convey sewage to CDCA.
3. Edgmont Township would enter into an agreement with CDCA to accept and convey sewage to DELCORA.
4. Edgmont Township would adopt an ordinance establishing the Crum Creek Sewer District and require connection to the public sewer system.

Concurrent with the above plan, Newtown Township submitted an Act 537 Plan update to PaDEP for CDCA membership and conveyance of Edgmont's sewage to an expanded and upgraded CDCA system. CDCA is in the process of expanding and upgrading their system as necessary to receive the additional loading.

Edgmont Township 2010 Special Study evaluates alternatives:

The current Special Study (2010 Study) is being undertaken to further develop and evaluate additional alternatives for both the collection system and conveyance methods to reach the CDCA system, as well as to provide for current sewage needs in the West Chester Pike corridor of Edgmont Township that exceed the Crum Creek District. The 2010 Study will look to identify cost effective options and alternatives that can be implemented in a time frame suitable to the needs of Edgmont Township. Specifically, the 2010 Study will address the following items:

1. Develop alternatives for the proposed collection system including evaluation of existing pump stations for possible upgrading and reuse as opposed to an interceptor adjacent to Crum Creek, including preliminary designs for pump stations and force mains along with the budget cost estimates for comparison of cost effectiveness.
2. Develop alternatives for the major conveyance facilities needed to connect to the CDCA system, including preliminary engineering designs for the conveyance facilities along with budget cost estimates for study of the relative cost effectiveness.

3. Sewer needs for districts outside the Crum Creek District and their potential for future expansion of the proposed facilities which discharge to the CDCA system.

II. DESCRIPTION OF SERVICE AREAS

(Refer to the Master Sewer Plan in the Appendix for graphic locations).

A. AREAS INCLUDED IN THE CDCA AGREEMENT

1. District A- Edgmont Country Fair

This area includes the movie theater and other commercial uses located on West Chester Pike at the Crum Creek crossing. The area contains an estimated 100 EDU's (26,250 gpd) and is designated to connect to Newtown Township's PS "2" under the 2007 Plan.

2. District B- West Chester Pike Corridor East

The area is located mainly east of Providence Road and includes a mix of residential, retail, and commercial uses. The area also has two community on-lot disposal systems that will be phased out upon completion of the public sewer project. This area contains an estimated 162 EDU's (42,525 gpd). The 2007 Plan also designates this area to connect to the Newtown Township PS "2".

3. District C- West Chester Pike Corridor West

The original District C was subdivided into Districts C and C1. The new District C is situated west of Providence Road and south of West Chester Pike. District C was included in the CDCA project whereas the new District C1 was not. The 2007 Plan designates this area to connect to the proposed system in District B and ultimately to the Newtown Township via Newtown's PS "2". The area contains an estimated 15 EDU's (3,938 gpd).

4. District D- Castle Rock Residential Community

The Castle Rock Community consists of 65 single-family residences on lots of 6,400 square feet or less. The community is located along the south side of West Chester

Pike near Crum Creek. Due to the physical constraints of the area the 2007 Plan lists the community for a low-pressure sewer system with ultimate discharge to the Newtown system via PS "2".

5. District E- Gradyville Road

This district is bounded by West Chester Pike, Providence Road, the Upper providence Township line, and Crum Creek. The area includes the residential developments of Runnymede Farms, Addison Court, Dream Valley, Springton Chase, Roscommon, and Winderly. District E is the largest of the districts slated for discharge to the CDCA system. It contains three large volume community disposal systems serving 422 homes and approximately 129 homes with on-lot disposal systems. The immediate sewage needs for this district are for 551 EDU's (144,638 gpd) and an estimated future requirement for 887 EDU's (232,838gpd). The 2007 Plan designates this area to connect to the Newtown Township PS "4".

B. AREAS NOT INCLUDED IN THE CDCA AGREEMENT

1. District C1- West Chester Pike Corridor West

This area situated west of Providence Road consists of a mix of retail and commercial uses with a few residential units mixed in. This District was split off of the original District C when the area south of West Chester Pike was included in the CDCA project (see District C description above). The natural drainage of the district is to the west; away from the CDCA approved area. The existing and projected future sewage needs of the district is estimated to be 105 EDU's (27, 563 gpd). A pump station discharging to the proposed sewers near the intersection of Providence Road and West Chester Pike would be required to serve this district. The agreement with CDCA should be revised to include this District.

2. District F- Edgmont Country Club

The Edgmont Country Club consists of approximately 185 acres located off of West Chester Pike west of the Ridley Creek State Park. If developed under the current PRD-

3 zoning, the tract would need an estimated 70,000 gpd sewage capacity. There are no active development plans for the site at this time.

The agreement with CDCA should be revised to include District F for planning purposes only at this time. This will provide the Township with a potential disposal option subject to future capacity availability. The CDCA Agreement can be further modified if future development proposals are submitted to the Township and firm estimates of required sewage capacity are available.

III. EVALUATION OF ALTERNATIVES

The 2007 plan of choice was a public sewer system discharging to the CDCA system via Newtown Township for ultimate conveyance and treatment at the DELCORA facilities. Delays in Newtown along with the constructability of the proposed facilities have made this plan less desirable. The 2010 Study will review specific options for connection to the CDCA system and will consider alternate designs for the internal collection system for various parts of Edgmont Township.

A. EVALUATION OF EXISTING FACILITIES

The Crum Creek Watershed contains a number of existing facilities that will be utilized where possible in design of the local collection system. On-site subsurface disposal systems are present in Districts A and B. The sanitary sewers serving these areas will be incorporated into the final collection system design. The pumping and treatment facilities will be phased out and decommissioned.

The Runnymede Farms section of District E has a combination of capped sewers for future use and on-site disposal systems that are currently in use. The capped sewers and existing sanitary sewers will be incorporated into the final design of the collection system. Two of the existing four pump stations may be upgraded and used depending upon the final selection of conveyance system alternates. The existing stations are low flow, high head stations in moderate condition. It is expected that pumps, controls, electrical equipment and the entire super-structure will require replacement. Existing treatment facilities will be phased out and decommissioned.

Capped sewers in the Dream Valley/Carnoustie Way Sections of District E will all be incorporated into the new system design.

All of the above noted systems will require visual inspections and via closed circuit TV to insure that all components are in good physical condition. Any noted infiltration/inflow problems will be corrected prior to connection to the CDCA system. Updated plans will need to be generated where required for maintenance purposes.

Privately owned sewer facilities, active or capped systems, will need to be dedicated over to the Township for ownership, operation, and maintenance. Existing subdivision plans and agreements will need to be reviewed for language covering these items. If these matters are not addressed, the Township will either negotiate an agreement or possibly employ condemnation of the facilities for the overall health and welfare of the community. The Township must ensure that the systems are in good condition and are properly maintained as a minimum.

B. DESCRIPTION OF ALTERNATES

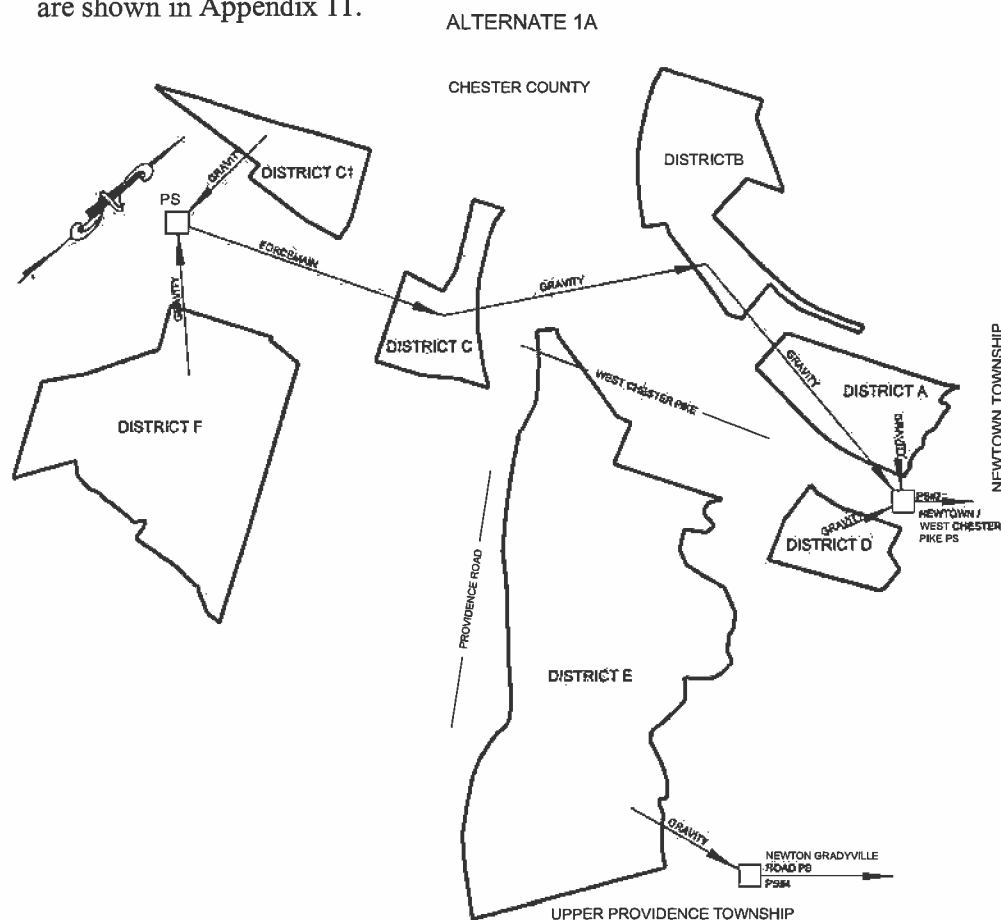
1. District A Through E- Collection System- Connection Alternates

a. ALTERNATE 1A

Alternate 1A is the current plan where flows from Districts A through D discharge to the proposed Newtown Pump Station PS-2 located across Crum Creek.

Flows from District E would discharge to Newtown Township's PS-4 for conveyance to the CDCA system under this option. The pump station would be located on the East side of the Geist Reservoir requiring crossing of the reservoir to tie-in Edgmont's flows.

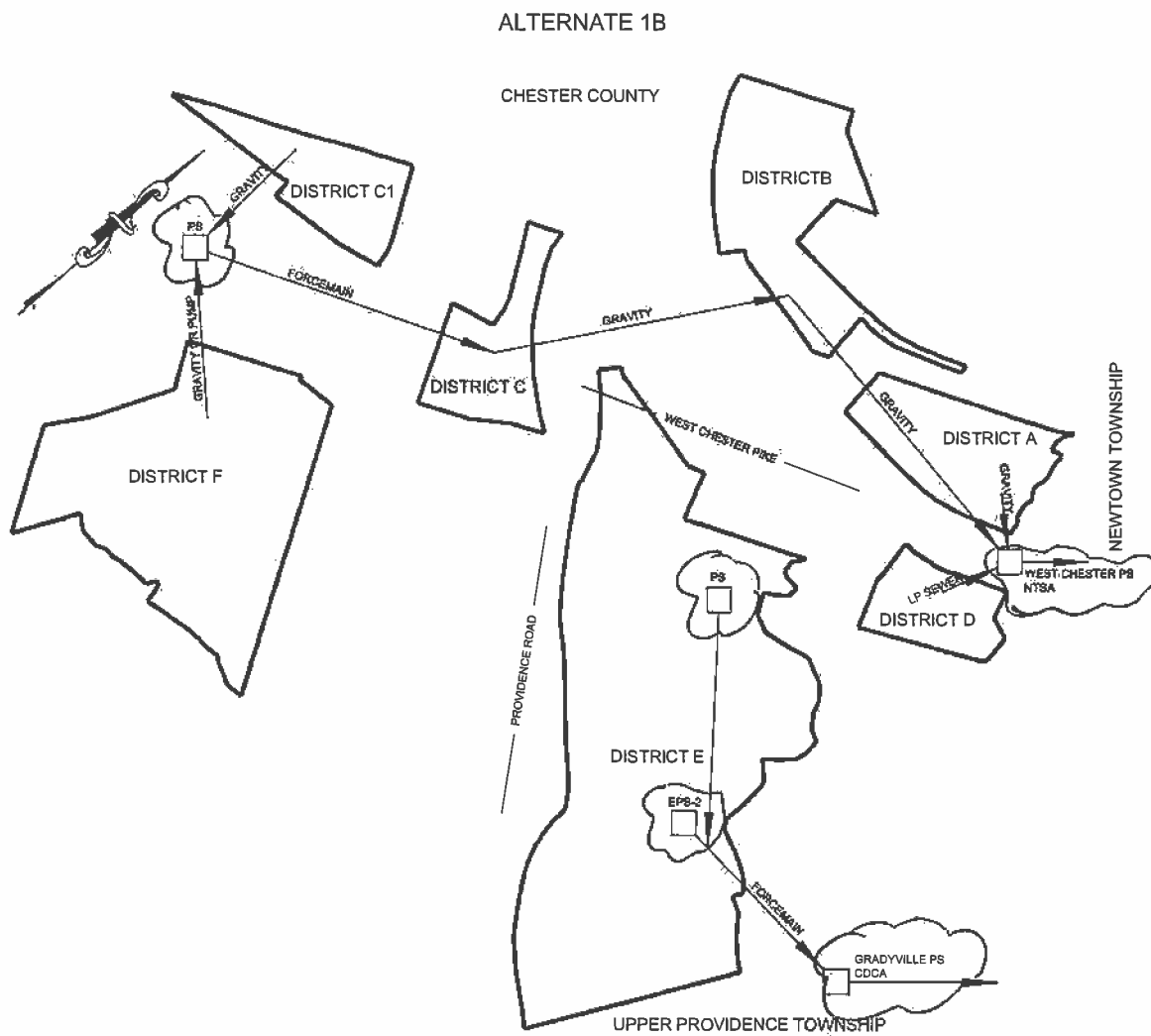
Newtown's PS-4 would be designed for 243,000 total gpd that includes 233,000 gpd for Edgmont. Edgmont's share of the construction costs would be 96%. Newtown's costs are shown in Appendix 11.



ALTERNATE 1B

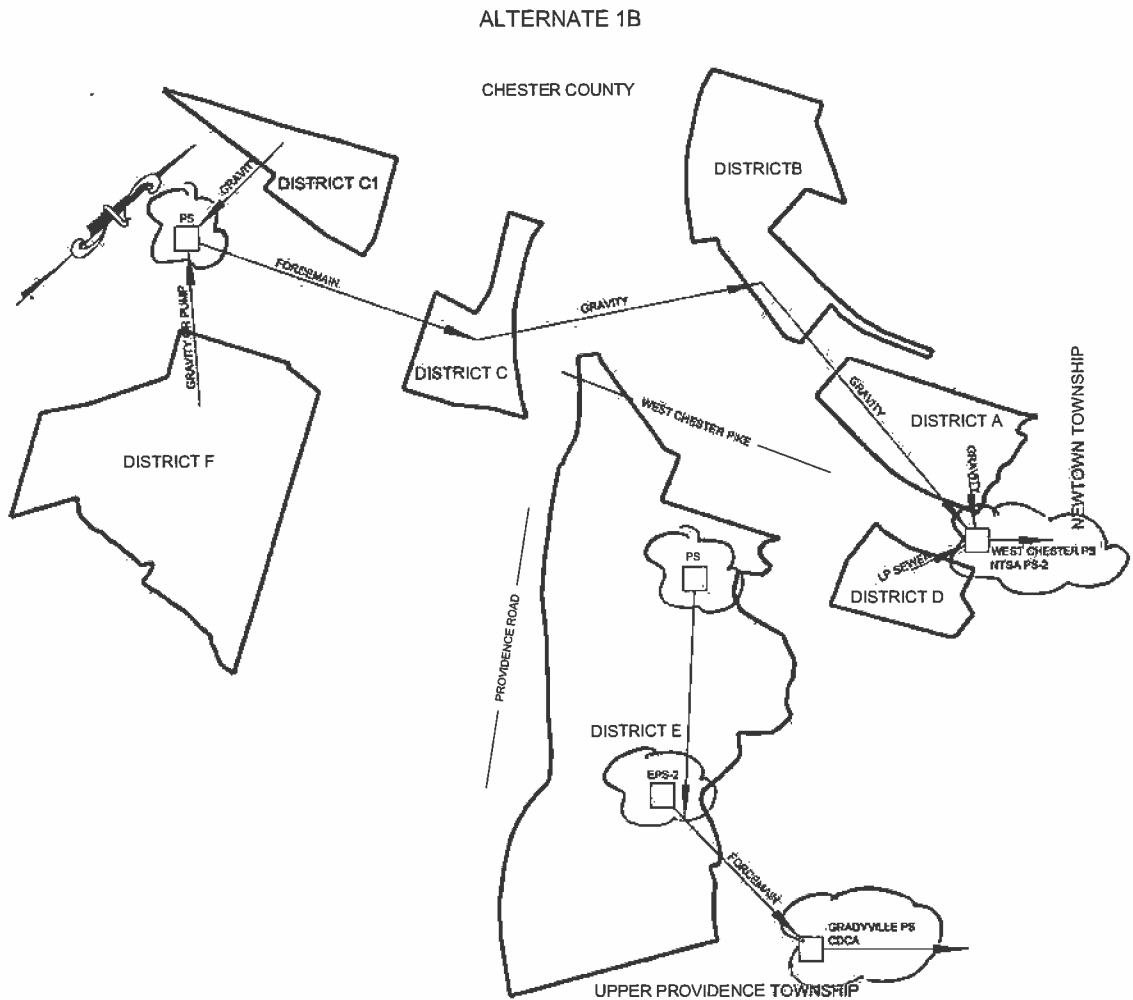
The sewer system under this option would convey sewage from Districts A through D to CDCA via the Newtown PS- 2. District E flows would be pumped to the Gradyville Road (EPS-2) or Newtown PS-4 as opposed to installing a gravity interceptor along the Geist Reservoir property.

b.



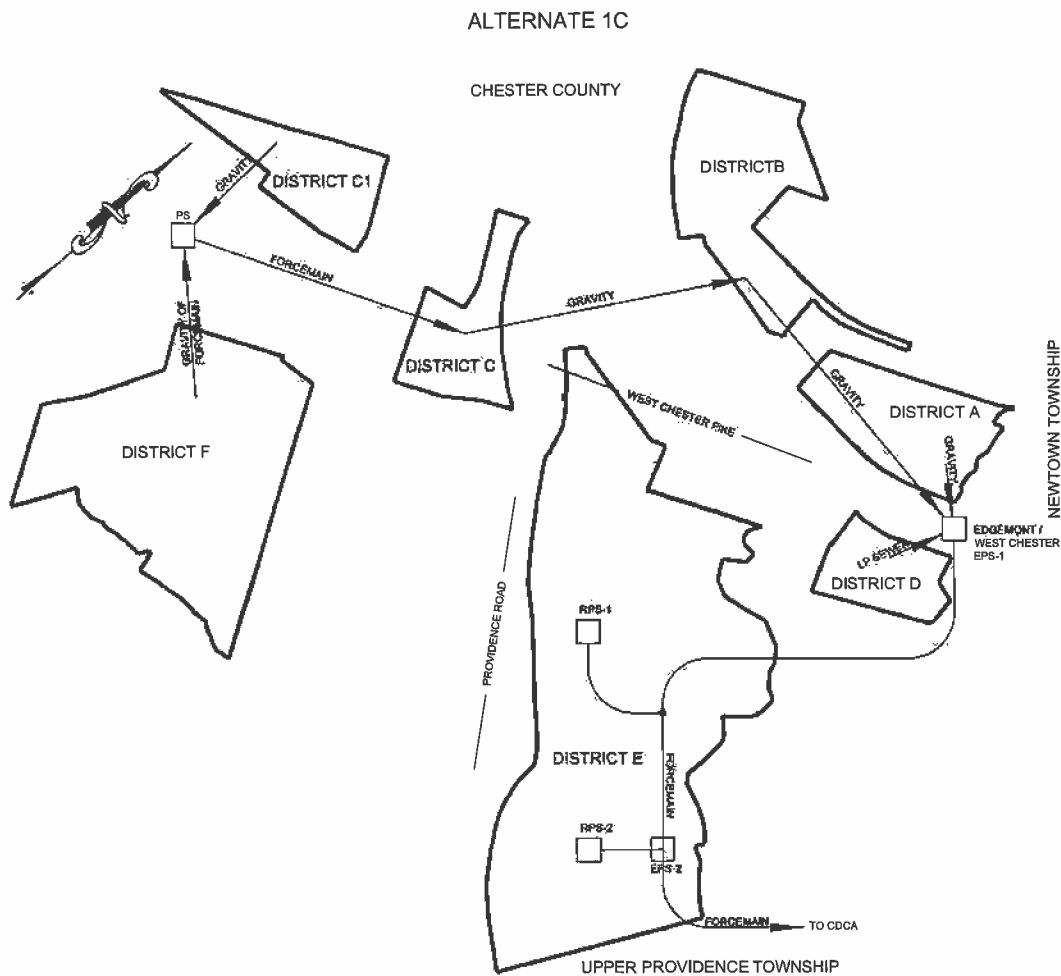
b. ALTERNATE 1B

The sewer system under this option would convey sewage from Districts A through D to CDCA via the Newtown PS- 2. District E flows would be pumped to the Gradyville Road (EPS-2) or Newtown PS-4 as opposed to installing a gravity interceptor along the Geist Reservoir property.



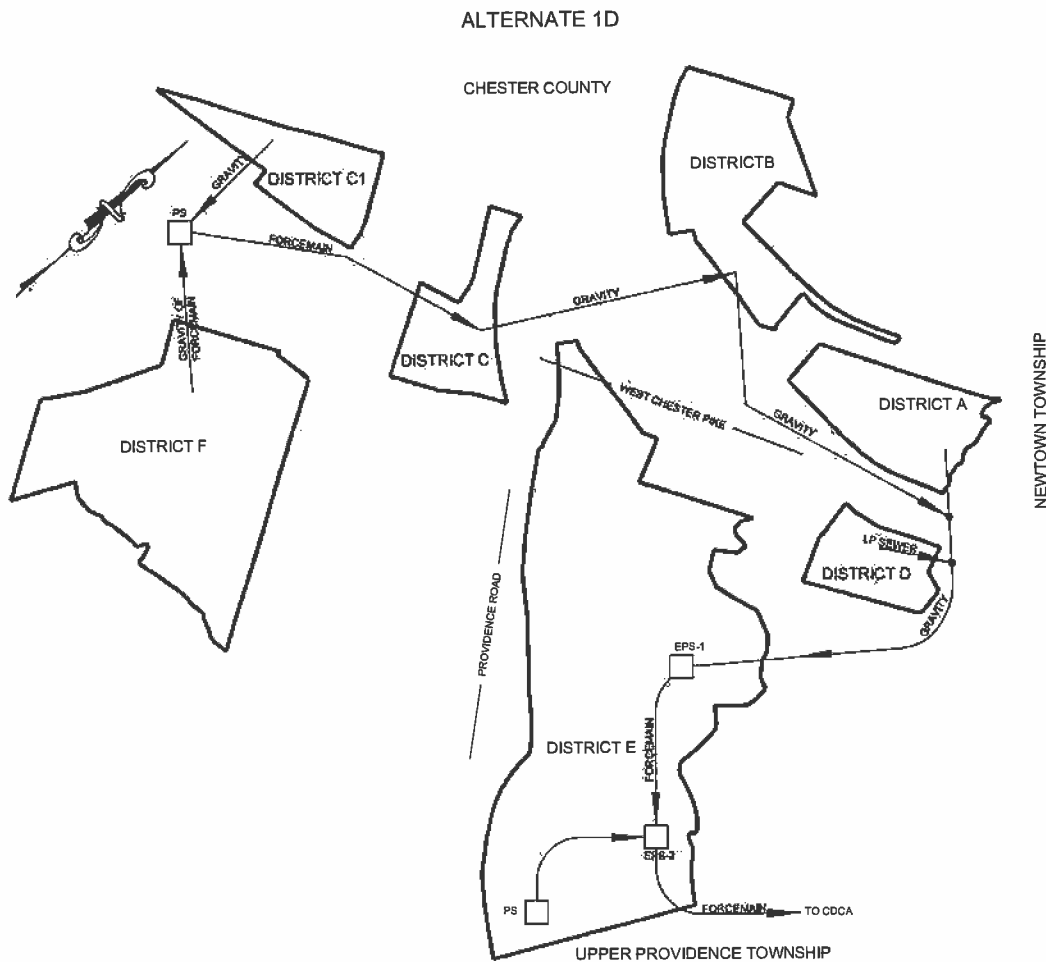
ALTERNATE 1C

This Alternate provides for the elimination of Edgmont's Connection to the Newtown PS#2. The option would include installation of a pump station (EPS-1) near Crum Creek and discharging directly to the proposed pump station at Gradyville Road (EPS-2). The proposed interceptor along Crum Creek under the 2007 Plan would be deleted and the existing Runnymede Farms pump stations (RPS-1 and RPS-2) would be replaced and would connect to the new force main.



c. ALTERNATE 1D

Under Alternate 1D a gravity interceptor approximately parallel to Crum Creek would be installed from the West Chester Pike to EPS-1 in the Runnymede Subdivision near the existing pump station RPS-1. The existing pump stations in District A and the existing Runnymede pump stations all would be phased out and connected to the interceptor. The capped sewer located south of Gradyville Road will be connected to the main system by a small pump station. EPS-1 will pump through the Runnymede streets to avoid construction problems along Crum Creek. The force main will discharge to the proposed EPS-2 for further conveyance to the CDCA system.

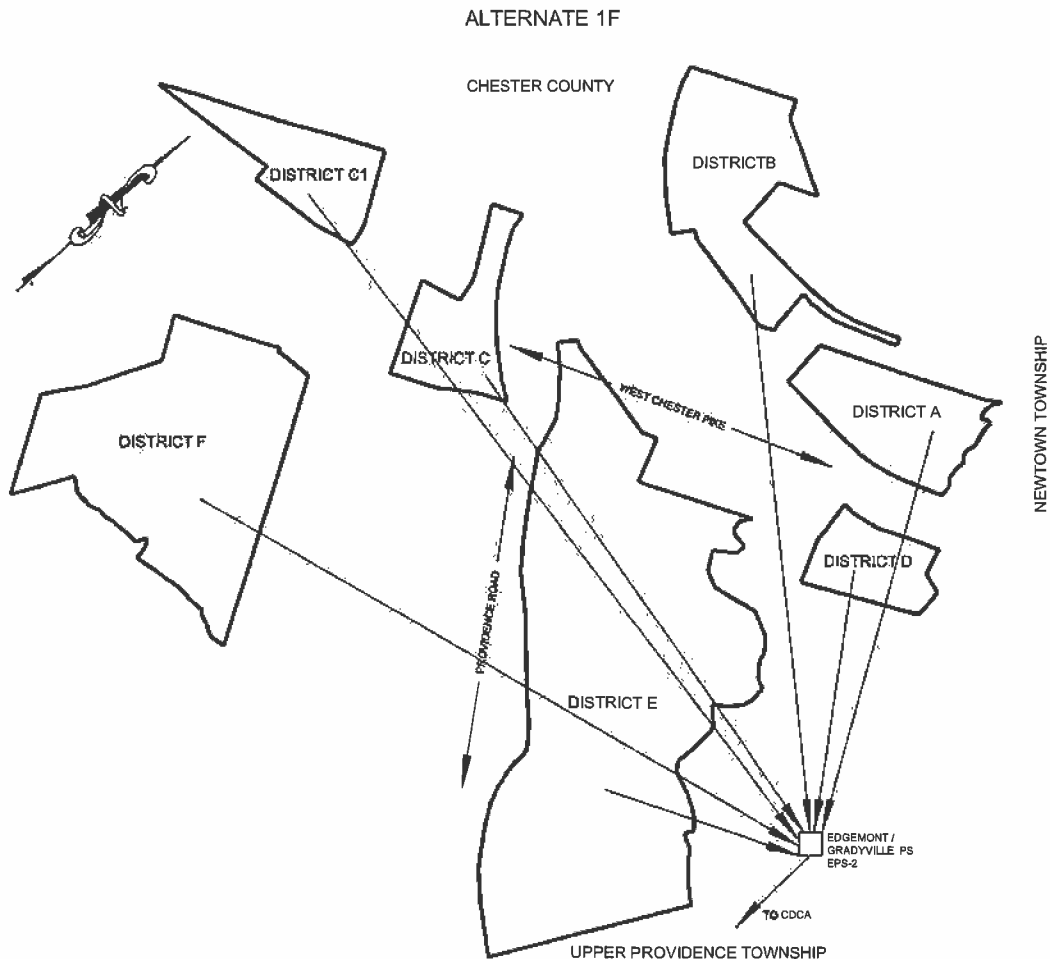


2. Conveyance System Alternates (Gradyville Road Pump Station)

a. ALTERNATE 1F

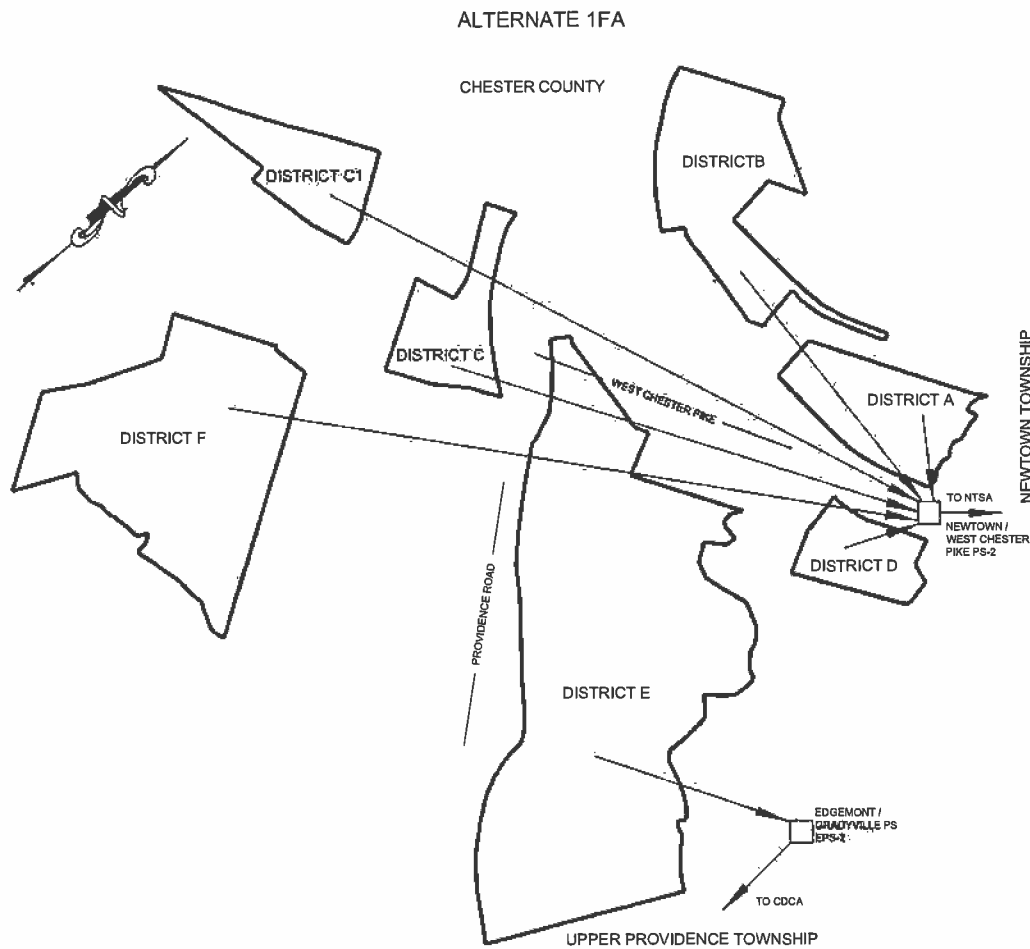
DESCRIPTION: This Alternate is comprised of Pump Station EPS-2 installed on the West side of Geist Reservoir. The force main would run through Upper Providence Township via Gradyville, Providence, and Newtown Roads to a connection point on the CDCA system located on the downstream side of the Geist Reservoir. Upper Providence would share use of the force main for connection of sections of their proposed low pressure sewer system. Costs of the force main would be shared based on the pro-rata proportion of use.

Note that the pump station is designed for all Edgemont Flows which total 350,000 gpd. This is an increase of roughly 50% over the Newtown PS-4.



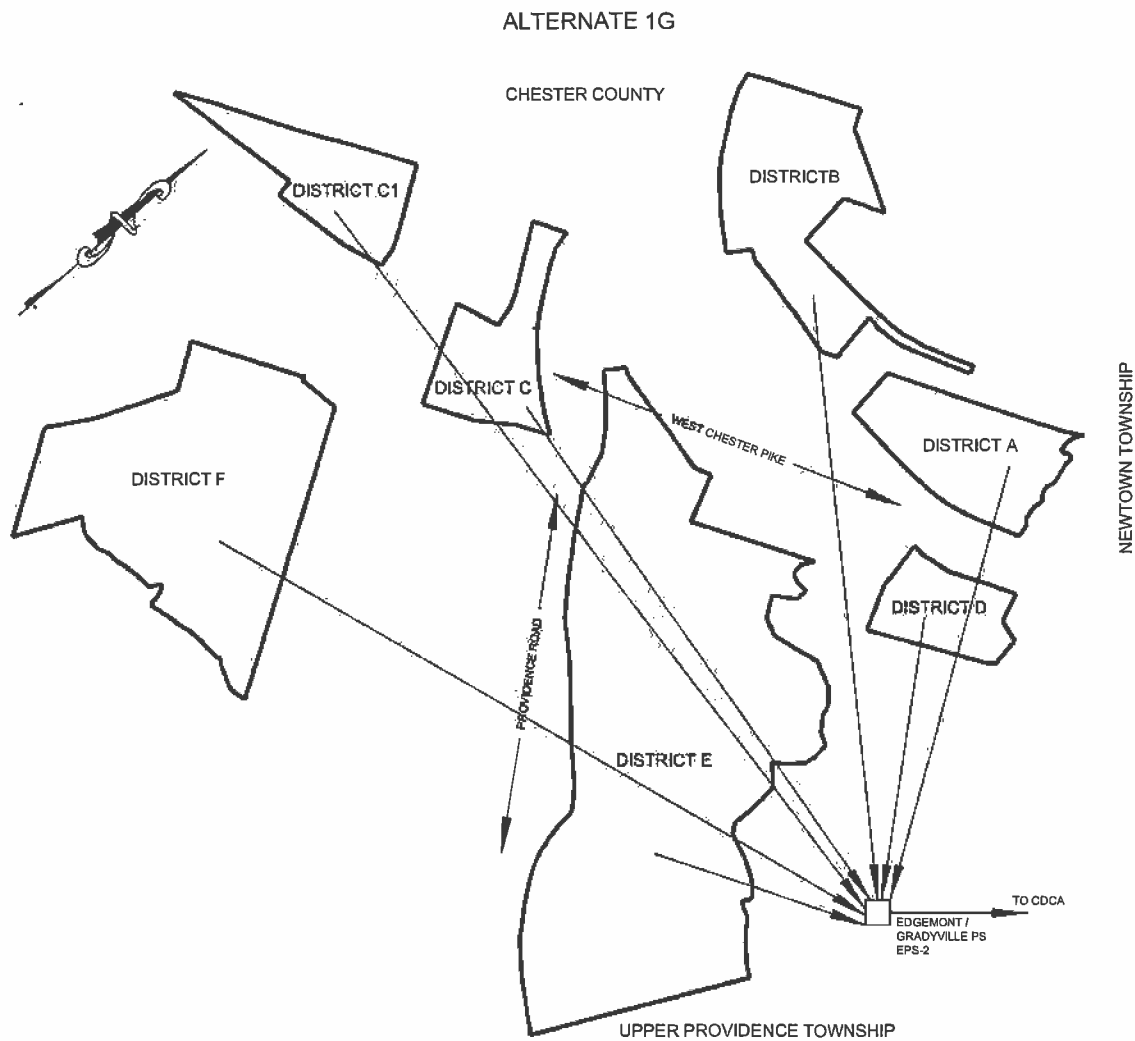
b. ALTERNATE 1F-OPTION A

DESCRIPTION: This Alternate is identical to Alternate 1F with the exception that the design flows would include only District E. This Alternate would apply only if the decision was made to keep the connection of West Chester Pike to Newtown PS # 2 and to pump only District E via upper Providence to the CDCA system. The savings in cost results from a smaller pump station and force main.



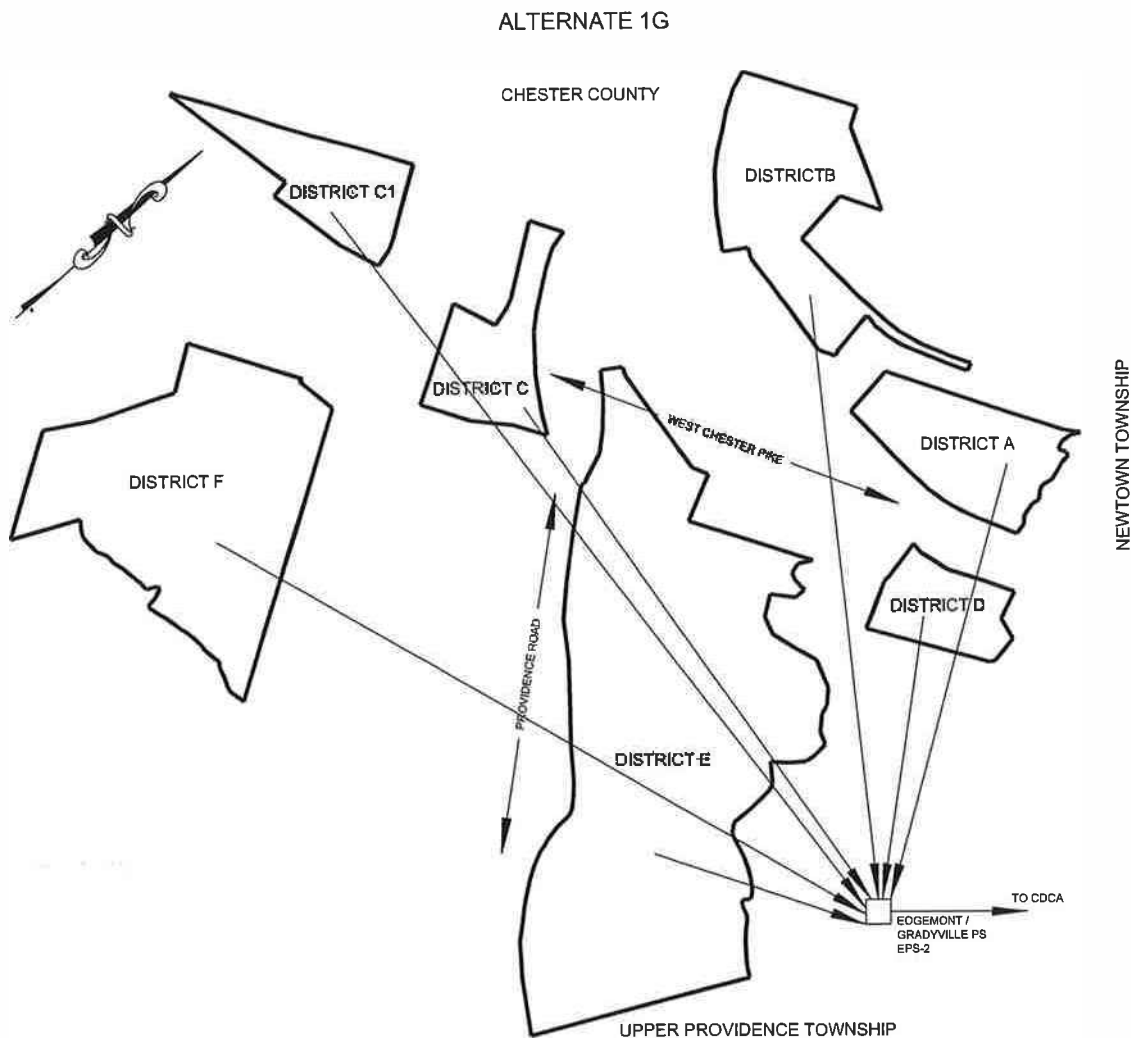
c. ALTERNATE 1G-PUMP THROUGH NEWTOWN OPTION

In this scenario all wastewater generated in Districts A through E is conveyed to a pump station (EPS-2) in the vicinity of Gradyville Road on the Edgmont side of the Geist Reservoir. The Gradyville Road pump station would also be constructed by Edgmont/DELCORA and would discharge to the CDCA system via a force main installed through Newtown Township. Under this option, Edgmont/DELCORA would build/own/operate the new pump station and force main and pump directly to the CDCA system.



c. ALTERNATE 1G-PUMP THROUGH NEWTOWN OPTION

In this scenario all wastewater generated in Districts A through E is conveyed to a pump station (EPS-2) in the vicinity of Gradyville Road on the Edgmont side of the Geist Reservoir. The Gradyville Road pump station would also be constructed by DELCORA and would discharge to the CDCA system via a force main installed through Newtown Township. Under this option, DELCORA would build/own/operate the new pump station and force main and pump directly to the CDCA system.



3. Alternate 2- District C-1 And District F Project Inclusion

This alternate was developed to formally include District C-1 in the project and provide the base planning for District F for infrastructure sizing purposes.

The flow estimates and resulting “buy in” costs for District C1 were included in the CDCA Agreement but this area was excluded in the mapping portion of the agreement for some unknown reason. This section of the Township has some of the most serious public sewage needs in the entire study area. Estimated costs to serve the area are included in overall collection system totals. Adoption of Alternate 2 in the Plan of Choice will require amendment of the CDCA Agreement to eliminate any language that excludes District C-1. Refer to map number 6 for orientation of the area in question.

The CDCA agreement should be additionally amended to include District F into the Crum Creek Sewer District. At this time the inclusion would be for future planning purposes only to provide Edgmont Township with a viable sewage disposal alternative for this area. The CDCA Agreement can be further modified if future development proposals are submitted to the Township and firm estimates of required sewage capacity are available. The inclusion of District F would be contingent upon capacity being available in the CDCA system at the time and arrangements for an agreed upon capital contribution to be paid to CDCA. Connection of District F to the Crum Creek Sewer System will not be implemented at this time. Additional planning will be necessary to evaluate sewage disposal alternatives in the future.

C. EVALUATION OF ALTERNATES:

1. Collection System Connection Alternates

The following cost estimates include only those items directly associated with the Alternates described. Costs for the Townships collection system, pressure sewers for example, are not included in this summary. The Alternate cost estimates are only for

direct comparison of the alternates described. More comprehensive estimates for selected alternates are presented later in this report.

a. ALTERNATE 1A

This alternate provides for the installation of the system selected for adoption in the 2007 Plan. Flows from the West Chester Pike East Corridor would discharge to Newtown Township's PS-2 for conveyance to the CDCA system under this option. Newtown's PS # 3 would also require an upgrade to provide the capacity needed.

Newtown's PS-2 would be designed for 378,000 total gpd that includes 117,339 gpd for Edgmont. Note that the 117,339 gpd for Edgmont includes all estimated flow from Districts A through D, including C1. Edgmont's share of the construction costs would be 31%. Edgmont's share of the PS#3 modifications would amount to 28% of the total. Newtown's costs are shown in Appendix 11.

Estimated Costs:

District A-D

Item	Original Costs	Escalated Costs (3)
PS-2, PS-3 and Force Mains (1)	\$618,280	\$675,611
Major Stream Crossing (2)	\$50,000	\$54,636
Total		\$730,248

(1) Based on Kelly & Close Engineers memo dated June 20, 2007

(2) Based on estimate in Edgmont 2007 Special Study

(3) Escalated costs based on 3% per year for 3 years

Table 1 Estimated Edgmont Flows to Newtown PS-2.

SEWER DISTRICT	EDU's	ESTIMATED FLOW (gpd)
A	100	26,250
B	162	42,525
C	15	3,938
C1	105	27,563
D	65	17,063
TOTALS	447	117,339

Flows from District E would discharge to Newtown Township's PS-4 for conveyance to the CDCA system under this option. The pump station would be located on the East

side of the Geist Reservoir requiring crossing of the reservoir to tie-in Edgmont's flows.

Newtown's PS-4 would be designed for 243,000 total gpd that includes 233,000 gpd for Edgmont. Edgmont's share of the construction costs would be 96%. Newtown's costs are shown in Appendix 11.

Estimated Costs:

District E

Item	Original Costs	Escalated Costs (3)
PS-4 and Force Main (1)	\$1,184,760	\$1,294,619
Major Stream Crossing (2)	\$125,000	\$136,591
District E Interceptor (2)	\$978,250	\$1,068,960
Total		\$2,500,170

(1) Based on Kelly & Close Engineers memo dated June 20, 2007

(2) Based on estimate in Edgmont 2007 Special Study

(3) Escalated costs based on 3% per year for 3 years

Total Conveyance Costs Alternate 1A

\$3,230,418

b. ALTERNATE 1B

The sewer system under this option would convey sewage from Districts A through D to CDCA via the Newtown Pump Station 2. District E flows would be pumped to the Gradyville Road (EPS-2) or Newtown PS-4 as opposed to installing a gravity interceptor along the Geist Reservoir property.

This alternate would be implemented if it is decided to keep the Newtown option as provided in the 2007 Plan and the interceptor is determined to be impractical to implement. See Alternate 1D for a review of the advantages and disadvantages of the interceptor approach.

Preliminary Pump Station Design (RPS-1)

Average Daily Flow – 109,462 gpd or 76.00 gpm

Peaking Factor (peak hourly flow) – 3.8

Peak Hourly Flow – 300 gpm.

Force Main Diameter- 6"

Total Dynamic Head – 163'. (195' with RP-2 running)

Preliminary Pump Station Design (RPS-2)

Average Daily Flow – 109,725 gpd or 76.00 gpm

Peaking Factor (peak hourly flow) – 3.8

Peak Hourly Flow – 300 gpm

Force Main Diameter- 6"

Total Dynamic Head – 47'. (With RP-1 running.)

Estimated Costs:**District A-D**

Item	Original Costs	Escalated Costs (3)
PS-2, PS-3 and Force Mains (1)	\$618,280	\$675,611
Major Stream Crossing (2)	\$50,000	\$54,636
Total		\$730,248

(1) Based on Kelly & Close Engineers memo dated June 20, 2007

(2) Based on estimate in Edgmont 2007 Special Study

(3) Escalated costs based on 3% per year for 3 years

District E

Item	Original Costs	Escalated Costs (3)
PS-4 and Force Main (1)	\$1,184,760	\$1,294,619
Major Stream Crossing (2)	\$125,000	\$136,591
District E Internal Conveyance Costs		\$1,341,080
Total		\$2,772,290

(1) Based on Kelly & Close Engineers memo dated June 20, 2007

(2) Based on estimate in Edgmont 2007 Special Study

(3) Escalated costs based on 3% per year for 3 years

Total Conveyance Costs Alternate 1B **\$3,502,538**

c. ALTERNATE 1C

This Alternate provides for the elimination of Edgmont's Connection to the Newtown PS#2. The option would include installation of a pump station (EPS-1) near Crum Creek and discharging directly to the proposed pump station at Edgmont's Gradyville Road (EPS-2). The proposed interceptor along Crum Creek under the 2007 Plan would be deleted and the existing Runnymede Farms pump stations would be replaced and connect to the new force main.

The advantages of this option include the fact that the plan can be implemented without reliance on Newtown completing their pump station and the elimination of the gravity sewer along Crum Creek. The Crum Creek Interceptor is discussed further under Alternate 1D. It is assumed that annual operating costs for EPS-1 would be less than the pro-rata share of Newtown's operating costs for PS-2 and PS-3.

Average Daily Flow – 117,339 gpd or 82 gpm.

Peaking Factor (peak hourly flow) = 3.5

Peak Hourly Flow – 287 gpm.

Force Main Diameter- 6"

Total Dynamic Head – 155'.

\$ 2,043,574

Under Alternate 1D a gravity interceptor approximately parallel to Crum Creek would be installed from the West Chester Pike to EPS-1 in the Runnymede Subdivision near the existing pump station RPS-1. The existing pump stations in District A and the existing Runnymede pump stations all would be phased out and connected to the interceptor. The capped sewer located south of Gradyville Road will be connected to the main system by a small pump station. EPS-1 will pump through the Runnymede streets to avoid construction problems along Crum Creek. The force main will discharge to the proposed EPS-2 for further conveyance to the CDCA system.

The other disadvantage of this specific location is dealing with the proximity of the Geist Reservoir. There is the probability of public and utility owner concern over locating a sanitary sewer relatively close to a drinking water supply. It is anticipated that obtaining easements from the utility owner will be difficult.

The concerns listed above can be partially mitigated using design measures directed toward eliminating the impacts resulting from the construction of the proposed interceptor. The initial layout of the sewer route is probably the most important step. The route must first be established in the field by experienced personnel to optimize the location. The initial route must then be surveyed and adjusted as required to meet both the physical and environmental criteria needed to satisfy the project concerns. Post construction maintenance of the easement and inspection of the system on a regular basis will be important steps to protect the reservoir. Proper alarms and rapid emergency response at the pump station will also be needed to protect the reservoir.

Preliminary Facilities Sizing

Estimated Sewage Flows:

Area	EDU's	Estimated ADF
Districts A through D	447	113,401 gpd.

District E Flows.

Tie-in at RP-1	417	109,462 gpd.
Tie-in at RP-2	418	109,725 gpd.

Interceptor Segment 1- West Chester Pike to RP-1.

Average Daily Flow (ADF) - 113,401 gpd.

Peaking Factor - 3.4

Peak Hourly Flow - 385,563 gpd.

Required Pipe Size - 8" diameter at 0.50% minimum slope.

Required Pipe Size - 12" diameter at 0.30% minimum slope.

Preliminary Pump Station size EPS-1

Average Daily Flow - 226,801 gpd or 158 gpm.

Peaking Factor (peak hourly flow) - 3.4

Peak Hourly Flow - 535 gpm.

Force Main Diameter- 6"

Total Dynamic Head - 214'

Preliminary Pump Station size EPS -3

Average Daily Flow - 16,275 or 11 gpm.

Peaking Factor (peak hourly flow) - 3.8

Peak Hourly Flow - 43 gpm.

Force Main Diameter- 4"

Total Dynamic Head - 60'

Total Estimated Costs Alternate 1D

\$ 1,593,332.00

The concerns listed above can be partially mitigated using design measures directed toward eliminating the impacts resulting from the construction of the proposed interceptor. The initial layout of the sewer route is probably the most important step. The route must first be established in the field by experienced personnel to optimize the location. The initial route must then be surveyed and adjusted as required to meet both the physical and environmental criteria needed to satisfy the project concerns. Post construction maintenance of the easement and inspection of the system on a regular basis will be important steps to protect the reservoir. Proper alarms and rapid emergency response at the pump station will also be needed to protect the reservoir.

Preliminary Facilities Sizing

Estimated Sewage Flows:

Area	EDU's	Estimated ADF
Districts A through D	447	117,338 gpd.
District E Flows.		
Tie-in at RP-1	417	109,462 gpd.
Tie-in at RP-2	418	109,725 gpd.

Interceptor Segment 1- West Chester Pike to RP-1.

Average Daily Flow (ADF) -	117,338 gpd.
Peaking Factor – 3.4	
Peak Hourly Flow -	398,949 gpd.
Required Pipe Size – 8” diameter at 0.50% minimum slope.	
Required Pipe Size – 12” diameter at 0.30% minimum slope.	

Preliminary Pump Station size EPS-1

Average Daily Flow – 226,801 gpd or 158 gpm.
Peaking Factor (peak hourly flow) – 3.4
Peak Hourly Flow – 535 gpm.
Force Main Diameter- 6”
Total Dynamic Head – 214’

Preliminary Pump Station size EPS -3

Average Daily Flow – 16,275 or 11 gpm.
Peaking Factor (peak hourly flow) – 3.8
Peak Hourly Flow – 43 gpm.
Force Main Diameter- 4”
Total Dynamic Head – 60’

Total Estimated Costs Alternate 1D **\$1,593,332.00**

2. Conveyance System Alternatives

a. ALTERNATE 1F- UPPER PROVIDENCE OPTION

This Alternate is comprised of Pump Station EPS-2 installed on the West side of Geist Reservoir. The force main would run through Upper Providence Township via Gradyville, Providence, and Newtown Roads to a connection point on the CDCA system located on the downstream side of the Geist Reservoir. Upper Providence would share use of the force main for connection of sections of their proposed low-pressure sewer system. Costs of the force main would be shared based on the pro-rata proportion of use.

PUMP STATION AND FORCE MAIN SIZE

Size Required With West Chester Pike Corridor

Districts A through D -	117,339 gpd.
District E -	<u>232,837 gpd.</u>
TOTAL	≈350,000 gpd.

Preliminary Pump Station size.

Average Daily Flow – 350,000 gpd or 243 gpm.
Peaking Factor (peak hourly flow) – 3.2
Peak Hourly Flow – 778 gpm.
Force Main Diameter- 8”
Total Dynamic Head – 359’

Size Required Without West Chester Pike Corridor

District E TOTAL -	<u>232,837 gpd.</u>
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Preliminary Pump Station size.

Average Daily Flow – 232,937 or 162 gpm.
Peaking Factor (peak hourly flow) – 3.5
Peak Hourly Flow – 567 gpm.
Force Main Diameter- 8”
Total Dynamic Head – 283’

Total Estimated Costs Alternate 1F	\$ 5,113,041.00
Potential Cost Sharing credit from UPTSA (1)	\$ (951,190.00)
Grand Total Alternate 1F	\$ 4,161,851.00

(1) Assumes UPTSA will share in the pro-rata proportionate share of the force main construction costs

b. ALTERNATE 1F-OPTION A

DESCRIPTION: This Alternate is identical to Alternate 1F with the exception that the design flows would include only District E. This Alternate would apply only if the decision was made to keep the connection of West Chester Pike to Newtown PS # 2 and to pump only District E via upper Providence to the CDCA system. The savings in cost results from a smaller pump station and force main.

Total Estimated Costs Alternate 1FA	\$ 4,575,947.00
Potential Cost Sharing credit from UPTSA (1)	\$ (951,190.00)
Grand Total Alternate 1F	\$ 3,624,757.00

(1) Assumes UPTSA will share in the pro-rata proportionate share of the force main construction costs

Project costs for Alternates 1F and 1FA are subject to sharing with Upper Providence Township based on a pro-rata percentage of EDU's and length of line used. Although Upper Providence Township Sewer Authority was approached with this idea, no formal agreement or understanding has been reached at this point.

c. ALTERNATE 1G-PUMP THROUGH NEWTOWN OPTION

This scenario provides gravity flow for Edgmont wastewater generated in Districts A through E to a pump station in the vicinity of Gradyville Road on the Edgmont side of the Geist Reservoir. The Gradyville Road pump station would also be constructed by Edgmont/DELCORA and would discharge to the CDCA system via a force main installed through Newtown Township. Under this option, Edgmont/DELCORA would build/own/operate the new pump station and force main and pump directly to the CDCA system.

Preliminary Pump Station size.

Average Daily Flow – 350,000 gpd or 243 gpm.

Peaking Factor (peak hourly flow) – 3.2

Peak Hourly Flow – 868 gpm (includes flow from EPS-1 and EPS-3)

Force Main Diameter- 8"

Total Dynamic Head – 280'

Total Estimated Costs Alternate 1G	\$ 2,289,392.00
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b. ALTERNATE 1F-OPTION A

DESCRIPTION: This Alternate is identical to Alternate 1F with the exception that the design flows would include only District E. This Alternate would apply only if the decision was made to keep the connection of West Chester Pike to Newtown PS # 2 and to pump only District E via upper Providence to the CDCA system. The savings in cost results from a smaller pump station and force main.

<u>Total Estimated Costs Alternate 1FA</u>	<u>\$ 4,575,947.00</u>
Potential Cost Sharing credit from UPTSA (1)	\$ (951,190.00)
<u>Grand Total Alternate 1F</u>	<u>\$ 3,624,757.00</u>
(1) Assumes UPTSA will share in the pro-rata proportionate share of the force main construction costs	

Project costs for Alternates 1F and 1FA are subject to sharing with Upper Providence Township based on a pro-rata percentage of EDU's and length of line used. Although Upper Providence Township Sewer Authority was approached with this idea, no formal agreement or understanding has been reached at this point.

c. ALTERNATE 1G-PUMP THROUGH NEWTOWN OPTION

This scenario provides gravity flow for Edgmont wastewater generated in Districts A through E to a pump station in the vicinity of Gradyville Road on the Edgmont side of the Geist Reservoir. The Gradyville Road pump station would also be constructed by DELCORA and would discharge to the CDCA system via a force main installed through Newtown Township. Under this option, DELCORA would build/own/operate the new pump station and force main and pump directly to the CDCA system.

Preliminary Pump Station size.

Average Daily Flow – 193,462.5 gpd plus EPS-1 and EPS-3
Peaking Factor (peak hourly flow) – 3.5 (based upon ADF from collection system tributary to the pump station)
Peak Hourly Flow – 1068 gpm (includes flow from EPS-1 and EPS-3)
Force Main Diameter- 8"
Total Dynamic Head – 280'

<u>Total Estimated Costs Alternate 1G</u>	<u>\$ 2,289,392.00</u>
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D. SCREENING OF ALTERNATIVES

The list of alternatives described above needs to be narrowed down so that a plan for implementation can be selected. The alternate selected for the collection system is dependent upon the conveyance option selected. It is therefore necessary to look at the conveyance options available and make this choice first. The three options for consideration are reviewed below.

1. Screening Of Collection System Alternates

The four collection system alternates break down into choice between gravity interceptor options and pumping options. Ordinarily a gravity interceptor would stand out as the first choice due to lower up front costs and lower operating costs. The situation along this particular stretch of Crum Creek calls for additional factors to be considered in making the selection. The proximity to the Geist Reservoir raises concerns about contamination of a major drinking water supply should a problem develop with the interceptor. Also, the area that would be designated for the interceptor construction contains both wetlands and many mature trees that will certainly raise serious concerns with local environmental groups and property owners. Public acceptance of the gravity interceptor options is very questionable due to the conditions cited. Finally, if it should become necessary to use property owned by Aqua, PA, a major problem in obtaining the necessary right-of-way can be expected. It would probably be necessary to locate the sewer back into deeper side slope conditions that translate into higher costs and more disturbances of the wooded sections.

The concerns listed above can be largely mitigated using design measures directed toward eliminating the impacts resulting from the construction of the proposed interceptor. The initial layout of the sewer route is probably the most important step. The route must first be established in the field by experienced personnel to optimize the location. The initial route must then be surveyed and adjusted as required to meet both the physical and environmental criteria needed to satisfy the project concerns. Post construction maintenance of the easement and inspection of the system on a regular basis will be important steps to protect the reservoir. Proper alarms and rapid emergency response at the pump station will also be needed to protect the reservoir.

The pumping options will avoid most of the objections noted above. The stations themselves will be completely monitored at all times for operational problems. They will be located in areas of easy access to facilitate repairs and reduce down time. The force main will be located much further back from the Reservoir thereby providing a larger buffer should problems occur. The following Table details the pumps proposed for this Alternate along with the operational parameters:

Pump Station	Annual Average Daily Flow (gpd)	Peak Flow (gpd)	Proposed Pump Rate (gpm)
EPS -1	226,801	771,123	535
EPS-3	16,275	61,845	43

Alternate 1D was selected as the plan of choice for the collection system.

2. Screening Of Conveyance System Alternates

- a. **Alternate 1A Original 2007 Plan.** This scenario provides for Newtown to construct pump stations at West Chester Pike and Gradyville Road along with the force mains needed to connect with the CDCA system. Edgmont would be responsible for paying a proportionate share of Newtown's costs plus the buy-in and interceptor repair and expansion costs for the CDCA facilities. It should be noted that there are two major items that need to be considered with this alternate. First, this Plan assumed that a gravity interceptor would be installed along Crum Creek to the Gradyville Road Pump Station. As stated earlier in this report, this interceptor would not be easily buildable and the ability to gain the needed easement is questionable. Second, an inter-municipal agreement would be needed with Newtown Township. Although we assumed some cost sharing in the construction of the two Newtown Pump Station, it is unclear if a tapping fee or additional capital contributions would need to be paid.

Total Conveyance Costs Alternate 1A

\$3,230,418

- b. **Alternate 1F Upper Providence Option.** This scenario provides for Edgmont to pump wastewater generated in Districts A through E to a pump station on Gradyville Road on the Edgmont side of the Geist Reservoir. The Gradyville Road

pump station would also be constructed by Edgmont/DELCORA and would discharge to the CDCA system via a force main installed through Upper Providence Township. The force main can be used by Upper Providence for connection of their Low Pressure Sewer Systems for conveyance to the CDCA system. Capital and O & M costs would be shared based on proportionate use of the facilities. Connection to the CDCA system would occur at a point downstream from the original plan and could result in costs savings to Edgmont due to the elimination of costs attributed to the Newtown Township system.

Grand Total Alternate 1F **\$4,161,851.00**

Alternate 1G Pump through Newtown Option. This scenario provides for Edgmont's wastewater generated in Districts A through E to be conveyed to a pump station in the vicinity of Gradyville Road on the Edgmont side of the Geist Reservoir. The Gradyville Road pump station would be constructed by Edgmont and would discharge to the CDCA system via a force main installed through Newtown Township. Under this option, Edgmont or its agent would build/own/operate the new pump station and force main and pump directly to the CDCA system. The following Table details the pumps proposed for this Alternate along with the operational parameters:

Pump Station	Annual Average Daily Flow (gpd)	Peak Flow (gpd)	Proposed Pump Rate (gpm)
EPS -2	350,000	1,249,920	868

Total Estimated Costs Alternate 1G **\$ 2,289,392.00**

Alternate 1G, The Newtown Option is the Plan of Choice for the Conveyance System.

3. Total Project Cost

The following is an estimated cost to complete the Crum Creek Sewer Project. Alternate 1D is shown as the Collection Plan of Choice and Alternate 1G is shown as the Conveyance System Plan of Choice. The internal collection system cost estimate is based upon the original 2007 Plan. The costs were escalated 3% per year for three years. No further study was performed on the internal collection system and this plan cannot speak to the accuracy of those numbers. Additionally, a cost to televise the

The pumping options will avoid most of the objections noted above. The stations themselves will be completely monitored at all times for operational problems. They will be located in areas of easy access to facilitate repairs and reduce down time. The force main will be located much further back from the Reservoir thereby providing a larger buffer should problems occur. The following Table details the pumps proposed for this Alternate along with the operational parameters:

Pump Station	Districts Served	Annual Average Daily Flow (gpd)	Peak Factor	Peak Flow (gpd)	Proposed Pump Rate (gpm)
EPS -1	A-D, F, 150 EDUs Dist E	226,801	3.5	793,803.5	552
EPS-3	62 EDUs E	16,275	4.0	65,100	46

Alternate 1D was selected as the plan of choice for the collection system.

2. Screening Of Conveyance System Alternates

- a. **Alternate 1A Original 2007 Plan.** This scenario provides for Newtown to construct pump stations at West Chester Pike and Gradyville Road along with the force mains needed to connect with the CDCA system. Edgmont would be responsible for paying a proportionate share of Newtown's costs plus the buy-in and interceptor repair and expansion costs for the CDCA facilities. It should be noted that there are two major items that need to be considered with this alternate. First, this Plan assumed that a gravity interceptor would be installed along Crum Creek to the Gradyville Road Pump Station. As stated earlier in this report, this interceptor would not be easily buildable and the ability to gain the needed easement is questionable. Second, an inter-municipal agreement would be needed with Newtown Township. Although we assumed some cost sharing in the construction of the two Newtown Pump Station, it is unclear if a tapping fee or additional capital contributions would need to be paid.

Total Conveyance Costs Alternate 1A

\$3,230,418

The pumping options will avoid most of the objections noted above. The stations themselves will be completely monitored at all times for operational problems. They will be located in areas of easy access to facilitate repairs and reduce down time. The force main will be located much further back from the Reservoir thereby providing a larger buffer should problems occur. The following Table details the pumps proposed for this Alternate along with the operational parameters:

Pump Station	Districts Served	Annual Average Daily Flow (gpd)	Peak Factor	Peak Flow (gpd)	Proposed Pump Rate (gpm)
EPS -1	A-D, 417 EDUs Dist E	226,801	3.5	793,803.5	552
EPS-3	62 EDUs E	16,275	4.0	65,100	46

Alternate 1D was selected as the plan of choice for the collection system.

2. Screening Of Conveyance System Alternates

- a. **Alternate 1A Original 2007 Plan.** This scenario provides for Newtown to construct pump stations at West Chester Pike and Gradyville Road along with the force mains needed to connect with the CDCA system. Edgmont would be responsible for paying a proportionate share of Newtown's costs plus the buy-in and interceptor repair and expansion costs for the CDCA facilities. It should be noted that there are two major items that need to be considered with this alternate. First, this Plan assumed that a gravity interceptor would be installed along Crum Creek to the Gradyville Road Pump Station. As stated earlier in this report, this interceptor would not be easily buildable and the ability to gain the needed easement is questionable. Second, an inter-municipal agreement would be needed with Newtown Township. Although we assumed some cost sharing in the construction of the two Newtown Pump Station, it is unclear if a tapping fee or additional capital contributions would need to be paid.

Total Conveyance Costs Alternate 1A

\$3,230,418

- b. **Alternate 1F Upper Providence Option.** This scenario provides for Edgmont to pump wastewater generated in Districts A through E to a pump station on Gradyville Road on the Edgmont side of the Geist Reservoir. The Gradyville Road pump station would also be constructed by DELCORA and would discharge to the CDCA system via a force main installed through Upper Providence Township. The force main can be used by Upper Providence for connection of their Low Pressure Sewer Systems for conveyance to the CDCA system. Capital and O & M costs would be shared based on proportionate use of the facilities. Connection to the CDCA system would occur at a point downstream from the original plan and could result in costs savings to Edgmont due to the elimination of costs attributed to the Newtown Township system.

Grand Total Alternate 1F ***\$4,161,851.00***

Alternate 1G Pump through Newtown Option. This scenario provides for Edgmont's wastewater generated in Districts A through E to be conveyed to a pump station in the vicinity of Gradyville Road on the Edgmont side of the Geist Reservoir. The Gradyville Road pump station would be constructed by Edgmont and would discharge to the CDCA system via a force main installed through Newtown Township. Under this option, Edgmont or its agent would build/own/operate the new pump station and force main and pump directly to the CDCA system. The following Table details the pumps proposed for this Alternate along with the operational parameters:

Pump Station	Districts Served	Annual Average Daily Flow (gpd)	Peak Factor	Peak Flow (gpd)	Proposed Pump Rate (gpm)
EPS -2	737 EDUs Dist E, EPS-1 and EPS-3	350,000	* 3.5	**1,537,920	1068



* Peak Factor based upon average daily flow of gravity collection system (737 EDUs@262.5 gpd) tributary to the pump station only.

**Pump Rate based upon peak flow of gravity system tributary to the pump station plus pumping rates of EPS-1 and EPS-3

Total Estimated Costs Alternate 1G ***\$ 2,289,392.00***

Alternate 1G, The Newtown Option is the Plan of Choice for the Conveyance System.

entire existing collection system is being shown. These numbers as with the estimates of construction are for budgeting purposes only. True costs will be acquired during the bidding process.

Crum Creek Sewer District Estimated Project Costs:

CDCA Costs

Buy-in ¹	\$	362,726
Cash Reserve ¹	\$	57,442
Interceptor Rehab ²	\$	324,571
Interceptor Expansion ²	\$	1,795,948

SUBTOTAL	\$	2,540,687
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Edgmont Conveyance Facilities

Alternate 1D (rev.2)	\$	1,593,332
Pump Station through Newtown	\$	2,289,392

SUBTOTAL	\$	6,423,411
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Edgmont Collection System ³	\$	5,614,431
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Existing system CCTV	\$	250,000
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Grant Proceedes	\$	(871,000)
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PROJECT TOTAL	\$	11,416,842
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1. Based upon agreement with CDCA dated December 21, 2007 escalated by 3% per year

2. Based upon CDCA cost sheet dated October 26, 2006 escalated by 3% per year

3. Based upon Edgmont Township Act 537 Plan prepared by Yerkes Associates, Inc. escalated by 3% per year

4. Consistency With Other Planning Agencies

All alternates listed above were evaluated for consistency and/or compliance with the following planning or regulatory agencies. All of the Alternates are consistent with the requirements as noted.

- Section 4 and 5 of the Clean Streams Law or Section 208 of the Clean Water Act;
- Municipal Waste load Management Plans, Chapter 94;
- PA Municipalities Planning Code;
- Antidegradation requirements of PA Code, Title 25, Chapters 93, 94 and 102;
- State Water Plans;
- PA Prime Agricultural Land Policy;
- County Stormwater Management Plans;
- Wetlands Protection;
- Protection of Endangered Plant or Animal Species;

- Protection of Historic and Archeological Resources.

IV. FUTURE DISPOSAL NEEDS

Two areas require consideration for future connection to the Crum Creek Sewer District. District C1 which is comprised of the western West Chester Pike area is experiencing some severe problems with failing on-site systems and is in need of public sewer service now. Estimated sewage flows for the district were included in the total Edgmont contribution to the CDCA system and were used in calculating the cost reimbursements to be paid by the Township. The agreements enabling the Crum Creek District should be revised to include District C1.

District F is the other area where future connection to the Crum Creek District may be desirable. The district consists of the Edgmont Country Club located to the west of Ridley Creek State Park. The tract is currently zoned PRD-3 with a maximum density of 3 dwellings per gross acre. This would translate to an estimated sewage flow of 70,000 gpd if developed under current zoning. There are no active development plans at this time. Future connection to the Crum Creek District could be an alternative for consideration if the tract is developed. The needs and available capacity can be reconsidered once a decision is made by the property owner and an application is received by the Township. A revision to the Township's Act 537 Plan will be needed to plan for sewage facilities in this District.

V. INSTITUTIONAL EVALUATION

Edgmont Township has a memorandum of understanding with DELCORA to provide all administrative, financial, technical, and operational tasks required to complete the selected plan. Under this memo DELCORA will finance the costs of membership to CDCA including buy-in and system upgrade costs. DELCORA will also provide financing for Edgmont's conveyance facilities in Newtown Township as required plus all costs necessary to complete the sewage facilities necessary for the Crum Creek District.

DELCORA was established by Delaware County to finance, build, own and operate regional sewage systems within the County. DELCORA has successfully carried out its mission since the early 1970's and has the financial capabilities to complete the

Edgmont project. They are also staffed to carry out all operational requirements of the proposed system.

DELCORA would be reimbursed for its expenses through a combination of tapping fee revenue and or capital recovery costs added to the annual user fee paid by the sewer customers. The final mix of the reimbursement method has not yet been finalized. Final project costs, when available, will be a major determining factor in deciding the tapping fee/capital financing mix. The Township will need to pass any ordinances necessary to ensure connection to the system by all available users.

VI. SELECTED ALTERNATIVES

The **approved** *SPECIAL STUDY FOR THE CRUM CREEK DISTRICT (2007 PLAN)* provided the base planning alternatives for the Crum Creek District. Service Districts A through E will be provided with public sewer service, existing community wastewater systems will be phased out and customers connected to the public sewer, and construction of a regional conveyance system will be completed that provides for the ultimate disposal of wastes at the DELCORA Treatment Facility.

The 2010 Special Study revises and updates the 2007 Plan and provides for the adoption of the following items:

Alternate 2. All of Service District C and District F (West Chester Pike corridor West) will be formally included in the Crum Creek District for base planning purposes. Modifications to the CDCA service agreement will be required. Capacity is allocated for District C1 only. District F will require additional planning which will require acquisition of additional capacity in the CDCA and DELCORA systems.

Conveyance of wastewater to the CDCA system will be implemented via adoption of **Alternates 1D and 1G**. These alternates provide for an internal collection system comprised of conventional gravity collection system, low pressure system and pump station and force mains for Districts A-E. These districts will convey the flow to a regional pump station to be constructed by Edgmont on the West side of the Geist reservoir. The main pump station would discharge to the CDCA system via a route through Newtown Township along Gradyville Road.

The above list comprises the revised Plan of Choice. The adoption of this plan replaces any prior plans approved by Edgmont Township. The table on the following page lists the estimated user costs based on implementation of the above Plan of Choice. Connection fee revenue and debt service estimates are based on the estimated initial number of EDU's shown below.

VII. ESTIMATED USER COSTS

The following table outlines alternatives for financing the project. As stated previously, Edgmont Township has a memorandum of understanding with DELCORA to provide all administrative, financial, technical, and operational tasks required to complete the selected plan. Financing of the project will become part of the final agreement with DELCORA. As such, identification of capital financing plan will be part of the implementation schedule.

ESTIMATED USER COSTS							
INITIAL CUSTOMER COSTS					ANNUAL CUSTOMER COSTS		
OPTION	CUSTOMER CLASS	CUSTOMER CONNECTION COSTS	CONNECTION FEE	TOTAL INITIAL COSTS	ANNUAL O & M COST	DEBT SERVICE COST	TOTAL ANNUAL USER COST
A	NEW	\$5,000	NONE	\$5,000	\$450	\$981	\$1,431
	EXISTING	NONE	NONE	NONE	\$450	\$981	\$1,431
	PRESSURE	\$6,500	NONE	\$6,500	\$450	\$981	\$1,431
B	NEW	\$5,000	\$5,000	\$10,000	\$450	\$559	\$1,009
	EXISTING	NONE	\$5,000	\$5,000	\$450	\$559	\$1,009
	PRESSURE	\$6,500	\$5,000	\$11,500	\$450	\$559	\$1,009
C	NEW	\$5,000	\$7,500	\$12,500	\$450	\$348	\$798
	EXISTING	NONE	\$7,500	\$7,500	\$450	\$348	\$798
	PRESSURE	\$6,500	\$7,500	\$14,000	\$450	\$348	\$798
D	NEW	\$5,000	\$11,614	\$16,700	\$450	\$0	\$450
	EXISTING	NONE	\$11,614	\$11,700	\$450	\$0	\$450
	PRESSURE	\$6,500	\$11,614	\$18,200	\$450	\$0	\$450

Notes:

- Finance options:
 - Option a – based on no connection fee. All project costs financed.
 - Option b & c - based on partial financing of project costs as noted.
 - Option d- based on all project costs paid up front.
- Customer class:
 - New – all properties with existing onsite systems with or without capped sewers.
 - Existing – all properties currently connected to an existing community sewer system.
 - Pressure – all properties within the pressure sewer district or requiring pump service.
- Customer connection costs: these costs represent typical costs to connect a property to the sewer system. These costs can vary widely based on the required length and depth of the connection. The costs shown are

- only intended to provide an estimate of what a typical connection may cost. Each individual property will be different depending upon individual circumstances.
4. Connection fee: often referred to as a "tapping fee". The fee charged by the township to offset all or part of the project costs. The balance of the project costs is deferred or financed with payments included in the annual rental fee.
 5. Total initial cost: this is the estimated total up front cost per customer or EDU.
 6. Annual O&M cost: the estimated annual cost for operating and maintaining the collection system in Edgmont plus conveyance and treatment costs paid to CDCA. A capital reserve contribution is also included.
 7. Debt service cost. The portion of the annual rental fee that covers finance charges for the deferred project costs.
 8. Total annual user cost: the estimated annual fee that is charged to each customer until the deferred project costs are paid off.
 9. EDU –equivalent dwelling unit. Based on the average daily flow of a typical single family dwelling. Non residential EDUs are based on peak daily flow divided by 262.5 gallons per day (gpd).
 10. There are approximately 983 EDUs that will initially connect to the proposed system.
 11. All costs listed above are based on budget estimates of the project costs. These costs will change when the detailed design is complete and actual construction bids are available.

VIII. PLAN IMPLEMENTATION

The proposed implementation schedule below is based on estimated dates to complete the various milestones listed. Completion of many of the items listed is dependent upon the timely actions of other Municipalities and/or Agencies. Edgmont Township will make every effort to keep the project on track. Milestone completion dates will be adjusted periodically to reflect actual progress toward project completion.

Milestone	Date
Submit Plan to PaDEP	-60 days
Respond to PaDEP comments	-30 days
Receive DEP Approval	Time 0
Negotiate Agreement with DELCORA and Identify Capital Finance Plan	0 days
Revise CDCA Agreement	0 days
Identification of Capital Financing Plan	0 days
Start Survey	10 days
Begin Detailed Design	30 days
Submission of Plans for Permits	210 days
Complete Design	270 days
Solicit Bids for Construction	300 days
Start Construction	360 days
Substantial Completion Construction	900 days
Facility Start-up	930 days

Note: Times noted in days from approval of Plan by PaDEP



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER SUPPLY AND WASTEWATER MANAGEMENT

Act 537 Plan Content and Environmental Assessment Checklist

PART 1 GENERAL INFORMATION

A. Project Information

1. Project Name Edgmont Township Act 537 Plan, 2010 Special Study
2. Brief Project Description This update revision was performed to evaluate potential collection and conveyance system alternatives for the Crum Creek Sewer District. This is a special study that updates the approved 2007 Plan

B. Client (Municipality) Information

Municipality Name Edgmont Township	County	City <input type="checkbox"/>	Boro <input type="checkbox"/>	Twp <input checked="" type="checkbox"/>
Municipality Contact Individual - Last Name Reiner	First Name Samantha	MI	Suffix	Title Manager
Additional Individual Last Name	First Name	MI	Suffix	Title
Municipality Mailing Address Line 1 PO Box 267		Mailing Address Line 2		
Address Last Line -- City Gradyville		State PA	ZIP+4 19039	
Phone + Ext. 610-459-1662	FAX (optional) 610-459-3760	Email (optional) edgmontmanager@comcast.net		

C. Site Information

Site (or Project) Name Crum Creek Sewer District	(Municipal Name) Act 537 Plan
Site Location Line 1	Site Location Line 2

D. Project Consultant Information

Last Name Fazler	First Name Walter	MI	Suffix
Title Consulting Engineer	Consulting Firm Name Bradford Engineering Associates, Inc.		
Mailing Address Line 1 2710 Concord Road	Mailing Address Line 2 Suite 3		
Address Last Line -- City Aston	State PA	ZIP+4 19014	Country USA
Email wfazler@bea-inc.com	Phone + Ext. 610-497-6200 x111	FAX 610-744-5627	

PART 2 ADMINISTRATIVE COMPLETENESS CHECKLIST

DEP Use Only	Indicate Page #(s) in Plan	In addition to the main body of the plan, the plan must include items one through eight listed below to be accepted for formal review by the department. Incomplete Plans will be returned unless the municipality is clearly requesting an advisory review.
_____	<u>TOC</u>	1. Table of Contents
_____	<u>3</u>	2. Plan Summary
_____	<u>21</u>	A. Identify the proposed service areas and major problems evaluated in the plan. (Reference - Title 25, §71.21.a.7.i).
_____	<u>24</u>	B. Identify the alternative(s) chosen to solve the problems and serve the areas of need identified in the plan. Also, include any institutional arrangements necessary to implement the chosen alternative(s). (Reference Title 25 §71.21.a.7.ii).
_____	<u>26</u>	C. Present the estimated cost of implementing the proposed alternative (including the user fees) and the proposed funding method to be used. (Reference Title 25, §71.21.a.7.ii).
_____	<u>29</u>	D. Identify the municipal commitments necessary to implement the Plan. (Reference Title 25, §71.21.a.7.iii).
_____	<u>App 3</u>	E. Provide a schedule of implementation for the project that identifies the MAJOR milestones with dates necessary to accomplish the project to the point of operational status. (Reference Title 25, §71.21.a.7.iv).
_____	<u>App 5&6</u>	3. Municipal Adoption: Original, signed and sealed Resolution of Adoption by the municipality which contains, at a minimum, alternatives chosen and a commitment to implement the Plan in accordance with the implementation schedule. (Reference Title 25, §71.31.f) Section V.F. of the Planning Guide.
_____	<u>App 7</u>	4. Planning Commission / County Health Department Comments: Evidence that the municipality has requested, reviewed and considered comments by appropriate official planning agencies of the municipality, planning agencies of the county, planning agencies with area wide jurisdiction (where applicable), and any existing county or joint county departments of health. (Reference Title 25, §71.31.b) Section V.E.1 of the Planning Guide.
_____	<u>App 7</u>	5. Publication: Proof of Public Notice which documents the proposed plan adoption, plan summary, and the establishment and conduct of a 30 day comment period. (Reference Title 25, §71.31.c) Section V.E.2 of the Planning Guide.
_____	<u>29</u>	6. Comments and Responses: Copies of ALL written comments received and municipal response to EACH comment in relation to the proposed plan. (Reference Title 25, §71.31.c) Section V.E.2 of the Planning Guide.
_____	<u>25</u>	7. Implementation Schedule: A complete project implementation schedule with milestone dates specific for each existing and future area of need. Other activities in the project implementation schedule should be indicated as occurring a finite number of days from a major milestone. (Reference Title 25, §71.31.d) Section V.F. of the Planning Guide. Include dates for the future initiation of feasibility evaluations in the project's implementation schedule for areas proposing completion of sewage facilities for planning periods in excess of five years. (Reference Title 25, §71.21.c).
_____	<u>25</u>	8. Consistency Documentation: Documentation indicating that the appropriate agencies have received, reviewed and concurred with the method proposed to resolve identified inconsistencies within the proposed alternative and consistency requirements in 71.21.(a)(5)(i-iii). (Reference Title 25, §71.31.e). Appendix B of the Planning Guide.

PART 3 GENERAL PLAN CONTENT CHECKLIST

DEP Use Only	Indicate Page #(s) in Plan	Item Required
<u> </u>	<u>1</u>	I. Previous Wastewater Planning
		A. Identify, describe and briefly analyze all past wastewater planning for its impact on the current planning effort:
<u> </u>	<u>1</u>	1. Previously undertaken under the Sewage Facilities Act (Act 537). (Reference-Act 537, Section 5 §d.1).
<u> </u>	<u>1</u>	2. Has not been carried out according to an approved implementation schedule contained in the plans. (Reference-Title 25, §71.21.a.5.i.A-D). Section V.F of the Planning Guide.
<u> </u>	<u>1</u>	3. Is anticipated or planned by applicable sewer authorities or approved under a Chapter 94 Corrective Action Plan. (Reference-Title 25, §71.21.a.5.i.A&B). Section V.D. of the Planning Guide.
<u> </u>	<u>n/a</u>	4. Through planning modules for new land development, planning "exemptions" and addenda. (Reference-Title 25, §71.21.a.5.i.A).
<u> </u>	<u>n/a</u>	II. Physical and Demographic Analysis utilizing written description and mapping (All items listed below require maps, and all maps should show all current lots and structures and be of appropriate scale to clearly show significant information).
<u> </u>	<u>3 & App 12</u>	A. Identification of planning area(s), municipal boundaries, Sewer Authority/Management Agency service area boundaries. (Reference-Title 25, §71.21.a.1.i).
<u> </u>	<u>n/a</u>	B. Identification of physical characteristics (streams, lakes, impoundments, natural conveyance, channels, drainage basins in the planning area). (Reference-Title 25, §71.21.a.1.ii).
<u> </u>	<u>n/a</u>	C. Soils - Analysis with description by soil type and soils mapping for areas not presently served by sanitary sewer service. Show areas suitable for in-ground onlot systems, elevated sand mounds, individual residential spray irrigation systems, and areas unsuitable for soil dependent systems. (Reference-Title 25, §71.21.a.1.iii). Show Prime Agricultural Soils and any locally protected agricultural soils. (Reference-Title 25, §71.21.a.1.iii).
<u> </u>	<u>n/a</u>	D. Geologic Features - (1) Identification through analysis, (2) mapping and (3) their relation to existing or potential nitrate-nitrogen pollution and drinking water sources. Include areas where existing nitrate-nitrogen levels are in excess of 5 mg/L. (Reference-Title 25, §71.21.a.1.iii).
<u> </u>	<u>n/a</u>	E. Topography - Depict areas with slopes that are suitable for conventional systems; slopes that are suitable for elevated sand mounds and slopes that are unsuitable for onlot systems. (Reference-Title 25, §71.21.a.1.ii).
<u> </u>	<u>n/a</u>	F. Potable Water Supplies - Identification through mapping, description and analysis. Include public water supply service areas and available public water supply capacity and aquifer yield for groundwater supplies. (Reference-Title 25 §71.21.a.1.vi). Section V.C. of the Planning Guide.

_____	<u>n/a</u>	G. Wetlands-Identify wetlands as defined in Title 25, Chapter 105 by description, analysis and mapping. Include National Wetland Inventory mapping and potential wetland areas per USDA, SCS mapped hydric soils. Proposed collection, conveyance and treatment facilities and lines must be located and labeled, along with the identified wetlands, on the map. (Reference-Title 25, §71.21.a.1.v). Appendix B, Section II.I of the Planning Guide.
_____	<u>3</u>	III. Existing Sewage Facilities in the Planning Area - Identifying the Existing Needs
_____	<u>5 & App 12</u>	A. Identify, map and describe municipal and non-municipal, individual and community sewerage systems in the planning area including:
_____	<u>n/a</u>	1. Location, size and ownership of treatment facilities, main intercepting lines, pumping stations and force mains including their size, capacity, point of discharge. Also include the name of the receiving stream, drainage basin, and the facility's effluent discharge requirements. (Reference-Title 25, §71.21.a.2.i.A).
_____	<u>n/a</u>	2. A narrative and schematic diagram of the facility's basic treatment processes including the facility's NPDES permitted capacity, and the Clean Streams Law permit number. (Reference-Title 25, §71.21.a.2.i.A).
_____	<u>n/a</u>	3. A description of problems with existing facilities (collection, conveyance and/or treatment), including existing or projected overload under Title 25, Chapter 94 (relating to municipal wasteload management) or violations of the NPDES permit, Clean Streams Law permit, or other permit, rule or regulation of DEP. (Reference-Title 25, §71.21.a.2.i.B).
_____	<u>n/a</u>	4. Details of scheduled or in-progress upgrading or expansion of treatment facilities and the anticipated completion date of the improvements. Discuss any remaining reserve capacity and the policy concerning the allocation of reserve capacity. Also discuss the compatibility of the rate of growth to existing and proposed wastewater treatment facilities. (Reference-Title 25, §71.21.a.4.i & ii).
_____	<u>n/a</u>	5. A detailed description of the municipality's operation and maintenance requirements for small flow treatment facility systems, including the status of past and present compliance with these requirements and any other requirements relating to sewage management programs. (Reference-Title 25, §71.21.a.2.i.C).
_____	<u>n/a</u>	6. Disposal areas, if other than stream discharge, and any applicable groundwater limitations. (Reference-Title 25, §71.21.a.4.i & ii).
_____	<u>n/a</u>	B. Using DEP's publication titled <i>Sewage Disposal Needs Identification</i> , identify, map and describe areas that utilize individual and community onlot sewage disposal and, unpermitted collection and disposal systems ("wildcat" sewers, borehole disposal, etc.) and retaining tank systems in the planning area including:
_____	<u>n/a</u>	1. The types of onlot systems in use. (Reference-Title 25, §71.21.a.2.ii.A).
_____	<u>n/a</u>	2. A sanitary survey complete with description, map and tabulation of documented and potential public health, pollution, and operational problems (including malfunctioning systems) with the systems, including violations of local ordinances, the Sewage Facilities Act, the Clean Stream Law or regulations promulgated thereunder. (Reference-Title 25, §71.21.a.2.ii.B).
_____	<u>n/a</u>	3. A comparison of the types of onlot sewage systems installed in an area with

the types of systems which are appropriate for the area according to soil, geologic conditions, topographic limitations sewage flows, and Title 25 Chapter 73 (relating to standards for sewage disposal facilities). (Reference-Title 25, §71.21.a.2.ii.C).

n/a

4. An individual water supply survey to identify possible contamination by malfunctioning onlot sewage disposal systems consistent with DEP's *Sewage Disposal Needs Identification* publication. (Reference-Title 25 §71.21.a.2.ii.B).

n/a

5. Detailed description of operation and maintenance requirements of the municipality for individual and small volume community onlot systems, including the status of past and present compliance with these requirements and any other requirements relating to sewage management programs. (Reference-Title 25, §71.21.a.2.i.C).

n/a

- C. Identify wastewater sludge and septage generation, transport and disposal methods. Include this information in the sewage facilities alternative analysis including:

n/a

1. Location of sources of wastewater sludge or septage (Septic tanks, holding tanks, wastewater treatment facilities). (Reference-Title 25 §71.71).

n/a

2. Quantities of the types of sludges or septage generated. (Reference-Title 25 §71.71).

n/a

3. Present disposal methods, locations, capacities and transportation methods. (Reference-Title 25 §71.71).

25

IV. Future Growth and Land Development

- A. Identify and briefly summarize all municipal and county planning documents adopted pursuant to the Pennsylvania Municipalities Planning Code (Act 247) including:

n/a

1. All land use plans and zoning maps that identify residential, commercial, industrial, agricultural, recreational and open space areas. (Reference-Title 25, §71.21.a.3.iv).

n/a

2. Zoning or subdivision regulations that establish lot sizes predicated on sewage disposal methods. (Reference – Title 25§71.21.a.3.iv).

n/a

3. All limitations and plans related to floodplain and stormwater management and special protection (Ch. 93) areas. (Reference-Title 25 §71.21.a.3.iv) Appendix B, Section II.F of the Planning Guide.

- B. Delineate and describe the following through map, text and analysis.

n/a

1. Areas with existing development or plotted subdivisions. Include the name, location, description, total number of EDU's in development, total number of EDU's currently developed and total number of EDU's remaining to be developed (include time schedule for EDU's remaining to be developed). (Reference-Title 25, §71.21.a.3.i).

n/a

2. Land use designations established under the Pennsylvania Municipalities Planning Code (35 P.S. 10101-11202), including residential, commercial and industrial areas. (Reference-Title 25, §71.21.a.3.ii). Include a comparison of proposed land use as allowed by zoning and existing sewage facility planning. (Reference-Title 25, §71.21.a.3.iv).

n/a

3. Future growth areas with population and EDU projections for these areas

using historical, current and future population figures and projections of the municipality. Discuss and evaluate discrepancies between local, county, state and federal projections as they relate to sewage facilities. (Reference-Title 25, §71.21.a.1.iv). (Reference-Title 25, §71.21.a.3.iii).

n/a

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

--public ground/surface water supplies

--recreational water use areas

--groundwater recharge areas

--industrial water use

--wetlands

25

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

5

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

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

5

1. The potential for regional wastewater treatment. (Reference-Title 25, §71.21.a.4).

5

2. The potential for extension of existing municipal or non-municipal sewage facilities to areas in need of new or improved sewage facilities. (Reference-Title 25, §71.21.a.4.i).

5

3. The potential for the continued use of existing municipal or non-municipal sewage facilities through one or more of the following: (Reference-Title 25, §71.21.a.4.ii).

5

a. Repair. (Reference-Title 25, §71.21.a.4.ii.A).

5

b. Upgrading. (Reference-Title 25, §71.21.a.4.ii.B).

5

c. Reduction of hydraulic or organic loading to existing facilities. (Reference-Title 25, §71.71).

5

d. Improved operation and maintenance. Reference-Title 25, §71.21.a.4.ii.C).

5

e. Other applicable actions that will resolve or abate the identified problems. (Reference-Title 25, §71.21.a.4.ii.D).

5

4. Repair or replacement of existing collection and conveyance system components. (Reference-Title 25, §71.21.a.4.ii.A).

5

5. The need for construction of new community sewage systems including sewer systems and/or treatment facilities. (Reference-Title 25, §71.21.a.4.iii).

n/a

6. Use of innovative/alternative methods of collection/conveyance to serve needs areas using existing wastewater treatment facilities. (Reference-Title 25, §71.21.a.4.ii.B).

n/a

- B. The use of individual sewage disposal systems including individual residential

spray irrigation systems based on:

n/a

1. Soil and slope suitability. (Reference-Title 25, §71.21.a.2.ii.C).

n/a

2. Preliminary hydrogeologic evaluation. (Reference-Title 25, §71.21.a.2.ii.C).

n/a

3. The establishment of a sewage management program. (Reference-Title 25, §71.21.a.4.iv). See also Part "F" below.

n/a

4. The repair, replacement or upgrading of existing malfunctioning systems in areas suitable for onlot disposal considering: (Reference-Title 25, §71.21.a.4).

n/a

a. Existing technology and sizing requirements of Title 25 Chapter 73. (Reference-Title 25, §73.31-73.72).

n/a

b. Use of expanded absorption areas or alternating absorption areas. (Reference-Title 25, §73.16).

n/a

c. Use of water conservation devices. (Reference-Title 25, §71.73.b.2.iii).

n/a

C. The use of small flow sewage treatment facilities or package treatment facilities to serve individual homes or clusters of homes with consideration of: (Reference-Title 25, §71.64.d).

n/a

1. Treatment and discharge requirements. (Reference-Title 25, §71.64.d).

n/a

2. Soil suitability. (Reference-Title 25, §71.64.c.i).

n/a

3. Preliminary hydrogeologic evaluation. (Reference-Title 25, §71.64.c.2).

n/a

4. Municipal, Local, Agency or other controls over operation and maintenance requirements through a Sewage Management Program. (Reference-Title 25, §71.64.d). See Part "F" below.

n/a

D. The use of community land disposal alternatives including:

n/a

1. Soil and site suitability. (Reference-Title 25, §71.21.a.2.ii.C).

n/a

2. Preliminary hydrogeologic evaluation. (Reference-Title 25, §71.21.a.2.ii.C).

n/a

3. Municipality, Local Agency or Other Controls over operation and maintenance requirements through a Sewage Management Program. (Reference-Title 25, §71.21.a.2.ii.C). See Part "F" below.

n/a

4. The rehabilitation or replacement of existing malfunctioning community land disposal systems. (See Part "V", B, 4, a, b, c above). See also Part "F" below.

n/a

E. The use of retaining tank alternatives on a temporary or permanent basis including: (Reference-Title 25, §71.21.a.4).

n/a

1. Commercial, residential and industrial use. (Reference-Title 25, §71.63.e).

n/a

2. Designated conveyance facilities (pumper trucks). (Reference-Title 25, §71.63.b.2).

n/a

3. Designated treatment facilities or disposal site. (Reference-Title 25, §71.63.b.2).

n/a

4. Implementation of a retaining tank ordinance by the municipality. (Reference-Title 25, §71.63.c.3). See Part "F" below.

<u> </u>	<u>n/a</u>	5. Financial guarantees when retaining tanks are used as an interim sewage disposal measure. (Reference-Title 25, §71.63.c.2).
<u> </u>	<u>n/a</u>	F. Sewage Management Programs to assure the future operation and maintenance of existing and proposed sewage facilities through:
<u> </u>	<u>n/a</u>	1. Municipal ownership or control over the operation and maintenance of individual onlot sewage disposal systems, small flow treatment facilities, or other traditionally non-municipal treatment facilities. (Reference-Title 25, §71.21.a.4.iv).
<u> </u>	<u>n/a</u>	2. Required inspection of sewage disposal systems on a schedule established by the municipality. (Reference-Title 25, §71.73.b.1.).
<u> </u>	<u>n/a</u>	3. Required maintenance of sewage disposal systems including septic and aerobic treatment tanks and other system components on a schedule established by the municipality. (Reference-Title 25, §71.73.b.2).
<u> </u>	<u>n/a</u>	4. Repair, replacement or upgrading of malfunctioning onlot sewage systems. (Reference-Title 25, §71.21.a.4.iv) and §71.73.b.5 through:
<u> </u>	<u>n/a</u>	a. Aggressive pro-active enforcement of ordinances that require operation and maintenance and prohibit malfunctioning systems. (Reference-Title 25, §71.73.b.5).
<u> </u>	<u>n/a</u>	b. Public education programs to encourage proper operation and maintenance and repair of sewage disposal systems.
<u> </u>	<u>n/a</u>	5. Establishment of joint municipal sewage management programs. (Reference-Title 25, §71.73.b.8).
<u> </u>	<u>n/a</u>	6. Requirements for bonding, escrow accounts, management agencies or associations to assure operation and maintenance for non-municipal facilities. (Reference-Title 25, §71.71).
<u> </u>	<u>n/a</u>	G. Non-structural comprehensive planning alternatives that can be undertaken to assist in meeting existing and future sewage disposal needs including: (Reference-Title 25, §71.21.a.4).
<u> </u>	<u>n/a</u>	1. Modification of existing comprehensive plans involving:
<u> </u>	<u>n/a</u>	a. Land use designations. (Reference-Title 25, §71.21.a.4).
<u> </u>	<u>n/a</u>	b. Densities. (Reference-Title 25, §71.21.a.4).
<u> </u>	<u>n/a</u>	c. Municipal ordinances and regulations. (Reference-Title 25, §71.21.a.4).
<u> </u>	<u>n/a</u>	d. Improved enforcement. (Reference-Title 25, §71.21.a.4).
<u> </u>	<u>n/a</u>	e. Protection of drinking water sources. (Reference-Title 25, §71.21.a.4).
<u> </u>	<u>n/a</u>	2. Consideration of a local comprehensive plan to assist in producing sound economic and consistent land development. (Reference-Title 25, §71.21.a.4).
<u> </u>	<u>n/a</u>	3. Alternatives for creating or changing municipal subdivision regulations to assure long-term use of on-site sewage disposal that consider lot sizes and protection of replacement areas. (Reference-Title 25, §71.21.a.4).
<u> </u>	<u>n/a</u>	4. Evaluation of existing local agency programs and the need for technical or administrative training. (Reference-Title 25, §71.21.a.4).

_____	<u>n/a</u>	H. A no-action alternative which includes discussion of both short-term and long-term impacts on: (Reference-Title 25, §71.21.a.4).
_____	<u>n/a</u>	1. Water Quality/Public Health. (Reference-Title 25, §71.21.a.4).
_____	<u>n/a</u>	2. Growth potential (residential, commercial, industrial). (Reference-Title 25, §71.21.a.4).
_____	<u>n/a</u>	3. Community economic conditions. (Reference-Title 25, §71.21.a.4).
_____	<u>n/a</u>	4. Recreational opportunities. (Reference-Title 25, §71.21.a.4).
_____	<u>n/a</u>	5. Drinking water sources. (Reference-Title 25, §71.21.a.4).
_____	<u>n/a</u>	6. Other environmental concerns. (Reference-Title 25, §71.21.a.4).
_____	<u>14</u>	VI. Evaluation of Alternatives
_____	<u>22</u>	A. Technically feasible alternatives identified in Section V of this check-list must be evaluated for consistency with respect to the following: (Reference-Title 25, §71.21.a.5.i.).
_____	<u>22</u>	1. Applicable plans developed and approved under Sections 4 and 5 of the Clean Streams Law or Section 208 of the Clean Water Act (33 U.S.C.A. 1288). (Reference-Title 25, §71.21.a.5.i.A). Appendix B, Section II.A of the Planning Guide.
_____	<u>22</u>	2. Municipal wasteload management Corrective Action Plans or Annual Reports developed under PA Code, Title 25, Chapter 94. (Reference-Title 25, §71.21.a.5.i.B). The municipality's recent Wasteload Management (Chapter 94) Reports should be examined to determine if the proposed alternative is consistent with the recommendations and findings of the report. Appendix B, Section II.B of the Planning Guide.
_____	<u>22</u>	3. Plans developed under Title II of the Clean Water Act (33 U.S.C.A. 1281-1299) or Titles II and VI of the Water Quality Act of 1987 (33 U.S.C.A. 1251-1376). (Reference-Title 25, §71.21.a.5.i.C). Appendix B, Section II.E of the Planning Guide.
_____	<u>22</u>	4. Comprehensive plans developed under the Pennsylvania Municipalities Planning Code. (Reference-Title 25, §71.21.a.5.i.D). The municipality's comprehensive plan must be examined to assure that the proposed wastewater disposal alternative is consistent with land use and all other requirements stated in the comprehensive plan. Appendix B, Section II.D of the Planning Guide.
_____	<u>22</u>	5. Antidegradation requirements as contained in PA Code, Title 25, Chapters 93, 95 and 102 (relating to water quality standards, wastewater treatment requirements and erosion control) and the Clean Water Act. (Reference-Title 25, §71.21.a.5.i.E). Appendix B, Section II.F of the Planning Guide.
_____	<u>22</u>	6. State Water Plans developed under the Water Resources Planning Act (42 U.S.C.A. 1962-1962 d-18). (Reference-Title 25, §71.21.a.5.i.F). Appendix B, Section II.C of the Planning Guide.
_____	<u>22</u>	7. Pennsylvania Prime Agricultural Land Policy contained in Title 4 of the Pennsylvania Code, Chapter 7, Subchapter W. Provide narrative on local municipal policy and an overlay map on prime agricultural soils. (Reference-Title 25, §71.21.a.5.i.G). Appendix B, Section II.G of the Planning Guide.

<u>22</u>	8. County Stormwater Management Plans approved by DEP under the Storm Water Management Act (32 P.S. 680.1-680.17). (Reference-Title 25, §71.21.a.5.i.H). Conflicts created by the implementation of the proposed wastewater alternative and the existing recommendations for the management of stormwater in the county Stormwater Management Plan must be evaluated and mitigated. If no plan exists, no conflict exists. Appendix B, Section II.H of the Planning Guide.
<u>22</u>	9. Wetland Protection. Using wetland mapping developed under Checklist Section II.G, identify and discuss mitigative measures including the need to obtain permits for any encroachments on wetlands from the construction or operation of any proposed wastewater facilities. (Reference-Title 25, §71.21.a.5.i.I) Appendix B, Section II.I of the Planning Guide.
<u>22</u>	10. Protection of rare, endangered or threatened plant and animal species as identified by the Pennsylvania Natural Diversity Inventory (PNDI). (Reference-Title 25, §71.21.a.5.i.J). Provide DEP with a copy of the completed Request For PNDI Search document. Also provide a copy of the response letter from the Department of Conservation and Natural Resources' Bureau of Forestry regarding the findings of the PNDI search. Appendix B, Section II.J of the Planning Guide.
<u>22</u>	11. Historical and archaeological resource protection under P.C.S. Title 37, Section 507 relating to cooperation by public-officials with the Pennsylvania Historical and Museum Commission. (Reference-Title 25, §71.21.a.5.i.K). Provide the department with a completed copy of a Cultural Resource Notice request of the Bureau of Historic Preservation (BHP) to provide a listing of known historical sites and potential impacts on known archaeological and historical sites. Also provide a copy of the response letter from the BHP. Appendix B, Section II.K of the Planning Guide.
<u>22</u>	B. Provide for the resolution of any inconsistencies in any of the points identified in Section VI.A. of this checklist by submitting a letter from the appropriate agency stating that the agency has received, reviewed and concurred with the resolution of identified inconsistencies. (Reference-Title 25, §71.21.a.5.ii). Appendix B of the Planning Guide.
<u>n/a</u>	C. Evaluate alternatives identified in Section V of this checklist with respect to applicable water quality standards, effluent limitations or other technical, legislative or legal requirements. (Reference-Title 25, §71.21.a.5.iii).
<u>28</u>	D. Provide cost estimates using present worth analysis for construction, financing, on going administration, operation and maintenance and user fees for alternatives identified in Section V of this checklist. Estimates shall be limited to areas identified in the plan as needing improved sewage facilities within five years from the date of plan submission. (Reference-Title 25, §71.21.a.5.iv).
<u>26</u>	E. Provide an analysis of the funding methods available to finance the proposed alternatives evaluated in Section V of this checklist. Also provide documentation to demonstrate which alternative and financing scheme combination is the most cost-effective; and a contingency financial plan to be used if the preferred method of financing cannot be implemented. The funding analysis shall be limited to areas identified in the plan as needing improved sewage facilities within five years from the date of the plan submission. (Reference-Title 25, §71.21.a.5.v).

<u> </u>	<u>n/a</u>	F. Analyze the need for immediate or phased implementation of each alternative proposed in Section V of this checklist including: (Reference-Title 25, §71.21.a.5.vi).
<u> </u>	<u>n/a</u>	1. A description of any activities necessary to abate critical public health hazards pending completion of sewage facilities or implementation of sewage management programs. (Reference-Title 25, §71.21.a.5.vi.A).
<u> </u>	<u>n/a</u>	2. A description of the advantages, if any, in phasing construction of the facilities or implementation of a sewage management program justifying time schedules for each phase. (Reference-Title 25, §71.21.a.5.vi.B).
<u> </u>	<u>n/a</u>	G. Evaluate administrative organizations and legal authority necessary for plan implementation. (Reference - Title 25, §71.21.a.5.vi.D.).
<u> </u>	<u>26</u>	VII. Institutional Evaluation
<u> </u>		A. Provide an analysis of all existing wastewater treatment authorities, their past actions and present performance including:
<u> </u>	<u>n/a</u>	1. Financial and debt status. (Reference-Title 25, §71.61.d.2).
<u> </u>	<u>26</u>	2. Available staff and administrative resources. (Reference-Title 25, §71.61.d.2)
<u> </u>	<u>26</u>	3. Existing legal authority to:
<u> </u>	<u>26</u>	a. Implement wastewater planning recommendations. (Reference-Title 25, §71.61.d.2).
<u> </u>	<u>26</u>	b. Implement system-wide operation and maintenance activities. (Reference-Title 25, §71.61.d.2).
<u> </u>	<u>26</u>	c. Set user fees and take purchasing actions. (Reference-Title 25, §71.61.d.2).
<u> </u>	<u>26</u>	d. Take enforcement actions against ordinance violators. (Reference-Title 25, §71.61.d.2).
<u> </u>	<u>26</u>	e. Negotiate agreements with other parties. (Reference-Title 25, §71.61.d.2).
<u> </u>	<u>26</u>	f. Raise capital for construction and operation and maintenance of facilities. (Reference-Title 25, §71.61.d.2).
<u> </u>	<u>n/a</u>	B. Provide an analysis and description of the various institutional alternatives necessary to implement the proposed technical alternatives including:
<u> </u>	<u>n/a</u>	1. Need for new municipal departments or municipal authorities. (Reference-Title 25, §71.61.d.2).
<u> </u>	<u>26</u>	2. Functions of existing and proposed organizations (sewer authorities, onlot maintenance agencies, etc.). (Reference-Title 25, §71.61.d.2).
<u> </u>	<u>26</u>	3. Cost of administration, implementability, and the capability of the authority/agency to react to future needs. (Reference-Title 25, §71.61.d.2).
<u> </u>	<u>26</u>	C. Describe all necessary administrative and legal activities to be completed and adopted to ensure the implementation of the recommended alternative including:
<u> </u>	<u>n/a</u>	1. Incorporation of authorities or agencies. (Reference-Title 25, §71.61.d.2).
<u> </u>	<u>26</u>	2. Development of all required ordinances, regulations, standards and inter-municipal agreements. (Reference-Title 25, §71.61.d.2).

_____	<u>n/a</u>	3. Description of activities to provide rights-of-way, easements and land transfers. (Reference-Title 25, §71.61.d.2).
_____	<u>n/a</u>	4. Adoption of other municipal sewage facilities plans. (Reference-Title 25, §71.61.d.2).
_____	<u>n/a</u>	5. Any other legal documents. (Reference-Title 25, §71.61.d.2).
_____	<u>29</u>	6. Dates or timeframes for items 1-5 above on the project's implementation schedule.
_____	<u>26</u>	D. Identify the proposed institutional alternative for implementing the chosen technical wastewater disposal alternative. Provide justification for choosing the specific institutional alternative considering administrative issues, organizational needs and enabling legal authority. (Reference-Title 25, §71.61.d.2).
_____	<u>30</u>	VIII. Implementation Schedule and Justification for Selected Technical & Institutional Alternatives
_____		A. Identify the technical wastewater disposal alternative which best meets the wastewater treatment needs of each study area of the municipality. Justify the choice by providing documentation which shows that it is the best alternative based on:
_____	<u>27</u>	1. Existing wastewater disposal needs. (Reference-Title 25, §71.21.a.6).
_____	<u>27</u>	2. Future wastewater disposal needs. (five and ten years growth areas). (Reference-Title 25, §71.21.a.6).
_____	<u>27</u>	3. Operation and maintenance considerations. (Reference-Title 25, §71.21.a.6).
_____	<u>27</u>	4. Cost-effectiveness. (Reference-Title 25, §71.21.a.6).
_____	<u>26</u>	5. Available management and administrative systems. (Reference-Title 25, §71.21.a.6).
_____	<u>26</u>	6. Available financing methods. (Reference-Title 25, §71.21.a.6).
_____	<u>22</u>	7. Environmental soundness and compliance with natural resource planning and preservation programs. (Reference-Title 25, §71.21.a.6).
_____	<u>26</u>	B. Designate and describe the capital financing plan chosen to implement the selected alternative(s). Designate and describe the chosen back-up financing plan. (Reference-Title 25, §71.21.a.6)
_____	<u>30</u>	C. Designate and describe the implementation schedule for the recommended alternative, including justification for any proposed phasing of construction or implementation of a Sewage Management Program. (Reference – Title 25 §71.31d)
_____		IX. Environmental Report (ER) generated from the Uniform Environmental Review Process (UER)
_____	<u>n/a</u>	A. Complete an ER as required by the UER process and as described in the DEP Technical Guidance 381-5511-111. Include this document as "Appendix-A" to the Act 537 Plan Update Revision. Note: <i>An ER is required only for Wastewater projects proposing funding through any of the funding sources identified in the UER.</i>

ADDITIONAL REQUIREMENTS FOR PENNVEST PROJECTS

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

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

Bradford Engineering Associates, Inc.

2710 Concord Road, Suite 3
Aston, PA 19014
info@bea-inc.com

Tel: 610.497.6200
Fax: 610.744.5627

February 22, 2010

Mrs. Samantha Reiner
Manager
Edgmont Township
P.O. Box 267
Gradyville, PA 19039

Re: Edgmont Township Act 537 Plan

P.N. 105-13

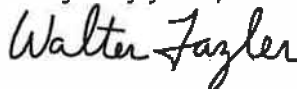
Dear Mrs. Reiner,

Over the past several months, we have been working with you and neighboring municipalities to evaluate conveyance system alternatives for Edgmont Township's Crum Creek Sewer District. In November of 2009, I presented a "Screening of Alternatives" report to your Board, and they decided to pursue the option of pumping the sewage through Upper Providence Township. Since that time, we had several meetings and discussions concerning the Upper Providence option. It was apparent from these meetings that a review of one additional alternate was needed. The conveyance options now include three choices: 1) the original 2007 Plan to pump to CDCA via Newtown Township using Newtown's facilities; 2) pump to CDCA via Upper Providence Township using facilities constructed by DELCORA on behalf of Edgmont Township and 3) pump to CDCA via Newtown Township using facilities constructed by DELCORA on behalf of Edgmont Township.

The work involved in evaluating all of the alternatives exceeds the scope of work outlined in our original Proposal dated March 19, 2009. In order to complete the work, we need to revise our proposal to you and ultimately the State. Bradford Engineering is proposing to prepare the final study to evaluate all the alternatives for a cost not to exceed \$49,941. This is the final plan cost, not in addition to the previous proposal. Since this study is considered sewage facilities planning, I recommend taking advantage of the State grant under Act 537 to fund 50% of the cost.

Attached please find an updated *Task Activity Report* outlining the work. This document should be signed and forwarded to PaDEP for review and approval. Once you received the go-ahead from DEP, we will begin work on finalizing the plan. If approvals are received in a timely fashion, I expect the plan to be completed by the end of April. We will advertise the plan for public comment as required. This will allow submission of the revised plan in June of 2010. If there are any questions concerning this matter, please don't hesitate to contact me.

Very truly yours,



Walter A. Fazler, P.E.



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATER SUPPLY AND WASTEWATER MANAGEMENT

TASK/ACTIVITY REPORT

Edgmont Township Municipality Delaware County County Crum Creek Sewer District
Proposed Planning Area (Attach Map) Date of Report

Date Completed plan will be submitted to DEP June 2010

Estimated Cost of Plan \$49,941

Column Headings May Be Changed To Suit The Needs of the Planning Effort Use Additional Sheets if Necessary

Sheet 1 of 1

TASK ACTIVITY NUMBER FROM APPENDIX I	PRINCIPAL		PROJECT ENG.		SR. ENG.		ENGINEER		PLANNER		DRAFTSMAN		CLERICAL		LEGAL		SUB TOTAL
	HR/ RATE	COST	HR/ RATE	HRS.	HR/ RATE	HRS.	HR/ RATE	HRS.	HR/ RATE	HRS.	HR/ RATE	HRS.	HR/ RATE	HRS.	HR/ RATE	HRS.	
I	20	1820	24	2184							15	750	10	275			5029
II	36	3276	25	2275			30	2235			40	2000	10	275			10061
III	26	2366	31	2821			30	2235			40	2000	10	275			9697
IV	20	1820	24	2184									10	275			4279
V	15	1365	33	3003							10	500	10	275			5143
VI	10	910	25	2275			20	1490			19	950	10	275			5900
VII	10	910	36	3276									10	275			4461
VIII	25	2275	31	2821									10	275			5371

Walter Fazler

Name of Person Completing Report

Walter Fazler
Signature

Consulting Engineer
Title

Municipal Secretary Signature



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

SOUTHEAST REGIONAL OFFICE

APR 20 2010

Ms. Samantha Reiner, Manager
Edgmont Township
1000 Gradyville Road
P.O. Box 267
Gradyville, PA 19039

Re: Act 537 – Plan of Study
Crum Creek Sewer District
Edgmont Township
Delaware County

Dear Ms. Reiner:

We have completed our review of your municipality's amended Plan of Study, as prepared by Bradford Engineering Associates, Inc., dated March 19, 2010.

This Plan of Study proposes to evaluate conveyance system alternatives for the Township's Crum Creek Public Sewer District.

Approval of this proposed Plan of Study is hereby granted. The estimated cost of the plan is \$49,941.

Please note, however, that this Plan of Study approval does not constitute a final action by the Department of Environmental Protection (Department). When a completed plan is submitted to us, we will act upon it consistent with Pa. Code Title 25, Chapter 71.

Please consider the following comments as your municipality prepares its Act 537 Official Plan Update:

1. Your municipality's Act 537 Official Plan Update is to be formatted as suggested in the "A Guide for Preparing Act 537 Update Revisions" including the necessary items listed in the "Act 537 Plan Content and Environmental Assessment Checklist." All necessary items must be included, and a copy of the completed checklist must be included with your Act 537 Plan. This form is available on our website at:
http://www.dep.state.pa.us/dep/deputate/watermgt/wqp/Forms/Act537/Forms_537Plan.htm

APR 20 2010

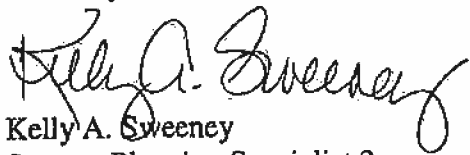
2. This plan may affect municipalities other than Edgmont Township. We urge you to coordinate with these municipalities as you complete this plan. Please note that your plan must include municipal planning agency reviews and resolutions of adoption from all affected municipalities. We note that Newtown Township has entered into a Consent Order and Agreement with the Department to update its official Act 537 sewage facilities plan within a specified time frame. Please coordinate with Newtown Township to assure that both municipalities' selected conveyance system alternatives are compatible.

Please be advised that the Department will not pay grants under the act for planning costs incurred that were not provided for either under this or other related previously approved plans of study. In addition, costs incurred for information that has been completed previously under local, State or Federal funding programs are not eligible for reimbursement.

Please note that any new land developments associated with this plan will not be eligible for exemptions from sewage facilities planning under Chapter 71, Section 71.51(b)(2), until after the receiving facilities have been constructed. Applicants proposing projects that will coordinate new development construction with the construction of municipal conveyance must submit Sewage Facilities Planning Modules for adoption by the municipality and approval by the Department.

If there are any questions concerning the information required, please contact me at 484.250.5182.

Sincerely,



Kelly A. Sweeney
Sewage Planning Specialist 2
Water Management

cc: Delaware County Planning Department
Mr. Fazler - Bradford Engineering Associates, Inc.
Mr. McHale - RCSOB, 11th Floor, Sewage Facilities
Mr. Gerlach - DEP OCC
Planning Section
Re 30 (GJE10WQ)091-14

**Edgmont Township
Delaware County, PA**

Resolution 2010 – 25

A RESOLUTION AMENDING THE OFFICIAL SEWAGE FACILITIES PLAN (ACT 537 PLAN) OF EDMONT TOWNSHIP

WHEREAS, Sections 5 of the Act of January 21, 1996, P.L. 1535, No. 537, known as the "Pennsylvania Sewage Facilities Act", as amended, and the Rules and Regulations of the Pennsylvania Department of Environment Protection (the "Department") [Chapter 71 of Title 25 of the Pennsylvania Code], require the Township of Edgmont (the "Township") to, among other things, adopt an official Sewage Facilities Plan providing for sewage services within the Township adequate to prevent contamination of waters and/or environmental health hazards from sewage wastes; and

WHEREAS, on August 4, 2003, the Township adopted an updated official sewage facilities plan entitled *Act 537 Plan for Township of Edgmont, Delaware County, Pennsylvania* (the "Act 537 Plan") prepared by Yerkes Associates, Inc., subsequently approved by the Department on February 25, 2004; and

WHEREAS, on September 19, 2007, the Board of Supervisors adopted an updated official sewage facilities plan entitled "Act 537 Plan Special Study – Crum Creek District" prepared by Yerkes Associates, Inc. dated July 25, 2007, subsequently approved by the Department on February 6, 2009; and

WHEREAS, the Township Sewer Engineer, Bradford Engineering Associates, Inc., has prepared a Special Study for the Crum Creek District dated August 2010 (the "Special Study"), that further updates and amends the Township's Act 537 Plan, a copy of said Special Study being attached hereto and made a part hereof as **Exhibit "A"**;

The alternative of choice to be implemented is 1D as the collection facilities, Alternate 1G as the conveyance facilities, and Alternate 2. Upon Department approval, the key implementation activities/dates include:

- | | | |
|--------------------------------------|---|----------------|
| a) Finalize System Survey and Design | - | 8 – 10 Months |
| b) Receive Department Permits | - | 10 – 12 Months |
| c) Begin Construction | - | 24 – 30 Months |
| d) Facility Startup | - | 42 – 44 Months |

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

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors of the Township of Edgmont hereby adopt and submit 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); and be it further


AND BE IT FURTHER RESOLVED, that the Township Manager is hereby authorized and directed to submit this Resolution, together with the Special Study to the Department for the Department's approval as an amendment of and to the Township's Act 537 Plan.

BE IT FURTHER RESOLVED, that all resolutions or parts thereof which are inconsistent with the provisions of this Resolution are hereby repealed and of no further force and effect.

ADOPTED this 15th day of December, 2010, by the Board of Supervisors of Edgmont Township.

Township of Edgmont


Ronald Gravina, Chairman


Joseph Conan, Vice Chairman


William C. Mackrides, Supervisor

Attest:


Samantha Reiner, Township Manager

(Township Seal)

will be adopted at April meeting

**Edgmont Township
Delaware County, PA**

Resolution 2011 – XX

A RESOLUTION AMENDING THE OFFICIAL SEWAGE FACILITIES PLAN (ACT 537 PLAN) OF EDMONT TOWNSHIP

WHEREAS, Sections 5 of the Act of January 21, 1996, P.L. 1535, No. 537, known as the "Pennsylvania Sewage Facilities Act", as amended, and the Rules and Regulations of the Pennsylvania Department of Environment Protection (the "Department") [Chapter 71 of Title 25 of the Pennsylvania Code], require the Township of Edgmont (the "Township") to, among other things, adopt an official Sewage Facilities Plan providing for sewage services within the Township adequate to prevent contamination of waters and/or environmental health hazards from sewage wastes; and

WHEREAS, on August 4, 2003, the Township adopted an updated official sewage facilities plan entitled *Act 537 Plan for Township of Edgmont, Delaware County, Pennsylvania* (the "Act 537 Plan") prepared by Yerkes Associates, Inc., subsequently approved by the Department on February 25, 2004; and

WHEREAS, on September 19, 2007, the Board of Supervisors adopted an updated official sewage facilities plan entitled "Act 537 Plan Special Study – Crum Creek District" prepared by Yerkes Associates, Inc. dated July 25, 2007, subsequently approved by the Department on February 6, 2009; and

WHEREAS, the Township Sewer Engineer, Bradford Engineering Associates, Inc., has prepared a Special Study for the Crum Creek District dated August 2010 (the "Special Study"), that further updates and amends the Township's Act 537 Plan, a copy of said Special Study being attached hereto and made a part hereof as **Exhibit "A"**;

The alternative of choice to be implemented is 1D as the collection facilities, Alternate 1G as the conveyance facilities, and Alternate 2. Upon Department approval, the key implementation activities/dates include:

Milestone	Date
Submit Plan to PaDEP	-60 days
Respond to PaDEP comments	-30 days
Receive DEP Approval	Time 0
Negotiate Agreement with DELCORA and Identify Capital Finance Plan	0 days
Revise CDCA Agreement	0 days
Start Survey	10 days
Begin Detailed Design	30 days
Submission of Plans for Permits	210 days
Complete Design	270 days
Solicit Bids for Construction	300 days
Start Construction	360 days
Substantial Completion Construction	900 days
Facility Start-up	930 days

is
concurrent
w/ Plan.

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

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors of the Township of Edgmont hereby adopt and submit 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); and be it further

AND BE IT FURTHER RESOLVED, that the Township Manager is hereby authorized and directed to submit this Resolution, together with the Special Study to the Department for the Department's approval as an amendment of and to the Township's Act 537 Plan.

BE IT FURTHER RESOLVED, that all resolutions or parts thereof which are inconsistent with the provisions of this Resolution are hereby repealed and of no further force and effect.

ADOPTED this XX day of April 2011, by the Board of Supervisors of Edgmont Township.

Township of Edgmont

Ronald Gravina, Chairman

Joseph Conan, Vice Chairman

William C. Mackrides, Supervisor

Attest:

Samantha Reiner, Township Manager

(Township Seal)

**Edgmont Township
Delaware County, PA.**

Resolution 2010 – 22

**A RESOLUTION AMENDING THE OFFICIAL SEWAGE FACILITIES PLAN
(ACT 537 PLAN) OF EDMONT TOWNSHIP**

WHEREAS, Sections 5 of the Act of January 21, 1996, P.L. 1535, No. 537, known as the "Pennsylvania Sewage Facilities Act", as amended, and the Rules and Regulations of the Pennsylvania Department of Environment Protection (the "Department") [Chapter 71 of Title 25 of the Pennsylvania Code], require the Township of Edgmont (the "Township") to, among other things, adopt an official Sewage Facilities Plan providing for sewage services within the Township adequate to prevent contamination of waters and/or environmental health hazards from sewage wastes; and

WHEREAS, on August 4, 2003, the Township adopted an updated official sewage facilities plan entitled *Act 537 Plan for Township of Edgmont, Delaware County, Pennsylvania* (the "Act 537 Plan") prepared by Yerkes Associates, Inc., subsequently approved by the Department on February 25, 2004; and

WHEREAS, on September 19, 2007, the Board of Supervisors adopted an updated official sewage facilities plan entitled "Act 537 Plan Special Study – Crum Creek District" prepared by Yerkes Associates, Inc. dated July 25, 2007, subsequently approved by the Department on February 6, 2009; and

WHEREAS, the Township Sewer Engineer, Bradford Engineering Associates, Inc., has prepared a Special Study for the Crum Creek District dated August 2010 (the "Special Study"), that further updates and amends the Township's Act 537 Plan, a copy of said Special Study being attached hereto and made a part hereof as **Exhibit "A"**;

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors of the Township of Edgmont hereby adopts the Special Study as an amendment of and to the Township's Act 537 Plan, subject to approval of the Department; The alternatives of choice that will be implemented are Alternate ID, IG and Alternate 2 as outlined in the Special Study; and be it further

RESOLVED, that the Township Manager is hereby authorized and directed to submit this Resolution, together with the Special Study to the Department for the Department's approval as an amendment of and to the Township's Act 537 Plan.

CENTRAL DELAWARE COUNTY AUTHORITY

212 B Unity Terrace
Rutledge, Pennsylvania 19070
Telephone (610) 544-9944

Boroughs

RIDLEY PARK
SWARTHMORE
PROSPECT PARK
RUTLEDGE
MORTON

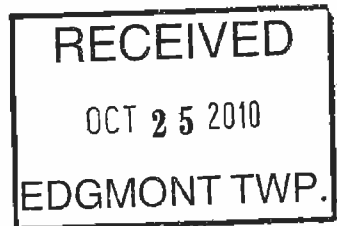
Townships

RIDLEY
SPRINGFIELD
NETHER PROVIDENCE
MARPLE
NEWTOWN
UPPER PROVIDENCE
EDGMONT

October 12, 2010

Samantha Reiner, Manager
Edgmont Township
P.O. Box 267
Gradyville, Pennsylvania 19039

Re: Edgmont Township Delaware County
Sewage Facilities Plan PA Act 537 2010 Special Study
August 2010



Dear Ms. Reiner:

This letter will acknowledge receipt of the above document by CDCA. As none of the details involving CDCA have changed, an updated resolution of approval will not be required of CDCA.

Thank you.

Sincerely,

Charles J. Lillicrapp, Jr.
Chairman



TOWNSHIP OF EDGMONT

1000 Gradyville Road
PO Box 267
Gradyville, Pennsylvania 19039
610-459-1662 phone 610-459-3760 fax

September 7, 2010

Charles J. Lillicrapp, Jr., President
Gennifer Guiliano, Secretary
Central Delaware County Authority
212 B. Unity Terrace
Rutledge, Pennsylvania 19070

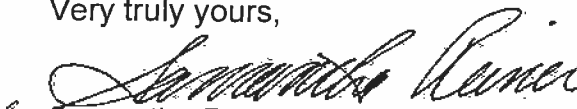
Re: Edgmont Township Act 537 Plan Special Study

Dear Mr. Lillicrapp and Ms. Guiliano:

Enclosed please find a copy of the recently revised Edgmont Township Act 537 Plan Special Study which is under a thirty (30) day review and comment period. Kindly review this document and forward any comments or questions you may have to my attention, in writing.

Copies of this document are available to review on line at www.edgmont.org. Thank you.

Very truly yours,


Samantha Reiner, Manager

enclosure



TOWNSHIP OF EDMONT

1000 Gradyville Road

PO Box 267

Gradyville, Pennsylvania 19039

610-459-1662 phone 610-459-3760 fax

November 20, 2010

Ms. Kelly Sweeney
PA Dept. of Environmental Protection
Southeast Regional Office
2 East Main Street
Norristown, PA 19401-4915

Re: Edgmont Township Act 537 Sewage Facilities Plan

Dear Ms. Sweeney,

The Edgmont Township Planning Commission reviewed the proposed 2010 Special Study for the Township's Act 537 Sewage Facilities Plan at its regular meeting on August 23, 2010. During this meeting, the Commission unanimously voted to recommend that the Act 537 Sewage Facilities Plan for Edgmont Township prepared by Bradford Engineering Associates, Inc. be advertised for public comment and be adopted by the Board of Supervisors. It is the belief of the Commission that this plan will adequately provide for the sewage disposal needs for the residents of the Township.

If you have any questions, please feel free to contact that the Township. Thank you.

Very truly yours,

E.E. "Chip" Miller III
Planning Commission Chairman

**NEWTOWN TOWNSHIP,
DELAWARE COUNTY, PENNSYLVANIA**

RESOLUTION NO. 2011- 03

A RESOLUTION OF NEWTOWN TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA, ACKNOWLEDGING THE ACT 537 SEWAGE FACILITIES PLAN FOR EDMONT TOWNSHIP.

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

WHEREAS, Edgmont Township has prepared an update and amendment to Edgmont Township's Official Sewage Facilities Plan, entitled a "Special Study for the Crum Creek District" dated August 2010 (the "Edgmont Plan Revision"), which provides for certain sewage facilities within Edgmont Township and a portion of said facilities to be located within Newtown Township.

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors of the Township of Newtown ("Newtown Township") hereby acknowledges the submission of the Edgmont Plan Revision to the Department for consideration; and be it further

RESOLVED, Newtown Township further acknowledges that Edgmont has chosen to implement Alternative 1D for the collection facilities, Alternate 1G for the conveyance facilities and Alternate 2 identifying additional service areas within Edgmont Township, from the Edgmont Plan Revision (the "Alternatives"); which Alternatives propose construction of certain sewage facilities within Newtown Township to ultimately connect the Alternatives to the Central Delaware County Authority interceptor located in State Route 252; and be it further

RESOLVED, Newtown Township hereby approves the Edgmont Plan Revision and recognizes that Edgmont Township intends to utilize the public rights-of-ways of Gradyville Road and Bishop Hollow Road, located within Newtown Township, to implement the Alternatives; and be it

RESOLVED, that nothing in this Resolution shall limit, prohibit or otherwise bind Newtown Township from revising, modifying and amending its own Official Sewage Facilities Plan (including the implementation of same), which may provide for the collection, conveyance, treatment and disposal of sanitary sewage by methods and means different than and/or inconsistent with the Edgmont Plan Revision.

RESOLVED this the 14th day of February, 2011.

**TOWNSHIP OF NEWTOWN
BOARD OF SUPERVISORS**

James P. Wong
Linda Hamblin
James
Don Pauls

Attest:

James Sheldrake
Secretary

I, James Sheldrake, Manager, Newtown Township, hereby certify that the foregoing is a true and correct copy of Resolution No. 2011-03 adopted this 14th day of February, 2011.

James Sheldrake
ATTEST: James Sheldrake
Newtown Township Manager

Bradford Engineering Associates, Inc.

2710 Concord Road, Suite 3
Aston, PA 19014
info@bea-inc.com

Tel: 610.497.6200
Fax: 610.500.5677

October 13, 2010

Mr. Kevin Mattson, PE
Kelly and Close Engineers
1786 Wilmington Pike
Glen Mills, PA 19342

Re: Edgmont Township; Crum Creek Sewer District
Act 537 Plan Revision

PN 105-13

Dear Mr. Mattson,

I am writing to you in response to your letter dated October 7, 2010 to Samantha Reiner concerning the above referenced Plan. The following is a reiteration of your comments along with our response in bold:

1. The Edgmont Special Study no longer directs proposed flows to Newtown's West Chester Pike Pump Station. The sizing of the Newtown Pump Station, and the subsequent downstream facilities, will have to be adjusted accordingly.

Noted.

2. Newtown has proposed future flows within the Gradyville Road area. It would be logical for these flows to be conveyed to Edgmont's proposed Gradyville Road Pump Station.

Directing flow from Newtown to the Gradyville Pump Station will most likely be costly and difficult. A pump station and bridge or reservoir crossing will be necessary. It may be more economical for Newtown to connect to the Gradyville force main instead. Newtown should work closely with Edgmont on this item.

3. Coordination with Aqua must be performed for the alternative choice.

Noted. We met with Aqua several times, including a walk along Crum Creek. They have been instrumental in helping choose the alternatives.

4. Verification must be given that proposed pump stations will be capable of delivering flow to the COCA interceptor without the need of a booster station in Newtown Township.

Noted.

5. The potential for proposed easement acquisition and landscaping (tree removal) may alter the Budget Cost Estimate for Alternate "1D".

Noted.

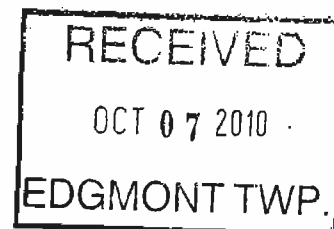
6. Coordination with the Newtown Engineer and CDCA Engineer will be required for the proposed force main connection into the terminus manhole at CDCA. To date, there are several force mains proposed to connect to the terminus manhole.

Noted.



KELLY & CLOSE
CONSULTING ENGINEERS & SURVEYORS

Township of Edgmont
Attn: Ms. Samantha Reiner
1000 Gradyville Road
P.O. Box 267
Gradyville, PA 19039



October 7, 2010
File No.: ET-130B

Re: Act 537 Sewage
Facilities Plan Update for
Edgmont Township,
Delaware County

Dear Ms. Reiner:

Our office has received and reviewed the Edgmont Township Act 537 Plan Revision and offers the following comments:

1. The Edgmont Special Study no longer directs proposed flows to Newtown's West Chester Pike Pump Station. The sizing of the Newtown Pump Station, and the subsequent downstream facilities, will have to be adjusted accordingly.
2. Newtown has proposed future flows within the Gradyville Road area. It would be logical for these flows to be conveyed to Edgmont's proposed Gradyville Road Pump Station.
3. Coordination with Aqua must be performed for the alternative choice.
4. Verification must be given that proposed pump stations will be capable of delivering flow to the CDCA interceptor without the need of a booster station in Newtown Township.
5. The potential for proposed easement acquisition and landscaping (tree removal) may alter the Budget Cost Estimate for Alternate "1D".
6. Coordination with the Newtown Engineer and CDCA Engineer will be required for the proposed forcemain connection into the terminus manhole at CDCA. To date, there are several forcemains proposed to connect to the terminus manhole.

If you should have any questions or concerns, please feel free to call our office.

Sincerely,


Kevin W. Matson, P.E.
Senior Project Engineer

Kelly & Close Engineers

1786 Wilmington Pike

Glen Mills, Pennsylvania 19342

610.358.9363 fax 610.358.9376

Cc: Robert Jackson, NTMA Chairperson
J. Michael Sheridan, Esq., NTMA Solicitor
James Sheldrake, NT
File



TOWNSHIP OF EDGMONT

1000 Gradyville Road

PO Box 267

Gradyville, Pennsylvania 19039

610-459-1662 phone 610-459-3760 fax

September 7, 2010

James Sheldrake, Manager
Newtown Township, Delaware County
209 Bishop Hollow Road
Newtown Square, Pennsylvania 19073

Re: Edgmont Township Act 537 Plan Special Study

Dear Mr. Sheldrake:

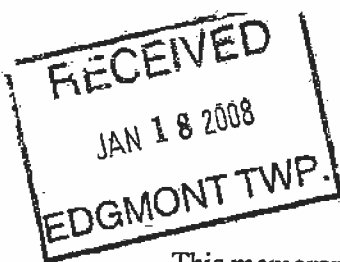
Enclosed please find a copy of the recently revised Edgmont Township Act 537 Plan Special Study which is under a thirty (30) day review and comment period. Kindly provide this document to the Newtown Township Planning Commission for review and forward any comments or questions they may have to my attention, in writing.

Copies of this document are available to review on line at www.edgmont.org. Thank you.

Very truly yours,

Samantha Reiner, Manager

enclosure



MEMORANDUM OF UNDERSTANDING

This memorandum of understanding is made the 19 day of Dec, 2007 by and between Edgmont Township, a Pennsylvania Township of the Second Class (the "Township") and the Delaware County Regional Water Quality Control Authority ("DELCORA").

WHEREAS, the Township has submitted an Act 537 Plan to the Pennsylvania Department of Environmental Protection that calls for the installation of sewers throughout a substantial portion of the Township;

WHEREAS, the parties mutually desire that DELCORA design, build and maintain such sewers; and

WHEREAS, the parties have elected to make this memorandum of understanding to express their current understanding of a potential relationship between the parties, and for the purpose of establishing a framework for any future, binding relationship that may arise between the parties.

IN RECOGNITION OF THE ABOVE, the parties mutually express their present understanding of their future relationship as follows:

1. Sewers. DELCORA acknowledges that it has reviewed Edgmont's proposed Act 537, and specifically the Special Study described therein, and is willing, subject to approval by DEP, and upon terms both described below and to be agreed upon among the Parties, to finance, design, install, the sewers and sewer related facilities described in the Special Study, to maintain and operate said sewers, and to acquire, maintain and operate any existing sewers and sewer related facilities presently owned by either the Township for a term to be agreed upon.

2. Future Development. Prior to making any final agreement regarding the Sewers, the Parties shall mutually discuss and attempt to define areas of potential future development, and develop as strategy for wastewater treatment in such areas.

3. Duty to Connect. Any agreement between the Parties shall be contingent upon the Township passing an ordinance containing a provision that will require all occupied properties in the Sewered area of the Township to connect to the Sewers, and mandating that any properties in such area unoccupied as of the time of the agreement connect to the Sewers prior to obtaining a certificate of occupancy.

4. Scope of Maintenance. Should the Parties make a final agreement, it set forth the scope of DELCORA's maintenance of the Sewers to be from any sewer main up to, but not including, the curb trap on a gravity lateral or a check valve on a pressure lateral. Occupants shall be responsible for maintenance of the lateral from, and including the curb trap or check valve, to any structure on their properties. The Township shall include a provision to this effect in any sewer ordinance.

5. DELCORA Standards, Rules and Regulations. Any agreement shall include a provision conditioning service within the Township upon the Township adopting the then current version of DELCORA's standards, rules and regulations, and continuing to adopt any amendments or updates thereto.

6. Easements. Any agreement shall be contingent upon the Township obtaining all easements required for the construction and maintenance of the Sewers during a period certain prior to construction. In the alternative, should any agreement require DELCORA to acquire such easements, the Township acknowledges that DELCORA may employ its condemnation powers to do so.

7. Costs. The parties acknowledge that all costs associated with the design, construction, financing, operation and maintenance of the Sewers, including any improvements to existing sewer lines or sewer related facilities, shall be born exclusively by users in the Township.

8. Connection with Newtown. Any agreement shall be contingent upon the Township reaching an agreement to connect to Newtown Township's sewer system.

9. Chapter 94 sign-offs. The parties acknowledge that every planning module proposing connection to the Sewers shall require Chapter 94 approval from DELCORA for collection; Newtown Township Sewer Authority and Central Delaware County Sewer Authority ("CDCA") for conveyance; and DELCORA and the City of Philadelphia for treatment.

10. Buyback. Any agreement shall provide Edgmont with the opportunity to acquire the Sewers from DELCORA at the expiration of any financing or re-financing term, at its then book value.

11. Insurance. During the term of any agreement, DELCORA shall be required to maintain environmental insurance at levels to be agreed upon naming the Township as an additional insured.

12. CDCA. Any agreement shall be conditioned upon the Township acquiring either full membership in CDCA, or the right to connect to CDCA's Crum Creek Interceptor.

THE ABOVE expresses the Parties understanding as of the date set forth in the opening paragraph hereof.

Township

Ronald Gravina
RONALD GRAVINA, Chairman
Edgmont Township Board of Supervisors

WITNESS:

Annitha Reiner
Secretary

DELCORA

Stanley R. Kester
Stanley R. Kester, Chairman
Board of Directors

WITNESS:

Robert A. Powell
Robert A. Powell
Business Development and
Strategic Planning Manager



DELAWARE COUNTY PLANNING DEPARTMENT

COURT HOUSE/GOVERNMENT CENTER
201 W. Front St. Media, PA 19063

COUNCIL

JOHN J. WHELAN
CHAIRMAN

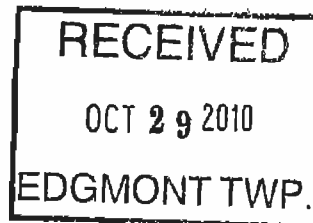
CHRISTINE FIZZANO CANNON
VICE CHAIRMAN

THOMAS J. McGARRIGLE
ANDY LEWIS
MARIO J. CIVERA, JR.

Office Location: Toal Building, 2nd & Orange Sts., Media, PA 19063
Phone: (610) 891-5200 FAX: (610) 891-5203
E-mail: planning_department@co.delaware.pa.us

JOHN E. PICKETT, AICP
DIRECTOR

October 26, 2010



Ms. Samantha Reiner, Manager
Edgmont Township
P.O. Box 267
Gradyville, PA 19039

RE: Edgmont Township
Revised Act 537 Special Study 2010

Dear Ms. Reiner:


The Delaware County Planning Department (DCPD) has reviewed the draft of Edgmont Township's revised Act 537 Special Study. DCPD supports the recommendations outlined in the Plan, which is an update to the previous Special Study from 2007.

The selected alternative in the 2007 plan was to provide a public sewer system discharging to the CDCA system via Newtown Township for conveyance to and treatment at the DELCORA sewage treatment plant in the City of Chester. The 2010 study reviews specific options for connection to the CDCA system and considers alternative designs for the internal collection system for parts of Edgmont Township. The chosen alternative will require construction of conventional gravity systems, low pressure systems, pump stations, and force mains throughout the Crum Creek District. It proposes the discharge of wastewater from 5 of the 6 service districts in Edgmont's Crum Creek District into Newtown Township and the CDCA system via a new pump station and force main near Gradyville Road.

DCPD believes that this revision adequately addresses the issues associated with providing public sewers to serve the future needs of Township residents. We trust that the actions taken by Edgmont Township will remain in compliance with all applicable local, state, and federal regulations.

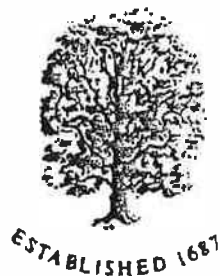
If you have any questions, or need further information please do not hesitate to contact me at 610-891-5214.

Very truly yours


Steven R. Beckley, AICP
Senior Planner

cc: Department of Environmental Protection: Stefanie Rittenhouse
Bradford Engineering Associates, Inc.





TOWNSHIP OF EDGMONT

1000 Gradyville Road
PO Box 267
Gradyville, Pennsylvania 19039
610-459-1662 phone 610-459-3760 fax

October 12, 2010

John E. Pickett, Director
Delaware County Planning Commission
Court House/Government Center
201 West Front Street
Media, Pennsylvania 19063

**Re: Act 537 Sewage Facilities Planning
Edgmont Township, Delaware County**


Dear Mr. Pickett:

Enclosed please find a recently revised Act 537 Special Study prepared for the Crum Creek District by Bradford Engineering Associates, Inc., dated August 2010.

Kindly review and forward your comments to this office at your earliest convenience.

Please do not hesitate to contact me if you have any questions. Thank you.

Very truly yours,


Samantha Reiner
Township Manager

Enclosure

NOTICE

The Board of Supervisors of Edgmont Township, Delaware County is considering adopting a "Special Study" updating the Township's Sewage Facilities Plan (ACT 537) last approved February 2007. Comments on the Plan are being accepted by the Township for a period of thirty (30) days beginning January 10, 2011.

The planning area is located generally in the Crum Creek watershed, and includes a small section of the Ridley Creek watershed of Edgmont Township. This 2010 Study is being undertaken to further develop and evaluate additional alternatives for both the collection system and conveyance methods to reach the Central Delaware County Authority's (CDCA) sanitary sewer system, as well as to provide for current sewage needs in the West Chester Pike corridor of Edgmont Township that exceed the Crum Creek watershed District.

The 2010 Study identifies cost effective options, alternatives and an implementation schedule suitable to the needs of the Township. Specifically, the 2010 Study addresses alternatives for the proposed collection system including evaluation of existing pump stations for possible upgrade and reuse as opposed to new facilities. Alternatives for the major conveyance facilities required to connect to the CDCA system are considered. Sewer needs for the Crum Creek and a small portion of the Ridley Creek watershed Districts, and their potential for future expansion are considered.

The alternatives of choice to be implemented involve the installation of a combination of gravity sewers, lift stations and a regional pump station in Edgmont Township. The pump station will convey flow to the CDCA system through Newtown Township. See Plan alternatives 1D, 1G & 2.

The Act 537 Plan may be reviewed in its entirety at the Edgmont Township Municipal Building, 1000 Gradyville Road between the hours of 8:30 AM and 4:30 PM. The plan is also available for viewing online at <http://www.edgmont.org>. Comments will be accepted at the Township Building during the thirty (30) day public review period.

Samantha Reiner, Township Manager

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Samantha Reiner, Township Manager

Proof of Publication of Notice in Delaware County Daily Times

Under Newspaper Advertising Act. No. 587, Approved May 16, 1929

State of Pennsylvania, }
County of Delaware, } ss.

Maureen A. Hartney

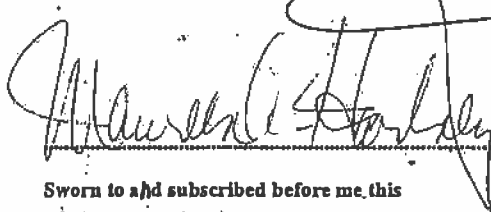
designated agent of CENTRAL STATES PUBLISHING, INC., being duly sworn, deposes and says that the DELAWARE COUNTY DAILY TIMES, a daily newspaper of general circulation as defined in the above-mentioned Act, published at Primor, Delaware County, Pennsylvania, was established September 7, 1876, and issued and published continuously thereafter for a period of 100 years and for a period of more than six months immediately prior hereto, (under the name Chester Times prior to November 2, 1959) in the City of Chester, County of Delaware, and further says that the printed notice or publication attached hereto is an exact copy of a notice or publication printed and published in the regular edition and issues of the DELAWARE COUNTY DAILY TIMES on the following dates, viz:

January 9, 2011

A.D. 20

and that said advertising was inserted in all respects as ordered.

Affiant further deposes that he is the proper person duly authorized by CENTRAL STATES PUBLISHING, INC., publisher of said DELAWARE COUNTY DAILY TIMES, a newspaper of general circulation, to verify the foregoing statement under oath and that affiant is not interested in the subject matter of the aforesaid notice or advertisement, and that all allegations in the foregoing statements as to time, place and character of publication are true.



Sworn to and subscribed before me this

10th day of January 2011



Notary Public

COMMONWEALTH OF PENNSYLVANIA

Notarial Seal

Kathleen Ragni, Notary Public
Upper Merion Twp., Delaware County
My Commission Expires March 2, 2011

Notary Public State Association of Notaries



TOWNSHIP OF EDGMONT

1000 Gradyville Road

PO Box 267

Gradyville, Pennsylvania 19039

610-459-1662 phone 610-459-3760 fax

Edgmont Township

1000 Gradyville Road

Meeting with Aqua Pennsylvania

January 26, 2011

2:00 p.m.

Re: Act 537 Planning Meeting

In attendance:

**Aqua Pennsylvania –
Mark Bubel, P.E.
Tony Francisco, P.E.
Craig Marlton**

**Edgmont Township –
Walter Fazler, P.E.
Samantha Reiner
Notes by S. Reiner**

The meeting was requested by Aqua to go over some questions they have relative to the 537 Plan. They saw the re-advertisement and wanted to take advantage of this opportunity for a second look.

- 1.) Aqua feels the plan showing proposed sewer district and the study text don't reflect the information the same way. Walter Fazler took a look at his plan and felt he could amend it to indicate more clearly no interceptor to be located in some of the lands owned by Aqua behind Runnymede Farms. (result will be a newly revised plan sheet)
- 2.) Aqua questions status of EPS (Edgmont Pump Station) #2 – Walter Fazler confirmed it be rebuilt or upgraded. It is referred to in the proposal as EPS #2. (No change required)
- 3.) Aqua questioned what is the difference from Alternative 1c and 1d. Mr. Fazler explained one showed a pump station on West Chester Pike and one shows gravity lines. Mr. Fazler also confirmed that "RPS 1" is existing and "EPS" is proposed.

Copy of Notice or Publication

Proof of Publication of Notice in Delaware County Daily Times

Under Newspaper Advertising Act. No. 587, Approved May 16, 1929

State of Pennsylvania,
County of Delaware,

ss.

Lynn D. Bettcher

Designated agent of CENTRAL STATES PUBLISHING, INC., being duly sworn, deposes and says that the DELAWARE COUNTY DAILY TIMES, a daily newspaper of general circulation as defined in the above-mentioned Act, published at Pottsville, Delaware County, Pennsylvania, was established September 7, 1876, and issued and published continuously thereafter for a period of 100 years and for a period of more than six months immediately prior hereto, (under the name Chester Times prior to November 2, 1959) in the City of Chester, County of Delaware and further says that the printed notice or publication attached hereto is an exact copy of a notice or publication printed and published in the regular edition and issues of the DELAWARE COUNTY DAILY TIMES on the following date, viz:

September 3,

2010

and that said advertising was inserted in all respects as ordered.

A.D. 2010

Affiant further deposes that he is the proper person duly authorized by CENTRAL STATES PUBLISHING, INC. publisher of said DELAWARE COUNTY DAILY TIMES, a newspaper of general circulation, to verify the foregoing statement under oath and that affiant is not interested in the subject matter of the aforesaid notice or advertisement, and that all allegations in the foregoing statements as to time, place and character of publication are true.

Lynn D. Bettcher

Sworn to and subscribed before me this

3rd September

2010

Notary Public

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Kathleen Ragni, Notary Public
Upper Darby Twp., Delaware County
My Commission Expires March 2, 2011
Member, Pennsylvania Association of Notaries

RECEIVED
SEP 07 2010
EDGMONT TWP.

Notice
The Board of Supervisors of Edgmont Township, Delaware County is considering adopting a "Special Study" which is an updated revision to the Township's Sewage Facilities (ACT 537) Plan. Comments on the Plan are being accepted by the Township for a period of thirty (30) days beginning September 7, 2010. This Special Study is being undertaken to further develop and evaluate additional alternatives for both the collection system and conveyance methods to reach the Central Delaware County Authority's sanitary sewer system, as well as to provide for current sewage needs in the West Chester Pike corridor of Edgmont Township that exposed the Crum Creek District. The 2010 Study will look to identify cost effective options and alternatives that can be implemented in a time frame suitable to the needs of Edgmont Township. Specifically, the 2010 Study will address the following items:
1. Develop alternatives for the proposed collection system including evaluation of existing pump stations for possible upgrading and reuse as opposed to an interceptor adjacent to Crum Creek.
2. Develop alternatives for the major conveyance facilities needed to connect to the CDCA system.
3. Sewer needs for districts outside the Crum Creek District and their potential for future expansion of the proposed facilities which discharge to the CDCA system.
The Act 537 Plan can be reviewed in its entirety at the Edgmont Township Municipal Building, 1000 Gmodyville Road between the hours of 8:30 AM and 4:30 PM. The plan is also available for viewing online at <http://www.edgmont.org>. Comments will be accepted at the Township Building during the thirty (30) day public review period.
Samantha Reiner, Township Manager

Original 2007 Plan

Newtown Capital Costs		
Alternate IA	\$	730,248
Alternate IE	\$	2,500,170
CDCA Costs		
Buy-in ¹	\$	362,726
Cash Reserve ¹	\$	57,442
Interceptor Rehab ²	\$	324,571
Interceptor Expansion ²	\$	1,795,948
SUBTOTAL	\$	5,771,105
Edgmont Collection System ³	\$	5,614,431
Existing system CCTV	\$	250,000
Grant Proceedes	\$	(871,000)
PROJECT TOTAL	\$	10,764,536

Upper Providence Option

CDCA Costs		
Buy-in ¹	\$	362,726
Cash Reserve ¹	\$	57,442
Interceptor Rehab. And Expansion ²	\$	1,415,385
SUBTOTAL	\$	1,835,553
Edgmont Conveyance Facilities		
Alternate IC	\$	2,043,574
Alternate IF	\$	5,113,041
SUBTOTAL	\$	8,992,168
Less Upper Providence Conveyance Share ⁴	\$	(951,190)
SUBTOTAL	\$	8,040,978
Edgmont Collection System ³	\$	5,614,431
Existing system CCTV	\$	250,000
Grant Proceedes	\$	(871,000)
PROJECT TOTAL	\$	13,034,410

Edgmont Pump through Newton Option

CDCA Costs		
Buy-in ¹	\$	362,726
Cash Reserve ¹	\$	57,442
Interceptor Rehab ²	\$	324,571
Interceptor Expansion ²	\$	1,795,948
SUBTOTAL	\$	2,540,687
Edgmont Conveyance Facilities		
Alternate ID (rev.2)	\$	1,593,332
Pump Station through Newtown	\$	2,289,392
SUBTOTAL	\$	6,423,411
Edgmont Collection System ³	\$	5,614,431
Existing system CCTV	\$	250,000
Grant Proceedes	\$	(871,000)
PROJECT TOTAL	\$	11,416,842

1. Based upon agreement with CDCA dated December 21, 2007 escalated by 3% per year

2. Based upon CDCA cost sheet dated October 26, 2006 escalated by 3% per year

3. Based upon Edgmont Township Act 537 Plan prepared by Yerkes Associates, Inc. escalated by 3% per year

4. Assumes UPTSA will share in the pro-rata proportionate share of the force main construction costs

EDGMONT CAPPED SEWERS CCTV COST ESTIMATE

<u>DESCRIPTION</u>	<u>QUANTITY</u>	<u>UNITS</u>	<u>UNIT PRICE</u>	<u>TOTAL COST</u>
LIGHT CLEAN- 8" SEWER	37,700	LF	\$1.00	\$37,700
HEAVY CLEAN- 8" SEWER	3,500	LF	\$2.00	\$7,000
CCTV 8" SEWER	37,700	LF	\$1.00	\$37,700
CCTV LATERALS	50	EA	\$200.00	\$10,000
TRAFFIC CONTROL	1	LUMP SUM	\$1,000.00	\$1,000
CHEMICAL GROUT 8" SEWER JOINTS	300	EACH	\$9.00	\$2,700
CHEMICAL GROUT MANHOLES	25	EACH	\$1,200.00	\$30,000
GROUT MATERIAL	1,500	GAL.	\$7.00	\$10,500
CURED IN PLACE LINER 8" X 3' LONG	20	EACH	\$1,200.00	\$24,000
CURED IN PLACE LINER 8" X 4' LONG	5	EACH	\$1,275.00	\$6,375
CURED IN PLACE LINER 8" X 5' LONG	3	EACH	\$1,400.00	\$4,200
LATERAL GROUT SEALS	10	EACH	\$400.00	\$4,000
LATERAL REINSTATEMENT	3	EACH	\$350.00	\$1,050
Pressure Test Joints	500	EACH	\$1.50	\$750
			SUB-TOTAL	\$176,975
			ENGINEERING	\$35,395
			20% CONTINGENCY	\$35,395
			TOTAL	\$250,000

EDGMONT TOWNSHIP- ACT 537 PLAN SPECIAL STUDY

Aug-09

ALTERNATE 1B -BUDGET COST ESTIMATE

DIST. A-DPUMP VIA NEWTOWN PS2. DIST.E PUMP TO EPS-2(GRADYVILLE RD.)

<i>Item No.</i>	<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Unit Price</i>	<i>Total Price</i>
1	8" Sewer (0'-8')	1000	lf	\$ 62.00	\$ 62,000.00
2	Manholes (0'-8')	2	ea	\$ 3,500.00	\$ 7,000.00
3	Watertight Covers	2	ea	\$ 350.00	\$ 700.00
4	Type II Bedding	5100	lf	\$ 6.50	\$ 33,150.00
5	Lawn Restoration	1550	lf	\$ 10.00	\$ 15,500.00
6	Twp Rd Rest (main)	3550	lf	\$ 45.00	\$ 159,750.00
7	6" Force Main	4100	lf	\$ 40.00	\$ 164,000.00
8	THRUST BLOCK	8	ea	\$ 500.00	\$ 4,000.00
9	PUMP STATION (RP-1)	1	ea	\$ 334,225.00	\$ 334,225.00
10	Air Release Valve	2	ea	\$ 5,000.00	\$ 10,000.00
11	PUMP STATION (RP-2)	1	ea	\$ 241,275.00	\$ 241,275.00
Subtotal					\$ 1,031,600.00
15% Contingency					\$ 154,740.00
Engineering					\$ 154,740.00
Total Estimated Costs Alternate 1B					\$ 1,341,080.00

EDGMONT TOWNSHIP-2009 ACT 537 PLAN

Aug-09

ALTERNATE IC - BUDGET COST ESTIMATE**WEST CHESTER PIKE CORREDOR-PUMP TO EPS-2.**

<i>Item No.</i>	<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Unit Price</i>	<i>Total Price</i>
1	8" Sewer (0'-8')	1000	lf	\$ 62.00	\$ 62,000
2	Manholes (0'-8')	2	ea	\$ 3,500.00	\$ 7,000
3	Watertight Covers	2	ea	\$ 350.00	\$ 700
4	Type II Bedding	7200	lf	\$ 6.50	\$ 46,800
5	Lawn Restoration	3650	lf	\$ 10.00	\$ 36,500
6	Twp Rd Rest (main)	3550	lf	\$ 45.00	\$ 159,750
7	6" Force Main	6200	lf	\$ 40.00	\$ 248,000
8	THRUST BLOCK	10	ea	\$ 500.00	\$ 5,000
9	PUMP STATION (ET-1)	1	ea	\$ 370,730.00	\$ 370,730
10	Highway Crossing	1	LS	\$ 50,000.00	\$ 50,000
11	Upgrade Exist PS(RP-1 & 2)	1	ea	\$ 575,500.00	\$ 575,500
12	Air Release Valve	2	ea	\$ 5,000.00	\$ 10,000
Subtotal					\$ 1,571,980
15% Contingency					\$ 235,797
Engineering					\$ 235,797
Total Estimated Costs Alternate IC					\$ 2,043,574

EDGMONT TOWNSHIP-2009 ACT 537 PLAN

ALTERNATE ID(rev2) - BUDGET COST ESTIMATE

Gravity Interceptor- WC Pike to EPS-1

Jul-10

<i>Item No.</i>	<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Unit Price</i>	<i>Total Price</i>
1	8" Sewer (0'-8')	1900	lf	\$ 62.00	\$ 117,800.00
2	8" Sewer (8-10')	600	lf	\$ 70.00	\$ 42,000.00
3	8" Sewer (10-12')	400	lf	\$ 72.00	\$ 28,800.00
4	8" Sewer (12-14')	200	lf	\$ 97.00	\$ 19,400.00
5	PUMP STATION EPS-1	1	lf	\$ 334,225.00	\$ 334,225.00
6	Manholes (0'-8')	10	ea	\$ 3,500.00	\$ 35,000.00
7	Additional MH Dpth	15	ea	\$ 281.00	\$ 4,215.00
8	Watertight Covers	10	ea	\$ 350.00	\$ 3,500.00
9	Type II Bedding	6000	lf	\$ 6.50	\$ 39,000.00
10	Select Backfill	100	cy	\$ 30.00	\$ 3,000.00
11	Lawn Restoration	5000	lf	\$ 10.00	\$ 50,000.00
12	Twp Rd Rest (main)	950	lf	\$ 45.00	\$ 42,750.00
13	State Rd Rest (main)	50	lf	\$ 51.00	\$ 2,550.00
14	Connect to Exist	2	ea	\$ 2,200.00	\$ 4,400.00
15	4" Force Main	300	lf	\$ 75.00	\$ 22,500.00
16	6" Force Main	2600	lf	\$ 95.00	\$ 247,000.00
17	THRUST BLOCK	9	ea	\$ 500.00	\$ 4,500.00
18	PUMP STATION EPS-3	1	ea	\$ 150,000.00	\$ 150,000.00
19	Highway Crossing	1	LS	\$ 50,000.00	\$ 50,000.00
20	Air Release Valve	1	ea	\$ 5,000.00	\$ 5,000.00
21	Tie-In Exist PS	2	ea	\$ 10,000.00	\$ 20,000.00
Subtotal					\$ 1,225,640.00
15% Contingency					\$ 183,846.00
Engineering					\$ 183,846.00
Total Estimated Costs Alternate 1D					\$ 1,593,332.00

EDGMONT TOWNSHIP-2009 ACT 537 PLAN

Aug-09

ALTERNATE IF- BUDGET COST ESTIMATE***EPS-2Pump To CDCA Via Upper Providence - ALL FLOW***

<i>Item No.</i>	<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Unit Price</i>	<i>Total Price</i>
1	Type II Bedding	19000	lf	\$ 6.50	\$ 123,500.00
2	Select Backfill	7378	cy	\$ 30.00	\$ 221,340.00
3	Lawn Restoration	800	lf	\$ 10.00	\$ 8,000.00
4	Twp Rd Rest (main)	1600	lf	\$ 45.00	\$ 72,000.00
5	State Rd Rest (main)	16600	lf	\$ 51.00	\$ 846,600.00
6	State Road Overlay	22133	sy	\$ 13.00	\$ 287,729.00
7	Connect to Exist	1	ea	\$ 2,200.00	\$ 2,200.00
8	10" Force Main	19000	lf	\$ 80.00	\$ 1,520,000.00
9	THRUST BLOCK	10	ea	\$ 500.00	\$ 5,000.00
10	Air Release Valve	3	ea	\$ 5,000.00	\$ 15,000.00
11	Right-of-way Acquisition	800	lf	\$ 100.00	\$ 80,000.00
Subtotal					\$ 3,181,369.00
15% Contingency					\$ 477,205.00
Engineering					\$ 477,205.00
Total Estimated Costs Alternate IF (force main only)					\$ 4,135,779.00

EDGMONT TOWNSHIP-2009 ACT 537 PLAN

Aug-09

ALTERNATE IF- BUDGET COST ESTIMATE

EPS-2Pump To CDCA Via Upper Providence - ALL FLOW

<i>Item No.</i>	<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Unit Price</i>	<i>Total Price</i>
1	Type II Bedding	19000	lf	\$ 6.50	\$ 123,500.00
2	Select Backfill	7378	cy	\$ 30.00	\$ 221,340.00
3	Lawn Restoration	800	lf	\$ 10.00	\$ 8,000.00
4	Twp Rd Rest (main)	1600	lf	\$ 45.00	\$ 72,000.00
5	State Rd Rest (main)	16600	lf	\$ 51.00	\$ 846,600.00
6	State Road Overlay	22133	sy	\$ 13.00	\$ 287,729.00
7	Connect to Exist	1	ea	\$ 2,200.00	\$ 2,200.00
8	10" Force Main	19000	lf	\$ 80.00	\$ 1,520,000.00
9	THRUST BLOCK	10	ea	\$ 500.00	\$ 5,000.00
10	PUMP STATION (ET-2)	1	ea	\$ 751,740.00	\$ 751,740.00
11	Air Release Valve	3	ea	\$ 5,000.00	\$ 15,000.00
12	Right-of-way Acquisition	800	lf	\$ 100.00	\$ 80,000.00
Subtotal					\$ 3,933,109.00
15% Contingency					\$ 589,966.00
Engineering					\$ 589,966.00
Total Estimated Costs Alternate 1F					\$ 5,113,041.00
Potential Cost Sharing credit frm UPTSA (1)					\$ (951,190.00)
Grand Total Alternate 1F					\$ 4,161,851.00

(1) Assumes UPTSA will share in the pro-rata proportionate share of the force main construction costs

EDGMONT TOWNSHIP-2009 ACT 537 PLAN

Aug-09

ALTERNATE IFA - BUDGET COST ESTIMATE***EPS-2Pump To CDCA Via Upper Providence - DIST. E ONLY.***

<i>Item No.</i>	<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Unit Price</i>	<i>Total Price</i>
1	Type II Bedding	19000	lf	\$ 6.50	\$ 123,500.00
2	Select Backfill	7378	cy	\$ 30.00	\$ 221,340.00
3	Lawn Restoration	800	lf	\$ 10.00	\$ 8,000.00
4	Twp Rd Rest (main)	1600	lf	\$ 45.00	\$ 72,000.00
5	State Rd Rest (main)	16600	lf	\$ 51.00	\$ 846,600.00
6	State Road Overlay	22133	sy	\$ 13.00	\$ 287,729.00
7	Connect to Exist	1	ea	\$ 2,200.00	\$ 2,200.00
8	8" Force Main	19000	lf	\$ 60.00	\$ 1,140,000.00
9	THRUST BLOCK	10	ea	\$ 500.00	\$ 5,000.00
10	PUMP STATION (ET-2A)	1	ea	\$ 718,590.00	\$ 718,590.00
11	Air Release Valve	3	ea	\$ 5,000.00	\$ 15,000.00
12	Right-of-way Acquisition	800	lf	\$ 100.00	\$ 80,000.00
Subtotal					\$ 3,519,959.00
15% Contingency					\$ 527,994.00
Engineering					\$ 527,994.00
Total Estimated Costs Alternate 1FA					\$ 4,575,947.00
Potential Cost Sharing credit frm UPTSA (1)					\$ (951,190.00)
Grand Total Alternate 1F					\$ 3,624,757.00

(1) Assumes UPTSA will share in the pro-rata proportionate share of the force main construction costs

EDGMONT TOWNSHIP-2009 ACT 537 PLAN

Aug-09

ALTERNATE 1G - BUDGET COST ESTIMATE*EPS-2Pump To CDCA Via Gradyville Road*

<i>Item No.</i>	<i>Description</i>	<i>Quantity</i>	<i>Unit</i>	<i>Unit Price</i>	<i>Total Price</i>
1	Bridge crossing	500	lf	\$ 200.00	\$ 100,000.00
2	Select Backfill	220	cy	\$ 30.00	\$ 6,600.00
3	Lawn Restoration	1500	lf	\$ 10.00	\$ 15,000.00
4	Leak Telemetry	1	ls	\$ 5,000.00	\$ 5,000.00
5	State Rd Rest (main)	1060	lf	\$ 51.00	\$ 54,060.00
6	State Road Overlay	590	sy	\$ 13.00	\$ 7,670.00
7	Connect to Exist	1	ea	\$ 5,000.00	\$ 5,000.00
8	8" Force Main	12100	lf	\$ 60.00	\$ 726,000.00
9	THRUST BLOCK	10	ea	\$ 500.00	\$ 5,000.00
10	PUMP STATION (ET-1G)	1	ea	\$ 751,740.00	\$ 751,740.00
11	Air Release Valve	1	ea	\$ 5,000.00	\$ 5,000.00
12	Right-of-way Acquisition	800	lf	\$ 100.00	\$ 80,000.00
Subtotal					\$ 1,761,070.00
15% Contingency					\$ 264,161.00
Engineering					\$ 264,161.00
Total Estimated Costs Alternate 1G					\$ 2,289,392.00

EDGMONT COLLECTION SYSTEM COST ESTIMATE**CRUM CREEK DISTRICT**

March 8, 2010

Crum Creek Sewer District Collection System Cost Estimate

	ITEM	ESCALATED UNIT COST	QUANTITY	TOTAL
District A	Gravity Sewers	\$163.91	1,000	\$163,909
District B	Gravity Sewers	\$163.91	5,625	\$921,988
	Laterals	\$546.36	30	\$16,391
	Highway Crossing	\$27,318.18	1	\$27,318
	Highway Crossing	\$54,636.35	1	\$54,636
District C	Gravity Sewers	\$163.91	7,800	\$1,278,491
	Highway Crossing	\$27,318.18	1	\$27,318
	Highway Crossing	\$54,636.35	1	\$54,636
	4" Force Main	\$81.95	3,000	\$245,864
	100 gpm Pump Station	\$163,909.05	1	\$163,909
District D	Pressure Main	\$81.95	4,000	\$327,818
	Highway Crossing	\$27,318.18	1	\$27,318
	Lateral	\$273.18	65	\$17,757
	Grinder Pump	\$2,731.82	65	\$177,568
District E	Gravity Sewers	\$191.23	2,000	\$382,454
	SUBTOTAL			\$3,887,376
	Engineering 15%			\$583,106
	Contingency 20%			\$777,475
	Legal and R/W 5%			\$194,369
	TOTAL			\$5,440,000

Feb 06 2009 2:42PM DEP WATER SERO

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**Pennsylvania Department of Environmental Protection****2 East Main Street
Norristown, PA 19401
February 6, 2009****Southeast Regional Office**

Phone: 484-250-5970

Fax: 484-250-5971

Ms. Samantha Reiner, Manager
Edgmont Township
100 Gradyville Road
P.O. Box 267
Gradyville, PA 19039

Re: Act 537 Plan Update
Crum Creek District Special Study
Status: ISSUED
APS ID 500868, AUTH ID 712662
Edgmont Township
Delaware County

Dear Ms. Reiner:

We have completed our review of your municipality's updated official sewage facilities plan titled Act 537 Plan Special Study - Crum Creek District, as prepared by Yerkes Associates, Inc., and Bradford Engineering Associates, Inc., dated July 25, 2007. The plan includes the drawing titled "Master Sanitary Sewer Plan," prepared by Yerkes Associates, Inc., which is referenced below. The plan was supplemented by additional information that we received on January 28, 2008, February 19, 2008, June 3, 2008, June 26, 2008, July 18, 2008, and October 9, 2008. In addition, the Department of Environmental Protection's ("Department") review considers and incorporates by reference: (1) Article V of the December 21, 2007, Supplemental Agreement ("Supplemental Agreement") between Edgmont Township ("Township") and the Central Delaware County Authority ("CDCA") providing for the construction of improvements by CDCA to CDCA's Crum Creek Interceptor; (2) CDCA's November 2006 Capital Improvement Program & Comprehensive Trunkline Assessment ("CDCA Improvement Program and Trunkline Assessment"); (3) CDCA's August 8, 2007, letter to the Department regarding the coordination of construction of the facilities in light of the interceptor capacity needs of member municipalities ("Coordination Letter"); and (4) the Township's December 19, 2007, Memorandum of Understanding ("MOU") with the Delaware County Regional Authority ("DELCORA"). The review was conducted in accordance with the provisions of the Pennsylvania Sewage Facilities Act.

Ms. Samantha Reiner, Manager

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February 6, 2009

Approval of the plan, as supplemented and amended, is hereby granted subject to the following conditions. This approval provides for the following:

1. The Township will become a member of the CDCA. Upon attaining membership in the CDCA, the Township will be authorized to convey up to a total of 350,000 gallons per day annual average sewage flow through CDCA's sewage conveyance system to DELCORA's wastewater treatment facility. This capacity will be allocated to the Township's Crum Creek District.
2. The Township commits to have DELCORA construct the following sewage collection and conveyance facilities in accordance with the MOU, and the schedule set forth below, to provide for the collection and conveyance of sewage from the Township as provided in paragraph 1. The construction of these facilities is necessary for implementation of the plan:
 - a. The District A sewer service area is depicted on the Master Sanitary Sewer Plan. District A includes the Edgmont Country Fair development, and is improved with a movie theater, commercial, retail and light industrial uses. Sewage facilities proposed for this district include gravity sewer segments along North Crum Road that will enable this district to drain to Newtown Township's proposed Pump Station 2. Sewage facilities for this district shall be completed as soon as practicable but no later than February 28, 2011. The three large volume community on-lot sewage disposal currently serving this district will be phased out as a result of the plan's implementation.
 - b. The District B sewer service area is depicted on the Master Sanitary Sewer Plan. District B includes a mix of residential, retail, and commercial uses. Sewage facilities proposed for this district include gravity sewers that will be installed in Eagleview Drive, Columbus Lane, Papa Boulevard, Newton Terrace, and West Chester Pike. These facilities will enable District B to drain to Newtown Township's proposed Pump Station 2. Sewage facilities for this district shall be completed as soon as practicable but no later than February 28, 2011. The community land application systems currently serving the Eagleview and Eagleview II (a.k.a. Arbors at Edgmont) developments will be phased out as a result of the plan's implementation.

Ms. Samantha Reiner, Manager

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February 6, 2009

- c. The District C sewer service area is depicted on the Master Sanitary Sewer Plan. District C includes a mix of mostly retail and commercial uses, with some residential uses. This district is currently served by inadequate on-lot sewage disposal systems. Sewage facilities proposed for this district include gravity sewers along Miller Road and West Chester Pike. These gravity sewers will drain to a proposed pump station that will be located along West Chester Pike, near the Chester County line. The pump station will have average daily flows of 27,563 gallons per day, and will convey sewage to the gravity sewers that will be installed in West Chester Pike as part of the improvements proposed for District B. Sewage facilities for this district shall be completed as soon as practicable but no later than February 28, 2011.
- d. The District D sewer service area is depicted on the Master Sanitary Sewer Plan. District D includes the Castle Rock community. This district is currently served by inadequate on-lot sewage disposal systems. Sewage facilities proposed for this district include low pressure sewers that will be installed in Castle Rock Road, Ridge Road, Oak Circle, Chestnut Road, Walnut Road, Locust Road, and Spruce Road. The low-pressure system will connect to the gravity sewers that will be installed in West Chester Pike as part of the improvements proposed for District B. Sewage facilities for this district shall be completed as soon as practicable but no later than February 28, 2011.
- e. The District E sewer service area is depicted on the Master Sanitary Sewer Plan. District E includes the Runnymede Farm, Addison Court, Dream Valley, Springton Chase, Roscommon, and Winderly residential communities. Sewage facilities proposed for this district include gravity sewers that will be installed along Crum Creek. These facilities will enable District E to drain to Newtown Township's proposed Pump Station 4. Sewage facilities for this district shall be completed as soon as practicable but no later than February 28, 2014. Three community land application systems currently serving this district will be phased out as a result of the plan's implementation.

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DEP WATER SERO

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Ms. Samantha Reiner, Manager

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February 6, 2009

3. CDCA has committed to construct improvements to CDCA's Cram Creek Interceptor in accordance with the Supplemental Agreement, the CDCA Improvement Program and Trunkline Assessment, and the Coordination Letter. These improvements will be carried out consistent with the requirements of Article V of the Supplemental Agreement. These improvements are required as a result of the additional flow originating in Edgmont, Newtown, and Upper Providence Townships that will be conveyed through the interceptor. CDCA will coordinate the construction of these improvements with its member municipalities' need for capacity in the interceptor in accordance with the Coordination Letter.

Before constructing or operating the sewage facilities set forth in this approved plan, including proposed trunkline improvements, the Township, CDCA, and DELCORA must, as applicable, secure Clean Streams Law permits and any other permits or approvals that are needed from the Department. The Township must submit a copy of a finalized, signed and executed intermunicipal agreement between the Township and Newtown Township, and a copy of a finalized, signed and executed agreement between the Township and DELCORA with the Clean Streams Law permit application for the Township's proposed sewage facilities.

Any person aggrieved by this action may appeal, pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. Section 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A, to the Environmental Hearing Board, Second Floor, Rachel Carson State Office Building, 400 Market Street, P.O. Box 8457, Harrisburg, PA 17105-8457, 717-787-3483. TDD users may contact the Board through the Pennsylvania Relay Service, 800-654-5984. Appeals must be filed with the Environmental Hearing Board within 30 days of receipt of written notice of this action unless the appropriate statute provides a different time period. Copies of the appeal form and the Board's rules of practice and procedure may be obtained from the Board. The appeal form and the Board's rules of practice and procedure are also available in braille or on audiotape from the Secretary to the Board at 717-787-3483. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST REACH THE BOARD WITHIN 30 DAYS. YOU DO NOT NEED A LAWYER TO FILE AN APPEAL WITH THE BOARD.

Ms. Samatha Reiner, Manager

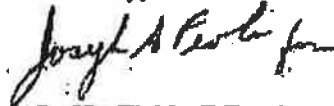
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February 6, 2009

IMPORTANT LEGAL RIGHTS ARE AT STAKE, HOWEVER, SO YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD (717-787-3483) FOR MORE INFORMATION.

If you have any questions, please contact Ms. Elizabeth Mahoney of this office.

Sincerely,



Jennifer Fields, P.E.
Regional Manager
Water Management

cc: Delaware County Planning Department
Mr. Lillicrap - CDCA
Mr. Salvucci - DELCORA
Mr. Sheldrake - Newtown Township
Mr. Donatoni - Aqua Pennsylvania, Inc.
Mr. Gerlach - DEP OCC
Ms. Mahoney
Ms. Moore
Ms. Grant
Mr. McHale - RCSOB, 11th Floor, Sewage Facilities
Planning Section
Re 30 (GJE09WQ)037

1. PROJECT INFORMATION

Project Name: **Edgmont Crum Creek SD**

Date of review: **2/14/2011 3:36:29 PM**

Project Category: **Waste Transfer, Treatment, and Disposal, Liquid waste/Effluent, Sewage module/Act 537 plan**

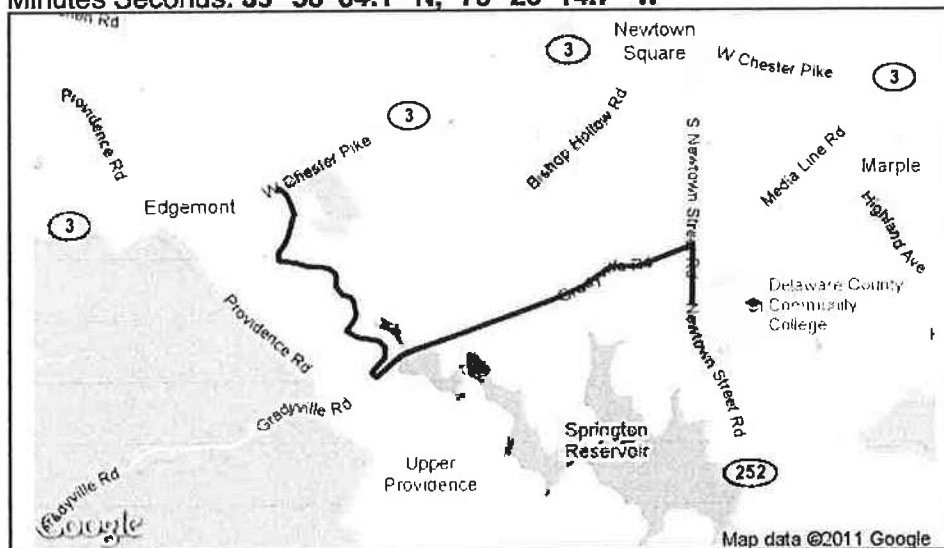
Project Length: **18637.2 feet**

County: **Delaware** Township/Municipality: **Edgmont, Marple, Newtown**

Quadrangle Name: **MEDIA** ~ ZIP Code: **19063, 19073**

Decimal Degrees: **39.976133 N, -75.437407 W**

Degrees Minutes Seconds: **39° 58' 34.1" N, -75° 26' 14.7" W**



2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
PA Fish and Boat Commission	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

Note that regardless of PNDI search results, projects requiring a Chapter 105 DEP individual permit or GP 5, 6, 7, 8, 9 or 11 in certain counties (Adams, Berks, Bucks, Carbon, Chester, Cumberland, Delaware, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Schuylkill and York) must comply with the bog turtle habitat screening requirements of the PASPGP.

RESPONSE TO QUESTION(S) ASKED

Q1: Aquatic habitat (stream, river, lake, pond, etc.) is located on or adjacent to the subject property and project activities (including discharge) may occur within 300 feet of these habitats

Your answer is: **3. Unknown**

Q2: Accurately describe what is known about wetland presence in the project area or on the land parcel. "Project" includes all features of the project (including buildings, roads, utility lines, outfall and intake structures, wells, stormwater retention/detention basins, parking lots, driveways, lawns, etc.), as well as all associated impacts (e.g., temporary staging areas, work areas, temporary road crossings, areas subject to grading or clearing, etc.). Include all areas that will be permanently or temporarily affected -- either directly or indirectly -- by any type of disturbance (e.g., land clearing, grading, tree removal, flooding, etc.). Land parcel = the lot(s) on which some type of project(s) or activity(s) are proposed to occur.

Your answer is: **1. The entire project will occur in or on an existing building, parking lot, driveway, road, road shoulder, street, runway, paved area, or railroad bed.**

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 one year** (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 jurisdictional 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: Further review of this project is necessary to resolve the potential impacts(s). Please send project information to this agency for review (see WHAT TO SEND).

DCNR Species: (Note: The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below. As of January 2011, DCNR recommends following the Botanical Survey Protocols available here:

http://www.gis.dcnr.state.pa.us/hgis-er/PNDI_DCNr.aspx.)

Scientific Name: Erosional remnant

Common Name: Erosional Remnant

Current Status: Special Concern Resource*

Proposed Status: Special Concern Resource*

PA Fish and Boat Commission

RESPONSE: Further review of this project is necessary to resolve the potential impacts(s). Please send project information to this agency for review (see WHAT TO SEND).

PFBC Species: (Note: The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name: Sensitive Species**

Common Name:

Current Status: Threatened

Proposed Status: Special Concern Species*

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.

* Special Concern Species or Resource - Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.

** Sensitive Species - Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, send the following information to the agency(s) seeking this information (see AGENCY CONTACT INFORMATION).

Check-list of Minimum Materials to be submitted:

- ☐ **SIGNED** copy of this Project Environmental Review Receipt
- ☐ Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.
- ☐ Project location information (name of USGS Quadrangle, Township/Municipality, and County)
- ☐ USGS 7.5-minute Quadrangle with project boundary clearly indicated, and quad name on the map

The inclusion of the following information may expedite the review process.

____ A basic site plan (particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)

____ Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)

____ Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams

____ The DEP permit(s) required for this project

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. For cases where a "Potential Impact" to threatened and endangered species has been identified before the application has been submitted to DEP, the application should not be submitted until the impact has been resolved. For cases where "Potential Impact" to special concern species and resources has been identified before the application has been submitted, the application should be submitted to DEP along with the PNDI receipt, a completed PNDI form and a USGS 7.5 minute quadrangle map with the project boundaries delineated on the map. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. DEP and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <http://www.naturalheritage.state.pa.us>.

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
Fax: (717) 772-0271

U.S. Fish and Wildlife Service

Endangered Species Section
315 South Allen Street, Suite 322, State College, PA.
16801-4851
NO Faxes Please.

PA Fish and Boat Commission

Division of Environmental Services
450 Robinson Lane, Bellefonte, PA. 16823-7437
NO Faxes Please

PA Game Commission

Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA. 17110-9797
Fax: (717) 787-6957

7. PROJECT CONTACT INFORMATION

Name: Samantha Reinert
Company/Business Name: Edgmont Township
Address: PO Box 267
City, State, Zip: Gradyville, PA 19039
Phone: (610) 459-1662 Fax: (610) 459-3760
Email: edgmontmanager@comcast.net

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.


applicant/project proponent signature

2/14/11
date

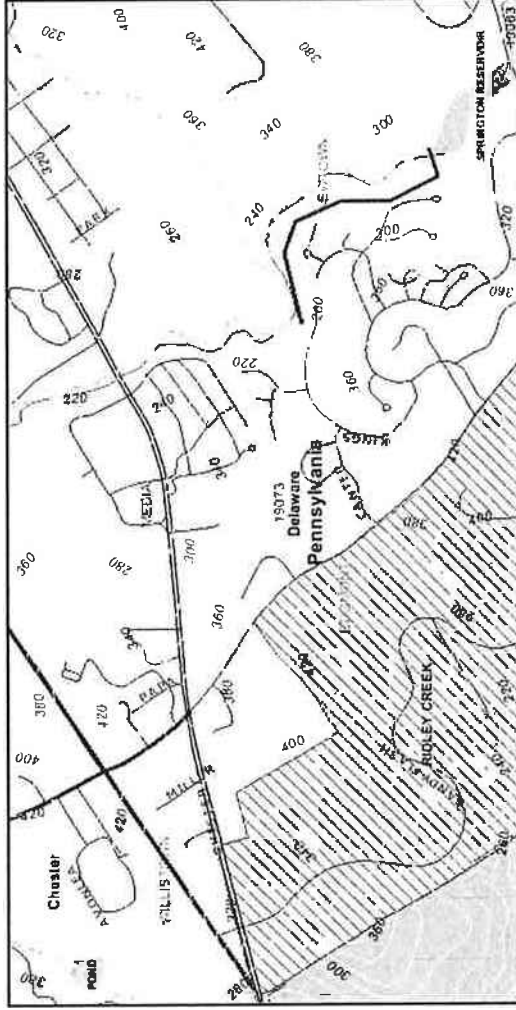
PNDI Project Environmental Review Receipt

Project Search ID: 20080423137962

Project Name: Edgmont Crum Creek Sewer District

Date: 4/23/2008 3:49:13 PM

Project Location



Project Name: Edgmont Crum Creek Sewer District

On Behalf Of: Local Government

Project Search ID: 20080423137962

Date: 4/23/2008 3:47:19 PM

of Potential Impacts: 1

Jurisdictional Agency:

Pennsylvania Fish and Boat Commission

Project Category: Waste Transfer, Treatment, and Disposal, Liquid waste/Effluent, Sewage module/Act 537 plan

Project Location

Decimal Degrees: 39.9708 N, -75.43461 W

Degrees Minutes Seconds: 39° 58' 14.9" N, 75° 26' 4.6" W

Lambert: 719647.49584244, 364153.48393228 ft

ZIP Code: 19073

County: Delaware

Township/Municipality: NEWTOWN, EDGMONT

USGS 7.5 Minute Quadrangle ID: 788

Quadrangle Name: MEDIA

Project Length: 3264.3 feet

Location Accuracy

Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Receipt is solely responsible for the project location and thus the correctness of the Project Review Receipt content.

1 Potential Impacts

Under the Following Agencies' Jurisdiction:
Pennsylvania Fish and Boat Commission

Pennsylvania State Programmatic General Permit (PASPGP)

Please note that regardless of PNDI search results, projects requiring a Chapter 105 DEP individual permit or GP 5, 6, 7, 8, 9 or 11 in certain counties (Adams, Berks, Bucks, Chester, Cumberland, Delaware, Franklin, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Schuylkill and York) are required by DEP to comply with the bog turtle habitat screening requirements of the PASPGP.

PNDI Project Environmental Review Receipt

Project Search ID: 20080423137962

Project Name: Edgmont Crum Creek Sewer District

Date: 4/23/2008 3:49:13 PM

Pennsylvania Natural Diversity Inventory (PNDI) records indicate there are potential impacts on special concern species and resources within the project area. If the project is pursued, the jurisdictional agency/agencies indicated require that the instructions below regarding potential impacts and/or avoidance measures be followed in their entirety.

Q1: Aquatic habitat (stream, river, lake, pond, etc.) is located on or adjacent to the subject property and project activities (including discharge) may occur within 300 feet of these habitats

Your answer is: **1. Yes**

Please initial here signifying that you have provided the most accurate answer to the question as possible.

APPLICANT INITIALS: _____

Q2: Accurately describe what is known about wetland presence in the project area or on the land parcel. "Project" includes all features of the project (including buildings, roads, utility lines, outfall and intake structures, wells, stormwater retention/detention basins, parking lots, driveways, lawns, etc.), as well as all associated impacts (e.g., temporary staging areas, work areas, temporary road crossings, areas subject to grading or clearing, etc.). Include all areas that will be permanently or temporarily affected -- either directly or indirectly -- by any type of disturbance (e.g., land clearing, grading, tree removal, flooding, etc.). Land parcel = the lot(s) on which some type of project(s) or activity(s) are proposed to occur.

Your answer is: **2. The project area (or land parcel) has not been**

investigated by someone qualified to identify and delineate wetlands, or it is currently unknown if the project or project activities will affect wetlands.

Please initial here signifying that you have provided the most accurate answer to the question as possible.

APPLICANT INITIALS: _____

These determinations were based on the project-specific information you 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 information you provided does not accurately reflect this project, or if project plans change, DEP and the jurisdictional agencies require that another PNDI review be conducted.

This response represents the most up-to-date summary of the PNDI data files and is good for one(1) year from the date of this PNDI Project Environmental Review Receipt.

1 potential impact

The Applicant should MAIL/FAX a copy of this Project Environmental Review Receipt, a cover letter with project narrative, acreage to be impacted, how construction/maintenance activity is to be accomplished, township/municipality and county where project is located, and a USGS 7.5 minute quadrangle with project boundary and quad name marked on the map.

Natural Diversity Section
Pennsylvania Fish and Boat Commission
Division of Environmental Services
450 Robinson Lane
Bellefonte, PA 16823

Please mail only one (1) copy of the project review request. Do not email the project information. Allow 30 days for completion of the project review from the date of PFBC receipt of the project review request.

Based on the project-specific information you provided, no impacts to federally listed, proposed, or candidate species are anticipated. Therefore, no further consultation under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.* is required with the U.S. Fish and Wildlife Service. Because no take of federally listed species is anticipated, none is authorized. For a list of species that could occur in your project area (but have

PNDI Project Environmental Review Receipt

Project Search ID: 20080423137962

Project Name: Edgmont Crum Creek Sewer District

Date: 4/23/2008 3:49:13 PM

not been documented in PNDI), please see the county lists of threatened, endangered, and candidate species. A field visit or survey may reveal previously undocumented populations of one or more threatened or endangered species with a project area. If it is determined that any federally listed species occur in your project area, the U.S. Fish and Wildlife Service requires that you initiate consultation to identify and resolve any conflicts. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

DISCLAIMER

The PNDI environmental review website is a preliminary environmental screening tool. It is not a substitute for information obtained from a field survey of the project area conducted by a biologist. Such surveys may reveal previously undocumented populations of species of special concern. In addition, the PNDI only contains information about species occurrences that have actually been reported to the Pennsylvania Natural Heritage Program.

TERMS OF USE

Upon signing into the PNDI environmental review website, and as a condition of using it, you agreed to certain terms of use. These are as follows:

The web site is intended solely for the purpose of screening projects for potential impacts on resources of special concern in accordance with the instructions provided on the web site. Use of the web site for any other purpose or in any other way is prohibited and subject to criminal prosecution under federal and state law, including but not limited to the following: Computer Fraud and Abuse Act of 1986, as amended, 18 U.S.C. Â§ 1030; Pennsylvania Crimes Code, Â§ 4911 (tampering with public records or information), Â§ 7611 (unlawful use of computer and other computer crimes), Â§ 7612 (disruption of service), Â§ 7613 (computer theft), Â§ 7614 (unlawful duplication), and Â§ 7615 (computer trespass).

The PNHP reserves the right at any time and without notice to modify or suspend the web site and to terminate or restrict access to it.

The terms of use may be revised from time to time. By continuing to use the web site after changes to the terms have been posted, the user has agreed to accept such changes.

This review is based on the project information that was entered. The jurisdictional agencies and DEP require that the review be redone if the project area, location, or the type of project changes. If additional information on species of special concern becomes available, this review may be reconsidered by the jurisdictional agency.

PRIVACY and SECURITY

This web site operates on a Commonwealth of Pennsylvania computer system. It maintains a record of each environmental review search result as well as contact information for the project applicant. These records are maintained for internal tracking purposes. Information collected in this application will be made available only to the jurisdictional agencies and to the Department of Environmental Protection, except if required for law enforcement purposes see paragraph below.

This system is monitored to ensure proper operation, to verify the functioning of applicable security features, and for other like purposes. Anyone using this system consents to such monitoring and is advised that if such monitoring reveals evidence of possible criminal activity, system personnel may provide the evidence to law enforcement officials. See Terms of Use.

In order for this project to be considered for subsequent review, a signed and initialed copy of this receipt is required by the agency or agencies indicated. DEP requires that a signed and initialed copy of this receipt, along with any required documentation from jurisdictional agencies

PNDI Project Environmental Review Receipt

Project Search ID: 20080423137962

Project Name: Edgmont Crum Creek Sewer District

Date: 4/23/2008 3:49:13 PM

concerning resolution of potential impacts, be submitted in applications for permits requiring PNDI review. See DEP PNDI policy at www.naturalheritage.state.pa.us or visit the following websites for further information.

Regional Offices

[Http://www.dep.state.pa.us/dep/deputate/fieldops/map.pdf](http://www.dep.state.pa.us/dep/deputate/fieldops/map.pdf)

District Mining Operations

[Http://www.dep.state.pa.us/dep/deputate/minres/Districts/homepage/Default.htm](http://www.dep.state.pa.us/dep/deputate/minres/Districts/homepage/Default.htm)

Oil and Gas Management

[Http://www.dep.state.pa.us/dep/deputate/minres/OILGAS/CustomNeeds.htm](http://www.dep.state.pa.us/dep/deputate/minres/OILGAS/CustomNeeds.htm)

Print this Project Review Receipt using your Internet browser's print function and keep it as a record of your search.

Signature: _____

Date: _____

Project applicant on whose behalf this search was conducted:

APPLICANT

Contact Name: _____

Address: _____

City, State, Zip: _____

Phone: _____

Email: _____

PERSON CONDUCTING SEARCH (if not applicant)

Contact Name: _____

Address: _____

City, State, Zip: _____

Phone: _____

Email: _____

The following contact information is for the agencies involved in this Pennsylvania Natural Diversity Inventory environmental review process. Please read this entire receipt carefully as it contains instructions for how to contact these agencies for further review of this particular project.

Natural Diversity Section
Pennsylvania Fish and Boat Commission
Division of Environmental Services
450 Robinson Lane
Bellefonte, PA 16823



Commonwealth of Pennsylvania
Pennsylvania Historical and Museum Commission
Bureau for Historic Preservation
Commonwealth Keystone Building, 2nd Floor
400 North Street
Harrisburg, PA 17120-0093
www.phmc.state.pa.us

30 June 2008

Walter Fazler
Bradford Engineering Associates, Inc.
2710 Concord Road
Suite 3
Aston, PA 19014

TO EXPLOITE REVIEW USE
AND REFERENCE NUMBER

RE: ER 08-1652-045-C
DEP: Crum Creek district Sewer Act 537 Plan Revisions, Edgemont Twp.,
Delaware Co.

Dear Mr. Fazler:

The Bureau for Historic Preservation has reviewed the above named project under the authority of the Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 et seq. (1988). This review includes comments on the project's potential effect on both historic and archaeological resources.

Based on the project site plans provided, in our opinion, the activity described in your proposal will have no effect on **Castle Rock Farm**, eligible for the National Register. Thank you for your cooperation in this matter.

If you need further information in this matter please consult Ann Safley at (717) 787-9121.

Sincerely,

Douglas McLearn, Chief
Division of Archaeology & Protection

DMcL/ras



Commonwealth of Pennsylvania
Pennsylvania Historical and Museum Commission
Bureau for Historic Preservation
Commonwealth Keystone Building, 2nd Floor
400 North Street
Harrisburg, PA 17120-0093
www.phmc.state.pa.us

June 6, 2008

Walter A. Fazler, PE
Bradford Engineering Associates, Inc.
2710 Concord Road Suite 3
Aston, PA 19014

TO EXPEDITE REVIEW USE
BHP REFERENCE NUMBER

Re: File No. ER-2008-1652-045-B
DEP ACT 537 Program: WQM Permit
Water Management, Crum Creek District
Sewer ACT 537 Plan Revision,
Edgemont Twp., Delaware Co.

Dear Mr. Fazler:

The Bureau for Historic Preservation has reviewed the above named project under the authority of the Environmental Rights amendment, Article 1, Section 27 of the Pennsylvania Constitution and the Pennsylvania History Code, 37 Pa. Cons. Stat. Section 500 *et seq.* (1988). This review includes comments on the project's potential effect on both historic and archaeological resources.

Based on an evaluation by our staff, there is a high probability that significant archaeological sites are located in this project area. These resources could be adversely affected by project activities. Although there are no recorded archaeological sites within the project boundaries, the soil type, topographic setting, slope direction, and distance to water of the project area are similar to the settings of known archaeological sites in the vicinity. A Phase I archaeological survey of the project area to locate potentially significant archaeological resources is recommended but not required.

If a survey is not conducted and you encounter archaeological resources during construction, you must stop the project, notify the Pennsylvania Historical and Museum Commission's Bureau for Historic Preservation and the Department of Environmental Protection and allow the Bureau for Historic Preservation 60 days to conduct a survey to determine the significance of the archaeological resources. If the Bureau determines that the resources are significant, you must submit a mitigation plan to protect the significant resources on the site. We will review the plan within 30 days.

If this project will require any federal permits or will receive federal funding, the federal agency, under the National Historic Preservation Act of 1966, may require the appropriate surveys to be conducted. If the project will need an Army Corp of Engineers permit, this would be a **Category III** activity. We suggest that you consider conducting the survey early in the development or planning process to avoid delays in the future. Guidelines and instructions for conducting Phase I surveys are available on our web site at <http://phmc.state.pa.us/bhp/Inventories/ArchaeologicalGuidelines.pdf> or from our office upon request.

Page 2
June 6, 2008
Mr. Walter A. Fazler, PE

The Bureau for Historic Preservation will keep the Determination Notice and the materials you submitted in its files. Please attach this letter to your copy of the Notice and materials then submit the entire package of materials to DEP. Thank you for notifying us of your proposed activity.

Your request does not include sufficient information. We are unable to proceed with our review for historic structures until the information on the attached form is provided.

If you need further information regarding archaeological resources, please contact Mark Shaffer at (717) 783-9900. If you need further information concerning historic structures, please contact Ann Safley at (717) 787-9121.

Sincerely,



Douglas C. McLearen, Chief
Division of Archaeology &
Protection

Attachment

CC: DEP, Southeast Region
DCM/lmm



**CONESTOGA-ROVERS
& ASSOCIATES**

410 Eagleview Boulevard, Suite 110, Exton, PA 19341
Telephone: 610-321-1800 Facsimile: 610-321-2763
www.CRAworld.com

September 4, 2008

Reference No. 053540

Ms. Bonnie Dershem
U.S. Fish and Wildlife Service
Pennsylvania Field Office
315 South Allen Street
Suite 322
State College, PA 16801

Mr. Chris Urban, Chief
Pennsylvania Fish and Boat Commission
Natural Diversity Section
450 Robinson Lane
Bellefonte, PA 16823

RE: PNDI # 20080423137962
PFBC SIR # SIR 28604
USFWS # Initial Correspondence
Phase 1 Bog Turtle Habitat Assessment
Edgmont Township Crum Creek Sewer Act 537
Edgmont Township, Delaware County, Pennsylvania

Dear Ms. Dershem and Mr. Urban:

Conestoga-Rovers & Associates, Inc. (CRA) was retained by Edgmont Township to conduct a bog turtle habitat assessment (Phase 1 survey) as required by the Act 537 sewer planning module for the proposed Edgmont Crum Creek Sewer in Edgmont Township, Delaware County, Pennsylvania. Edgmont Township is proposing to construct a sewer interceptor line to provide a sanitary sewer connection between Edgmont Township and the Delaware County Regional Water Quality Control Authority (DELCORA) treatment facilities as required by the Act 537 planning module.

A Pennsylvania Natural Diversity Inventory (PNDI) search (No. 20080423137962) identified a potential conflict under the jurisdiction of the Pennsylvania Fish and Boat Commission (PFBC) and PFBC responded with a letter (SIR 28604) indicating that bog turtles are known from the vicinity of the project. CRA evaluated the habitat in the area of the proposed sewer alignment (study area) located along the west side of Crum Creek, northwest of the Springton Reservoir. The location of the Site is shown on the Media, PA USGS topographic map provided as Figure 1. An aerial photograph showing the proposed sewer alignment and surrounding areas is provided as Figure 2. As shown in the aerial photograph, the proposed sewer alignment extends north-northwest along the western side of Crum Creek within a densely wooded corridor. Adjacent land use includes residential and commercial development.

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The study area for this habitat assessment included the wetlands occurring within the proposed sewer alignment as well as within 300 feet of the alignment. CRA's Phase 1 habitat assessment did not identify any areas of potentially suitable bog turtle habitat in the area of the proposed alignment or within 300 feet of the alignment. The details of CRA's Phase 1 bog turtle habitat evaluation are provided in the following paragraphs. Photographs taken during the Phase 1 habitat assessment are provided in Appendix A.

1.0 METHODOLOGY

A Phase 1 bog turtle habitat assessment was conducted in accordance with the U.S. Fish and Wildlife Service (USFWS) and Pennsylvania Fish & Boat Commission (PFBC) *Guidelines for Bog Turtle Surveys* (Revised April 2006) on July 14, 2008 by Mr. Scott Bush. The wetlands identified along the proposed alignment and within 300 feet of the alignment were assessed for their suitability to support bog turtles based on the vegetation, soils, and hydrology. Wetlands that contained habitat that could potentially support bog turtles, if any, were identified as potential bog turtle habitat. Wetlands that were lacking one or more of the characteristics of wetlands that could support bog turtles were not identified as potential bog turtle habitat.

2.0 GENERAL CHARACTERISTICS OF BOG TURTLE HABITAT

The bog turtle has relatively specific habitat requirements. Wetlands where bog turtles occur typically have the following three characteristics in at least part of the wetland: (1) a deep, soft, mucky substrate, usually with a high organic content; (2) suitable hydrology which is usually characterized by the presence of springs, seeps, and rivulets of clear, shallow, slow flowing water; and (3) a relatively open canopy with emergent vegetation, such as tussock sedge (*Carex stricta*), for basking and nesting. Suitable substrate is a critical habitat component for the bog turtle. The substrate of bog turtle habitats is typically soft, deep muck that provides cover, estivation, and brumation habitat. Vegetative communities associated with bog turtle habitats vary but often consist of low-growing emergent species that provide sites for basking and egg deposition. Low growing or emergent species often associated with bog turtle habitats include tussock sedge (*Carex stricta*), tearthumb (*Polygonum spp.*), skunk cabbage (*Symplocarpus foetidus*), sensitive fern (*Onoclea sensibilis*), cattails (*Typha spp.*), sphagnum moss (*Sphagnum spp.*), jewelweed (*Impatiens capensis*), and wool grass (*Scirpus cyperinus*). Shrub species often associated with bog turtle habitat include swamp rose (*Rosa palustris*), elderberry (*Sambucus canadensis*), and poison sumac (*Toxicodendron vernix*). A relatively open tree canopy is also an important requisite of bog turtle habitat. While bog turtle habitat can contain components of forested and scrub shrub areas, densely forested wetlands offer little basking habitat and thus typically do not support bog turtle populations. Forested wetlands with dense tree and shrub canopies can provide a movement corridor between suitable habitats and if part of a suitable wetland complex, can provide brumation sites and general foraging and cover habitat. The hydrology typically observed in bog turtle habitat is characterized by springs and rivulets of

shallow, clear, slow moving water. These spring areas typically maintain the deep, mucky soils in at least part of the wetland year round and often provide brumation sites.

3.0 HABITAT DESCRIPTION

A description of the wetlands and waterways within and adjoining the study area for the proposed Edgmont Crum Creek Sewer is provided in the following paragraphs.

3.1 CRUM CREEK

Within the study area, Crum Creek flows southeast from PA Route 3 to the Springton Reservoir within a forested corridor. The slopes along the riparian corridor are generally forested with mature trees and the topography is moderate to steep along the entire length of the project area. Within the limits of the project area, Crum Creek's channel is approximately 20 to 30 feet wide. The creek channel is generally composed of cobble and gravel with several rock outcrops present. The water elevations at the downstream reaches of the Crum Creek Channel, just above the Springton Reservoir, are periodically influenced by the reservoir and the banks and adjoining floodplain are periodically inundated for extended periods of time.

3.2 WETLANDS WITHIN 300 FEET OF THE SEWER ALIGNMENT

Three wetland areas were identified in the study area. These areas are discussed in further detail in the following paragraphs. A sketch map showing these wetland areas is provided as Figure 3.

AREA 1

Area 1 is a palustrine forested wetland, approximately 0.06 acre in size, located along the west side of Crum Creek north of the Springton Reservoir in the approximate center of the Study Area. The dominant vegetation in these wetlands included red maple (*Acer rubrum*), sycamore (*Platanus occidentalis*), multiflora rose (*Rosa multiflora*), skunk cabbage (*Symplocarpus foetidus*), false nettle (*Boehmeria cylindrica*) and jumpseed (*Polygonum virginianum*). Area 1 is 95 percent shaded by the overstory canopy. The soil in Area 1 was observed to be firm silt loam that is seasonally saturated. No mucky soil was observed in Area 1. The wetland hydrology in Area 1 is the result of seasonal saturation near the soil surface and periodic flooding of Crum Creek. Seeps, springs, and rivulets were absent.

Based on the lack of mucky soils and suitable hydrology to support bog turtles, it is CRA's opinion that Area 1 does not provide suitable habitat for the bog turtle.

AREA 2

Area 2 is a complex of forested wetlands and partially vegetated silt bars, approximately 1.7 acres in size, occurring along both banks of Crum Creek and extending upstream from the Springton Reservoir for approximately 415 feet. Area 2 occurs along the portion of the Crum Creek channel that is periodically inundated by backwater from the Springton Reservoir when water levels are high. The forested portions of Area 2 occur nearer to the toe-of-slope of the adjoining upland wooded slopes. The partially vegetated silt bars are fairly wide and occur closer to the channel. These silt deposits could be classified as seasonally exposed.

The densely wooded sections of Area 2 occur along the toe-of-slope of the forested upland slopes and are periodically inundated by the reservoir but not for a long enough duration to prohibit mature trees from existing. The dominant vegetation in the forested sections of Area 2 included red maple, sycamore, spicebush (*Lindera benzoin*), ironwood (*Carpinus caroliniana*), sensitive fern (*Onoclea sensibilis*) and stilt grass (*Microstegium vimineum*). These wetlands are shaded.

The silt bars areas closer to the banks of the Creek are dominated by younger sycamore, black willow (*Salix nigra*), and green ash (*Fraxinus pensylvanica*) trees as well as mud plantain (*Heteranthera reniformis*), duck potato (*Sagittaria latifolia*), forget-me-not (*Myosotis* sp.), water purslane (*Ludwigia palustris*), clotbur (*Xanthium* sp.), yellow marsh iris (*Iris pseudacorus*) and false nettle in the herbaceous stratum. The vegetation on the silt bars was sparse or absent in some locations, due to the duration of inundation. The soil throughout Area 2 was observed to be firm, sticky or muddy silt that lacked an organic component. Mucky soil was absent in Area 2. The source of hydrology in Area 2 is seasonal flooding by the pool of inundation Springton Reservoir. No springs or seeps were observed in Area 2.

The soil in Area 2 consists of sticky, muddy silt and would not be suitable to support bog turtles. Additionally, the hydrology in Area 2 consists of prolonged periods of inundation followed by prolonged periods of exposure during periods when the reservoir is lowered. These soil and hydrology conditions are not suitable to support bog turtles. Based on the lack of suitable mucky soil and suitable hydrology, it is CRA's opinion that Area 2 does not provide suitable habitat to support bog turtles.

AREA 3

Area 3 is a palustrine emergent wetland, approximately 0.82 acre in size that occurs north of the proposed alignment, on the Olde Masters Golf Course property on the eastern side of Crum Creek. Area 3 is located on the opposite side of Crum Creek from the proposed sewer line. Area 3 is located in the floodplain of Crum Creek but is separated from the Creek by a natural wooded levee along the bank. The dominant vegetation in Area 3 consisted of red maple,

September 4, 2008

5

Reference No. 053540

sycamore, pignut hickory (*Carya glabra*), green ash, Japanese privet (*Ligustrum obtusifolium*), multiflora rose, three way sedge (*Dulichium arundinaceum*), lurid sedge (*Carex lurida*), fox sedge (*Carex vulpinoidea*), common rush (*Juncus effusus*), path rush (*Juncus tenuis*), reed canary grass (*Phalaris arundinacea*), stilt grass, blue vervane (*Verbena hastata*), sensitive fern, arrow-leaf tearthumb (*Polygonum sagittatum*), green bulrush (*Scirpus atrovirens*) and monkey flower (*Mimulus ringens*). The soil was observed to be firm alluvial silt loam. Areas of mucky soil were absent. This area is intermittently flooded by Crum Creek and is seasonally saturated in the Spring. No seeps, springs, or rivulets were observed in this area.

Although suitable vegetation exists in Area 3 and the area is partially open to the sun, the soil and hydrology are not consistent with habitats known to support bog turtles. Based on the lack of suitable mucky soil and hydrology such as seeps and springs, it is CRA's opinion that Area 3 does not provide suitable habitat to support bog turtles.

4.0 CONCLUSIONS

CRA's bog turtle habitat assessment in the area of the proposed Crum Creek Sewer Alignment did not identify any areas of potentially suitable bog turtle habitat. Since the proposed sewer line is to be installed in wooded uplands west of Crum Creek and will require only one stream crossing near the upstream end of the Springton Reservoir, it is CRA's opinion that this project will not impact bog turtles or their habitat.

We request your review and concurrence with CRA's conclusions. If you have any questions or require additional information, please call me at (610) 321-1800, ext. 11.

Yours truly,

CONESTOGA-ROVERS & ASSOCIATES



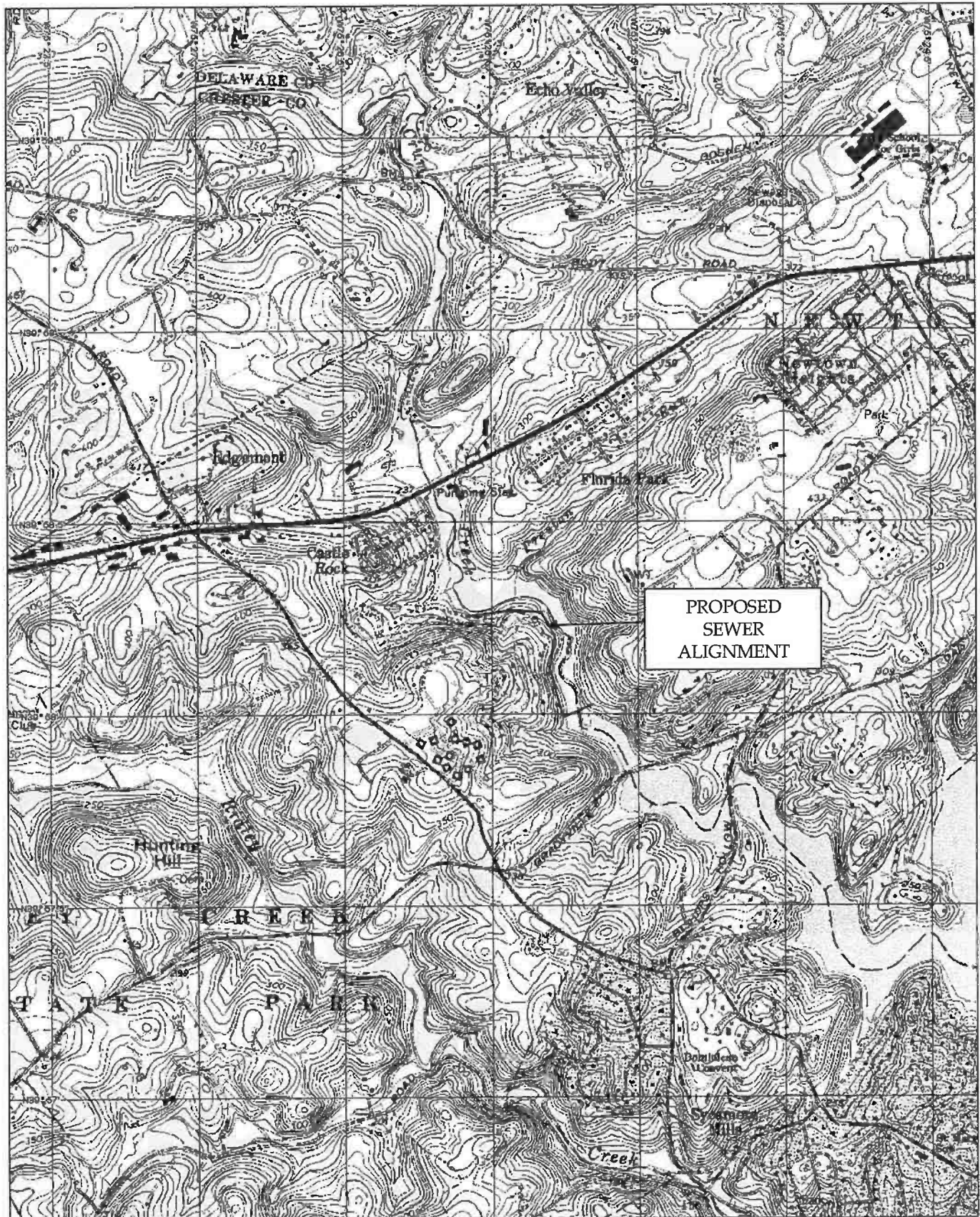
Scott E. Bush, P.W.S.
Senior Ecologist

Encl.

c.c.: Samantha Reiner - Edgmont Township
Walter Falzer - Bradford Engineering

FIGURES

EDGMONT TOWNSHIP CRUM CREEK SEWER ACT 537
Edgmont Township, Delaware County, Pennsylvania



3-D TopoQuads Copyright © 1999 DeLorme, Yarmouth, ME 04096 Source Data: USGS 700 ft Scale: 1:24,000 Detail: 13-0 Datum: WGS84

FIGURE 1
SITE LOCATION MAP

APPENDIX A
COLOR PHOTOGRAPHS

EDGMONT TOWNSHIP CRUM CREEK SEWER ACT 537
Edgmont Township, Delaware County, Pennsylvania



3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 300 ft Scale: 1 : 10,400 Detail: L4-3 Datum: WGS84

PHOTOGRAPH KEY MAP

EDGMONT TOWNSHIP CRUM CREEK SEWER ACT 537
Edgmont Township, Delaware County, Pennsylvania



Photo 7. Looking downstream at periodically flooded wetland fringe along Crum Creek as the sewer nears the Springton Reservoir. Soils are alluvial silt and mud, not mucky.



Photo 10. Looking at periodically flooded wetland fringe along Crum Creek as the sewer nears the Springton Reservoir. Soils are alluvial silt and mud, not mucky.



Photo 8. Looking at periodically flooded wetland fringe along Crum Creek as the sewer nears the Springton Reservoir. Soils are alluvial silt and mud, not mucky.



Photo 11. Looking at deer tracks in periodically flooded wetland fringe along Crum Creek as the sewer nears the Springton Reservoir. Soils are alluvial silt and mud, not mucky.



Photo 9. Looking at periodically flooded wetland fringe along Crum Creek as the sewer nears the Springton Reservoir. Soils are alluvial silt and mud, not mucky.

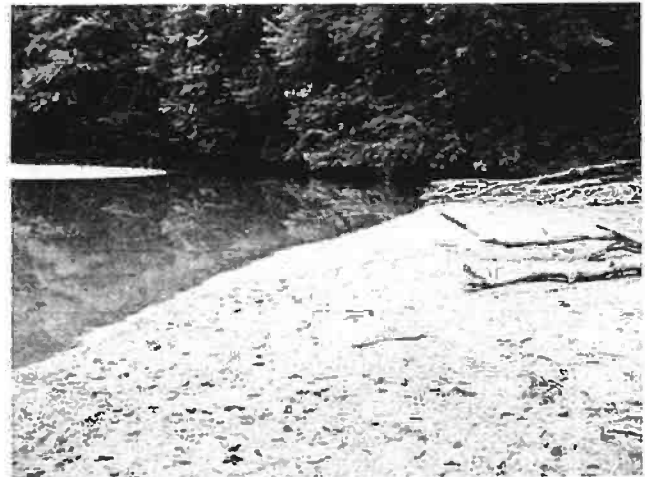


Photo 12. Looking at periodically flooded wetland fringe along Crum Creek at the beginning of the Springton Reservoir. Soils are alluvial silt and mud, not mucky.

EDGMONT TOWNSHIP CRUM CREEK SEWER ACT 537
Edgmont Township, Delaware County, Pennsylvania



Photo 13. Looking at the Springton Reservoir downstream of the project Area.



Photo 16. Looking at palustrine emergent wetlands on Olde Masters Golf Course.



Photo 14. Close-up of the alluvial silt along the edge of Crum Creek. These fringe wetland areas are periodically flooded when the reservoir levels are high, accounting for the sparse herbaceous stratum.

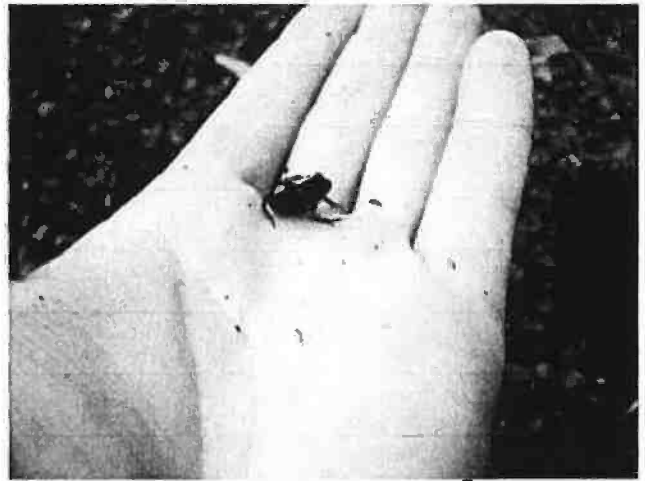


Photo 17. Recently metamorphosed American Toad (*Bufo americana*) found along Crum Creek.



Photo 15. Looking at palustrine emergent wetland on the Olde Masters Golf Course, beyond the eastern (northern) bank of Crum Creek) near the beginning of the sewer line. Soils are firm silt loam, not mucky.

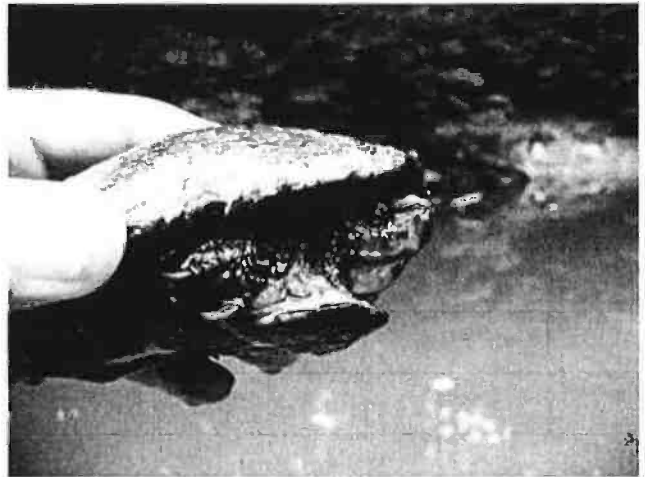


Photo 18. Adult stinkpot (*Sternotherus odoratus*) captured along Crum Creek, just downstream of the project area near the Reservoir.



Pennsylvania Fish & Boat Commission

**Division of Environmental Services
Natural Diversity Section**

450 Robinson Lane
Bellefonte, PA 16823-9620
(814) 359-5237 Fax: (814) 359-5175

September 29, 2008

IN REPLY REFER TO
SIR# 28604

SCOTT BUSH
CONESTOGA-ROVERS & ASSOCIATES
410 EAGLEVIEW BOULEVARD, SUITE 110
EXTON, PA 19341

**RE: Species Impact Review (SIR) – Rare, Candidate, Threatened and Endangered Species
PNDI Search Number: 20080423137962
ACT 537 PLAN
Bog Turtle Habitat Survey
EDGMONT Township, DELAWARE County, Pennsylvania**

Dear Mr. BUSH:

The staff of the Natural Diversity Section reviewed your recent correspondence regarding the above-referenced project. Based on records maintained in the Pennsylvania Natural Diversity Inventory (PNDI) database and our own files, the bog turtle (*Glyptemys muhlenbergii*, state endangered, federal threatened) is known from the vicinity of the proposed project site.

You conducted a bog turtle habitat evaluation at the project site and concluded that suitable habitat for bog turtles did not occur on-site. According to your report, the vegetation, hydrology, and soils are not consistent with wetlands known to support bog turtles. I concur with the conclusions of the Phase 1 habitat assessment; the habitat is not suitable for bog turtles. Therefore, I do not foresee the proposed project resulting in adverse impacts to the bog turtle or any other rare or protected species under Pennsylvania Fish and Boat Commission jurisdiction.

Note that this office performed no field inspection of the project area. Consequently, comments in this letter are not meant to address other issues or concerns that might arise concerning matters under Pennsylvania Fish and Boat Commission jurisdiction or that of other authorities. Please call Tina Walther at 814-359-5186 if you have any additional concerns regarding this response. Thank you for your cooperation and attention to this matter of threatened and endangered species conservation.

Sincerely,


Christopher A. Urban, Chief
Natural Diversity Section

CAU/TRW/mr

Our Mission:

www.fish.state.pa.us

To protect, conserve and enhance the Commonwealth's aquatic resources and provide fishing and boating opportunities.



Yerkes Associates, Inc.

Consulting Engineers / Site Planners / Land Surveyors

June 21, 2007

Township of Edgmont
1000 Gradyville Road
PO Box 267
Gradyville, Pennsylvania 19039

Attention: Samantha Reiner, Township Manager

Subject: Newtown Township, Delaware County
Official Sewage Plan (Act 537 Plan)

Dear Samantha:

Reference is made to Newtown Township's current proposed Act 537 Plan. This plan provides for the conveyance of 350,000 gallons per day of sewage from Edgmont Township to the Central Delaware County Authority. The plan calls for the extension of and upgrades to the Newtown Township Delaware County Municipal Authority sewer system. According to Newtown's proposed Act 537 Plan the estimated capital costs for Edgmont Township's share of improvements to Newtown's sewer system is \$1,803,040.00.

I have reviewed the plan and the proposed costs. I find them to be fair and reasonable. It is recommended that the Township Board of Supervisors endorse the proposed Newtown Township Act 537 Plan.

Should you have any questions, please call at your convenience.

Very truly yours,
Yerkes Associates, Inc.

David V. Linahan, PE
Senior Vice President

cc: Michael Conrad, PE, Township Engineer
Matt Boggs, PE

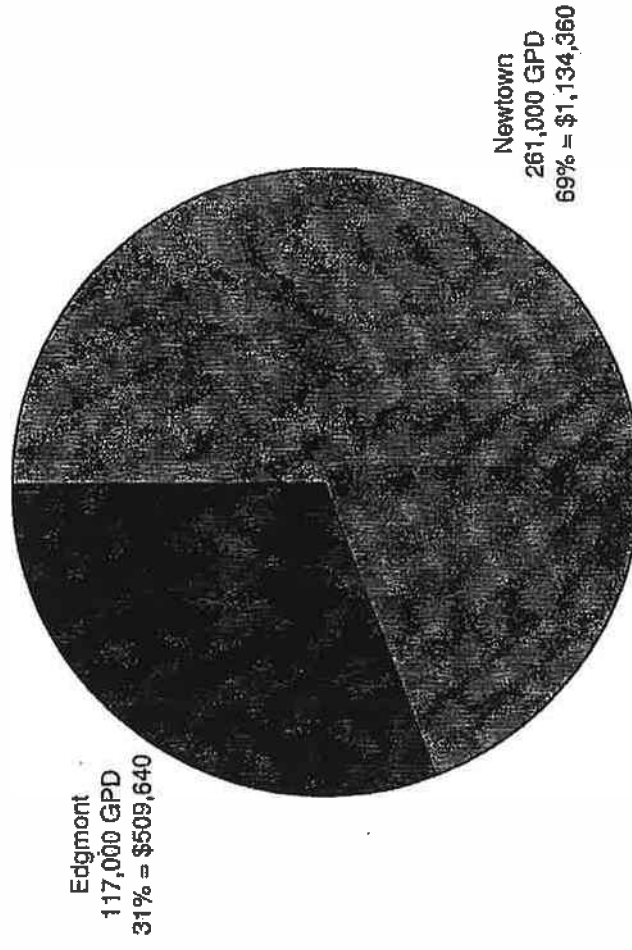
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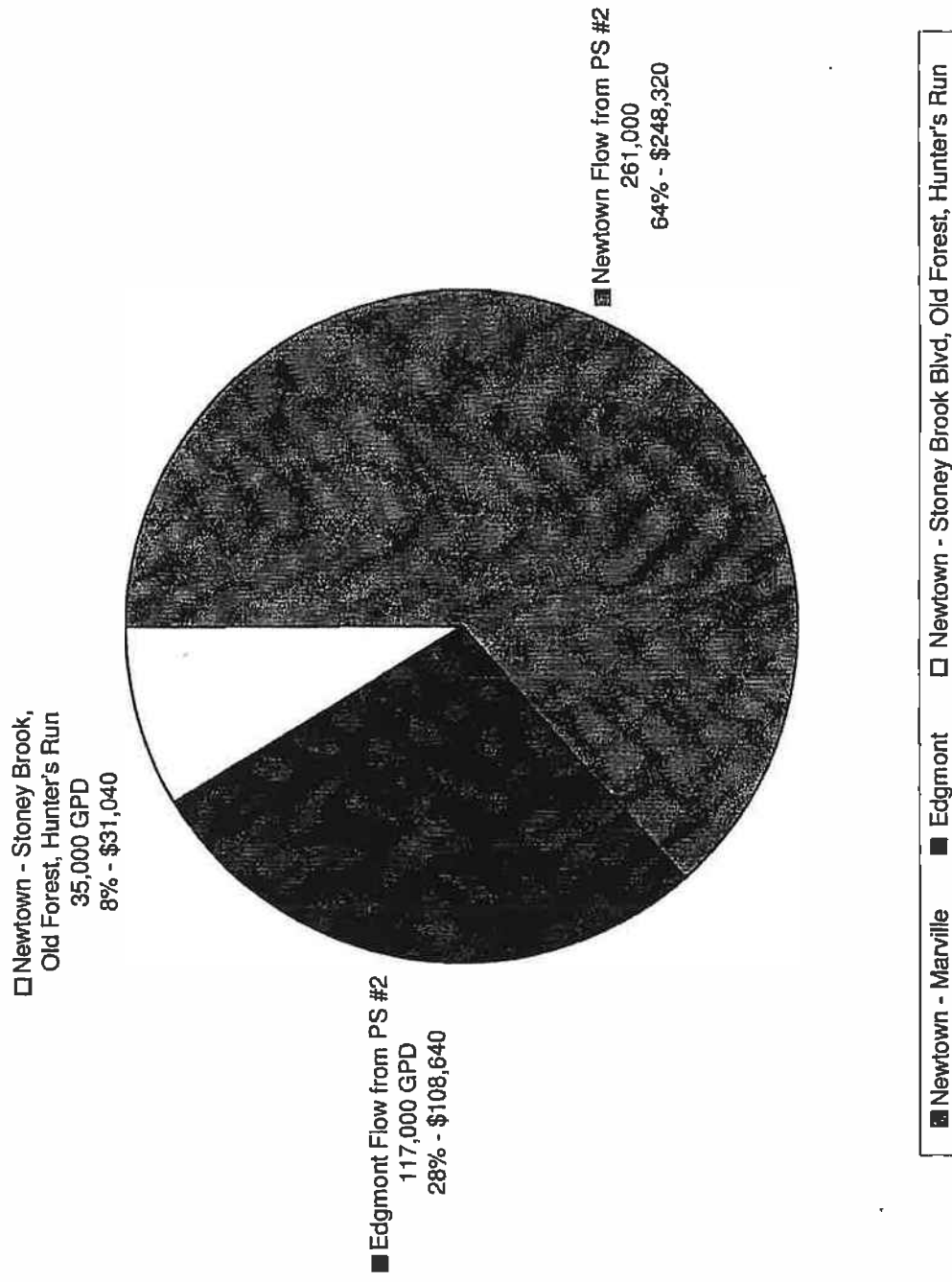
Estimated cost breakdown for Pump Station and Forcemain

PS #2 - 378,000 GPD \$1,644,000



Estimated cost breakdown for Pump Station and Force mains

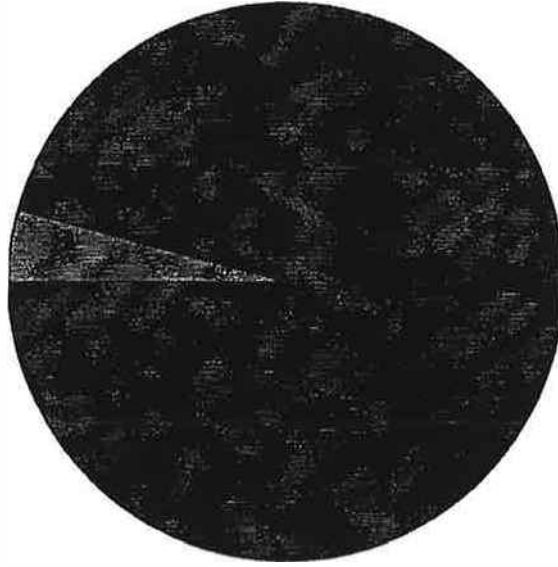
Pump Station 3 - 413,000 GPD \$388,000



Estimated cost breakdown for Pump Station and Forcemains

PS #4 243,000 GPD - \$1,223,125

NEWTOWN FLOW
10,000 GPD
4% - \$49,365



EDGMONT -
RUNNYMEADE SECTION
233,000 GPD
96% - \$1,184,760

NEWTOWN FLOW
EDGMONT - RUNNYMEADE SECTION



Yerkes Associates, Inc.

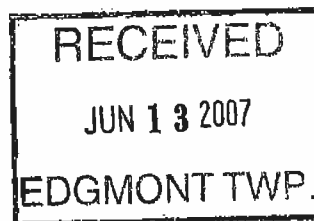
Consulting Engineers / Land Surveyors / Land Planners

MEMORANDUM

Date: June 11, 2007

TO: Samantha Reiner, Township Manager
Edgmont Township

FROM: Matthew L. Boggs, P.E. *MLB*



SUBJECT: Newtown Township Act 537 Plan

Yerkes Associates, Inc. has reviewed Newtown Township's Official Act 537 Sewerage Facilities Plan Update, dated May 21, 2007 and has found it consistent with Edgmont's Act 537 Plan Update, with the exception of Item #4 below, which is currently being revised by our office. There is additional information that will be needed from Newtown Township prior to granting approval. The items are as follows:

1. What are the total estimated capital costs for conveyance from PS#2 to the CDCA trunk line? The conveyance appears to be through the internal collection system for Newtown and will include a pumping station (Pumping Station #3) where the former wastewater treatment plant is located. What are Edgmont's expected share of these costs? What are the estimated annual user (O&M) costs?
2. What are the total estimated capital costs for conveyance from PS#4 to the CDCA trunk line? What are Edgmont's expected share of these costs? What are the estimated annual user (O&M) costs?
3. For implementation authorization, please indicate if some type of inter-municipal Agreement is to be created.
4. The Act 537 Update from Newtown indicates the pumping station to serve the Route 3 corridor in Edgmont will be Phase 1A. Phase 1A is planned to be implemented between 3-5 years. This timeframe is not consistent with Edgmont Township's Act 537 Plan. The work proposed is to be in the 0-3 year timeframe.

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Tel: 610-913-7342 / Fax: 610-913-7343

After we receive information on the above items we can recommend to the Board that they adopt a resolution accepting Newtown's Plan.

Professional services since 1874

New Morgan Corporate Center, 200 Bethlehem Drive, Bldg. C - Suite 118, Morgantown, PA 15543
Tel: 610-913-7342 / Fax: 610-913-7343



pennsylvania
DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES

BUREAU OF FORESTRY

Date: March 7, 2011

PNDI Number: 20110214283130

Walter A. Fazler, P.E.
Bradford Engineering Associates, Inc.
2710 Concord Road, Suite 3
Aston, PA 19014
Fax: 610-500-5677(hard copy will not follow)

Re: 2010 Act 537 Plan Revision
County: Delaware Township/Municipality: Edgemont/Marple/Newtown

Dear Mr. Fazler,

Thank you for submission of the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Receipt Number 20110214283130 for review. PA Department of Conservation and Natural Resources screened this project for potential impacts to species and resources of concern under DCNR's responsibility, which includes plants, terrestrial invertebrates, natural communities, and geologic features only.

No Impact Anticipated

PNDI records indicate species or resources of concern are located in the vicinity of the project. However, based on the information you submitted concerning the nature of the project, the immediate location, and our detailed resource information, DCNR has determined that no impact is likely. No further coordination with our agency is needed for this project.

This response represents the most up-to-date summary of the PNDI data files and is valid for one (1) year from the date of this letter. An absence of recorded information does not necessarily imply actual conditions on-site. Should project plans change or additional information on listed or proposed species become available, this determination may be reconsidered. Should the proposed work continue beyond the period covered by this letter, please resubmit the project to this agency as an "Update" (including an updated PNDI receipt, project narrative and accurate map.

This finding applies to impacts to DCNR only. To complete your review of state and federally-listed threatened and endangered species and species of special concern, please be sure the U.S. Fish and Wildlife Service, PA Game Commission, and the Pennsylvania Fish and Boat Commission have been contacted regarding this project as directed by the online PNDI ER Tool found at www.naturalheritage.state.pa.us.

Sincerely,

Richard Shockey, Environmental Review Specialist FOR Chris Firestone, Wild Plant Program Mgr.
Ph: 717-772-0263 ~ F: 717-772-0271 ~ c-rshockey@state.pa.us

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