

**SEWAGE FACILITIES PLANNING MODULE**

**DPW 4<sup>th</sup> DIVISION MAINTENANCE FACILITY  
CITY OF PITTSBURGH  
ALLEGHENY COUNTY, PENNSYLVANIA**

**Prepared by:**

**CIVIL & ENVIRONMENTAL CONSULTANTS, INC.**

**CEC Project 303-328**

**May 2021**

**REVISED July 2021**



**Civil & Environmental Consultants, Inc.**

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**APPENDIX A**

**SEWAGE FACILITIES PLANNING MODULE – COMPONENT 3**

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Code No.



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

**SEWAGE FACILITIES PLANNING MODULE**

**Component 3. Sewage Collection and Treatment Facilities**

*(Return completed module package to appropriate municipality)*

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

This planning module component is used to fulfill the planning requirements of Act 537 for the following types of projects: (1) a subdivision to be served by sewage collection, conveyance or treatment facilities, (2) a tap-in to an existing collection system with flows on a lot of 2 EDU's or more, or (3) the construction of, or modification to, wastewater collection, conveyance or treatment facilities that will require DEP to issue or modify a Clean Streams Law permit. Planning for any project that will require DEP to issue or modify a permit cannot be processed by a delegated agency. Delegated agencies must send their projects to DEP for final planning approval.

This component, 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.

**REVIEW FEES:** Amendments to the Sewage Facilities Act established fees to be paid by the developer for review of planning modules for land development. These fees may vary depending on the approving agency for the project (DEP or delegated local agency). Please see section R and the instructions for more information on these fees.

**NOTE:** All projects must complete Sections A through I, and Sections O through R. Complete Sections J, K, L, M and/or N if applicable or marked .

**A. PROJECT INFORMATION** (See Section A of instructions)

1. Project Name DPW 4<sup>th</sup> Division Maintenance Facility

2. Brief Project Description The City of Pittsburgh Department of Public Works (DPW) is proposing to construct a maintenance facility to include a 13,300 GSF building, material storage areas and associated parking.

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

Municipality Name	County	City	Boro	Twp
City of Pittsburgh	Allegheny	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Municipality Contact Individual - Last Name	First Name	MI	Suffix	Title
Pree	Brenda	F		City Clerk
Additional Individual Last Name	First Name	MI	Suffix	Title

Municipality Mailing Address Line 1	Mailing Address Line 2		
414 Grant Street			
Address Last Line -- City	State	ZIP+4	
Pittsburgh	PA	15219	
Area Code + Phone + Ext.	FAX (optional)	Email (optional)	
412-255-2138		brenda.pree@pittsburghpa.gov	



**C. SITE INFORMATION** (See Section C of instructions)

**Site (Land Development or Project) Name**

DPW 4<sup>th</sup> Division Maintenance Facility

Site Location Line 1

410 Mathews Avenue

Site Location Line 2

Site Location Last Line -- City

Pittsburgh

State

PA

ZIP+4

15210

Latitude

40.413646

Longitude

-79.995504

Detailed Written Directions to Site After going outbound through the Liberty Tunnel, turn left onto Saw Mill Run Blvd. Then turn left onto Bausman Street. Since Mathews Avenue is a one way, continue on Bausman until you can turn right onto Grimes Avenue. Then turn right onto Mathews Ave and the project site is on your left after a block of residential houses.

Description of Site Project site consists of multiple vacant lots. The former DPW facility at this site was demolished several years ago.

**Site Contact (Developer/Owner)**

Last Name

Baker

First Name

Calli

MI

Suffix

Phone

412-255-2604

Ext.

Site Contact Title

Sr. Project Manager

Site Contact Firm (if none, leave blank)

Pittsburgh Department of Public Works

FAX

142-255-8847

Email

calli.baker@pittsburghpa.gov

Mailing Address Line 1

414 Grant Street, Room 301

Mailing Address Line 2

Mailing Address Last Line -- City

Pittsburgh

State

PA

ZIP+4

15219

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

Last Name

Zhukas

First Name

Nelson

MI

Suffix

Title

Staff Consultant

Consulting Firm Name

Civil & Environmental Consultants, Inc.

Mailing Address Line 1

333 Baldwin Road

Mailing Address Line 2

Address Last Line -- City

Pittsburgh

State

PA

ZIP+4

15205

Country

Email

nzhukas@cecinc.com

Area Code + Phone

412-354-8093

Ext.

Area Code + FAX

**E. AVAILABILITY OF DRINKING WATER SUPPLY**

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: PA American Water

**F. PROJECT NARRATIVE** (See Section F of instructions)

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

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

**G. PROPOSED WASTEWATER DISPOSAL FACILITIES** (See Section G of instructions)

Check all boxes that apply, and provide information on collection, conveyance and treatment facilities and EDU's served. This information will be used to determine consistency with Chapter 93 (relating to wastewater treatment requirements).

**1. COLLECTION SYSTEM**

a. Check appropriate box concerning collection system

- New collection system     Pump Station     Force Main  
 Grinder pump(s)     Extension to existing collection system     Expansion of existing facility

Clean Streams Law Permit Number \_\_\_\_\_

b. Answer questions below on collection system

Number of EDU's and proposed connections to be served by collection system. EDU's 5

Connections 1

Name of:

existing collection or conveyance system 48" Combined PWSA sewer in Mathews Avenue

owner PWSA

existing interceptor Ohio Interceptor

owner ALCOSAN

**2. WASTEWATER TREATMENT FACILITY**

Check all boxes that apply, and provide information on collection, conveyance and treatment facilities and EDU's served. This information will be used to determine consistency with Chapter(s) 91 (relating to general provisions), 92 (relating to national Pollution Discharge Elimination System permitting, monitoring and compliance) and 93 (relating to water quality standards).

a. Check appropriate box and provide requested information concerning the treatment facility

- New facility     Existing facility     Upgrade of existing facility     Expansion of existing facility

Name of existing facility ALCOSAN

NPDES Permit Number for existing facility 25984

Clean Streams Law Permit Number \_\_\_\_\_

Location of discharge point for a new facility. Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

b. The following certification statement must be completed and signed by the wastewater treatment facility permittee or their representative.

As an authorized representative of the permittee, I confirm that the ALCOSAN  
(Name from above) sewage treatment facilities can accept sewage flows from this project without adversely affecting the facility's ability to achieve all applicable technology and water quality based effluent limits (see Section I) and conditions contained in the NPDES permit identified above.

Name of Permittee Agency, Authority, Municipality ALCOSAN

Name of Responsible Agent Joseph A. Sparbanic, P.E.

Agent Signature [Signature] Date 6-28-21

(Also see Section I. 4.)

**G. PROPOSED WASTEWATER DISPOSAL FACILITIES (Continued)**

**3. PLOT PLAN**

The following information is to be submitted on a plot plan of the proposed subdivision.

- a. Existing and proposed buildings.
- b. Lot lines and lot sizes.
- c. Adjacent lots.
- d. Remainder of tract.
- e. Existing and proposed sewerage facilities. Plot location of discharge point, land application field, spray field, COLDS, or LVCOLDS if a new facility is proposed.
- f. Show tap-in or extension to the point of connection to existing collection system (if applicable).
- g. Existing and proposed water supplies and surface water (wells, springs, ponds, streams, etc.)
- h. Existing and proposed rights-of-way.
- i. Existing and proposed buildings, streets, roadways, access roads, etc.
- j. Any designated recreational or open space area.
- k. Wetlands - from National Wetland Inventory Mapping and USGS Hydric Soils Mapping.
- l. Flood plains or Flood prone areas, floodways, (Federal Flood Insurance Mapping)
- m. Prime Agricultural Land.
- n. Any other facilities (pipelines, power lines, etc.)
- o. Orientation to north.
- p. Locations of all site testing activities (soil profile test pits, slope measurements, permeability test sites, background sampling, etc. (if applicable).
- q. Soils types and boundaries when a land based system is proposed.
- r. Topographic lines with elevations when a land based system is proposed

**4. WETLAND PROTECTION**

YES NO

- a.   Are there wetlands in the project area? If yes, ensure these areas appear 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 streams classified as HQ or EV and address impacts of the permitting requirements of said encroachments on the project.

**5. PRIME AGRICULTURAL LAND PROTECTION**

YES NO

- Will the project involve the disturbance of prime agricultural lands?  
If yes, coordinate with local officials to resolve any conflicts with the local prime agricultural land protection program. The project must be consistent with such municipal programs before the sewage facilities planning module package may be submitted to DEP.  
If no, prime agricultural land protection is not a factor to this project.
- Have prime agricultural land protection issues been settled?

**6. HISTORIC PRESERVATION ACT**

YES NO

- Sufficient documentation is attached to confirm that this project is consistent with DEP Technical Guidance 012-0700-001 *Implementation of the PA State History Code* (available online at the DEP website at [www.dep.state.pa.us](http://www.dep.state.pa.us), select "subject" then select "technical guidance"). As a minimum this includes copies of the completed Cultural Resources Notice (CRN), a return receipt for its submission to the PHMC and the PHMC review letter.

**7. PROTECTION OF RARE, ENDANGERED OR THREATENED SPECIES**

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](http://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 jurisdictional agencies (when necessary) is/are received by DEP.

Applicant or Consultant Initials NBZ

**H. ALTERNATIVE SEWAGE FACILITIES ANALYSIS** (See Section H of instructions)

- An alternative sewage facilities analysis has been prepared as described in Section H of the attached instructions and is attached to this component.  
The applicant may choose to include additional information beyond that required by Section H of the attached instructions.

**I. COMPLIANCE WITH WATER QUALITY STANDARDS AND EFFLUENT LIMITATIONS** (See Section I of instructions) (Check and complete all that apply.)

**1. Waters designated for Special Protection**

- The proposed project will result in a new or increased discharge into special protection waters as identified in Title 25, Pennsylvania Code, Chapter 93. The Social or Economic Justification (SEJ) required by Section 93.4c. is attached.

**2. Pennsylvania Waters Designated As Impaired**

- The proposed project will result in a new or increased discharge of a pollutant into waters that DEP has identified as being impaired by that pollutant. A pre planning meeting was held with the appropriate DEP regional office staff to discuss water quality based discharge limitations.

**3. Interstate and International Waters**

- The proposed project will result in a new or increased discharge into interstate or international waters. A pre-planning meeting was held with the appropriate DEP regional office staff to discuss effluent limitations necessary to meet the requirements of the interstate or international compact.

**4. Tributaries To The Chesapeake Bay**

- The proposed project result in a new or increased discharge of sewage into a tributary to the Chesapeake Bay. This proposal for a new sewage treatment facility or new flows to an existing facility includes total nitrogen and total phosphorus in the following amounts: \_\_\_\_\_ pounds of TN per year, and \_\_\_\_\_ pounds of TP per year. Based on the process design and effluent limits, the total nitrogen treatment capacity of the wastewater treatment facility is \_\_\_\_\_ pounds per year and the total phosphorus capacity is \_\_\_\_\_ pounds per year as determined by the wastewater treatment facility permittee. The permittee has determined that the additional TN and TP to be contributed by this project (as modified by credits and/or offsets to be provided) will not cause the discharge to exceed the annual total mass limits for these parameters. Documentation of compliance with nutrient allocations is attached.

Name of Permittee Agency, Authority, Municipality \_\_\_\_\_

Initials of Responsible Agent (See Section G 2.b) \_\_\_\_\_

See *Special Instructions* (Form 3800-FM-BPNPSM0353-1) for additional information on Chesapeake Bay watershed requirements.

**J. CHAPTER 94 CONSISTENCY DETERMINATION** (See Section J 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 Title 25, Chapter 94 (relating to Municipal Wasteload Management). If not previously included in Section F, include a general map showing the path of the sewage to the treatment facility. 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 1873 gpd
2. Total Sewage Flows to Facilities (pathway from point of origin through treatment plant)

When providing "treatment facilities" sewage flows, use Annual Average Daily Flow for "average" and Maximum Monthly Average Daily Flow for "peak" in all cases. For "peak flows" in "collection" and "conveyance" facilities, indicate whether these flows are "peak hourly flow" or "peak instantaneous flow" and how this figure was derived (i.e., metered, measured, estimated, etc.).

- a. Enter average and peak sewage flows for each proposed or existing facility as designed or permitted.
- b. Enter the average and peak sewage flows for the most restrictive sections of the existing sewage facilities.
- c. Enter the average and peak sewage flows, projected for 5 years (2 years for pump stations) through the most restrictive sections of the existing sewage facilities. Include existing, proposed (this project) and future project (other approved projects) flows.

To complete the table, refer to the instructions, Section J.

	a. Design and/or Permitted Capacity (gpd)		b. Present Flows (gpd)		c. Projected Flows in 5 years (gpd) (2 years for P.S.)	
	Average	Peak	Average	Peak	Average	Peak
<b>Collection</b>	29,233,688	102,317,907	1,031,285	3,609,498	1,083,411	3,791,940
<b>Conveyance</b>		<u>6,010,000</u>	<u>159,000</u>	<u>232,000</u>	<u>162,792</u>	<u>236,207</u>
<b>Treatment</b>		<u>250,000,000</u>	<u>190,000,000</u>	<u>250,000,000</u>	<u>219,001,000</u>	<u>295,000,000</u>

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. The individual(s) signing below must be legally authorized to make representation for the organization.

YES NO

- a.  YES  NO 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?

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 Corrective Action Plan (CAP) granting an allocation for this project. A letter granting allocations to this project under the CAP must be attached to the module package.

If no, a representative of 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 both §71.53(d)(3) and Chapter 94 requirements and that this proposal will not affect that status.

b. Collection System

Name of Agency, Authority, Municipality PWSA

Name of Responsible Agent Barry King, PE, PMP

Agent Signature [Signature]

Date 5/25/2021

**J. CHAPTER 94 CONSISTENCY DETERMINATION** (See Section J of instructions)

c. Conveyance System

Name of Agency, Authority, Municipality ALCOSAN

Name of Responsible Agent Joseph A. Sparbanie, P.E.

Agent Signature [Signature]

Date 6/28/21

4. Treatment Facility

The questions below are to be answered by a representative of the facility permittee in coordination with the information in the table and the latest Chapter 94 report. The individual signing below must be legally authorized to make representation for the organization.

YES NO

- a.  YES  NO 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?

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 CAP granting an allocation for this project. A letter granting allocations to this project under the CAP must be attached to the planning module.

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 both §71.53(d)(3) and Chapter 94 requirements and that this proposal will not impact that status.

b. Name of Agency, Authority, Municipality ALCOSAN

Name of Responsible Agent Joseph A. Sparbanie, P.E.

Agent Signature [Signature]

Date 6/28/21

**K. TREATMENT AND DISPOSAL OPTIONS** (See Section K of instructions)

This section is for land development projects that propose construction of wastewater treatment facilities. Please note that, since these projects require permits issued by DEP, these projects may NOT receive final planning approval from a delegated local agency. Delegated local agencies must send these projects to DEP for final planning approval.

Check the appropriate box indicating the selected treatment and disposal option.

- 1. Spray irrigation (other than individual residential spray systems (IRSIS)) or other land application is proposed, and the information requested in Section K.1. of the planning module instructions are attached.
- 2. Recycle and reuse is proposed and the information requested in Section K-2 of the planning module instructions is attached.
- 3. A discharge to a dry stream channel is proposed, and the information requested in Section K.3. of the planning module instructions are attached.
- 4. A discharge to a perennial surface water body is proposed, and the information requested in Section K.4. of the planning module instructions are attached.

**L. PERMEABILITY TESTING** (See Section L of instructions)

- The information required in Section L of the instructions is attached.

**M. PRELIMINARY HYDROGEOLOGIC STUDY** (See Section M of instructions)

- The information required in Section M of the instructions is attached.



**N. DETAILED HYDROGEOLOGIC STUDY** (See Section N of instructions)

The detailed hydrogeologic information required in Section N. of the instructions is attached.

**O. SEWAGE MANAGEMENT** (See Section O of instructions)

(1-3 for completion by the developer(project sponser), 4-5 for completion by the non-municipal facility agent and 6 for completion by the municipality)

Yes No

1.   Is connection to, or construction of, a DEP permitted, non-municipal sewage facility or a local agency permitted, community onlot sewage facility proposed.

If Yes, respond to the following questions, attach the supporting analysis, and an evaluation of the options available to assure long-term proper operation and maintenance of the proposed non-municipal facilities. If No, skip the remainder of Section O.

2. Project Flows \_\_\_\_\_ gpd

Yes No

3.   Is the use of nutrient credits or offsets a part of this project?

If yes, attach a letter of intent to purchase the necessary credits and describe the assurance that these credits and offsets will be available for the remaining design life of the non-municipal sewage facility;

**(For completion by non-municipal facility agent)**

4. Collection and Conveyance Facilities

The questions below are to be answered by the organization/individual responsible for the non-municipal collection and conveyance facilities. The individual(s) signing below must be legally authorized to make representation for the organization.

Yes No

- a.   If this project proposes sewer extensions or tap-ins, will these actions create a hydraulic overload on any existing collection or conveyance facilities that are part of the system?

If yes, this sewage facilities planning module will not be accepted for review by the municipality, delegated local agency and/or DEP until this issue is resolved.

If no, a representative of the organization responsible 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 71 §71.53(d)(3) and that this proposal will not affect that status.

- b. Collection System

Name of Responsible Organization \_\_\_\_\_

Name of Responsible Agent \_\_\_\_\_

Agent Signature \_\_\_\_\_

Date \_\_\_\_\_

- c. Conveyance System

Name of Responsible Organization \_\_\_\_\_

Name of Responsible Agent \_\_\_\_\_

Agent Signature \_\_\_\_\_

Date \_\_\_\_\_

5. Treatment Facility

The questions below are to be answered by a representative of the facility permittee. The individual signing below must be legally authorized to make representation for the organization.

Yes No

- a.   If this project proposes the use of an existing non-municipal wastewater treatment plant for the disposal of sewage, will this action create a hydraulic or organic overload at that facility?

If yes, this planning module for sewage facilities will not be reviewed by the municipality, delegated local agency and/or DEP until this issue is resolved.

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 §71.53(d)(3) and that this proposal will not impact that status.

- b. Name of Facility \_\_\_\_\_  
Name of Responsible Agent \_\_\_\_\_  
Agent Signature \_\_\_\_\_  
Date \_\_\_\_\_

(For completion by the municipality)

6.  The **SELECTED OPTION** necessary to assure long-term proper operation and maintenance of the proposed non-municipal facilities is clearly identified with documentation attached in the planning module package.

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**P. PUBLIC NOTIFICATION REQUIREMENT** (See Section P of instructions)

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This section must be completed to determine if the applicant will be required to publish facts about the project in a newspaper of general circulation to provide a chance for the general public to comment on proposed new land development projects. This notice may be provided by the applicant or the applicant's agent, the municipality or the local agency by publication in a newspaper of general circulation within the municipality affected. Where an applicant or an applicant's agent provides the required notice for publication, the applicant or applicant's agent shall notify the municipality or local agency and the municipality and local agency will be relieved of the obligation to publish. The required content of the publication notice is found in Section P of the instructions.

To complete this section, each of the following questions must be answered with a "yes" or "no". Newspaper publication is required if any of the following are answered "yes".

Yes No

1.   Does the project propose the construction of a sewage treatment facility ?
2.   Will the project change the flow at an existing sewage treatment facility by more than 50,000 gallons per day?
3.   Will the project result in a public expenditure for the sewage facilities portion of the project in excess of \$100,000?
4.   Will the project lead to a major modification of the existing municipal administrative organizations within the municipal government?
5.   Will the project require the establishment of *new* municipal administrative organizations within the municipal government?
6.   Will the project result in a subdivision of 50 lots or more? (onlot sewage disposal only)
7.   Does the project involve a major change in established growth projections?
8.   Does the project involve a different land use pattern than that established in the municipality's Official Sewage Plan?



**P. PUBLIC NOTIFICATION REQUIREMENT cont'd.** (See Section P of instructions)

- 9.   Does the project involve the use of large volume onlot sewage disposal systems (Flow > 10,000 gpd)?
- 10.   Does the project require resolution of a conflict between the proposed alternative and consistency requirements contained in §71.21(a)(5)(i), (ii), (iii)?
- 11.   Will sewage facilities discharge into high quality or exceptional value waters?
- Attached is a copy of:
  - the public notice,
  - all comments received as a result of the notice,
  - the municipal response to these comments.
- No comments were received. A copy of the public notice is attached.

**Q. FALSE SWEARING STATEMENT** (See Section Q of instructions)

I verify that the statements made in this component are true and correct to the best of my knowledge, information and belief. I understand that false statements in this component are made subject to the penalties of 18 PA C.S.A. §4904 relating to unsworn falsification to authorities.

Nelson Zhukas	Zhukas, Nelson
Name (Print)	Signature
Staff Consultant	04/23/2021
Title	Date
333 Baldwin Road	412-354-8093
Address	Telephone Number

Digitally signed by Nelson Zhukas, DN: cn=Nelson Zhukas, o=Commonwealth of Pennsylvania, ou=Users, email=Nelson.Zhukas@pa.gov, c=US, Date: 2021.04.23 11:44:24-0400

**R. REVIEW FEE** (See Section R of instructions)

The Sewage Facilities Act establishes a fee for the DEP planning module review. DCP will calculate the review fee for the project and invoice the project sponsor **OR** the project sponsor may attach a self-calculated fee payment to the planning module prior to submission of the planning package to DEP. (Since the fee and fee collection procedures may vary if a "delegated local agency" is conducting the review, the project sponsor should contact the "delegated local agency" to determine these details.) Check the appropriate box.

- I request DEP calculate the review fee for my project and send me an invoice for the correct amount. I understand DEP's review of my project will not begin until DEP receives the correct review fee from me for the project.
- I have calculated the review fee for my project using the formula found below and the review fee guidance in the instructions. I have attached a check or money order in the amount of \$250 payable to "Commonwealth of PA, DEP". Include DEP code number on check. I understand DEP will not begin review of my project unless it receives the fee and determines the fee is correct. If the fee is incorrect, DEP will return my check or money order, send me an invoice for the correct amount. I understand DEP review will NOT begin until I have submitted the correct fee.
- I request to be exempt from the DEP planning module review fee because this planning module creates **only** one new lot and is the **only** lot subdivided from a parcel of land as that land existed on December 14, 1995. I realize that subdivision of a second lot from this parcel of land shall disqualify me from this review fee exemption. I am furnishing the following deed reference information in support of my fee exemption.

County Recorder of Deeds for \_\_\_\_\_ County, Pennsylvania

Deed Volume \_\_\_\_\_ Book Number \_\_\_\_\_

Page Number \_\_\_\_\_ Date Recorded \_\_\_\_\_

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**R. REVIEW FEE** (continued)

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Formula:

1. For a new collection system (with or without a Clean Streams Law Permit), a collection system extension, or individual tap-ins to an existing collection system use this formula.

$$\#5 \quad \text{Lots (or EDUs)} \times \$50.00 = \$250.00$$

The fee is based upon:

- The number of lots created or number of EDUs whichever is higher.
- For community sewer system projects, one EDU is equal to a sewage flow of 400 gallons per day.

2. For a surface or subsurface discharge system, use the appropriate one of these formulae.

- A. A new surface discharge greater than 2000 gpd will use a flat fee:

$$\begin{aligned} & \$ 1,500 \text{ per submittal (non-municipal)} \\ & \$ 500 \text{ per submittal (municipal)} \end{aligned}$$

- B. An increase in an existing surface discharge will use:

$$\# \quad \text{Lots (or EDUs)} \times \$35.00 = \$$$

to a maximum of \$ 1,500 per submittal (non-municipal) or \$ 500 per submittal (municipal)

The fee is based upon:

- The number of lots created or number of EDUs whichever is higher.
- For community sewage system projects one EDU is equal to a sewage flow of 400 gallons per day.
- For non-single family residential projects, EDUs are calculated using projected population figures

- C. A sub-surface discharge system that requires a permit under The Clean Streams Law will use a flat fee:

$$\begin{aligned} & \$ 1,500 \text{ per submittal (non-municipal)} \\ & \$ 500 \text{ per submittal (municipal)} \end{aligned}$$

---

**APPENDIX B**

**SEWAGE FACILITIES PLANNING MODULE – COMPONENT 4A**

---



## INSTRUCTIONS FOR COMPLETING COMPONENT 4A MUNICIPAL PLANNING AGENCY REVIEW

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

### Background

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

### Who Should Complete the Component?

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

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

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

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

#### **Section A. Project Name**

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

#### **Section B. Review Schedule**

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

#### **Section C. Agency Review**

1. Answer the yes/no questions and provide any descriptive information necessary on the lines provided. Attach additional sheets, if necessary.
2. Complete the name, title, and signature block.

#### **Section D. Additional Comments**

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



COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
BUREAU OF CLEAN WATER

DEP Code #:

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

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

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

Project Name

DPW 4th Division -- 410 Mathews

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

1. Date plan received by municipal planning agency July 26, 20212. Date review completed by agency July 29, 2021

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

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

**SECTION C. AGENCY REVIEW (continued)**

Yes	No	
<input checked="" type="checkbox"/>	<input type="checkbox"/>	13. Is this proposal consistent with the ordinance? If no, describe the inconsistencies _____
<input checked="" type="checkbox"/>	<input type="checkbox"/>	14. Is this plan consistent with the municipal Official Sewage Facilities Plan? If no, describe the inconsistencies _____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	15. Are there any wastewater disposal needs in the area adjacent to this proposal that should be considered by the municipality? If yes, describe _____
<input type="checkbox"/>	<input checked="" type="checkbox"/>	16. Has a waiver of the sewage facilities planning requirements been requested for the residual tract of this subdivision?
<input type="checkbox"/>	<input type="checkbox"/>	If yes, is the proposed waiver consistent with applicable ordinances? If no, describe the inconsistencies _____
17. Name, title and signature of planning agency staff member completing this section: Name: <u>Martina Wolf Battistone</u> Title: <u>Principal Environmental Planner</u> Signature: <u><i>Martina Wolf Battistone</i></u> Date: <u>July 29, 2021</u> Name of Municipal Planning Agency: <u>City of Pittsburgh Department of City Planning</u> Address <u>200 Ross Street 4th Floor Pittsburgh, PA 15219</u> Telephone Number: <u>(412) 255-2516</u>		

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

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

The planning agency must complete this component within 60 days.

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

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**APPENDIX C**

**SEWAGE FACILITIES PLANNING MODULE – COMPONENT 4C**

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

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

---

### Background

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

### Who Should Complete the Component?

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

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

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

---

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

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#### Section A. Project Name

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

---

#### Section B. Review Schedule

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

---

#### Section C. Agency Review

1. Answer the yes/no questions and provide any descriptive information necessary on the lines provided. Attach additional sheets, if necessary.
  2. Complete the name, title, and signature block.
- 

#### Section D. Additional Comments

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



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

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

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

Project Name  
 DPW 4<sup>th</sup> Division Maintenance Facility

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

1. Date plan received by county or joint county health department July 1, 2021  
 Agency name Allegheny County Health Department (ACHD)
2. Date review completed by agency July 2, 2021

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

- |                                     |                                     |   |
|-------------------------------------|-------------------------------------|---|
| Yes                                 | No                                  |   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 1. Is the proposed plan consistent with the municipality's Official Sewage Facilities Plan?<br>If no, what are the inconsistencies? _____   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 2. Are there any wastewater disposal needs in the area adjacent to this proposal that should be considered by the municipality?<br>If yes, describe _____   |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | 3. Is there any known groundwater degradation in the area of this proposal?<br>If yes, describe _____   |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | 4. The county or joint county health department recommendation concerning this proposed plan is as follows: <u>ACHD recommends approval. See attached letter.</u>   |
|                                     |                                     | 5. Name, title and signature of person completing this section:<br>Name: <u>Freddie Fields</u><br>Title: <u>Environmental Health Engineer III</u><br>Signature: <u><i>Freddie Fields</i></u><br>Date: <u>July 2, 2021</u><br>Name of County Health Department: <u>ACHD</u><br>Address: <u>3901 Penn Avenue, Building #5, Pittsburgh, PA 15224-1318</u><br>Telephone Number: <u>412-578-8046</u> |

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

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

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



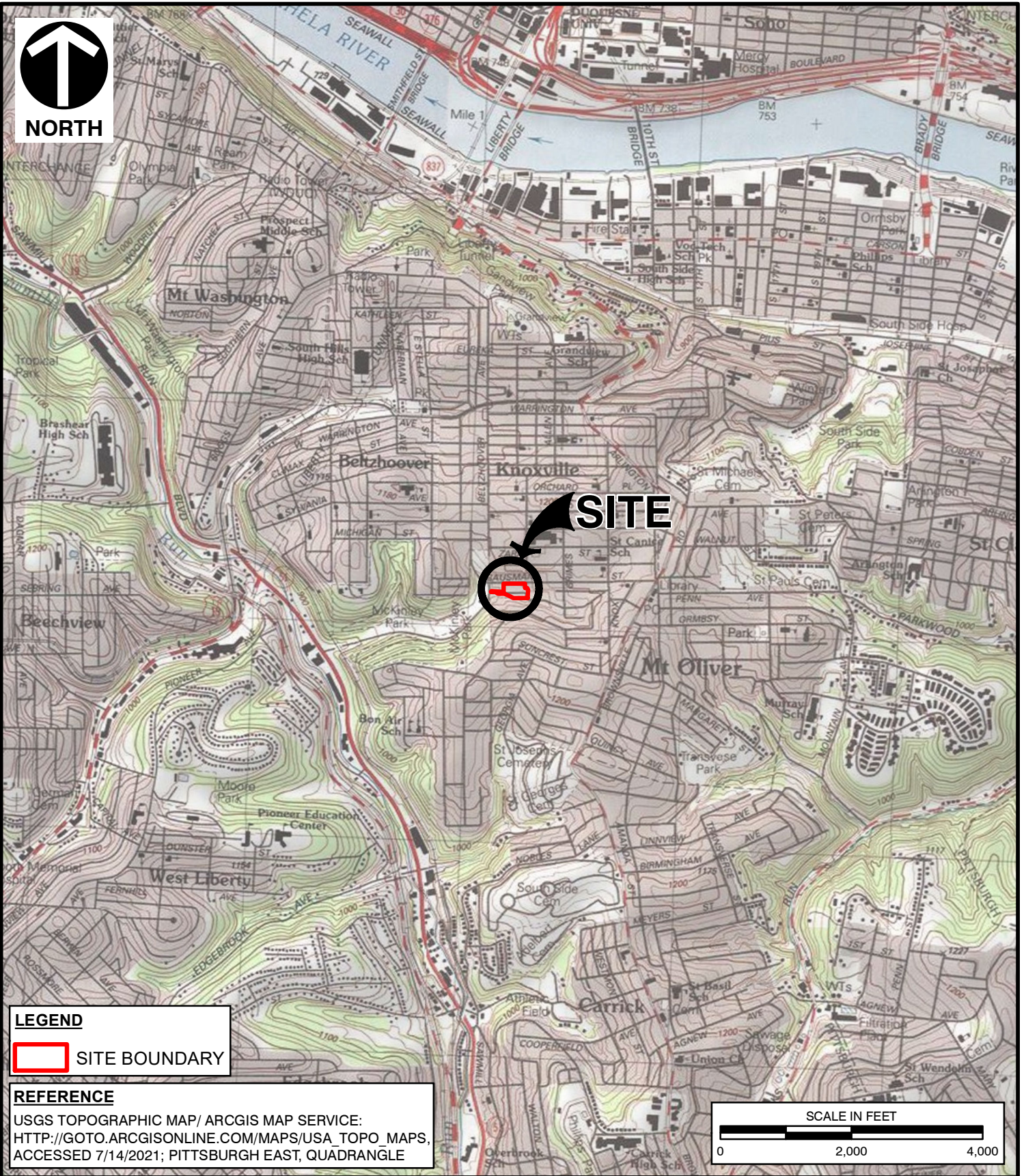
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**APPENDIX D**

**SITE LOCATION MAP**

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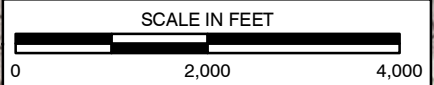


**LEGEND**

 SITE BOUNDARY

**REFERENCE**

USGS TOPOGRAPHIC MAP/ ARCGIS MAP SERVICE:  
[HTTP://GOTO.ARCGISONLINE.COM/MAPS/USA\\_TOPO\\_MAPS](http://gto.arcgis.com/maps/usa_topo_maps),  
 ACCESSED 7/14/2021; PITTSBURGH EAST, QUADRANGLE



**Civil & Environmental Consultants, Inc.**  
 333 Baldwin Road - Pittsburgh, PA 15205-9072  
 412-429-2324 • 800-365-2324  
 www.cecinc.com

CITY OF PITTSBURGH  
 DPW 4TH DIVISION MAINTENANCE FACILITY  
 CITY OF PITTSBURGH  
 ALLEGHENY COUNTY, PENNSYLVANIA

**SITE LOCATION MAP**

DRAWN BY:	CBL	CHECKED BY:	NZ	APPROVED BY:	* Hand signature on file DMK*	FIGURE NO:	<b>1</b>
DATE:	7/14/2021	SCALE:	1" = 2,000'	PROJECT NO:	303-328		

I:\sv-fs-pfi\Projects\300-000\303-328-GIS\Maps\C\01\_REPORT\_FIGURES\303328\_C\01\_FIG1\_SITE\_LOCATION.mxd CV01\_7/14/2021 11:25 AM (derobinson)



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**APPENDIX E**

**PROJECT NARRATIVE**

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**PROJECT NARRATIVE**  
**DPW 4<sup>th</sup> DIVISION MAINTENANCE FACILITY**  
**CITY OF PITTSBURGH, ALLEGHENY COUNTY, PENNSYLVANIA**

On behalf of the City of Pittsburgh Department of Public Works (DPW), Civil & Environmental Consultants, Inc. (CEC) is submitting a Sewage Facilities Planning Module for the proposed 4<sup>th</sup> Division Maintenance Facility project. This project narrative is being submitted in accordance with the requirements of Component 3, Section F of the Sewage Facilities Planning Module.

The proposed project is located in the 30<sup>th</sup> Ward of the City of Pittsburgh, Allegheny County, Pennsylvania. The project site is located at 410 Mathews Avenue, east of the intersection of Mathews Avenue and Bausman Street in the Knoxville neighborhood of the City of Pittsburgh. The site currently consists of multiple abandoned lots in the same area where the previous DPW 4<sup>th</sup> Division Maintenance Facility was located. The DPW is proposing to construct a new maintenance building along with material storage areas. Other improvements will include new proposed parking areas, site utilities, landscaping, etc.

With regard to the proposed sanitary sewage, the flow was calculated based on PADEP & PWSA guidelines. The proposed net increase in flow from the development is calculated to be 1873 GPD. Based on PADEP calculations that assume that one EDU is equal to 400 GPD, there are 5 EDU's that will be generated from the proposed development. Sanitary sewer flow estimate calculations are included in Appendix G.

On April 20, 2021, CEC provided a 2-man field crew to obtain peak flow depth measurements in accordance with the Method #1 parameters described in the PWSA Developer's Manual. Flow depth measurements were taken at PWSA Manhole MH033A002 utilizing a telescopic camera and surveying measuring rod. As outlined in the Method #1 parameters, CEC's field crew took five (5) separate measurements over a one-hour period beginning at 6:45 AM. The maximum flow measured during this timeframe was approximately 3.4 inches (0.28 feet). This observed flow depth is was used in our hydraulic flow calculations provided in Appendix H. The existing sewer slope (0.0184) was determined based on PWSA's "Most Limited Capacity Sewer (MLCS)

Spreadsheet” dated March 18, 2021. This spreadsheet is included in Appendix L of this planning module.

Sewage Conveyance Information:

The proposed sewage flows generated from the development will be collected from the proposed development via a new private 6” lateral before being conveyed to an existing 48” public PWSA combination sewer. This PWSA public sewer ultimately connects to the ALCOSAN Saw Mill Run Interceptor at connection point S-23. All sewage flows will ultimately be conveyed to ALCOSAN’s Woods Run treatment facility located near Brighton Heights.

DPW is currently planning to start construction in Fall of 2021.

---

**APPENDIX F**

**ALTERNATIVE SEWAGE FACILITIES ANALYSIS**

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**ALTERNATE SEWAGE FACILITIES ANALYSIS  
DPW 4<sup>th</sup> DIVISION MAINTENANCE FACILITY  
CITY OF PITTSBURGH  
ALLEGHENY COUNTY, PENNSYLVANIA**

On behalf of the City of Pittsburgh Department of Public Works (DPW), Civil and Environmental Consultants, Inc. (CEC) presents this Alternative Sewage Facilities Analysis to accompany the Sewage Facilities Planning Module for the 4<sup>th</sup> Division Maintenance Facility project. The proposed project is located at 410 Mathews Avenue in the Knoxville neighborhood of the city of Pittsburgh, Allegheny County, Pennsylvania. Refer to the Site Location Map (Figure 1) provided in Appendix D.

There are no means for an Alternative Sewage Facilities Analysis due to the following:

- The site location consists of a previously developed urban setting and existing on-site soils do not lend itself to on-lot treatment.
- Public sanitary sewer lines are accessible.



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**APPENDIX G**

**SANITARY SEWER FLOW CALCULATIONS**

---

**Project Name:** DPW 4th Division Maintenance Building  
**Location:** City of Pittsburgh, Allegheny County, Pennsylvania  
**CEC Project No.:** 303-328

**Prepared by:** NBZ  
**Date:** 3/3/2021

**Checked by:** DMK  
**Date:** 3/3/2021

### Proposed Sewage Flows

DPW 4th Division Maintenance Building				
Description	Number of Units	Unit	Flow Rate/Unit (GPD/Unit)	Total (GPD)
Facility Employees <sup>1</sup>	35	Employees	10	350
Showers <sup>2</sup>	4	Showers	20	80
Vehicle Cleaning Bay <sup>3</sup>	25	Trucks	120	3,000

Total:	<b>3,430</b>	GPD
PADEP EDU <sup>4</sup> :	8.58	EDU
Round to:	<b>9</b>	EDU
PWSA EDU <sup>5</sup> :	11.43	EDU
Round to:	<b>12</b>	EDU

**Notes:**

1. Assumes 35 employees per day and using "Office Employee" rate of 10 GPD/employee (using toilets and sinks). This may be somewhat conservative since most employees are assigned a vehicle "truck route" and will typically only use the restrooms at the beginning/end of their shifts. We anticipate approximately 5 full-time office employees occupying the building and 30 "truck route" employees.
2. The building will be equipped with showers. Based on limited shower use at similar DPW facilities, we assume the peak use will be four (4) showers per day at 20 gallons/shower (assuming 10 minute showers).
3. Vehicle wash bay flows are based on a proposed internal wash system that uses 4 gallons/minute. The average vehicle wash duration is 30 minutes and the maximum vehicle washes per day is assumed to be 25.
4. In accordance with PADEP Sewage Facilities Planning Module, for community sewer system projects, one EDU is equal to a sewage flow of 400 gpd.
5. In accordance with the Pittsburgh Water and Sewer Authority Procedures Manual for Developers, one EDU is equal to a sewage flow of 300 gpd.

**Project Name:** DPW 4th Division Maintenance Building  
**Location:** City of Pittsburgh, Allegheny County, Pennsylvania  
**CEC Project No.:** 303-328

**Prepared by:** NBZ  
**Date:** 3/3/2021

**Checked by:** DMK  
**Date:** 3/3/2021

### Historic Sewage Flows

Historic Water Bill Date	Monthly Usage (gallons)	Average (gpd)	Peak GPD (2.5 x Average)
May-16	18,700	623	1557

Total: **1,557** GPD

**Note:**

1. Water records for the previous DPW Maintenance Facility on this site (dating back 5 years) are attached. The highest monthly usage from May 2016 has been identified as noted above (18,700 gallons).

**Project Name:** DPW 4th Division Maintenance Building  
**Location:** City of Pittsburgh, Allegheny County, Pennsylvania  
**CEC Project No.:** 303-328

**Prepared by:** NBZ  
**Date:** 3/3/2021

**Checked by:** DMK  
**Date:** 3/3/2021

### Proposed Net Increase

Description	Number of Units	Unit
Proposed Sewage Flows	3430	GPD
Existing Sewage Flows	1557	GPD

GPD Increase	<b>1873</b>	GPD
PADEP Increase	<b>5</b>	EDU
PWSA Increase	<b>7</b>	EDU

**Notes:**

1. In accordance with PADEP Sewage Facilities Planning Module, for community sewer system projects, one EDU is equal to a sewage flow of 400 gpd.

2. In accordance with the Pittsburgh Water and Sewer Authority Procedures Manual for Developers, one EDU is equal to a sewage flow of 300 gpd.

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**APPENDIX H**

**PWSA HYDRAULIC FLOW CALCULATIONS**

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Project: DPW 4th Division Maintenance Facility  
 Date: 5/21/2021  
 CEC Job #: 303-328

PREPARED BY: NBZ

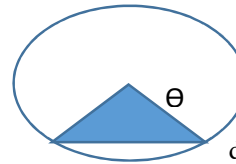
**HYDRAULIC CALCULATIONS (AVERAGE PRESENT FLOW MEASUREMENTS)**

Diameter of Sewer 48 inches  
 Slope of Sewer 0.0184 ft/ft  
 Type of Pipe Brick  
 Depth of Flow Observed 3.4 inches of flow

$$A = \frac{R^2(\Theta - \sin\Theta)}{2}$$

$$\Theta = 2 \cos^{-1} \left( \frac{R - d}{d} \right)$$

Where:  
 R = radius (ft)  
 d = depth (ft)



Θ = 1.08 Rads 61.7 Degrees  
 A = 0.39 sf

$$P = \text{Wetted Perimeter (ft)} = \frac{\pi D \Theta}{360}$$

Where:  
 D = diameter (ft)  
 Θ in degrees

P 2.16 ft

$$R = \text{Hydraulic Radius} = \frac{A}{P}$$

Where:  
 A = Cross Sectional Area (sf)  
 P = Wetted Perimeter (ft)

R 0.18

$$Q = \frac{1.486}{n} A R^{2/3} S^{1/2}$$

Where:  
 Q = discharge (cfs)  
 n = roughness coefficient  
 S = slope (ft/ft)  
 R = Hydraulic Radius (ft)

Q <sub>average Present</sub>	2 cfs	716 gpm
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**FULL FLOW CAPACITY SEWER CALCULATIONS**

$$Q = \frac{1.486}{n} A R^{2/3} S^{1/2}$$

Where:  
 Q = discharge (cfs)  
 n = roughness coefficient  
 S = slope (ft/ft)  
 R = Hydraulic Radius (ft)

Q <sub>FULL FLOW CAPACITY</sub>	158.3 cfs	71,054 gpm
---------------------------------	-----------	------------

Project: DPW 4th Division Maintenance Facility  
Date: 5/21/2021  
CEC Job #: 303-328

PREPARED BY: NBZ

### SUMMARY

#### Peak Design Capacity

$Q_{\text{Peak Design}}$  71,054 gpm 102,317,907 gpd

#### Average Design Capacity = Peak Design Capacity / 3.5

$Q_{\text{Average Peak Design}}$  20,301 gpm 29,233,688 gpd

#### Present Peak Flow

$Q_{\text{Present Peak Flow}}$  2,507 gpm 3,609,498 gpd

#### Present Average Flow = Present Peak Flow / 3.5

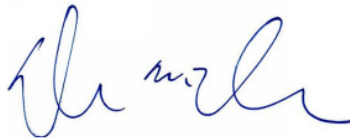
$Q_{\text{Present Average Flow}}$  716 gpm 1,031,285 gpd

#### Projected Peak Flow in 5 Years = (Present Peak Flow + Project Flow) \* 1.05

$Q_{\text{Projected Peak Flow 5 Year}}$  2,633 gpm 3,791,940 gpd

#### Project Average Flow in 5 Years = Projected Peak Flow in 5 Years / 3.5

$Q_{\text{Project Average Flow 5 Year}}$  752 gpm 1,083,411 gpd



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**APPENDIX I**

**PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION  
CORRESPONDENCE**

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# PROJECT REVIEW FORM

## Request to Initiate SHPO Consultation on State and Federal Undertakings

<b>SHPO USE ONLY</b>		Reviewers: _____ / _____
DATE RECEIVED: 1/15/21	DATE DUE: 1/29/21	
ER NUMBER: 2021-0949-003-A	HRSF: <input type="checkbox"/>	

REV: 07/2020

**SECTION A: PROJECT NAME & LOCATION**

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

Project Name DPW 4th. Division Maintenance Building County Allegheny Municipality City of Pittsburgh  
 Project Address 410 Mathews Ave. City/State/ Zip Pittsburgh PA 15210

**SECTION B: CONTACT INFORMATION & MAILING ADDRESS**

Name Nelson Zhukas Phone (412) 354-8093  
 Company Civil & Environmental Consultants, Inc. Fax  
 Street/PO Box 333 Baldwin Road Email nzhukas@cecinc.com  
 City/State/Zip Pittsburgh PA 15205 Email cc:

**SECTION C: PROJECT DESCRIPTION**

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

List all federal and state agencies and programs providing funds, permits, licenses.	Agency Type	Agency/Program/Permit Name	Project/Permit/Tracking Number (if applicable)
		State	PA DEP/Sewage Facilities Planning Module

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

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

Total acres of project area: 1.8 Total acres of earth disturbance: 1.8

Are there any buildings or structures within the project area?  Yes  No Approximate age of buildings: 1963

Does this project involve properties listed in or eligible for the National Register of Historic Places, or locally designated? Inventory here: <https://gis.penndot.gov/crgis>  
 Yes  No  Unsure  Name \_\_\_\_\_  
 Key Number \_\_\_\_\_

**Please email this form  
and pdf attachments to:  
RA-PH-PASHPO-ER@pa.gov**

Please be sure to save the Project Review Form so that it remains a digital document and retains its function as a fillable pdf. Do not print the form and scan as a pdf.

**Attachments – Please include the following information with this form**

- Map** – 7.5' USGS quad, streetmap, or parcel map showing the project's Area of Potential Effect
- Description/Scope of Work** – Narrative description of the project, including any ground disturbance and previous land use, and any potential to impact historic resources
- Site Plans/Drawings** – Indicate location and age of buildings, any proposed improvements, and past and present land use
- Photographs** – Digital photographs of all buildings and structures keyed to a site plan. If demolition or exterior changes are proposed to buildings more than 50 years old, please also include Abbreviated HRSF

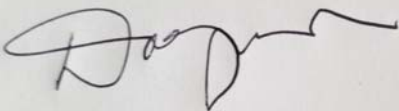
**SHPO RESPONSE (SHPO USE ONLY)**

There are **NO HISTORIC PROPERTIES** in the Area of Potential Effect  **SHPO REQUESTS ADDITIONAL INFORMATION** (see attached)

The project will have **NO EFFECT** on historic properties

The project will have **NO ADVERSE EFFECTS** on historic properties: \_\_\_\_\_ Key# \_\_\_\_\_

DIVISION CHIEF, ENVIRONMENTAL REVIEW:



DATE: 1/15/21

SHPO REVIEWER: SC

---

**APPENDIX J**

**PNDI PROJECT ENVIRONMENTAL REVIEW RECEIPT**

---

## 1. PROJECT INFORMATION

Project Name: **DPW 4th Division Maintenance Building**  
Date of Review: **12/30/2020 09:25:38 AM**  
Project Category: **Development, Other**  
Project Area: **1.34 acres**  
County(s): **Allegheny**  
Township/Municipality(s): **PITTSBURGH**  
ZIP Code:  
Quadrangle Name(s): **PITTSBURGH EAST**  
Watersheds HUC 8: **Upper Ohio**  
Watersheds HUC 12: **Sawmill Run**  
Decimal Degrees: **40.413763, -79.995675**  
Degrees Minutes Seconds: **40° 24' 49.5457" N, 79° 59' 44.4300" W**

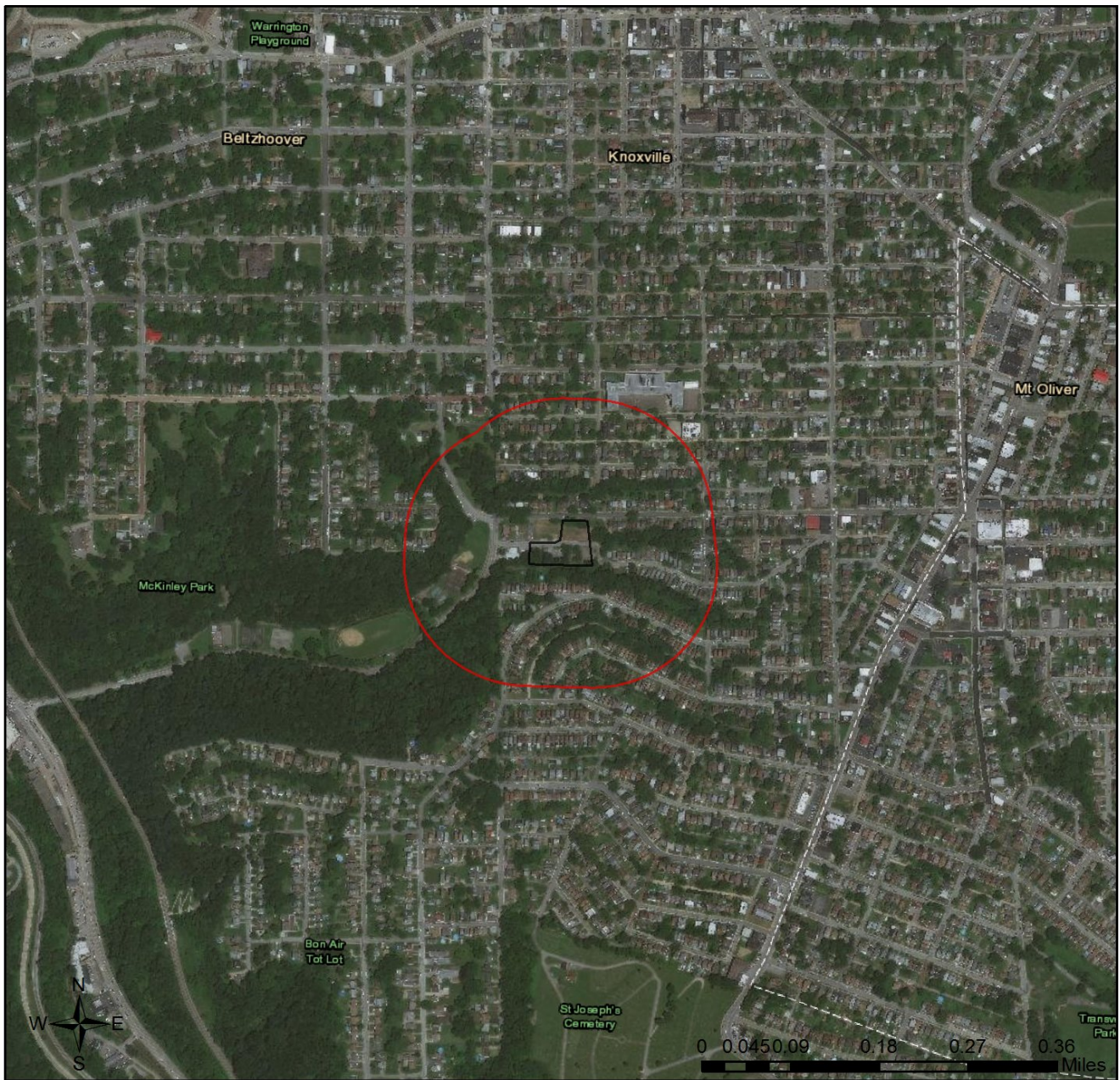
## 2. SEARCH RESULTS

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

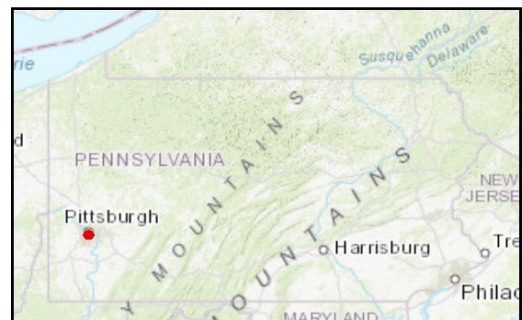
As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate no known impacts to threatened and endangered species and/or special concern species and resources within the project area. Therefore, based on the information you provided, no further coordination is required with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



## DPW 4th Division Maintenance Building



- Project Boundary
- Buffered Project Boundary



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community  
Sources: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community  
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China

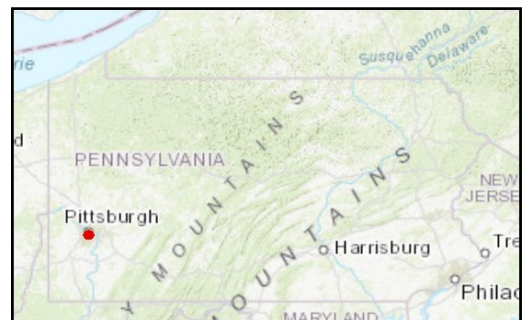


### DPW 4th Division Maintenance Building



- Project Boundary
- Buffered Project Boundary

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



## RESPONSE TO QUESTION(S) ASKED

**Q1:** The proposed project is in the range of the Indiana bat. Describe how the project will affect bat habitat (forests, woodlots and trees) and indicate what measures will be taken in consideration of this. Round acreages up to the nearest acre (e.g., 0.2 acres = 1 acre).

**Your answer is:** The project will affect 1 to 39 acres of forests, woodlots and trees.

**Q2:** Is tree removal, tree cutting or forest clearing of 40 acres or more necessary to implement all aspects of this project?

**Your answer is:** No

### 3. AGENCY COMMENTS

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

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

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

#### PA Fish and Boat Commission

##### RESPONSE:

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

#### U.S. Fish and Wildlife Service

##### RESPONSE:

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

## 4. DEP INFORMATION

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



## 5. ADDITIONAL INFORMATION

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

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

## 6. AGENCY CONTACT INFORMATION

### PA Department of Conservation and Natural Resources

Bureau of Forestry, Ecological Services Section  
400 Market Street, PO Box 8552  
Harrisburg, PA 17105-8552  
Email: [RA-HeritageReview@pa.gov](mailto:RA-HeritageReview@pa.gov)

### PA Fish and Boat Commission

Division of Environmental Services  
595 E. Rolling Ridge Dr., Bellefonte, PA 16823  
Email: [RA-FBPACENOTIFY@pa.gov](mailto:RA-FBPACENOTIFY@pa.gov)

### U.S. Fish and Wildlife Service

Pennsylvania Field Office  
Endangered Species Section  
110 Radnor Rd; Suite 101  
State College, PA 16801  
Email: [IR1\\_ESPenn@fws.gov](mailto:IR1_ESPenn@fws.gov)  
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  
Email: [RA-PGC\\_PNDI@pa.gov](mailto:RA-PGC_PNDI@pa.gov)  
NO Faxes Please

## 7. PROJECT CONTACT INFORMATION

Name: Nelson Zhukas  
Company/Business Name: Civil & Environmental Consultants Inc.  
Address: 333 Baldwin Road  
City, State, Zip: Pittsburgh PA 15208  
Phone: (412) 354 8043 Fax: ( )  
Email: Nzhukas@cecinc.com

## 8. CERTIFICATION

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

  
applicant/project proponent signature

3-24-21  
date



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**APPENDIX K**

**PLOT PLAN**

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**APPENDIX L**

**WATER SERVICE AVAILABILITY LETTER**

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VIA ELECTRONIC MAIL

July 29, 2021

Nelson Zhukas  
Civil & Environmental Consultants, Inc.  
333 Baldwin Road  
Pittsburgh, PA 15205

**Re:** Water Availability  
410 Mathews Avenue, Pittsburgh, PA 15210  
City of Pittsburgh Department of Public Works - 4th Division Maintenance Facility  
City of Pittsburgh – 30 Ward, Allegheny County

This letter is to advise that Pennsylvania American Water, Pittsburgh district, has an 8-inch water line available to provide service to the above referenced project.

Water service would be provided under our Rules and Regulations as approved by the Pennsylvania Public Utility Commission. Pennsylvania American Water is aware of the project, possesses capacity to serve the project and is willing to serve this project.

If additional demand and pressure requirements are expected, further review may be required. The Field Supervisor for this area is Jason Ciepley. He can be reached at 412-862-9099 and/or [Jason.Ciepley@amwater.com](mailto:Jason.Ciepley@amwater.com).

If you have any questions or require any additional information, please contact me.

Sincerely,

Jack R. Beal  
Sr. Superintendent of Field Operations  
Pennsylvania American Water  
500 Noblestown Road  
Carnegie, PA 15106  
412-883-4581 - Office  
412-888-9499 - Cell

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**APPENDIX M**

**RESOLUTION FOR PLAN REVISION FOR NEW LAND DEVELOPMENT**

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DEP Code No.

## RESOLUTION FOR PLAN REVISION FOR NEW LAND DEVELOPMENT

RESOLUTION OF THE (SUPERVISORS) (COMMISSIONERS) (COUNCILMEN) of Pittsburgh  
(TOWNSHIP) (BOROUGH) (CITY), Allegheny COUNTY, PENNSYLVANIA (hereinafter "the municipality").

**WHEREAS** Section 5 of the Act of January 24, 1966, P.L. 1535, No. 537, known as the *Pennsylvania Sewage Facilities Act*, as Amended, and the rules and Regulations of the Pennsylvania Department of Environmental Protection (DEP) adopted thereunder, Chapter 71 of Title 25 of the Pennsylvania Code, require the municipality to adopt an Official Sewage Facilities Plan providing for sewage services adequate to prevent contamination of waters of the Commonwealth and/or environmental health hazards from sewage wastes, and to revise said plan whenever it is necessary to determine whether a proposed method of sewage disposal for a new land development conforms to a comprehensive program of pollution control and water quality management, and

**WHEREAS** the City of Pittsburgh has proposed the development of a parcel of land identified as  
land developer

4<sup>th</sup> Division Maintenance Facility, and described in the attached Sewage Facilities Planning Module, and  
name of subdivision

proposes that such subdivision be served by: (check all that apply),  sewer tap-ins,  sewer extension,  new treatment facility,  individual onlot systems,  community onlot systems,  spray irrigation,  retaining tanks,  other, (please specify) \_\_\_\_\_

**WHEREAS**, City of Pittsburgh finds that the subdivision described in the attached  
municipality

Sewage Facilities Planning Module conforms to applicable sewage related zoning and other sewage related municipal ordinances and plans, and to a comprehensive program of pollution control and water quality management.

**NOW, THEREFORE, BE IT RESOLVED** that the (Supervisors) (Commissioners) (Councilmen) of the (Township) (Borough) (City) of Pittsburgh hereby adopt and submit to DEP for its approval as a revision to the "Official Sewage Facilities Plan" of the municipality the above referenced Sewage Facilities Planning Module which is attached hereto.

I \_\_\_\_\_, Secretary,  
(Signature)

Township Board of Supervisors (~~Borough Council~~) (City Councilmen), hereby certify that the foregoing is a true copy of the Township (Borough) (City) Resolution # \_\_\_\_\_, adopted, \_\_\_\_\_, 20\_\_\_\_\_.

Municipal Address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Seal of  
Governing Body*

Telephone \_\_\_\_\_

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**APPENDIX N**

**TRANSMITTAL LETTER FOR SEWAGE FACILITIES PLANNING  
MODULE**

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**TRANSMITTAL LETTER  
 FOR SEWAGE FACILITIES PLANNING MODULE**

DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) USE ONLY				
DEP CODE #	CLIENT ID #	SITE ID #	APS ID #	AUTH. ID #

TO: Approving Agency (DEP or delegated local agency)  
 DEP Southwest Regional Office  
 400 Waterfront Drive  
 Pittsburgh, PA 15222-4745

Date \_\_\_\_\_

Dear Sir/Madam:

Attached please find a completed sewage facilities planning module prepared by Nelson Zhukas \_\_\_\_\_  
(Name)  
 of Civil & Environmental Consultants, Inc. \_\_\_\_\_ for DPW 4<sup>th</sup> Division Maintenance Facility \_\_\_\_\_  
(Title) (Name)  
 a subdivision, commercial ,or industrial facility located in City of Pittsburgh, Allegheny \_\_\_\_\_  
 \_\_\_\_\_ County.  
(City, Borough, Township)

**Check one**

(i) The planning module, as prepared and submitted by the applicant, is approved by the municipality as a proposed  revision  supplement for new land development to its Official Sewage Facilities Plan (Official Plan), and is  adopted for submission to DEP  transmitted to the delegated LA for approval in accordance with the requirements of 25 Pa. Code Chapter 71 and the *Pennsylvania Sewage Facilities Act* (35 P.S. §750),

OR

(ii) The planning module will not be approved by the municipality as a proposed revision or supplement for new land development to its Official Plan because the project described therein is unacceptable for the reason(s) checked below:

**Check Boxes**

- Additional studies are being performed by or on behalf of this municipality which may have an effect on the planning module as prepared and submitted by the applicant. Attached hereto is the scope of services to be performed and the time schedule for completion of said studies.
- The planning module as submitted by the applicant fails to meet limitations imposed by other laws or ordinances, officially adopted comprehensive plans and/or environmental plans (e.g., zoning, land use, 25 Pa. Code Chapter 71). Specific reference or applicable segments of such laws or plans are attached hereto.
- Other (attach additional sheet giving specifics).

*Municipal Secretary: Indicate below by checking appropriate boxes which components are being transmitted to the approving agency.*

- Resolution of Adoption
- Module Completeness Checklist
- 2 Individual and Community Onlot Disposal of Sewage
- 3 Sewage Collection/Treatment Facilities
- 3s Small Flow Treatment Facilities
- 4A Municipal Planning Agency Review
- 4B County Planning Agency Review
- 4C County or Joint Health Department Review

\_\_\_\_\_  
 Municipal Secretary (print)

\_\_\_\_\_  
 Signature

\_\_\_\_\_  
 Date



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**APPENDIX O**  
**CLEARANCE LETTERS**

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May 25, 2021

Dana Klann  
CEC, Inc.  
333 Baldwin Road  
Pittsburgh, PA 15205


Subject: Sewage Facilities Planning Module (SFPM)  
Approval for Collection System Flows  
Project Name: 410 Mathews Avenue (Project)  
PWSA Project No.: 20014.35

Dear Mr. Klann:

Pursuant to your request, we have reviewed the SFPM and determined that the Project will not create a dry-weather hydraulic overload within the next five (5) years for any collection facility owned by the Pittsburgh Water and Sewer Authority (PWSA). We have enclosed for your use the electronically signed "Section J – Chapter 94 Consistency Determination". Please be advised that this approval is limited to the collection system portion of the SFPM.

Our review was based on information provided by others under the assumption that this information was accurate and complete. Should you have any questions, please do not hesitate to contact me directly at x5532 or RHerring@pgh2o.com.

Sincerely,

 Robert Herring  
2021.05.25  
11:18:58 -04'00'

Robert Herring, PE, PMP  
Project Manager

Enclosures

cc: Barry King, PE, PMP – PWSA (via email)  
Kate Mechler, PE – PWSA (via email)  
Robert Herring, PE, PMP – PWSA (via email)  
Thomas Flanagan – DEP (via email)  
eBuilder – Filing System (via email)

**To:** Barry King, PE, PMP - Director of Engineering and Construction

**From:** Robert Herring, PE, PMP – Project Manager

**Date:** May 21, 2021

**Subject:** Department of Environmental Protection (DEP) - Sewage Facilities  
Planning Module (SFPM)

Chapter 94 Consistency Determination

Project Name: 410 Mathews Avenue (Project)

Project Address: 410 Mathews Avenue, Pittsburgh, PA 15210

PWSA Project Number: 20014.35

The Pittsburgh Water and Sewer Authority (PWSA) received a SFPM application for the aforementioned Project. In accordance with Title 25 of the Pennsylvania Code, the PWSA is required to prepare an annual Wasteload Management Report on the collection and conveyance of wastewater relative to available capacity. Our review of the SFPM was conducted to understand how the Project will impact available dry-weather capacity and whether the proposed flows will contribute to a dry-weather hydraulic overload within the next five (5) years. Please note that a dry-weather hydraulic overload shall require both the denial of the SFPM and the submission of a Corrective Action Plan to the DEP.

We have determined that the Project will not contribute to a dry-weather hydraulic overload within the next five years. Please refer to the enclosed hydraulic calculations for additional information. Upon your approval, please sign and return the enclosed "Section J - Chapter 94 Consistency Determination" page from the SFPM.

Our review was based on information provided by others under the assumption that this information was accurate and complete. Should you have any questions, please do not hesitate to contact me directly.

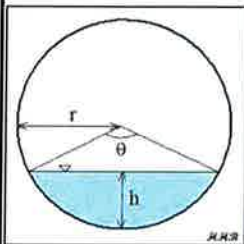
Enclosures

**Sewage Facilities Planning Module**  
**Chapter 94 Consistency Determination**  
**Hydraulic Calculations Spreadsheet for Average Present Flow Measurements**

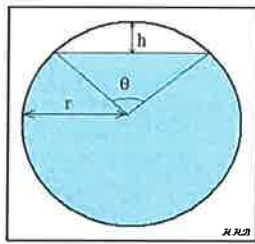
**PROJECT NAME:** 410 Mathews Avenue  
**PWSA PROJECT NUMBER:** 20014.35  
**PWSA REVIEWER:** Robert Herring, PE, PMP  
**DATE:** May 21, 2021

**LEGEND:** Input Data Output Data

**Section A: Manning Equation for Partially Filled Pipes**



Partially Full Pipe Flow Parameters  
(Less Than Half Full)



Partially Full Pipe Flow Parameters  
(More Than Half Full)

Variable	Units	Description
Q	ft <sup>3</sup>	Volumetric flowrate
n	Unitless	Manning Roughness Coeff.
A	ft <sup>2</sup>	Cross-Sectional Area of Flow
R	ft	Hydraulic Radius
S	ft/ft	Slope of Hydraulic Grade Line
P	ft	Wetted Perimeter of "A"
r	ft	Radius
h	ft	Depth of Flow or Headspace
θ	radians	Central Angle

$$Q = \left(\frac{1.49}{n}\right) \times A \times R^{2/3} \times S^{1/2} \qquad R = \frac{A}{P} \qquad \theta = 2 \times \cos^{-1} \left(\frac{r-h}{r}\right)$$

$$A_{<50\% Full} = \frac{r^2(\theta - \sin \theta)}{2} \qquad \text{OR} \qquad A_{>50\% Full} = \pi \times r^2 \times \frac{r^2(\theta - \sin \theta)}{2}$$

$$P_{<50\% Full} = r \times \theta \qquad P_{>50\% Full} = (2 \times \pi \times r) - (r \times \theta)$$

**Section B: Data for Calculations**

Peaking Factor, P.F.	
Sanitary Sewers	3
Combined Sewers	3.5

Proposed Project Flows		
Variable	Value	Units
Q <sub>p</sub>	1,873	gpd

Variable	Value	Units
Material	Brick	
n	0.016	unitless
S	0.019	ft/ft
h	0.250	ft
D	4.00	ft
P.F.	3.5	unitless

**Section C: Calculations for Design and/or Permitted Capacities**

Variable	Description	Definition
Q <sub>d, avg</sub>	Design Capacity, Average	= full pipe flow conditions / peaking factor
Q <sub>d, peak</sub>	Design Capacity, Peak	full pipe flow conditions

Design Capacity, Average

Design Capacity, Peak

Variable	Value	Unit
Q <sub>d, avg</sub>	29,787,250	gpd

Variable	Value	Unit
D	4.000	ft
r	2.000	ft
A	12.566	ft <sup>2</sup>
P	12.566	ft
R	1.000	ft
Q <sub>d, peak</sub>	161	cfs
Q <sub>d, peak</sub>	104,255,374	gpd

#### Section D: Calculations for Present Flows

Variable	Description	Definition
Q <sub>ex, avg</sub>	Present Flows, Average	existing flow conditions per site investigations
Q <sub>ex, peak</sub>	Present Flows, Peak	= existing flow conditions x peaking factor

Present Flows, Average		
Variable	Value	Unit
D	4.000	ft
r	2.000	ft
θ	1.01	rad
h/D	0.0625	ft/ft
A	0.33	ft <sup>2</sup>
P	2.02	ft
R	0.162	ft
Q <sub>ex, avg</sub>	1	cfs
Q <sub>ex, avg</sub>	805,478	gpd

Present Flows, Peak		
Variable	Value	Unit
Q <sub>ex, peak</sub>	2,819,172	gpd

#### Section E: Calculations for Projected Flows in Five (5) Years

Variable	Description	Definition
Q <sub>proj, avg</sub>	Projected Flows in Five (5) Years, Average	= Q <sub>proj, peak</sub> ÷ P.F.
Q <sub>proj, peak</sub>	Projected Flows in Five (5) Years, Peak	= (Q <sub>ex, peak</sub> + Q <sub>p</sub> ) x 1.05

Projected Flow Calculations		
Variable	Value	Unit
Q <sub>proj, avg</sub>	846,313	gpd
Q <sub>proj, peak</sub>	2,962,097	gpd

#### Section F: Compare Results with Applicant's Submission

Variable	PWSA, gpd	Applicant, gpd	Difference, gpd	Difference, %
Q <sub>d, avg</sub>	29,787,250	29,233,688	553,562	2%
Q <sub>d, peak</sub>	104,255,374	102,317,907	1,937,467	2%
Q <sub>ex, avg</sub>	805,478	1,031,285	-225,807	-28%
Q <sub>ex, peak</sub>	2,819,172	3,609,498	-790,326	-28%
Q <sub>proj, avg</sub>	846,313	1,083,411	-237,098	-28%
Q <sub>proj, peak</sub>	2,962,097	3,791,940	-829,843	-28%



June 28, 2021

Nelson Zhukas  
Civil & Environmental Consultants, Inc.  
333 Baldwin Road  
Pittsburgh, PA 15205

**Members of the Board**

Corey O'Connor  
*Chair Person*

Rep. Harry Readshaw  
Sylvia C. Wilson  
Shannah Tharp-Gilliam, Ph.D.  
Jack Shea  
John Weinstein

Arletta Scott Williams  
*Executive Director*

Karen Fantoni, CPA, CGMA  
*Director  
Finance & Administration*

Jan M. Oliver  
*Director  
Regional Conveyance*

Douglas A. Jackson, P.E.  
*Director  
Operations & Maintenance*

Kimberly N. Kennedy, P.E.  
*Director  
Engineering & Construction*

Michelle M. Buys, P.E.  
*Director  
Environmental Compliance*

Jeanne K. Clark  
*Director  
Governmental Affairs*

Joseph Vallarian  
*Director  
Communications*

**Re: DPW 4<sup>th</sup> Division Maintenance Facility  
410 Mathews Avenue, Pittsburgh, PA 15210  
PA DEP Sewage Facilities Planning Module  
ALCOSAN Regulator Structure S-29-00**

Dear Mr. Zhukas:

We have reviewed the Component 3 Planning Module for the referenced project to be located in the City of Pittsburgh. The project will generate a peak flow of 1,873 GPD in the ALCOSAN Saw Mill Run Interceptor and Woods Run Treatment Plant.

The capacity of the ALCOSAN regulator at S-29-00 is approximately 6.01 MGD. The estimated peak dry weather flow is approximately .232 MGD. Dry weather capacity exists for this connection. However, the ALCOSAN Saw Mill Run Interceptor and the Woods Run Treatment Plant do not have the capacity for the flows generated during wet weather periods. This limitation will be addressed as ALCOSAN implements its Clean Water Plan.

ALCOSAN has completed and signed the sections required in the Component 3 module and requests that this letter be made part of the planning module submission. If you have any questions regarding this matter, please contact me at 412-732-8046.

Sincerely,

**ALLEGHENY COUNTY SANITARY AUTHORITY**

Joseph A. Sparbanie, P.E.  
Civil Engineer

Attachment

cc: T. Dean (w/o attachment) B. King/ PWSA (w/o attachment)  
D. Thornton (w/o attachment) T. Flanagan/ PaDEP (w/o attachment)  
M. Lichte (w/o attachment) F. Fields/ ACHD (w/o attachment)



COUNTY OF



ALLEGHENY

RICH FITZGERALD  
COUNTY EXECUTIVE

July 2, 2021

Dana M. Klann, P.E., CPESC  
Civil & Environmental Consultants, Inc.  
333 Baldwin Road  
Pittsburgh, PA 15205-1751

**RE: SEWAGE FACILITIES PLANNING MODULE; ALLEGHENY COUNTY  
DPW 4<sup>th</sup> Division Maintenance Facility, City of Pittsburgh,**

Dear Ms. Klann:

Enclosed is a signed copy of Component 4C, County or Joint County Health Department Review, for the above-referenced development. This Planning Module Component was received on July 1, 2021. The project proposes the following:

Project Description:	DPW 4 <sup>th</sup> Division Maintenance Facility. Proposing the construction of a new maintenance building, material storage areas, parking areas, site utilities and landscaping located at 410 Mathews Avenue in the City of Pittsburgh, Allegheny County.
Sewage Flow:	1,873 GPD
Conveyance:	The flow from this site will be conveyed to the Pittsburgh Water & Sewer Authority (PWSA) collection system to the ALCOSAN POC S-29 to the Saw Mill Run Interceptor and then to the ALCOSAN Treatment Plant at Woods Run.
Sewer's Owner:	PWSA (collection) and ALCOSAN (interceptor)
Name of Sewage Treatment Plant:	ALCOSAN

Please be advised that a permit must be obtained from the Allegheny County Health Department's (ACHD) Plumbing Section prior to commencing any plumbing work for the proposed project. Plumbing work for which an ACHD Plumbing Permit must be obtained includes any plumbing work done on the site and any sewers, which will not be owned and operated by a municipality or a sewer authority.



DEBRA BOGEN, MD, FAAP, FABM, DIRECTOR  
ALLEGHENY COUNTY HEALTH DEPARTMENT

WATER POLLUTION CONTROL & SOLID WASTE MANAGEMENT  
3901 PENN AVENUE • BUILDING 5 • PITTSBURGH, PA 15224-1318  
PHONE: 412.578.8040 • FAX: 412.578.8053  
WWW.ALLEGHENYCOUNTY.US/HEALTHDEPARTMENT





Dana M. Klann, P.E., CPESC  
July 2, 2021  
Page 2

In addition, it should be noted that the approval of this sewage facilities planning module does not include approval of pipe size and/or type. Approval for pipe size and/or type must be obtained by filing a specific plumbing plan with the ACHD's Plumbing Section. If you should have any questions relative to ACHD's plumbing requirements, you can contact Ivo Miller, Plumbing Program Manager at 412-578-8393.

The ACHD has no objection to the approval of this project. If you have any questions, please call me at 412-578-8046.

Sincerely,



Freddie Fields, M.B.A.  
Environmental Health Engineer III  
Water Pollution Control & Solid Waste Management

FF/cb  
Enclosure

cc: Thomas Flanagan, PA Department of Environmental Protection w/attachment (electronically)  
Ivo Miller, ACHD w/attachment (electronically)