



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  
October 20, 2010

Mariya Skocik  
Glance Associates, Inc.  
3705 Trindle Road  
Camp Hill, PA 17011

TO EXPEDITE REVIEW USE  
BHP REFERENCE NUMBER

Re: File No. ER 2011-0022-041-A  
DEP Construction Permits: South Middleton Municipal  
Authority Enhanced BNR Upgrade-Waste Water  
Treatment Plant, South Middleton Twp., Cumberland  
Co.

Dear Ms. Skocik:

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.

There is a high probability that prehistoric and historic archaeological resources are located in this project area. In our opinion, the activity described in your proposal should have no effect on such resources. Should the scope of the project be amended to include additional ground disturbing activity this office should be contacted immediately and a Phase I Archaeological Survey may be necessary to locate all potentially significant archaeological resources.

In our opinion no evaluation of historic structures will be necessary for this project area.

If you need further information in this matter please consult Doug McLearen at (717) 772-0925.

Sincerely,

Douglas C. McLearen, Chief  
Division of Archaeology &  
Protection

cc: South Middleton Township Municipal Authority, 345 Criswell Drive, Boiling  
Springs, PA 17007-0008  
DEP, Southcentral Regional Office

DCM/tmw

September 29, 2010  
Project No. 1131003

PA Historic & Museum Commission  
Bureau for Historic Preservation  
400 North Street  
Commonwealth Keystone Building 2nd Floor  
Harrisburg, PA 17120-0093

CERTIFIED MAIL: 7009 1680 0000 6469 3955

RE: South Middleton Township Municipal Authority  
Waste Water Treatment Plant Upgrade

Dear Reviewer:

On the behalf of the South Middleton Township Municipal Authority, we are submitting the following items for your review in accordance with Section 106 of National Historic Preservation Act of 1966:

- Request to Initiate Consultation in Compliance with the State History Code and Section 106 of the National Historical Preservation Act.
- Narrative description of the project.
- Photographs of the site.
- Project Location Map

Should you have any questions, or additional information is required, please contact this office.

Sincerely,



Mariya Skocik

Cc: South Middleton Municipal Authority  
Lance Hoover, Glace Associates, Inc.

## ***SOUTH MIDDLETON TOWNSHIP MUNICIPAL AUTHORITY ENHANCED BNR FACILITY UPGRADE***

The South Middleton Township Municipal Authority, located in south-central Cumberland County, provides sanitary sewer service to more than 3,000 residents within South Middleton Township and Monroe Township, including Boiling Springs Pennsylvania. The existing wastewater treatment facility is an extended air activated sludge system, which utilizes long concrete tanks (with aeration) to provide the required treatment. The Municipal Authority has recently received a new NPDES permit, requiring compliance with the new Chesapeake Bay Nutrient Loading regulations. In addition, the treatment facility is located along the Yellow Breeches, a nationally renowned and exceptional quality Pennsylvania fishery. The age and treatment capabilities of the existing treatment facility will make compliance with the Chesapeake Bay Nutrient Loading regulations nearly impossible. Additionally, the Municipal Authority believes strongly that exceptional quality treatment of the incoming waste stream is critical in protecting the Yellow Breeches and its associated wildlife.

As a result, the Municipal Authority has decided to complete a comprehensive upgrade to the existing treatment facility, which will incorporate Enhanced Biological Nutrient Removal (EBNR) technology. The upgrades will include construction of the following: screening and grit removal facilities, influent pumping station, clarifiers, filters, ultra-violet disinfection facilities, digesters, waste thickening and de-watering facilities. Most importantly, the biological treatment process will be converted into a 5-stage Integrated Fixed Film Activated Sludge (IFAS) process for enhanced total nitrogen and total phosphorus removal. The upgrades are being designed to provide exceptional effluent quality as follows: Total Nitrogen < 3.3 mg/L, Total Phosphorus < 0.2 mg/L.

The project will re-use and renovate the existing biological treatment tanks, as well as an existing filter building and the existing laboratory and control building.

The following items have been completed, which indicates the passion of the Municipal Authority to be ready to move quickly in obtaining the needed permits and funding in order to start construction of the upgrades as soon as possible.

- ❖ The Municipal Authority has successfully completed a pilot study of the 5-stage IFAS process.
- ❖ The Municipal Authority has completed a comprehensive treatment feasibility study.
- ❖ The Municipal Authority has authorized design to start, and has begun investigating the potential funding options.
- ❖ Cost estimates have been completed, with adjustments made to account for inflation.

<b>BHP Use Only</b>
<b>ER #</b>

**Request to Initiate Consultation in Compliance with the State History Code and  
Section 106 of the National Historic Preservation Act**

<b>Applicant Information (print neatly, this will be used in the return envelope)</b>			
Applicant Name	South Middleton Township Municipal Authority		
Street Address	345 Criswell Drive		
City	Boiling Springs	Phone Number	717-258-6476
State/ZIP	PA 17007-0008		

<b>Contact Person to Receive Response (if applicable) (print neatly, this will be used in the return envelope)</b>			
Name/Company	Mariya Skocik/ Glace Associates		
Street Address	3705 Trindle Road		
City	Camp Hill	Phone Number	717-731-1579
State/ZIP	PA 17011	Fax Number	717-731-1348

<b>Project Information</b>			
Project Title	Enhanced BNR Upgrade – Waste Water Treatment Plant		
Project Location and/address	345 Criswell Drive Boiling Springs, PA 17007-0008		
<b>Municipality</b>	South Middleton Township Municipal Authority	<b>County Name</b>	Cumberland County
If this project was ever reviewed before, include previous ER #			

<b>Project Type (Check all that apply)</b>			
<b>Will Your Project Be Government Funded/Sponsored or On Government Land?</b>			
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <b>Specify Agency and Program Name Below</b>			
State Agency:	_____	Program:	_____
Federal Agency:	_____	Program:	_____
Local/Other: _____			
<b>Will Your Project Require Permits or Approvals?</b>			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <b>Specify Agency and/or Program Name Below</b>			
Anticipated Permits:	Construction Permits		
State Agency:	PA DEP	Program:	_____
Federal Agency:	_____	Program:	_____
<b>Agency Office to Receive Copy of Response (Check all that apply)</b>			
<b>Army Corps of Engineers:</b> <input type="checkbox"/> Philadelphia <input type="checkbox"/> Baltimore <input type="checkbox"/> Pittsburgh			

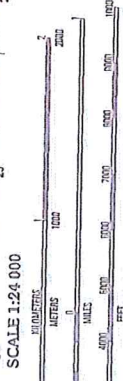
Pennsylvania Historical & Museum Commission  
Bureau for Historic Preservation

<b>DEP Office:</b>	<input type="checkbox"/> Central Office	<input checked="" type="checkbox"/> Regional Office:	Southcentral
<input type="checkbox"/> District Mining Office:	_____	<input type="checkbox"/> Oil & Gas Office:	_____
<input type="checkbox"/> Other: (provide address)	_____		





Produced by the United States Geological Survey  
 in cooperation with Pennsylvania Department of  
 Conservation and Natural Resources, Bureau of  
 Topographic and Geologic Survey  
 Map 1589, compiled 1999. Planimetry derived from imagery  
 as of 2001. Survey control current as of 1952  
 North American Datum of 1983 (NAD 83). Projection and  
 datum: Universal Transverse Mercator, zone 18  
 (south zone). Pennsylvania Coordinate System of 1983  
 (south zone)  
 North American Datum of 1927 (NAD 27) is shown by dashed  
 contour lines. The value of the shift between NAD 83 and  
 NAD 27 for this area is 1.81 meters. Elevation values are  
 National Geodetic Survey (NGS) datum.  
 There may be private buildings within the boundaries of the  
 National or State reservations shown on this map.  
 Houses of worship, schools, and other labeled buildings verified 1992.



<b>SOUTH MIDDLETON TOWNSHIP MUNICIPAL AUTHORITY CUMBERLAND COUNTY, PENNSYLVANIA</b>			
<b>PROJECT LOCATION</b>			
<b>SCALE</b>	<b>DATE</b>	<b>FILE CODE</b>	<b>PLAN NO.</b>
AS SHOWN	SEP., 2010	1131003	1
<b>GLACE ASSOCIATES, INC., CAMP HILL, PA.</b>			

**COMPUTER DRAWING FILE NAME:**  
 LOCATION PLAN.DWG

South Middleton Township Municipal  
Authority, Cumberland County, Pennsylvania

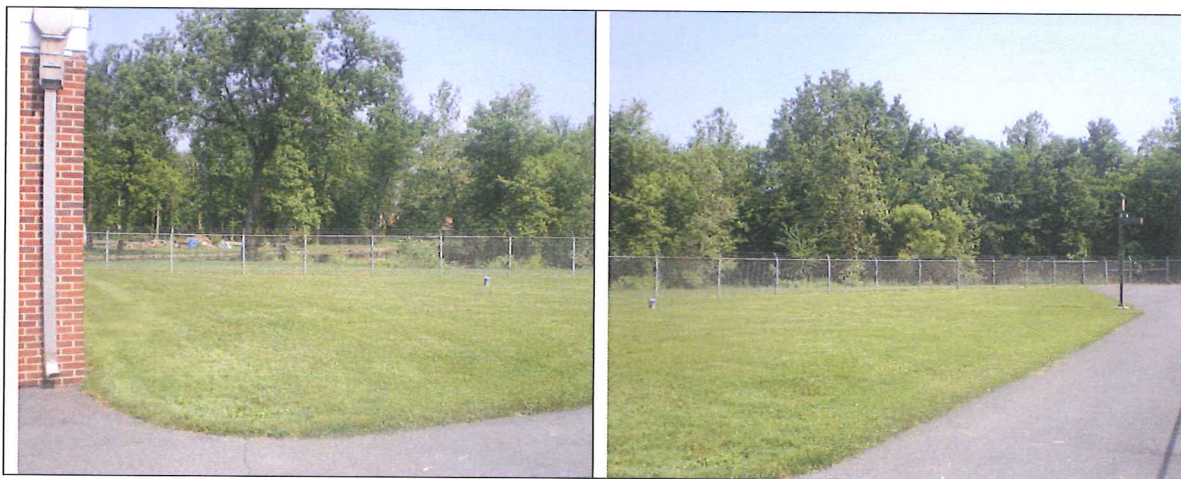
Waste Water Treatment Plant Upgrade

Photographs for Pennsylvania Historical and  
Museum Commission Review

September 2010



The area between the existing operations building (on the left) and the existing clarifiers (on the right) is the proposed location for the open top equalization tank construction





The area between the existing filter building (bottom picture on the right) and the fence on the northern side of the plant is the proposed site for the construction of the clarifiers. The existing filter building is proposed to be converted into tertiary filter system or UV disinfection system.



The series of pump systems are proposed to be constructed between the clarifiers (see picture above) and the existing garage and maintenance building on the south-western side of the plant

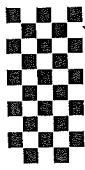


The existing storm water collection system located behind the storage building on the north-east side on the plant





The area along the fence on the south-western side of the plant is proposed to be used for the installation of the head works



**pennsylvania**  
DEPARTMENT OF CONSERVATION  
AND NATURAL RESOURCES

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BUREAU OF FORESTRY

**PNDI Number:20100607247290**

July 8, 2010

Lance Hoover  
Glance Associates, inc.  
Fax 717-731-1348

Re: South Middleton Sewage Plan Upgrade  
Monroe Township, Cumberland County

Dear Mr. Hoover,

Thank you for the submission of the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Receipt Number 20100607247290 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). If the proposed work has not changed and no additional information concerning listed species is found, the project will be cleared for PNDI requirements under this agency for an additional year.

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](http://www.naturalheritage.state.pa.us).

Sincerely,

Andrew Rohrbaugh, Environmental Review Specialist FOR Chris Firestone, Wild Plant Program Mgr.  
Ph: 717-705-2823 ~ [c-arohrbau@state.pa.us](mailto:c-arohrbau@state.pa.us)

## 1. PROJECT INFORMATION

Project Name: **SOUTH MIDDLETON TOWNSHIP SEWAGE PLAN UPGRADE**

Date of review: **6/7/2010 1:48:53 PM**

Project Category: **Waste Transfer, Treatment, and Disposal, Liquid waste/Effluent, Wastewater treatment plant (construction, expansion or modification)**

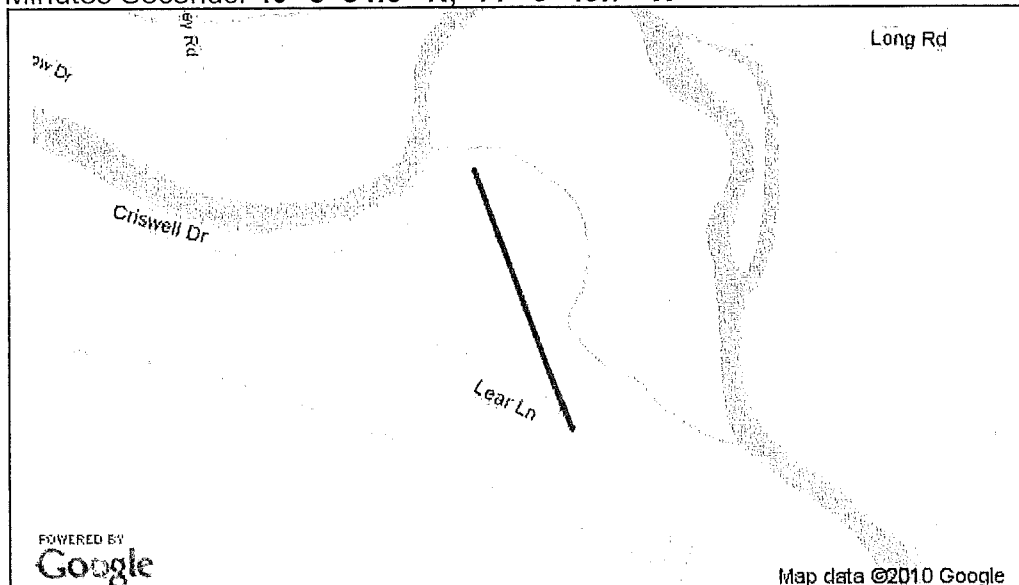
Project Length: **852.9 feet**

County: **Cumberland Township/Municipality: Monroe**

Quadrangle Name: **MECHANICSBURG ~ ZIP Code: 17007**

Decimal Degrees: **40.148504 N, -77.097136 W**

Degrees Minutes Seconds: **40° 8' 54.6" N, -77° 5' 49.7" W**



## 2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	No Known Impact	No Further Review Required
PA Department of Conservation and Natural Resources	<b>Potential Impact</b>	<b>FURTHER REVIEW IS REQUIRED, See Agency Response</b>
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 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.

### 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.

#### 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

**DCNR Species:**

**Scientific Name:** Potamogeton richardsonii

**Common Name:** Red-head Pondweed

**Current Status:** Threatened

**Proposed Status:** Special Concern Species\*

**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).

#### 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.

\* 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)

N/A 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

N/A 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

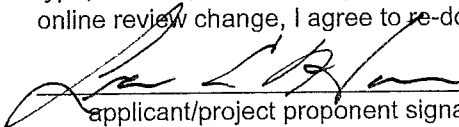
Bureau of Wildlife Habitat Management  
Division of Environmental Planning and Habitat Protection  
2001 Elmerton Avenue, Harrisburg, PA. 17110-9797  
Fax:(717) 787-6957

### 7. PROJECT CONTACT INFORMATION

Name: Lance Hoover  
Company/Business Name: Glace Associates, Inc.  
Address: 3705 Trindle Rd  
City, State, Zip: Camp Hill, PA, 17011  
Phone:( 717 ) 731-1579 Fax:( 717 ) 731-1348  
Email: lance@glaceeng.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

6-18-10  
date

## ***SOUTH MIDDLETON TOWNSHIP MUNICIPAL AUTHORITY ENHANCED BNR FACILITY UPGRADE***

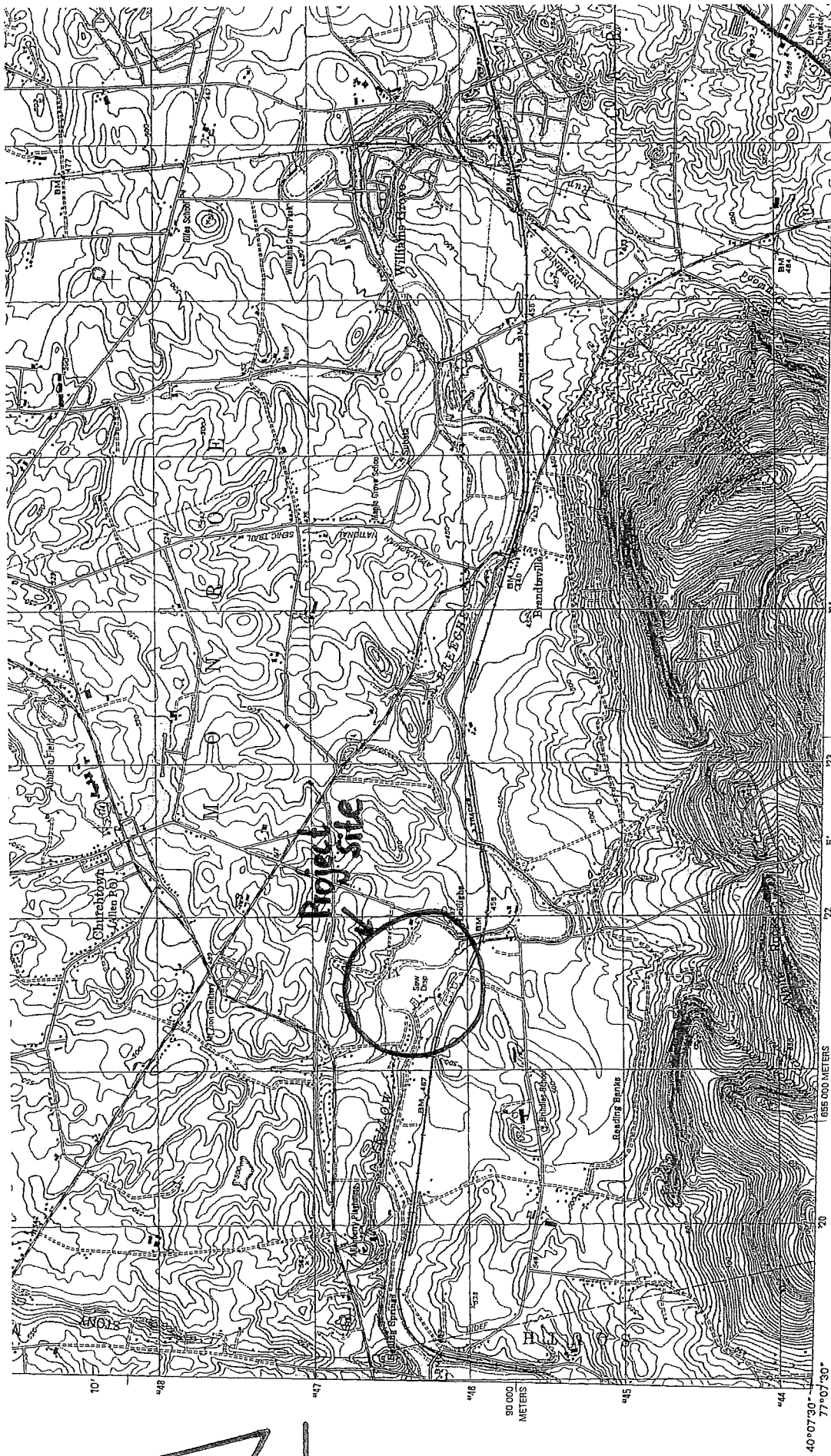
The South Middleton Township Municipal Authority, located in south-central Cumberland County, provides sanitary sewer service to more than 3,000 residents within South Middleton Township and Monroe Township, including Boiling Springs Pennsylvania. The existing wastewater treatment facility is an extended air activated sludge system, which utilizes long concrete tanks (with aeration) to provide the required treatment. The Municipal Authority has recently received a new NPDES permit, requiring compliance with the new Chesapeake Bay Nutrient Loading regulations. In addition, the treatment facility is located along the Yellow Breeches, a nationally renowned and exceptional quality Pennsylvania fishery. The age and treatment capabilities of the existing treatment facility will make compliance with the Chesapeake Bay Nutrient Loading regulations nearly impossible. Additionally, the Municipal Authority believes strongly that exceptional quality treatment of the incoming waste stream is critical in protecting the Yellow Breeches and its associated wildlife.

As a result, the Municipal Authority has decided to complete a comprehensive upgrade to the existing treatment facility, which will incorporate Enhanced Biological Nutrient Removal (EBNR) technology. The upgrades will include construction of the following: screening and grit removal facilities, influent pumping station, clarifiers, filters, ultra-violet disinfection facilities, digesters, waste thickening and de-watering facilities. Most importantly, the biological treatment process will be converted into a 5-stage Integrated Fixed Film Activated Sludge (IFAS) process for enhanced total nitrogen and total phosphorus removal. The upgrades are being designed to provide exceptional effluent quality as follows: Total Nitrogen < 3.3 mg/L, Total Phosphorus < 0.2 mg/L.

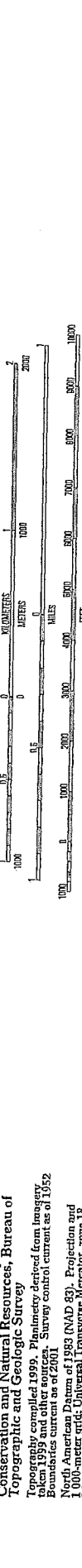
The project will re-use and renovate the existing biological treatment tanks, as well as an existing filter building and the existing laboratory and control building.

The following items have been completed, which indicates the passion of the Municipal Authority to be ready to move quickly in obtaining the needed permits and funding in order to start construction of the upgrades as soon as possible.

- ❖ The Municipal Authority has successfully completed a pilot study of the 5-stage IFAS process.
- ❖ The Municipal Authority has completed a comprehensive treatment feasibility study.
- ❖ The Municipal Authority has authorized design to start, and has begun investigating the potential funding options.
- ❖ Cost estimates have been completed, with adjustments made to account for inflation.



40°07'30" 77°07'30" 685 000 METERS 720 723 724 725 727 2'30"



**Project Site**

**SOUTH MIDDLETON TOWNSHIP  
MUNICIPAL AUTHORITY  
CUMBERLAND COUNTY, PENNSYLVANIA**

**LOCATION PLAN**

Produced by the United States Geological Survey in cooperation with Pennsylvania Department of Conservation and Natural Resources, Bureau of Topographic and Geologic Survey

Topography compiled 1999. Planimetry derived from imagery and other sources. Survey control current as of 1952

North American Datum of 1983 (NAD 83). Projection and datum are as shown on the map.

1:000-meter grid; Universal Transverse Mercator (UTM) projection; Zone 18N

2:500-meter tickler; Pennsylvania Coordinate System of 1983 (south zone)

North American Datum of 1927 (NAD 27) is shown by dashed lines. The values of the shift between NAD 83 and NAD 27 for 7' are shown by dashed lines.

National Geodetic Survey NAHD09N are obtainable from the National Geodetic Survey.

There may be private buildings within the boundaries of the National or State reservations shown on this map.

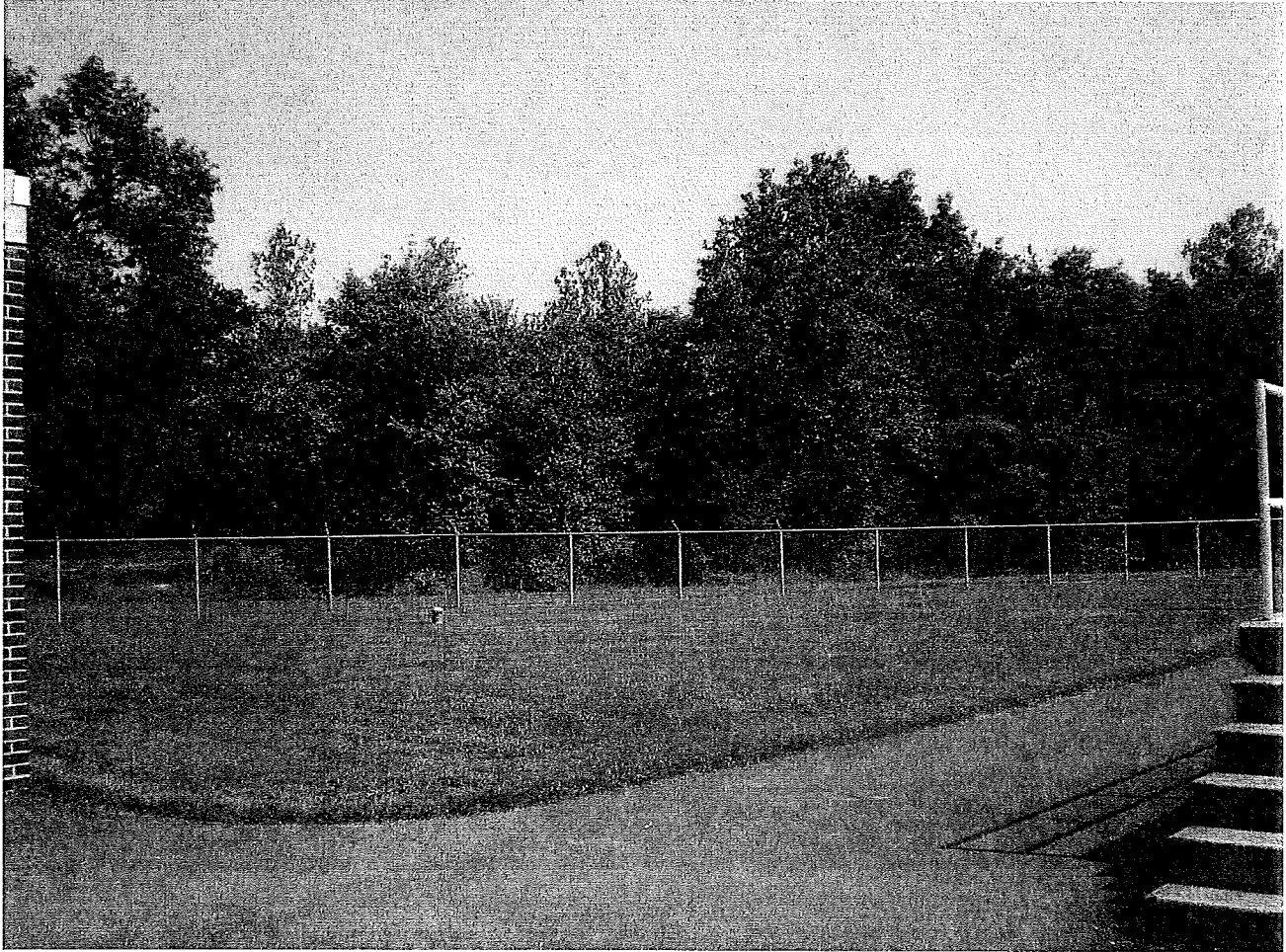
Houses of worship, schools, and other labeled buildings verified 1952

South Middleton Township Municipal  
Authority, Cumberland County, Pennsylvania

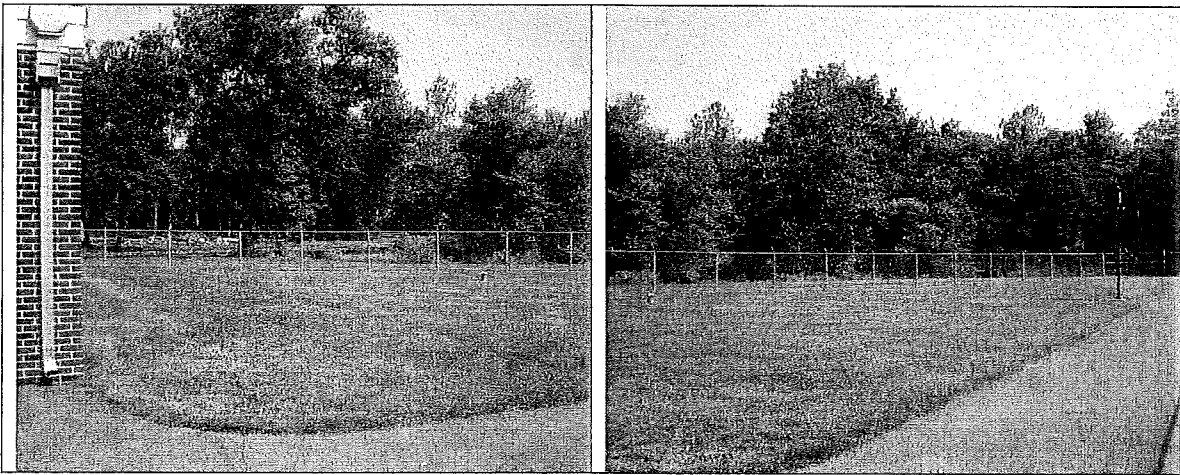
Sewage Plant Upgrade

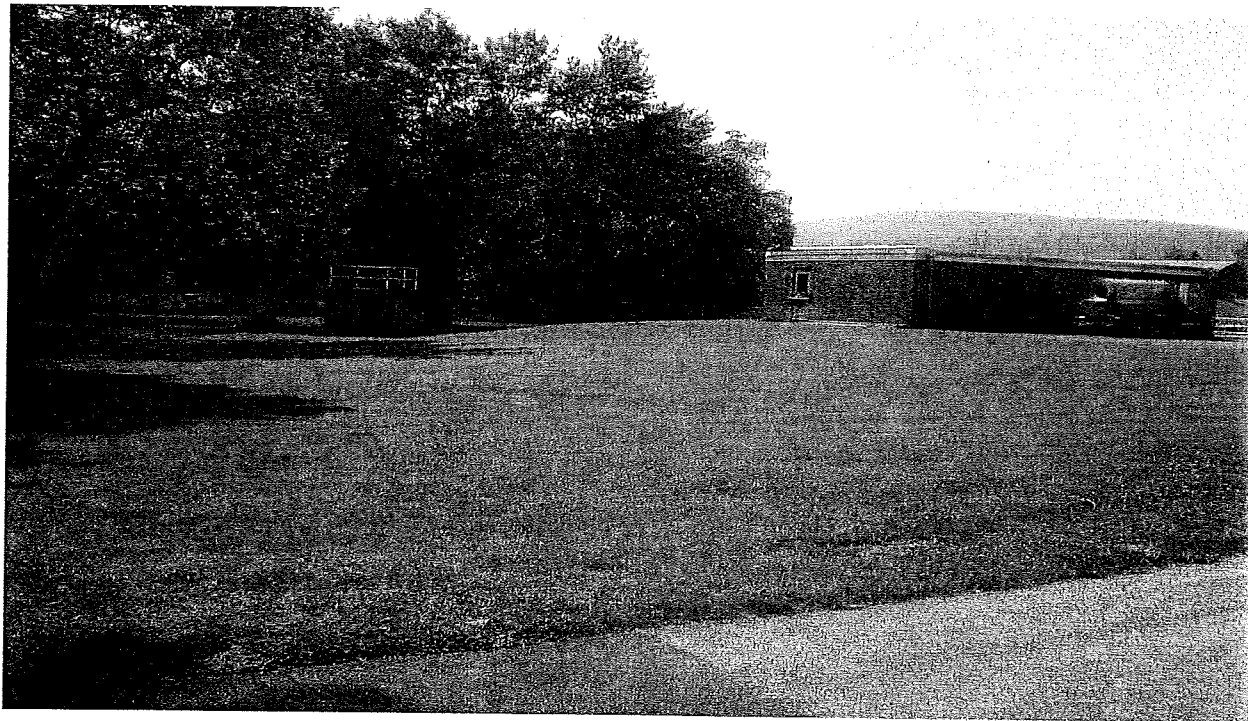
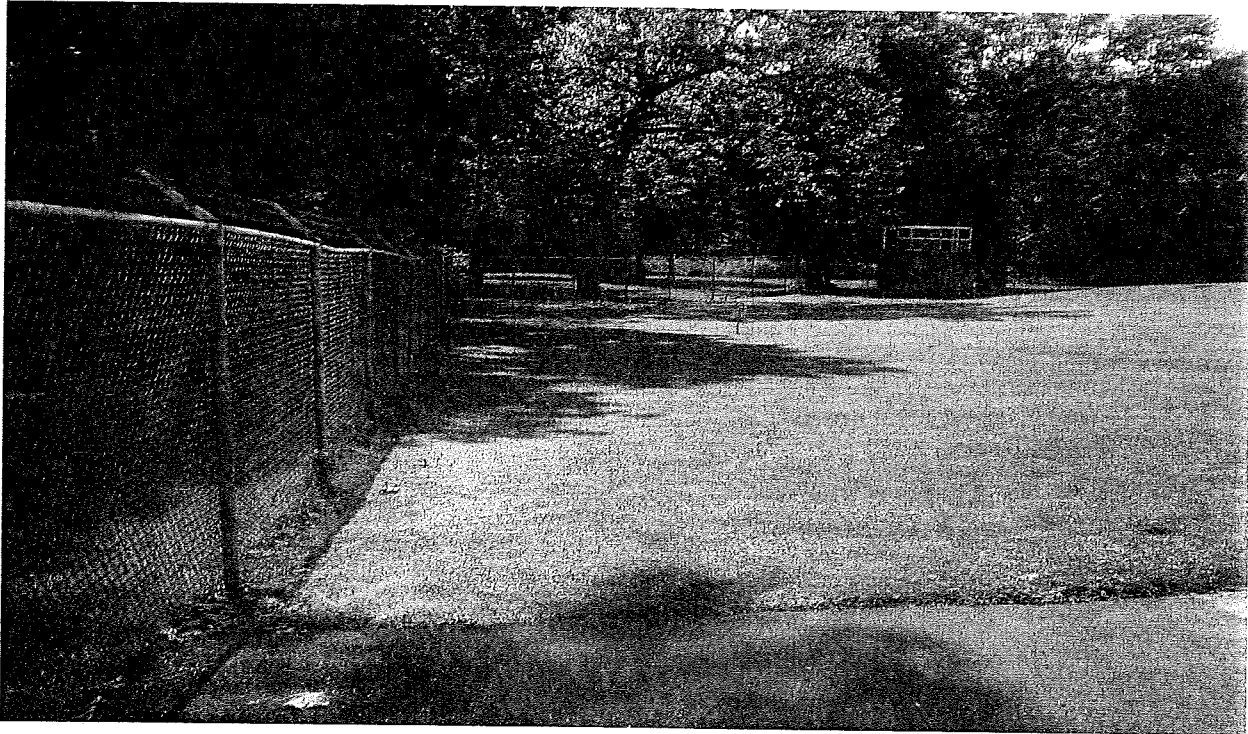
Photographs for PNDI Review

June 2010

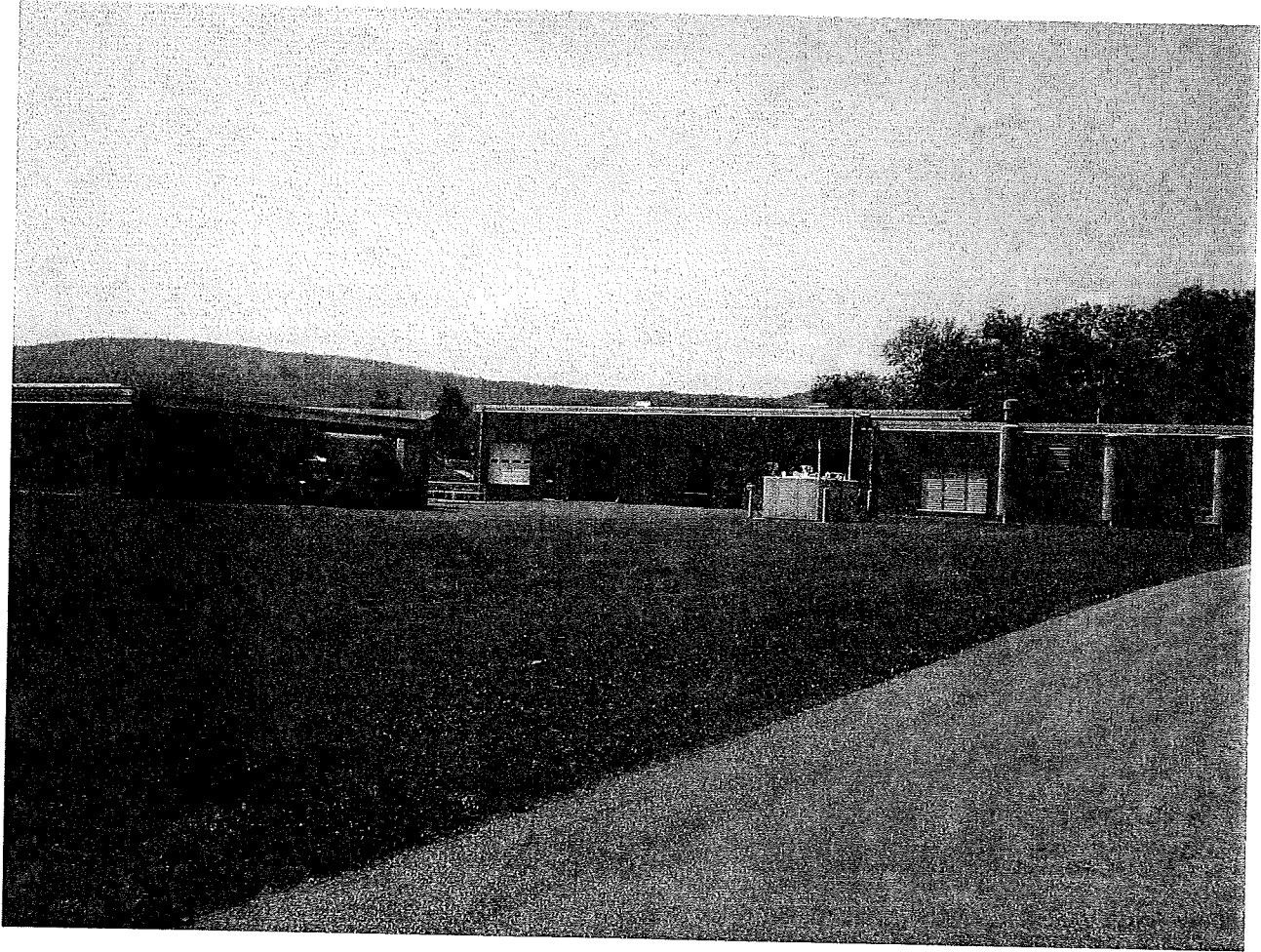


The area between the existing operations building (on the left) and the existing clarifiers (on the right) is the proposed location for the open top equalization tank construction

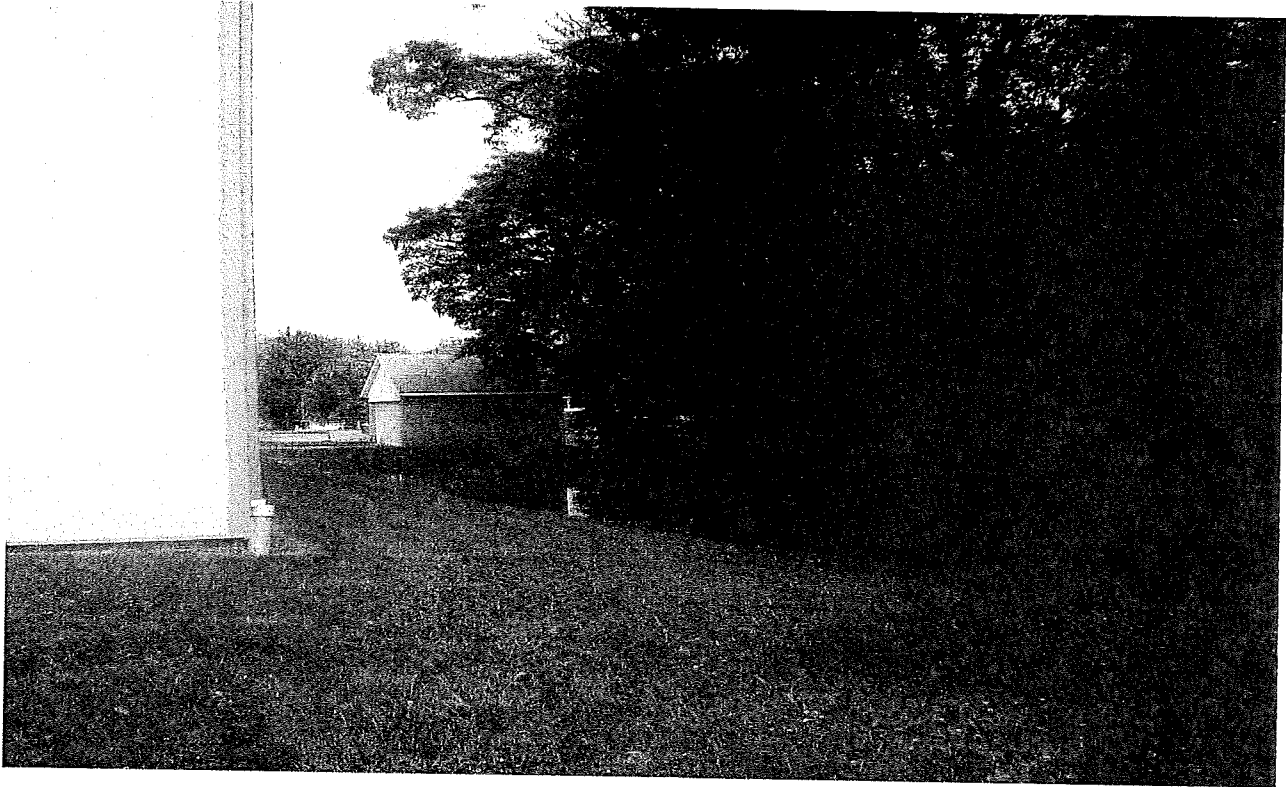




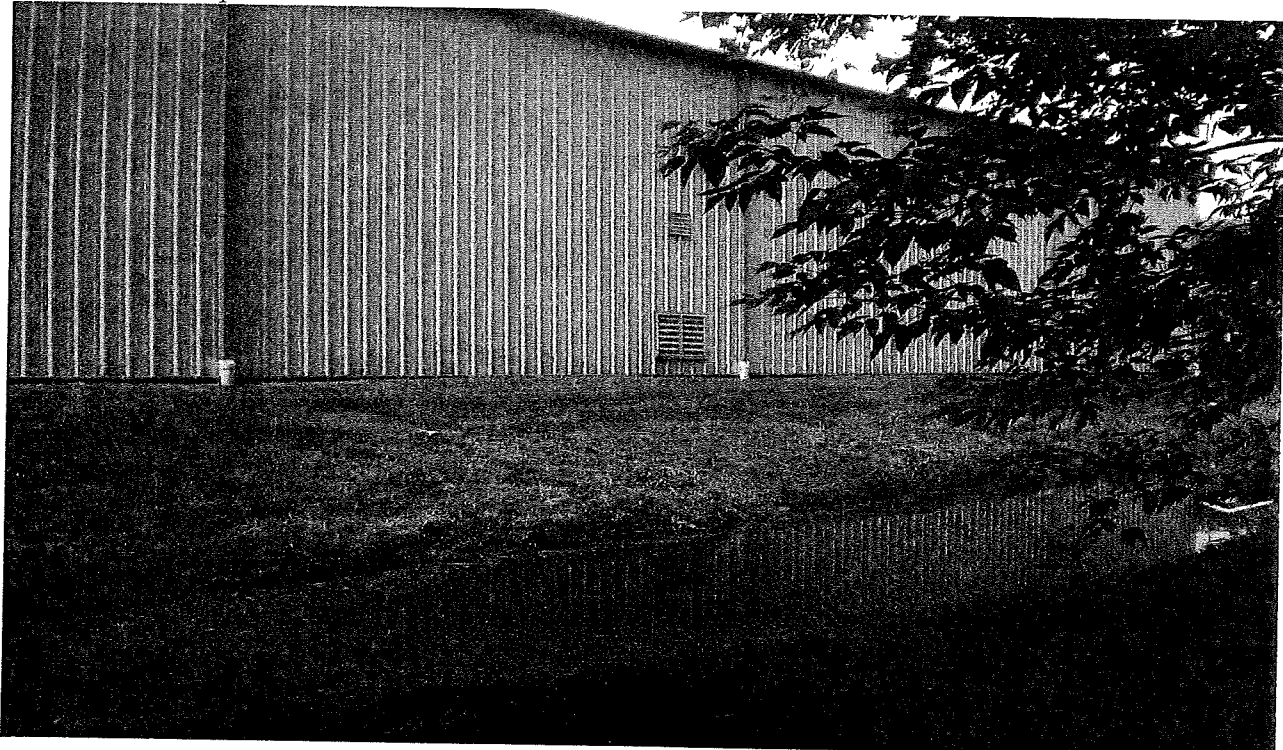
The area between the existing filter building (bottom picture on the right) and the fence on the northern side of the plant is the proposed site for the construction of the clarifiers. The existing filter building is proposed to be converted into tertiary filter system or UV disinfection system.

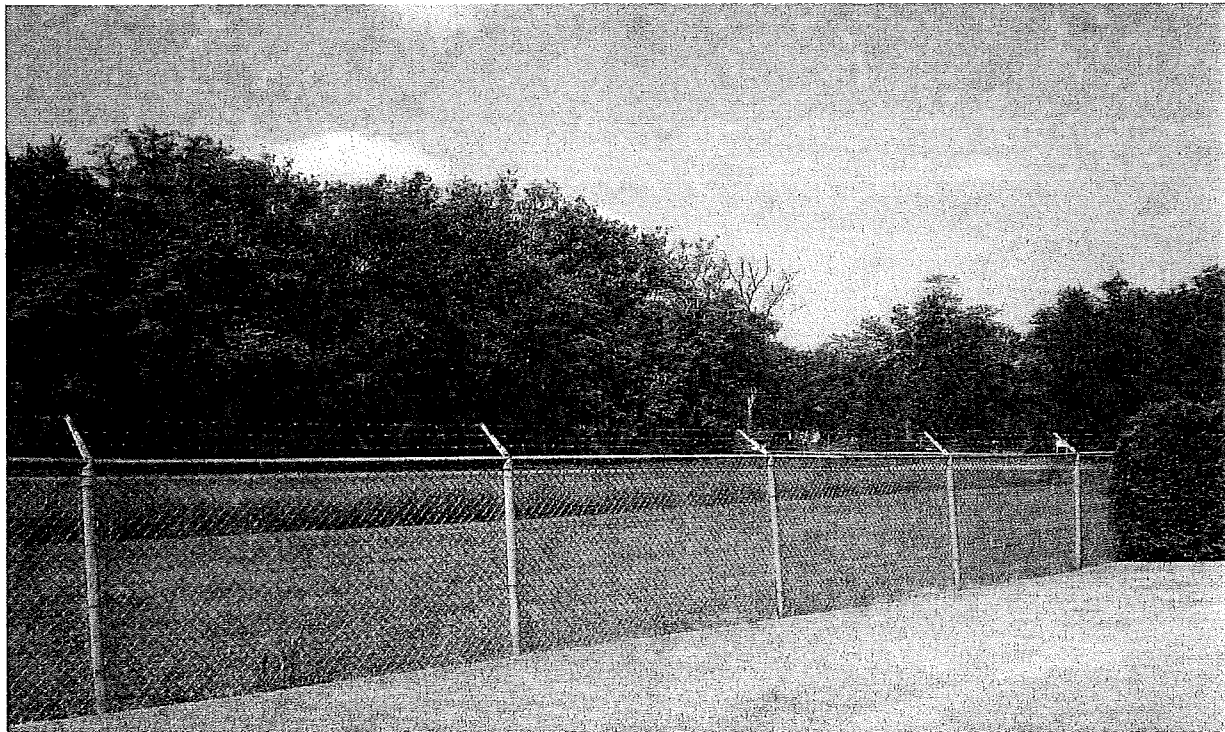
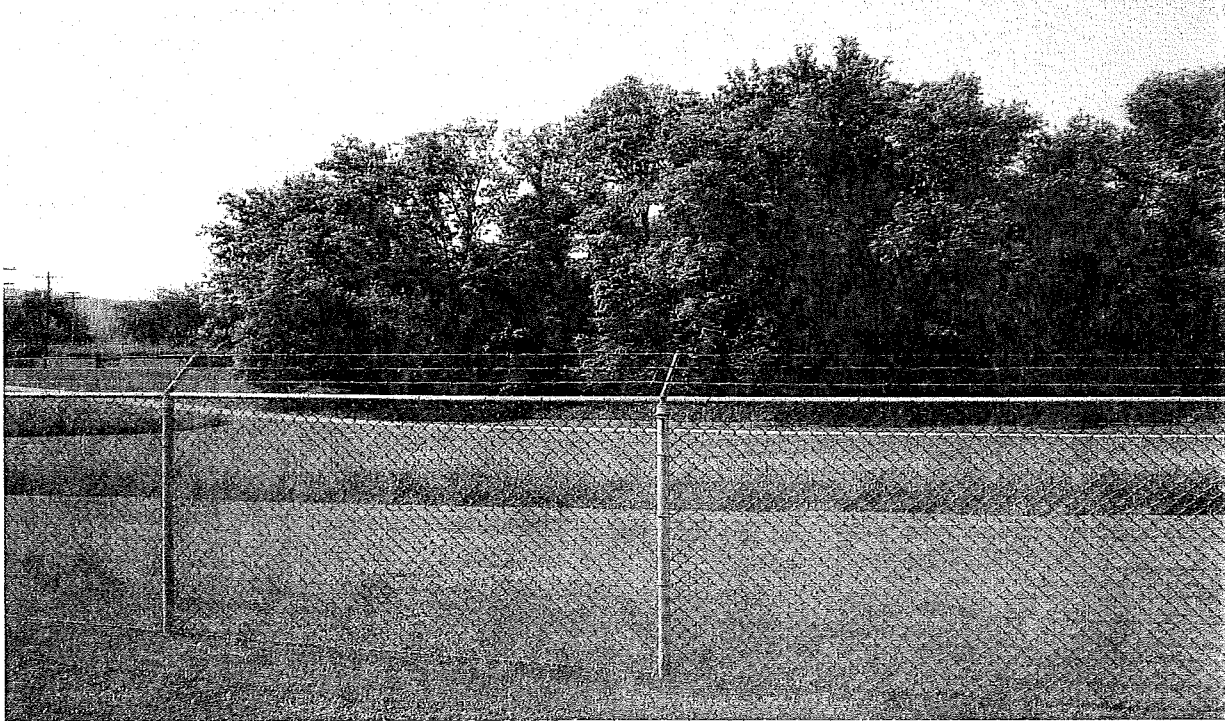


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The existing storm water collection system located behind the storage building on the north-east side on the plant





The area along the fence on the south-western side of the plant is proposed to be used for the installation of the head works



<b>Map Unit Legend</b>			
<b>Map Unit Symbol</b>	<b>Map Unit Name</b>	<b>Acres in AOI</b>	<b>Percent of AOI</b>
AgB	Allegheny silt loam, 3 to 8 percent slopes	16.4	0.40%
DuB	Duffeld silt loam, 0 to 3 percent slopes	416.9	11.20%
DuC	Duffeld silt loam, 8 to 15 percent slopes	238.7	6.40%
HaC	Hagerstown silt loam, 8 to 15 percent slopes	57	15%
HuA	Huntington silt loam, 0 to 5 percent slopes	753	20.30%
LdB	Laiding channery loam, 3 to 8 percent slopes	170	4.60%
LdC	Laiding channery loam, 8 to 15 percent slopes	86.7	2.30%
Me	Melvin silt loam	160.8	4.30%
MnA	Monongahela silt loam, 0 to 3 percent slopes	215.8	5.80%
MoC	Morrison sandy loam, 8 to 15 percent slopes	6	2%
MuA	Murril channery loam, 0 to 3 percent slopes	54	15%
MuB	Murrila channey loam, 3 to 8 percent slopes	627.2	16.90%
MuC	Murril channery loam, 8 to 15 percent slopes	122.7	3.30%
NeB	Neshaminy gravelly silt loam, 3 to 8 percent slopes	23.8	0.60%
Pe	Penlaw silt loam	120.4	3.30%
Pt	Pits and quarries	22.7	0.60%
Pu	Purdy silt loam	109.8	3%
Ty	Tyler silt loam	28.4	0.80%