

**ACT 537 PLAN UPDATE
FOR
THE BOROUGH OF HULMEVILLE
BUCKS COUNTY, PENNSYLVANIA**

**AUGUST 2015
REVISED JUNE 2017**

PREPARED FOR:

**THE BOROUGH OF HULMEVILLE
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ACKNOWLEDGEMENT

Hulmeville Borough has prepared this Act 537 Sewage Facilities Plan Update to address the present and future needs of the Hulmeville Borough, Bucks County. This report has been prepared in accordance with 25PA Code Chapter 71, “Administration of Sewage Facilities Planning Program”.

The following consultants have been involved in the preparation of this document for Hulmeville Borough:

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PLAN HULMEVILLE BOROUGH - (UPDATED JUNE 2017)

EXHIBIT 2 - BCWSA - HULMEVILLE BOROUGH EXECUTED AGREEMENT - JUNE
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EXHIBIT 3 - NESHAMINY INTERCEPTOR EVALUATION FOR MUNICIPAL ACT 537
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EXHIBIT 4 - METHODOLOGY OF SEWER MODEL FOR NESHAMINY INTERCEPTOR
EVALUATION - SEPTEMBER 2015

CORRESPONDENCE

March 6, 2016, BCWSA letter for meeting at Bucks County Community College
June 17, 2015, Letter to Borough from Carroll Engineering Corporation on 10 -Year
Projections
August 17, 2015, Letter to BCWSA requesting a short extension to submit an Act 537 Plan to
BCWSA
October 8, 2015, Cover letter from Carroll Engineering Corporation forwarding Interceptor
Evaluation and Methodology

COMPREHENSIVE SEWER SYSTEM EVALUATION REPORTS

All State Power Vac Inspection Reports (2013)

Carroll Engineering Meter Evaluation (July 15, 2016)

Carroll Engineering Sewer Video Reviews (October 18, 2016)

Carroll Engineering Sewer Repairs Scope of Work (November 7, 2016)

ACT 537 Plan Update for Hulmeville Borough

Plan Summary

This Plan Update has been developed in response to requests from the Pennsylvania Department of Environmental Protection and is corollary to the Plan developed and submitted by the Bucks County Water & Sewer Authority. The Hulmeville Municipal Authority, often referred to as the Water & Sewer Authority, in conjunction with the Borough of Hulmeville, owns and operates the sanitary sewer conveyance system within the Borough. There is no treatment or pumping facilities owned or operated by the Borough or its designated Authority.

Proposed Areas of Service

The proposed areas of service within this plan of study are within the boundaries of the Borough itself. All sanitary sewer main lines, connections to the Neshaminy Interceptor which is owned and operated by the Bucks County Water & Sewer Authority, as well as privately owned laterals and connections will be the subject of this Plan. Particular emphasis will be placed on efforts to reduce the amount of inflow and infiltration into the sanitary sewer lines that feed into the Neshaminy Interceptor. The stated purpose of this effort is to reduce the surge that results from the inflow and infiltration into the sanitary sewer system during periods of exceptionally wet weather and storm related events.

The boundaries and general layout of the Hulmeville Borough sanitary sewer system are shown in the map titled 2013 Infiltration / Inflow Rehabilitation Work in Appendix A.

Alternatives Chosen To Serve Areas of Need

Collection System (Hulmeville Borough)

To reduce the amount of inflow and infiltration into the sanitary sewer lines that feed the Neshaminy Interceptor, Hulmeville Borough will develop and implement a comprehensive program consisting of several measures and alternatives. This program will contain the following components:

1. Metered Flow Evaluation
2. Review of Video and Manhole inspection records to identify and confirm necessary sewer repairs.
3. Repair of Sewers and Manholes
4. Investigation of Private Laterals including:
 - a. An education and information dissemination program designed to alert the public to the problem of inflow and infiltration. This component will also identify the programs that the Borough will implement to reduce/eliminate the problems and associated costs.
 - b. Exterior inspection of private property laterals.

- c. Investigation of proper discharge of roof leaders and sump pumps
 - d. Follow-up with property owner where discharge location is indeterminate and/or where discharge is illegal.
5. Development of an implementation schedule.
 6. Development of costs associated with each alternative.
 7. Identification of funding sources in support of the various alternative measures.
 8. Development and adoption of fees and penalties in support of the various alternative measures. Details of each of these items can be found in the General Plan Content section of this document.

Conveyance System (Neshaminy Interceptor-BCWSA)

The conveyance system consists of the Neshaminy Interceptor and Totem Road Pumping Station which send flows from Hulmeville Borough to the Northeast Water Pollution Control Plant owned by the City of Philadelphia.

The following options were considered:

- Continued Use of the BCWSA Neshaminy Interceptor Conveyance System with proposed improvements.
- Construct and/or locate an Alternative Conveyance and Treatment system.
- A no action alternative, which would be to maintain the status quo.

The continued use of the BCWSA regional wastewater disposal system is the selected alternative. This alternative best meets the needs of the community, is the most cost effective from a capital cost perspective since the infrastructure exists, and is currently being implemented by Hulmeville Borough. Therefore, no new municipal commitments or capital cost funding are necessary to implement the Act 537 Plan.

Municipal Adoption

The necessary municipal resolution(s) of adoption, containing alternatives chosen and a commitment to implement the Plan according to the implementation schedule, will be provided upon completion of the necessary prerequisites.

Planning Commission / County Health Department Comments

In compliance with Title 25, §71.31.b, upon completion of this Plan of Study and the draft of the Act 537 Plan Update, Hulmeville Borough will submit the documents to the Bucks County Planning Commission, the Hulmeville Borough Planning Commission, and other local and regional planning agencies deemed appropriate for the purpose of plan review.

Publication

In compliance with Title 25, §71.31.c, Hulmeville Borough will provide the required Proof of Public Notice, including the establishment of a 30 day public comment period.

Comments and Responses

In compliance with Title 25, §71.31.c, Hulmeville Borough will provide copies of all written comments received along with responses to each comment related to the proposed plan.

Implementation Schedule

Hulmeville Borough will provide a complete project implementation schedule for the Plan. The schedule will include specific milestone dates for the initiation and completion of each component of the Plan as well as any other milestone dates that are essential to successful implementation of the Plan.

Consistency Documentation

In compliance with Title 25, §71.31.c, Hulmeville Borough will provide documentation that any identified inconsistencies have been resolved to each parties' satisfaction.

GENERAL PLAN CONTENT

SECTION 1. PREVIOUS WASTEWATER PLANNING

The Hulmeville Borough Municipal Authority was made a body corporate and politic on May 15, 1961. Bonds in the amount of \$310,000, for the purpose of constructing a sanitary sewer conveyance system were secured on September 1, 1966. Also, on September 1, 1966, the Borough of Hulmeville entered into a lease agreement with the Hulmeville Municipal Authority, providing among other things that the Authority leases to the Borough all of the facilities constructed or acquired by the Authority. The Authority is responsible for all planning, funding, and scheduling of maintenance and improvements to the sanitary sewer system. Hulmeville Borough entered into an agreement with the Bucks County Water and Sewer Authority on February 23, 1965 for the transportation and treatment of sewage. Hulmeville Borough's Sanitary Sewer System was constructed in 1968, prior to implementation of Act 537. The Borough Charter was extended in 1991 to Year 2041.

SECTION 2. PHYSICAL AND DEMOGRAPHIC ANALYSIS

Identification of Planning Areas and Service Area Boundaries

Please refer to the section titled Proposed Areas of Service in the Plan Summary.

Physical Characteristics: Creeks, Streams, Drainage Basins

Hulmeville Borough's primary physical characteristic is that it is bordered to the west by the Neshaminy Creek. There are a series of tributary streams throughout the Borough that feed into the Neshaminy Creek. Please refer to the map titled Wetlands in Appendix A for additional details.

Soils

Hulmeville Borough has only one property with an on-site sewage disposal system. All other areas of the Borough are served by the public sanitary sewer disposal system. For this reason, a soils map is superfluous, and is not provided.

Geologic Features

Hulmeville Borough, with the exception of one property, is entirely serviced by a public water delivery system, virtually eliminating the potential for nitrate-nitrogen pollution of drinking water sources. The drinking water, for the single property serviced by a private well, is tested annually by the Borough.

Topography

Hulmeville Borough has only one property with an on-site sewage disposal system. Please refer to the map titled Digital Elevation Model in Appendix A.

Potable Water Supplies

With the exception of one property serviced by a private well, public drinking water is supplied through an agreement with the Bucks County Water and Sewer Authority. Please refer to the map titled Water Distribution System in Appendix A.

Wetlands

Hulmeville Borough's sewage disposal system does not currently impact any wetlands. No future impact to wetlands is anticipated. Please refer to the map titled Wetlands in Appendix A.

SECTION 3. EXISTING SEWAGE FACILITIES IN THE PLANNING AREA

Treatment Facilities

Hulmeville Borough does not own or operate any sewage treatment facilities. The Borough's sewage conveyance system is integrated with the Neshaminy Interceptor which is owned and operated by the Bucks County Water and Sewer Authority. Please refer to the map titled 2013 Infiltration / Inflow Rehabilitation Work to view the layout of the sewer system.

Identification of Problems with Existing Facilities

Collection System

Hulmeville Borough implemented a video inspection and cleaning of the Borough owned sanitary sewer mains during the month of October, 2013. Mostly minor maintenance items were identified during that inspection; however, there were several sewer main defects requiring repair. Repairs to the minor items, including the sealing of some manhole covers, were performed immediately following the inspection. The installation of a grease interceptor for a restaurant at 11 Beaver Street was completed in Year 2014. The repair of sewer main defects identified in the video inspections, including the Pennsylvania Avenue location where a conduit was installed through a sewer main, are being scheduled for repair by BCWSA. The complete report of the sanitary sewer conveyance system inspection and cleaning is available upon request.

While the Borough's sanitary sewer main lines have been routinely inspected and subject to ongoing maintenance and repair, the condition of the privately owned individual laterals remains largely unknown. Since the system was installed in 1968, it is likely that there are some laterals that are in need of repair, and could be contributing to increased levels of inflow and infiltration.

Neshaminy Interceptor and Totem Road Pump Station

The Bucks County Water and Sewer Authority (BCWSA) has evaluated the Neshaminy Interceptor conveyance sewer system and identified improvements that are necessary to provide for capacity to Member Municipalities for approximately the next 10 years. This evaluation includes the anticipated reduction in excessive wet weather flows from all municipalities so as to meet maximum day and peak flow limits established in the agreement with the City of Philadelphia Water Department. Portions of the Neshaminy Interceptor will be lined or provided with relief sewers to provide capacity needs. The evaluation is included in Exhibit 3 and the BCWSA implementation schedule has been included in the Borough's overall Implementation plan.

SECTION 4. FUTURE GROWTH AND LAND DEVELOPMENT

Summary of Municipal Planning Documents Adopted Pursuant to the Pennsylvania Municipalities Planning Code Act 247

In compliance with Title 25, §71.21.a.3.iv, included in this plan update, is the map titled Hulmeville Borough Zoning Ordinance Map in Appendix A.

Hulmeville Borough does not have zoning or subdivision regulations that limit lot sizes due to on-site sewage disposal methods.

Limitations and plans related to floodplains are specified in Ordinance 265, adopted February 2, 2015, which updated Section 703, Floodplain Regulations, of the Borough. Section 703.5, Technical Provisions, specifies what can and cannot be done within the flood hazard areas and Section 703.5.C.(3) deals specifically with Water and Sanitary Facilities and Systems.

Limitations and plans related to stormwater management are specified in Ordinance 252, Hulmeville Borough Neshaminy Creek Watershed Act 167 Stormwater Management Ordinance, adopted May 2, 2011. This Ordinance promotes and encourages infiltration and groundwater recharge. Section 801, Prohibited Discharges, specifically prohibits sewage, process wastewater and wash water from entering the waters of the Commonwealth.

Limitations and plans related to areas subject to special protection are specified within Section 701, Natural Resource Protection Standards.

1. Areas with Existing Development or Plotted Subdivisions

Hulmeville Borough has 5 approved plotted subdivisions. These plotted subdivisions are listed in Hulmeville Borough’s Connection Management Plan. Minimal impact to the sanitary sewer system is anticipated.

2. Land Use Designations

Hulmeville Borough does not anticipate any significant zoning changes in either the near or long term. For details about current zoning, please refer to the map titled Hulmeville Borough Zoning Ordinance Map in Appendix A.

3. Future Growth Areas

A proposed expansion of the Kiss Electric site is under review. A recently submitted development sketch plan proposes approximately 50 EDU’s on a parcel known as the Black Property (Trenton Road). An additional 35 EDUs is projected over the next couple of years from an adjoining parcel referred to as Langhorne Wood Products Property. The two (2) named tracts are shown on the Future Development Plan in Appendix A.

4. Zoning & Subdivision Regulations Pertaining To Land & Water Resources:

The relevant Zoning Sections related to development, use, and protection of land and water resources are specified in the following Table:

Zoning Section	Description
402.3	Procedure for Minor Subdivision- Preliminary Plans
403.2	Procedure for Major Subdivisions & Land Development Preliminary Plans
404.2	Procedure for Major Subdivisions & Land Development Final Plans
406.6.A.(7), (8), (9)	General Standards for Flood Areas
406.6.D.(2)	Car Wash Regulations – Recycle Water
514.4	Easements for Water Courses

Zoning Section	Description
611	Public Water Supply
612	Private Water Supply
613	Public Sanitary Sewers
614	Private Sewage Disposal Systems
615	Onlot Sewer and Water Locations
616	Capped Sewers
701	Stormwater Performance Guarantee
704.C2	Stormwater Management Easements
718.3	Material Deposits on Lots in Borough
1102.1.B.(7), (9), (10), (11)	Requirements for Water, Sanitary Sewer, Stormwater and Flood Plain
1102.4	Zoning Officer required to make sure Stormwater requirements are met

SECTION 5. CURRENT AND PROJECTED FLOW ANALYSIS

1. Metering of the hydraulic flow by BCWSA from Hulmeville Borough into the Neshaminy Interceptor is accomplished using two (2) metered billing connections. Meter No. 1601 measures flows from the northern portion of the Borough and includes metered flows from Middletown Township connection No. 2235. There are Average flows for the Borough are obtained by adding the flows from Meters 1601 and 1602 and subtracting the flow from Meter No. 2225. Metered peak flows are based on the peak flow recorded in December 2009. There are 20 unmetered Hulmeville EDUs connected to the system which are estimated and 15 unmetered EDUs connected from Middletown sources and included in metered flows which are deducted using an estimate. For the 5 year period 2010 through 2014 the Borough flows have been have been recorded (with adjustments)as follows:

Current Flow Analysis		
Average Daily Flow (mgd)	Metered Peak Instant Flow (mgd)	Allowed Peak Flow (2 X ADF) (mgd)
0.074	0.45	0.148

2. The Allowed Peak Flow is based on the PWD agreement limit of 2 times the average flow. The Borough is permitted to send flows as high as 2.5 times the average flow (before connections could be limited.
3. Hulmeville Borough projects an additional 92 Equivalent Dwelling Units being erected within the Borough during the 10 year period from 2016 through 2025. Considering this additional contribution to the already existing flow, the Borough’s Projected Flow Analysis is as follows:

Projected Flow Analysis		
Average Daily Flow (mgd)	Additional Future Peak Flow (mgd)	Allowed Peak Flow with I&I Removed (2 X ADF) (mgd)
0.097	0.05	0.194

4. In order to achieve the flow rate reduction identified above, the Borough will consider several alternative measures, as described in Section 6.

SECTION 6. ALTERNATIVES FOR PROVIDING IMPROVED WASTEWATER DISPOSAL FACILITIES

A. Completed Evaluations of Public Sewer System

1. Hydraulic Flow Metering Evaluation and Investigations

Description & Goal: This alternative seeks to identify the areas of the Borough that are contributing to the hydraulic overload that occurs during periods of extremely wet weather.

Hulmeville Borough reserves the right to adjust the implementation of all subsequent alternative measures delineated in this plan, based on the evaluation of the data provided by this measure. The overall goal of this plan is to make an effective contribution to reducing the overload on the Neshaminy Interceptor by complying with the Borough flow limits established in its Supplemental Agreement with BCWSA. In order to make an effective contribution and wisely expend both effort and funds toward that end, the Borough must have a definitive knowledge of the nature and extent of the problem within the Borough.

Implementation: Existing billing meters were used to identify the part(s) of the sewer system contributing excessive peak flows. Carroll Engineering(CEC) completed an evaluation of existing metered flows from the two (2) BCWSA billing meters that measure all flows from the Borough. A letter report of this evaluation dated July 15, 2016 was included in the 537 Plan. Flows from Meter No. 1602 were found to have excessive wet weather flows and were given the priority for further investigations.

Video inspection of sewers and manhole inspections were completed by All State Power Vac in Year 2013. Several sewer main observed defects were identified for repair and the Borough expected All State to complete the repair work. Funds were retained from final payment for the repair of this work.

Carroll Engineering (CEC) was appointed the Borough Sewer and Water Engineer in Year 2016 and was asked to develop a plan to address wet weather inflow and infiltration in the Borough sewer system.

As a first step, CEC reviewed prior video and manhole inspection reports(completed by All State) to see if prior defects may have been located in this meter 1602 area that would contribute to metered excess flows. Our review and follow-up inspection by All State Power Vac confirmed that defects still existed which needed repairs. Proposals were received to make these needed repairs and BCWSA was selected to do the work. All identified repairs have been completed as of June 29, 2017.

CEC also recommended that the Borough not install additional meters at this time, but instead have CEC perform a limited wet weather inspection program to isolate sewer lines in the Meter 1602 area that could be contributing to observed wet weather flow exceedances. This was considered to be a more cost effective method in this small sewer system for observing leaks.

Wet weather inspections were completed in early 2017 and a report of our findings has been completed and forwarded to the Borough (copy provided for inclusion in the Correspondence section). Approximately 40 manholes were inspected and all had one or more defects requiring repair. It is expected to complete repairs on a prioritized basis including first importance maintenance issues(2) and then installation of MH insert dishes(to prevent inflow). Other repairs will be scheduled as funding permits. An approximate schedule for these repairs is included in the Implementation Schedule.

The Borough's success in reducing wet weather flow following repair completion and their compliance with PWD and DEP peak flow limits will be evaluated annually during the preparation of the Chapter 94 reports. If peak wet weather flows persist after all planned activities are completed and upon approval of the Borough, additional evaluations and meter analysis will be conducted.

B. Alternative Measures to Address Private Laterals:

1. Education and Information Program

Description & Goal: The implementation of this program will begin with an educational component that informs residences of the impending inspections and the reason that they are needed.

Additionally, there will at least one town-hall style public meeting which will include a discussion of the intent and importance of Ordinance 104 §18-205 Prohibited Substances:

No property owner shall discharge, or permit to be discharged, into the sewer system any roof drainage, surface water, waste from hydrants, or ground water from underground drainage fields.

The planned private lateral, sump pumps and roof leader inspections program will be explained and the residents given an opportunity to ask questions and express any concerns.

If the property owner does not voluntarily comply, the ordinance will be enforced in accordance with State law.

2. Private Lateral and Sump-Pump/Roof Leader Inspection (Exterior) Program

Description & Goal: This alternative seeks to eliminate the infiltration and inflow originating from residences and commercial buildings that have deteriorated laterals or defective cleanouts, or inappropriate sump-pump or roof leader connections to the sanitary sewer system. This program will be strongly encouraged by Authority and Borough officials. The Hulmeville Municipal Authority will attempt to convince all residents of the importance of this program as an effective way to reduce infiltration and inflow within the Borough.

Evaluation of Areas of Need. Implementation of this Alternative Measure will be based on the results of the hydraulic flow metering evaluation and investigations, to determine the areas of the Borough that require attention.

Execution of the Program Inspections. Residents will be notified of the inspection of their property at least one week in advance of any inspection. Inspections will consist of a “walk-through” inspection of the private lateral and sump pump/roof leader discharges on the outside of the building.

Inspections will verify that sump pumps and rain gutters (if visible) are not being discharged into the sanitary sewer system. Any violation will be noted by the inspector, and the Municipal Authority will follow-up with official written notification that the illegal hookup must be corrected or a financial penalty will be imposed.

Where the discharge location of a sump pump or roof leader is indeterminate, a follow-up letter will be sent to that resident requesting information and/or permission for an in-house inspection.

Correction of Violations. Violations must be corrected within 3 months of official notification of violation. A follow-up inspection can be requested by the violator at any time.

At the conclusion of the 3 month correction period, a sewer service charge will be imposed on the violator’s sewer bill.

Service Charge. A service charge may be imposed on each violator and included on the violator’s quarterly sewer bill. If at any time, the violator provides documentation that the violation has been corrected, the service charge will be removed from their sewer bill.

Certification of Violation Correction. A resident found to be in violation, may request that a Borough representative re-inspect their property to verify that the violation has been corrected. The resident found to be in violation may also provide written verification in the form of a letter signed by a master plumber licensed in the Commonwealth of Pennsylvania, attesting to the fact that the violation has been cleared.

Opt-Out. A resident may opt-out of the program at any time by providing written verification in the form of a letter signed by a master plumber licensed in the Commonwealth of Pennsylvania, attesting to the fact there are no illegal sump-pump connections or downspouts discharging rain water into the sanitary sewer system on their property.

3. **Alternative Measure: Capping/Covering/Raising of Sewer Lateral Vents**

Description & Goal. This alternative involves following up on previous work performed after heavy flood events and the lateral inspection program. Some of the properties have low-lying open grate vents which may be subject to flooded conditions. These will need to be raised or supplied with a solid cap to prevent extraneous flows from entering the collection system.

Execution of the Program. The implementation details will be determined following evaluation of the results from Section 6.B.2. Alternative Measure: Lateral and Sump Pump/Roof Leader Inspection.

4. **Future Investigations, Evaluations and Repairs**

Description & Goal-The Borough plans to complete a video inspection of the entire system on an approximately five (5) year interval. The next video inspection is anticipated for completion in Year 2018. This would include both metered connection areas. In Year 2019, the manholes in the Meter 1601 area would be inspected. In Year 2020, the laterals, sump pumps and downspouts would be inspected. Subject to scheduling and available funds, repairs of any defects would be completed within the next calendar year

C. Individual Sewage Disposal Systems

This alternative is not applicable to Hulmeville Borough.

D. Small Flow Sewage Treatment Facilities to Serve Individual Clusters of Homes

This alternative is not currently applicable to Hulmeville Borough.

E. Community Land Disposal Alternatives

This alternative is not applicable to Hulmeville Borough.

F. Sewage Management Programs to Assure Future Operation of Existing Facilities

- Hulmeville Borough will continue its existing maintenance program for the existing collection system.
- Hulmeville Borough will augment the existing maintenance program with some form of inspection program to minimize the negative impact of the following:
 - Sewer laterals in need of repair
 - Illegal sump pump connections

G. Non-structural Planning Alternatives

Hulmeville Borough will consider additional municipal ordinances and measures deemed necessary to further the reduction of infiltration and inflow into the sanitary sewer system.

H. Discussion of Short & Long Term Impact of Sewage Disposal

Hulmeville Borough will continue to participate and cooperate with both the Bucks County Water & Sewer Authority and the Pennsylvania Department of Environmental Protection to

further efforts to minimize environmental concerns related to the existing sewage collection system within the Borough.

SECTION 7. EVALUATION OF ALTERNATIVES

A. Evaluation of Public Sewer System

1. Alternative Measure: Hydraulic Flow Metering Evaluation and Investigations

a. Consistency Analysis

Consistency Analysis Summary for Supplemental Hydraulic Flow Metering Alternative			
Evaluation Category	Consistency		Comments
	Yes	No	
Clean Streams Law or Section 208 of Clean Water Act	X		This alternative is consistent with the objectives and requirements of the Clean Streams Law.
Chapter 94. Municipal Waste Load Management Plans	X		This alternative is consistent with the effort to address the load capacity issues associated with the Neshaminy Interceptor.
Title II. – Clean Water Act	X		This alternative is consistent with the goals of the Clean Water Act.
Borough Comprehensive Plan	X		This alternative is consistent with the Municipal Comprehensive Plan identified in Section 4.
Anti-degradation Requirements of PA Chapters 93, 95, 102	X		This alternative will not adversely affect water quality.
State Water Plan	X		This alternative is consistent with the State Water Plan.
PA prime Agricultural Land Policy	X		This alternative will have no impact on prime agricultural land.
County Storm Water Management Plan	X		This alternative is consistent with the County Storm Water Management Plan.
Chapter 105 – Wetland Protection	X		This alternative will not impact wetlands within the area of study.
Protection of Rare, Endangered or Threatened Plant and Animal Species	X		This alternative will have no impact on rare, threatened or endangered species within the area of study.
Historical and Archaeological Resource Protection	X		This alternative will have no impact on historical or archaeological resources within the area of study.

b. Resolution of Inconsistencies

There are no inconsistencies in this alternative.

c. Evaluation of this Alternative with regard to:

- **Applicable Water Quality Standards:** No negative impact expected.
- **Effluent Limitations:** No negative impact expected.

d. Cost Estimates for this Alternative:

It is estimated that this alternative will not cost the Hulmeville Municipal Authority and the Borough of Hulmeville anything for metering as existing billing meter readings are available from BCWSA.. It is estimated that data analysis, video reviews, contractor proposals and additional field investigations will cost approximately \$ 15,000 to complete.

e. Funding Source(s) for this Alternative:

This alternative will be funded through the Hulmeville Municipal Authority’s Sewer Fund Operating Account.

f. Administrative Organizations and Legal Authority

The Hulmeville Municipal Authority, in conjunction with the Hulmeville Borough Council, will be the organizations responsible for development and implementation of this alternative measure.

2. Alternative Measure: Private Lateral and Sump Pump/Roof Leader Inspection Program

a. Consistency Analysis

Consistency Analysis Summary for Private Lateral and Sump-Pump/Roof Leader External Inspection Alternative			
Evaluation Category	Consistency		Comments
	Yes	No	
Clean Streams Law or Section 208 of Clean Water Act	X		This alternative is consistent with the objectives and requirements of the Clean Streams Law.
Chapter 94. Municipal Waste Load Management Plans	X		This alternative is consistent with the effort to address the load capacity issues associated with the Neshaminy Interceptor.

Consistency Analysis Summary for Private Lateral and Sump-Pump/Roof Leader External Inspection Alternative			
Evaluation Category	Consistency		Comments
	Yes	No	
Title II. – Clean Water Act	X		This alternative is consistent with the goals of the Clean Water Act.
Borough Comprehensive Plan	X		This alternative is consistent with the Municipal Comprehensive Plan identified in Section 4.
Anti-degradation Requirements of PA Chapters 93, 95, 102	X		This alternative will not adversely affect water quality.
State Water Plan	X		This alternative is consistent with the State Water Plan.
PA prime Agricultural Land Policy	X		This alternative will have no impact on prime agricultural land.
County Storm Water Management Plan	X		This alternative is consistent with the County Storm Water Management Plan.
Chapter 105 – Wetland Protection	X		This alternative will not impact wetlands within the area of study.
Protection of Rare, Endangered or Threatened Plant and Animal Species	X		This alternative will have no impact on rare, threatened or endangered species within the area of study.
Historical and Archaeological Resource Protection	X		This alternative will have no impact on historical or archaeological resources within the area of study.

b. Resolution of Inconsistencies

There are no inconsistencies in this alternative.

c. Evaluation of this Alternative with regard to:

- **Applicable Water Quality Standards:** No negative impact expected.
- **Effluent Limitations:** No negative impact expected.

d. Institutional Resources. Permanent staff is not expected to be significantly impacted. Staffing for this alternative measure is likely to be subcontracted. Additionally, some clerical support will be required to track inspection progress as well as service charges and billing options.

e. **Cost Estimates for this Alternative**

It is estimated the cost for correspondence, and preparation for and conduct of the public education program and public meeting will be approximately \$5,000.

It is estimated that the exterior walk-through inspection will cost the Hulmeville Municipal Authority and the Borough of Hulmeville approximately \$50 per EDU. Reinspections are expected to cost approximately the same. There are currently 195 sewer customers within the Meter 1602 service area of the Borough, which is the area affected by peak flows as determined by flow meter analysis. The cost of the initial exterior inspection is estimated to cost approximately \$10,000.

3. **Alternative Measure: Capping/Covering/Raising of Sewer Lateral Vents and Selective Manhole Inserts**

a. **Consistency Analysis**

Consistency Analysis Summary for Capping/Covering/Raising of Sewer Lateral Vents and Selective Manhole Inserts Alternative			
Evaluation Category	Consistency		Comments
	Yes	No	
Clean Streams Law or Section 208 of Clean Water Act	X		This alternative is consistent with the objectives and requirements of the Clean Streams Law.
Chapter 94. Municipal Waste Load Management Plans	X		This alternative is consistent with the effort to address the load capacity issues associated with the Neshaminy Interceptor.
Title II. – Clean Water Act	X		This alternative is consistent with the goals of the Clean Water Act.
Borough Comprehensive Plan	X		This alternative is consistent with the Municipal Comprehensive Plan identified in Section 4.
Anti-degradation Requirements of PA Chapters 93, 95, 102	X		This alternative will not adversely affect water quality.
State Water Plan	X		This alternative is consistent with the State Water Plan.
PA prime Agricultural Land Policy	X		This alternative will have no impact on prime agricultural land.
County Storm Water Management Plan	X		This alternative is consistent with the County Storm Water Management Plan.
Chapter 105 – Wetland	X		This alternative will not impact wetlands within

Consistency Analysis Summary for Capping/Covering/Raising of Sewer Lateral Vents and Selective Manhole Inserts Alternative			
Evaluation Category	Consistency		Comments
	Yes	No	
Protection			the area of study.
Protection of Rare, Endangered or Threatened Plant and Animal Species	X		This alternative will have no impact on rare, threatened or endangered species within the area of study.
Historical and Archaeological Resource Protection	X		This alternative will have no impact on historical or archaeological resources within the area of study.

b. Resolution of Inconsistencies

- There are no inconsistencies in this alternative.

c. Evaluation of this Alternative with regard to:

- **Applicable Water Quality Standards:** No negative impact expected.
- **Effluent Limitations:** No negative impact expected.

d. Cost:

The cost for the capping/covering/raising of sewer lateral vents/cleanouts will vary from \$50 to replace a cap (material cost only) to \$200 to raise and replace the cap (material and installation). Additional costs to raise and replace in sidewalk or pavement can range from \$400 to \$800.

The manhole inserts material/installation cost would be approximately \$100 each.

e. Funding Source(s) for Alternatives:

Alternatives are anticipated to be funded through the Hulmeville Municipal Authority's Sewer Fund Operating Account. The cost of administering this measure may be offset by the imposition of either a sewer rate increase or a surcharge.

f. Administrative Organizations and Legal Authority

The Hulmeville Municipal Authority, in conjunction with the Hulmeville Borough Council will be the organizations responsible for development and implementation of this alternative measure.

SECTION 8. INSTITUTIONAL EVALUATION

- A. The Hulmeville Municipal Authority, along with the Hulmeville Borough Council, is the municipal agent responsible for the implementation of the alternatives identified in this plan of study. The Hulmeville Municipal Authority presently carries no debt. The Hulmeville Municipal Authority, as of May 31, 2017, has approximately \$65,248.27 in a working Sewer Fund as well as approximately \$412,702.30 in its Sewer Account PLGIT fund.
- B. The Hulmeville Municipal Authority is comprised of a five member Board. The Authority employs a Certified Water Operator serving as the Water and Sewer Manager. The Authority also employs a Billing Clerk and a Water Meter Reader.
- C. The Hulmeville Municipal Authority has successfully served the residents of Hulmeville Borough since its inception in 1961.

SECTION 9. IMPLEMENTATION SCHEDULES

Metered Flow Evaluation	Completed
Prior Video and Manhole Inspection Reports Review.....	Completed
Video Verification of Current Status of Video Reported Defects	Completed
Solicit Proposals from Contractors to Correct Video Reported Defects	Completed
Repair of Video Reported Defects	Completed
Wet Weather Investigations (Meter 1602 area).....	Completed
Public Meeting to Discuss Private Laterals and Sump Pump Inspection Program	within 12 months of 537 Approval
Sump Pump and Private Lateral Inspections(Meter 1602 area)	within 18 months of 537 Approval
Complete Borough-wide Video Inspection of Sewer System.....	within 18 months of 537 Approval
Complete Manhole Repairs (Meter 1602 area)	within 24 months of 537 Approval
Follow-up with Property Owners with Suspected Sump Pumps and Defective Private Laterals	within 24 months of 537 Approval
Compliance Actions with Property Owners	within 27 months of 537 Approval
Complete Manhole Inspections (Meter 1601 area).....	within 36 months of 537 Approval
Sump Pump and Private Lateral Inspections(Meter 1601 area)	within 42 months of 537 Approval

SECTION 10. NO ACTION ALTERNATIVE

Without the project, the flows into the Neshaminy Interceptor will continue to have spikes due to heavy precipitation events which may require the Bucks County Water and Sewer Authority to have to incur additional capital costs to increase the size of the interceptor line or install a parallel line. Also, penalties may be imposed by the City of Philadelphia should flows at the Totem Road Pump Station increase beyond BCWSA's purchased capacity. These costs will likely be passed on to the municipalities' tributary to the Neshaminy Interceptor which exceed their flow limits. The cost of the selected phased approach to reduction of infiltration and inflow in the Hulmeville sewage collection system is likely to cost less than capital contributions and penalties imposed by BCWSA.

SECTION 11. ENVIRONMENTAL REPORT

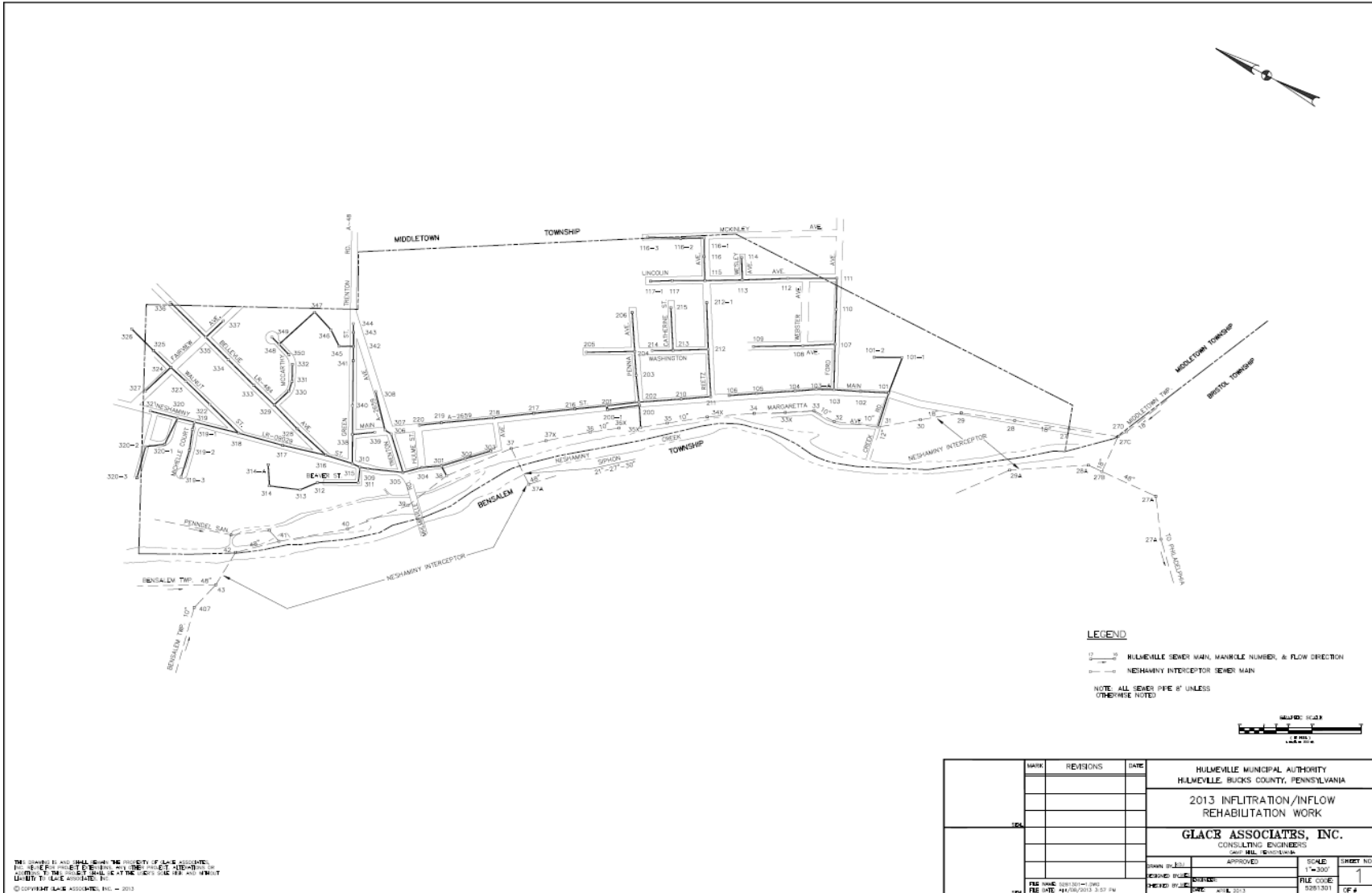
An Environmental Report (ER) will be included in the overall Act 537 Plan Revision for Bucks County Water and Sewer Authority. Hulmeville Borough and Hulmeville Municipal Authority do not currently plan to request funding through Pennvest, which requires additional environmental review than provided herein.

SECTION 12. QUESTIONS AND INQUIRIES

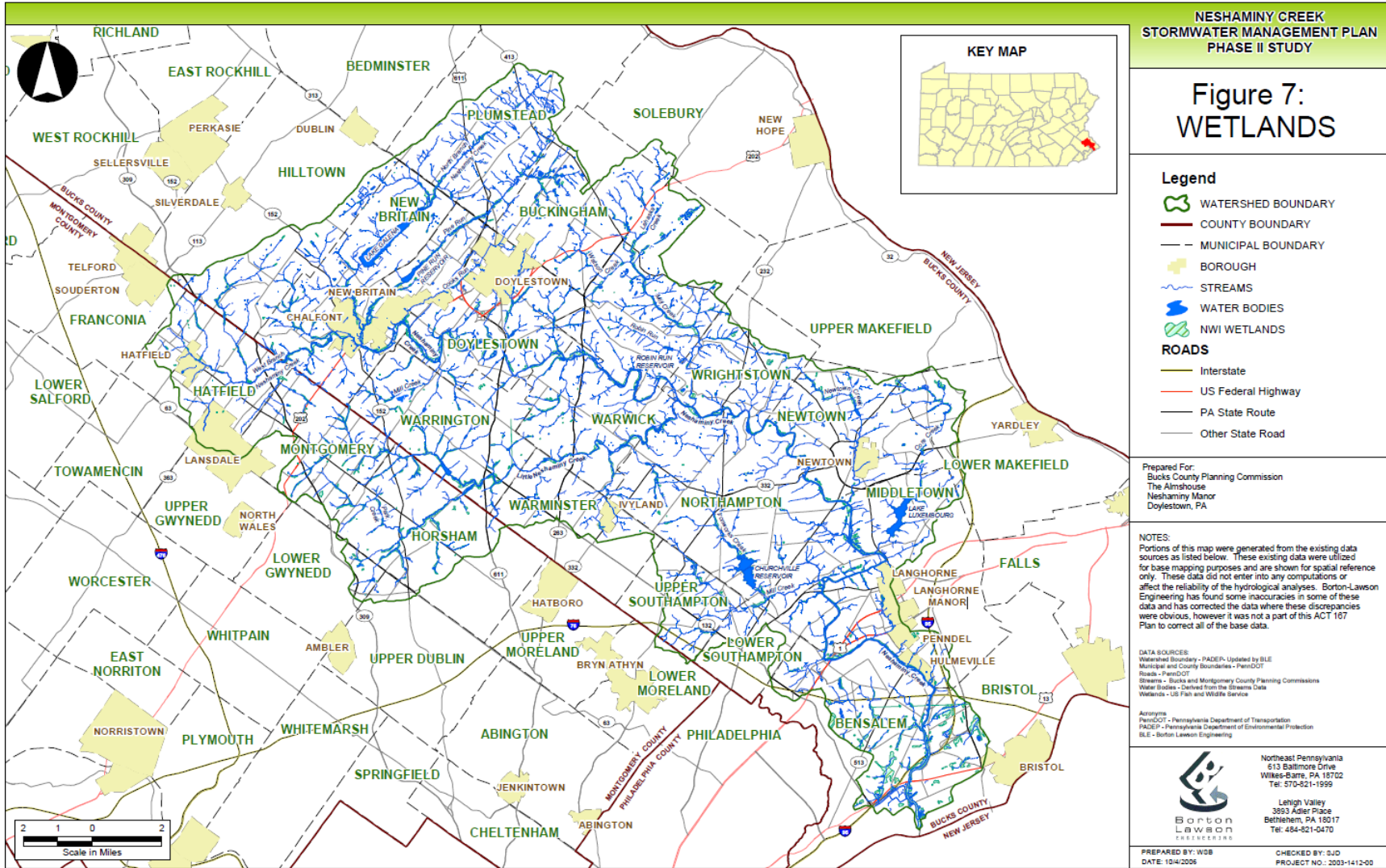
Hulmeville Municipal Authority
321 Main Street
Hulmeville, PA 19047
Telephone: 215-757-6531

APPENDIX A
MAPS

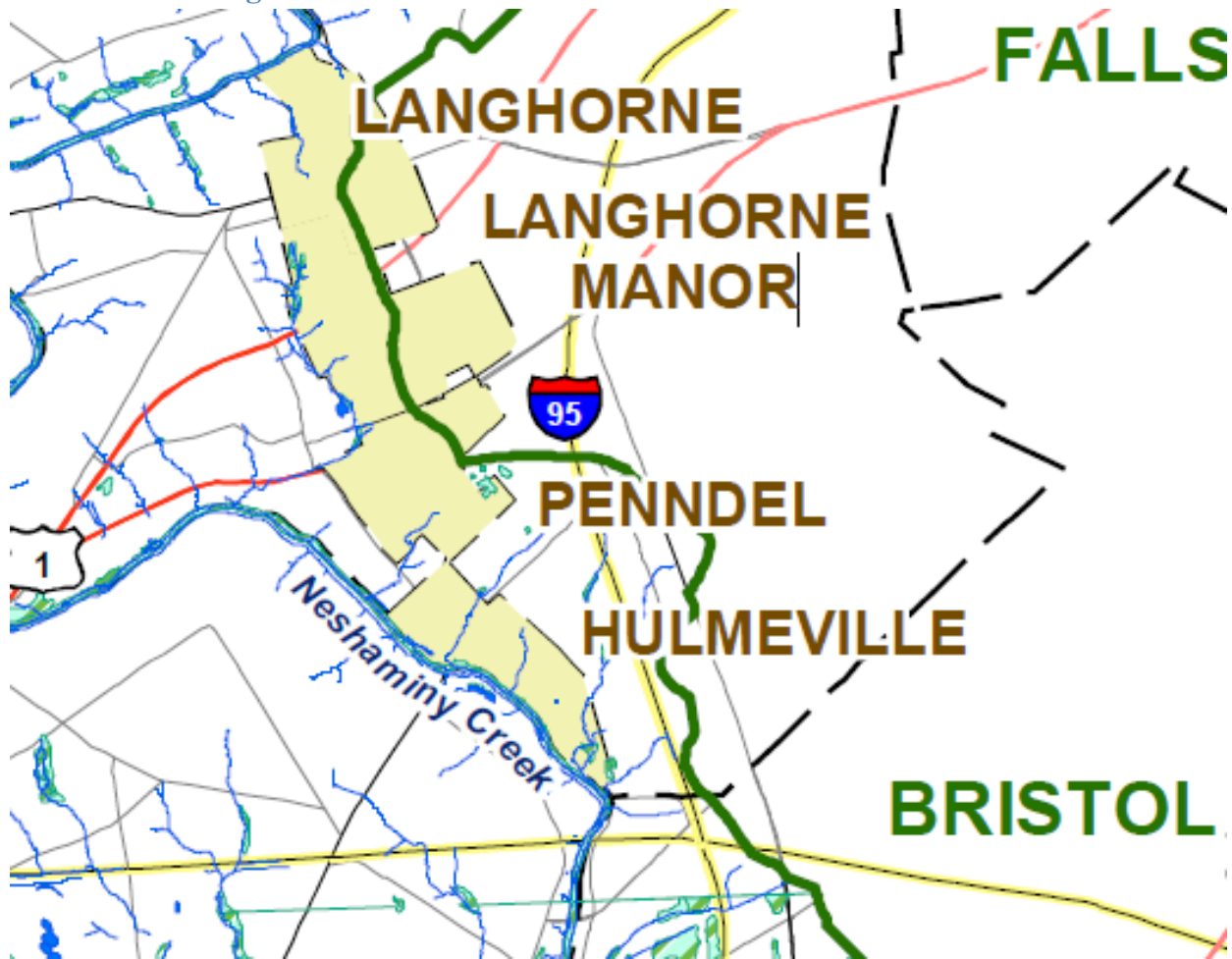
2013 Inflow /Infiltration Rehabilitation Work



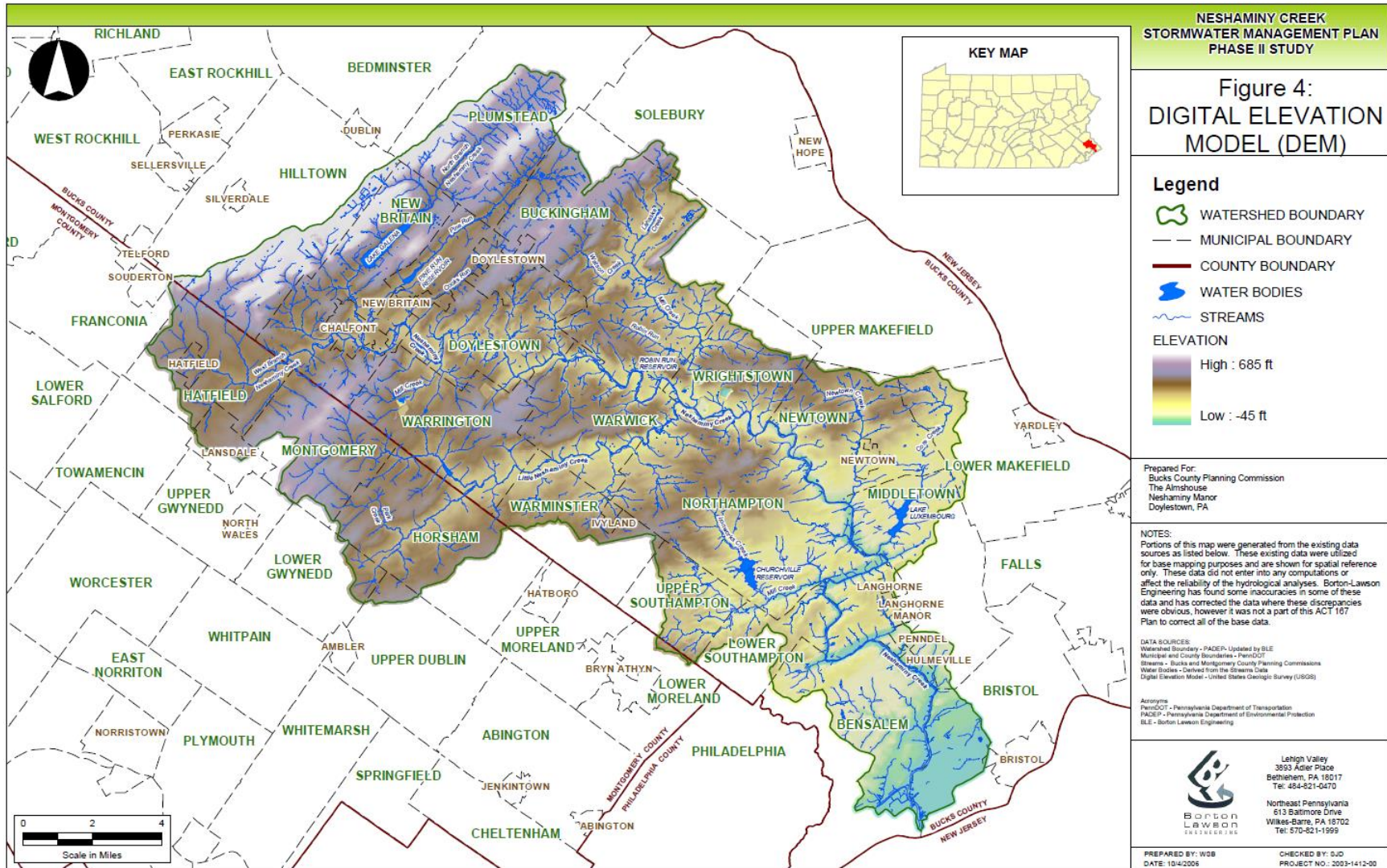
Wetlands



Wetlands – Enlarged



Digital Elevation Model



NESHAMINY CREEK
STORMWATER MANAGEMENT PLAN
PHASE II STUDY

Figure 4:
DIGITAL ELEVATION
MODEL (DEM)

Legend

- WATERSHED BOUNDARY
- MUNICIPAL BOUNDARY
- COUNTY BOUNDARY
- WATER BODIES
- STREAMS

ELEVATION

High : 685 ft

Low : -45 ft

Prepared For:
Bucks County Planning Commission
The Almshouse
Neshaminy Manor
Doylestown, PA

NOTES:
Portions of this map were generated from the existing data sources as listed below. These existing data were utilized for base mapping purposes and are shown for spatial reference only. These data did not enter into any computations or affect the reliability of the hydrological analyses. Borton-Lawson Engineering has found some inaccuracies in some of these data and has corrected the data where these discrepancies were obvious, however it was not a part of this ACT 167 Plan to correct all of the base data.

DATA SOURCES:
Watershed Boundary - PADEP, Updated by BLE
Municipal and County Boundaries - PENNDOT
Streams - Bucks and Montgomery County Planning Commissions
Water Bodies - Derived from the Streams Data
Digital Elevation Model - United States Geological Survey (USGS)

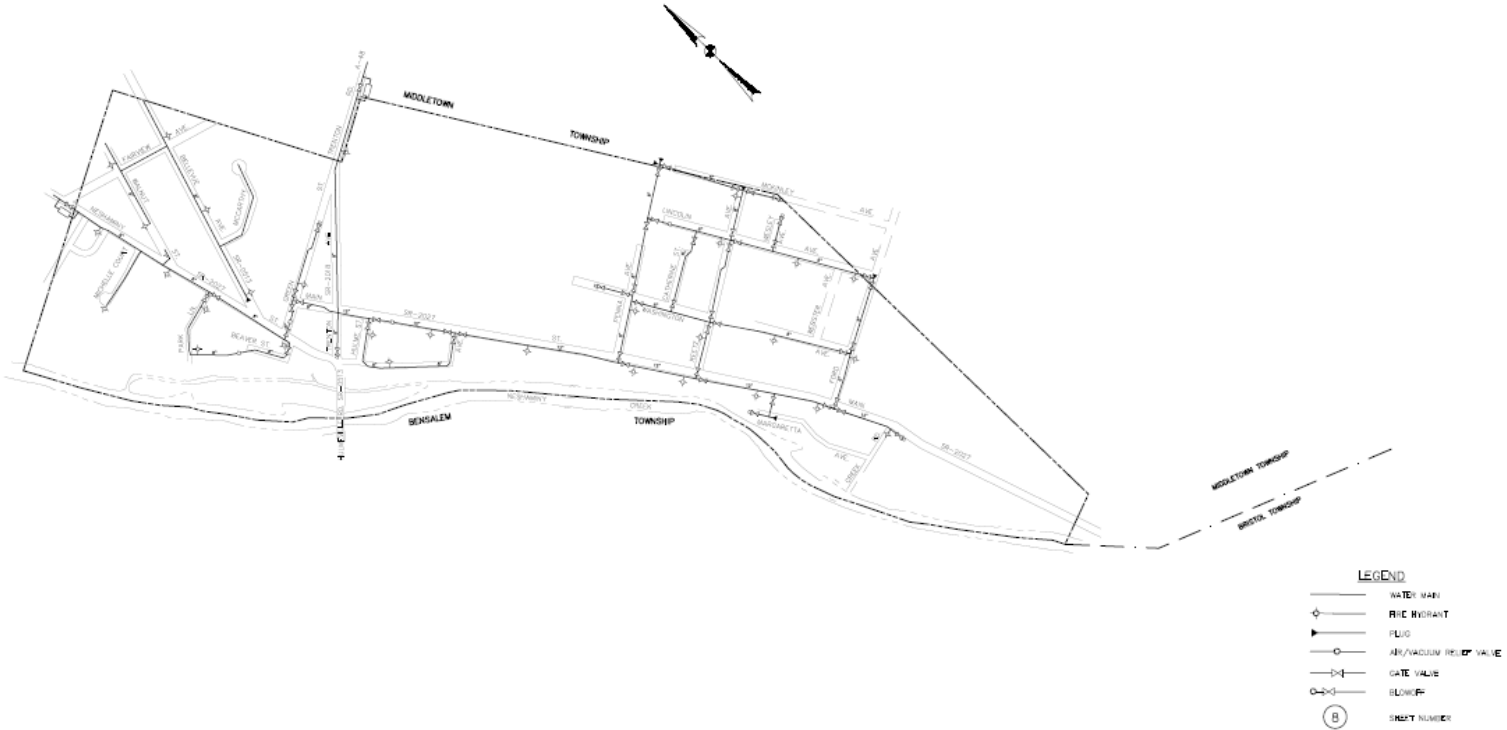
Acronyms:
PENNDOT - Pennsylvania Department of Transportation
PADEP - Pennsylvania Department of Environmental Protection
BLE - Borton Lawson Engineering

Latigh Valley
3853 Adler Place
Bethlehem, PA 18017
Tel: 484-821-0470

Northeast Pennsylvania
813 Baltimore Drive
White-Earth, PA 15702
Tel: 570-821-1999

PREPARED BY: WSB CHECKED BY: GJD
DATE: 10/4/2005 PROJECT NO.: 2003-1412-00

Water Distribution System



- LEGEND**
- WATER MAIN
 - ◆ FIRE HYDRANT
 - FLUG
 - AIR/VACUUM RELEASE VALVE
 - |— GATE VALVE
 - BLOWOFF
 - Ⓟ SHEET NUMBER

REVISIONS			DATE

RECORD DRAWING			
HUMBLETT MUNICIPAL AUTHORITY BUCKS COUNTY, PENNSYLVANIA			
WATER DISTRIBUTION SYSTEM GENERAL AND INDEX PLANS			
GLACE ASSOCIATES, INC. CONSULTING ENGINEERS 100 N. 22ND ST. PHILADELPHIA, PA 19103			
DATE PLOTTED	APPROVED	SCALE	SHEET NO.
		AS SHOWN	4
DRAWN BY	CHECKED BY	FILE CODE	DATE

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Hulmeville Borough Zoning Ordinance Map

