WASHINGTON TOWNSHIP

Westmoreland County, Pennsylvania

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)

PERMIT NO. PAI136152

POLLUTION REDUCTION PLAN (PRP) AMENDMENT

BEAVER RUN WATERSHED

September 2025

BANKSON ENGINEERS, INC.
267 Blue Run Road, Suite 200
Cheswick, PA 15024

412-767-5100

WASHINGTON TOWNSHIP
Westmoreland County, Pennsylvania

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
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LISTING OF ACRONYMS AND ABBREVIATIONS USED IN THIS PLAN:

NPDES	-	National Pollutant Discharge Elimination System
MS4	-	Municipal Separate Storm Sewer Systems
PRP	-	Pollutant Reduction Plan
PA DEP	-	Pennsylvania Department of Environmental Protection
BMPs	-	Best Management Practices
O&M	-	Operations and Maintenance
ESRI	-	Environmental Systems Research Institute (GIS Software Company)
GIS	-	Geographic Information Systems
PENNVEST	-	Pennsylvania Infrastructure Investment Authority
TSS	-	Total Suspended Solids

WASHINGTON TOWNSHIP
Westmoreland County, Pennsylvania

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS (MS4)

POLLUTION REDUCTION PLAN (PRP) AMENDMENT BEAVER RUN WATERSHED

SUMMARY

Washington Township, located in Westmoreland County, Pennsylvania, has prepared this Pollution Reduction Plan (PRP) Amendment to mitigate stormwater discharges of sediment and nutrients to surface waters of the Commonwealth of Pennsylvania, and to satisfy the requirements of its National Pollutant Discharge Elimination System Permit (NPDES ID PAI136152) within the Beaver Run Watershed. Specifically, stormwater discharges in Washington Township eventually flow to the Ohio River via the Allegheny River watershed. The Ohio River generally flows west from Pittsburgh to its terminus at the Mississippi River, which subsequently drains to the Gulf of Mexico. Washington Township owns and operates a separate storm sewer system and is considered a Small Municipal Separate Storm Sewer Systems (MS4) Community. However, stormwater discharges to surface waters for the Township are not tributary to the Chesapeake Bay. This Plan Amendment was prepared on behalf of Washington Township by Bankson Engineers, Inc., located in Cheswick, Pennsylvania.

LOCATION

Washington Township is situated in the northern portion of Westmoreland County, Pennsylvania. Per the United States Census Bureau, the Township has a total land area of 32.6 square miles. The Township has a total population of 6,883 people, according to the US Census of 2020. Washington Township borders Murrysville to the west, Upper Burrell Township and Allegheny Township to the north, Bell Township to the northeast, and Salem Township to the south.

PURPOSE

This PRP Amendment was prepared to meet the requirements set forth by the Pennsylvania Department of Environmental Protection (PA DEP) for MS4 discharges to impaired surface waters within the Beaver Run Watershed. This Plan includes the following required sections:

A) Public Participation
B) PRP Mapping
C) Beaver Run Watershed Pollutants of Concern
D) Existing and Proposed Loading for Pollutants of Concern
E) Selected BMPs to Achieve Minimum Reduction in Pollutant Loading
F) Identify Funding Mechanism(s)
G) Responsible Parties for Operation and Maintenance (O&M) of BMPs

Per the requirements of the Individual NPDES Permit Renewal Process, this Plan shall be submitted to the PA DEP for review.

PRP PROGRESS SUMMARY – BEAVER RUN WATERSHED

In January 2019, the MS4 Pollution Reduction Plan (PRP) for Washington Township, prepared by Senate Engineering was adopted by the Township. The PRP was reviewed and approved by the PA DEP in June 2019. The PRP focused on the implementation of streambank restoration within Washington Township as a Best Management Practice (BMP) to achieve sediment removal within the Beaver Run Watershed.

The Township's MS4 Permit states that pollutant removal must be achieved by the end of the 5-year permit period on June 30, 2024. The PRP proposes 1,360 linear feet of streambank restoration within the Beaver Run Watershed. To date, there has been no streambank restoration constructed within the Beaver Run Watershed. The Township has completed two streambank stabilization projects to date for the Pine Run Watershed and Pucketa Creek Watershed. This amendment is specific to the Beaver Run Watershed.

The following summary table demonstrates the characteristics of the Beaver Run impaired watershed area, the removal requirement, the proposed BMPs Project(s), and the amount of sediment projected to be removed as a result of its installation.

Table 1: Washington Township MS4 PRP Summary Table for Beaver Run

Impaired Area	Total Pollutant Generated (lbs/yr)	Minimum Removal Requirement (lbs/yr)	Proposed BMPs Project	Proposed Pollutants Removed (lbs/yr)	Is the Requirement Met?
Beaver Run	211,770 TSS	21,177 TSS	Pond Retrofit and Streambank Stabilization	21,286 TSS	Yes

A. PUBLIC PARTICIPATION

PUBLIC PARTICIPATION SUMMARY

This section of the PRP Amendment includes the following items: Proof of public notice, a copy of all written comments received from the public regarding and concerning the PRP Amendment, Washington Township's Record of Consideration of each timely comment, and identification of any changes made to the Plan as a result of the public input.

Washington Township releases this PRP Amendment as an official public document and shall make a complete copy of the Plan, in its entirety, available for public review at the Washington Township Office, located at 285 Pine Run Church Road, Apollo, PA 15613.

PUBLIC PARTICIPATION DOCUMENTATION

The following documents related to the public participation component of the Washington Township Pollution Reduction Plan Amendment are as follows:

- List of Property Owners Potentially Impacted by Proposed BMP Construction
- Proof of Public Notice Regarding the Pollution Reduction Plan
- Meeting Agenda
- Meeting Minutes
- Public Meeting Sign-In Sheet
- Landowner Letter and Deed of Easement Template
- Copy of Written Comments Concerning the PRP Amendment
- Washington Township's Record of Consideration of Public Comments
- Official Adoption of Pollution Reduction Plan Amendment Via Resolution

LIST OF PROPERTY OWNERS POTENTIALLY IMPACTED BY PROPOSED BMP CONSTRUCTION

1. Landowner: William and Bonnie Snyder
   Tax Parcel ID: 63-12-00-0-027
   Address: 3806 Route 66, Apollo, PA, 15613
   Proposed BMP: Maintenance Building Pond Retrofit

2. Landowner: Thomas and Lisa Blaskovich
   Tax Parcel ID: 63-12-00-0-027
   Address: 3806 Route 66, Apollo, PA, 15613
   Proposed BMP: Maintenance Building Pond Retrofit

3. Landowner: ABB Holding, LLC
   Tax Parcel ID: 63-12-00-0-216 and 63-12-00-0-237
   Address: 394 Fox Road Apollo, PA, 15613
   Proposed BMP: Streambank Restoration

PROOF OF PUBLIC NOTICE REGARDING THE POLLUTION REDUCTION PLAN

(TO BE INCLUDED ONCE AVAILABLE)

PUBLIC MEETING DOCUMENTS

- **Agenda**
- **Meeting Minutes**

(TO BE INCLUDED ONCE AVAILABLE)

PUBLIC MEETING SIGN-IN SHEET
(TO BE INCLUDED ONCE AVAILABLE)

LANDOWNER LETTER AND DEED OF EASEMENT TEMPLATE

March 27, 2024

William and Bonnie Snyder
3806 Route 66
Apollo, PA 15613

RE: Washington Township
Pennsylvania Department of Environmental Protection
Pollutant Reduction Plan Amendment

Dear Landowners:

On behalf of the Board of Supervisors of Washington Township, I am writing to you to request your assistance in a matter that should prove beneficial to both you, as a landowner, and the citizens of Washington Township.

The federal and state governments have imposed upon Washington Township a mandate regarding control of sediment in the Beaver Run Watershed, Pine Run Watershed, and Pucketa Creek Watershed. The Pennsylvania Department of Environmental Protection ("DEP") has classified portions of Washington Township as an "urbanized area," and this requires the Township to be subject to a heightened level of sediment control and containment. This DEP initiative is referred to as the "Municipal Separate Storm Sewer System" program or "MS4."

In order to comply with this mandate, Washington Township must reduce sediment in the municipal watershed by 10%. As Township Engineer, Bankson Engineers, Inc., has proposed a plan amendment that we believe is the most effective and efficient way to achieve this goal. The plan amendment is called a "Pollution Reduction Plan" ("PRP"), and our intent is to try to use structures and features already in place throughout the Township, as well as construct additional projects.

As Township Engineer we have identified properties throughout the Township that are ideally suited for installation of MS4 Best Management Practices (BMPs) and projects. Your property located near Route 66, identified as Westmoreland County Tax Map Parcel 63-12-00-0-027 is one of the properties that would ideally fit into the Township's plans. We would therefore request your help in meeting the Township's goal. Washington Township would like to extend an existing stormwater facility onto your property. This work would be done entirely at the Township's expense. We are requesting that you cooperate with the Township by providing Washington Township with an easement giving them permission to install stormwater facilities on your property. We are enclosing a draft of a typical easement for your review.

At this time, the Township's MS4 PRP BMPs and potential projects are considered to be preliminary and conceptual in nature. Final designs have yet to be completed. We intend for this letter to initiate communication between both parties. We are requesting that you review the language of the draft easement document and then contact Bankson Engineers, Inc. to arrange a meeting at your property to discuss a potential project. This meeting would be at no cost to you.

It is important that the Township moves forward together in this project as a community in a timely fashion so that the Township meets all DEP-imposed deadlines. Myself or other engineers from Bankson Engineers, Inc. will be available to answer any questions that you have regarding this process. Please call TJ Stephens at 412-767-5100 to schedule an appointment.

The Township would greatly appreciate your assistance in this matter. We look forward to working with you.

Very truly yours,

BANKSON ENGINEERS, INC.

T. J. Stephens, P.E.

TJS:cfs
Enclosure

DEED OF EASEMENT

THIS DEED OF EASEMENT, made this _____ day of _____, 20__, by and between _____,
(Property Owner(s) Name(s) and Address)
whether a natural person, corporation, or other entity, and whether one or more, hereinafter referred to as the "Grantor,"

AND

Washington Township, Washington Township Municipal Building, 283 Pine Run Church Road, Apollo, PA 15613, a municipal corporation organized under the laws of the Commonwealth of Pennsylvania, hereinafter referred to as the "Grantee,"

WITNESSETH, that the Grantor, for and in consideration of the sum of One Dollar ($1.00) in hand paid, the receipt of which is hereby acknowledged, by these presents does grant and convey to the said Grantee, its successors and assigns, a permanent and temporary right of way or easement for the construction, installation, operation, inspection, repair, maintenance, replacement, and removal of Municipal Separate Storm Sewer Systems (MS4) Pollution Reduction Plan storm water management facilities including but not limited to drainage channels, pipes and outlet structures, basins, tanks, inlets, headwalls, endwalls, riprap, fences, vegetation, plantings, access drives, storm water basin retrofitting activities, grading, regrading, removing sediment, mowing and clearing, and the necessary appurtenances in, under, and through, all that certain piece, parcel, or lot of land situate in the Township of Washington, County of Westmoreland, Commonwealth of Pennsylvania, Tax Map-Parcel I.D. Number _____, as more fully described in Westmoreland County Instrument _____.

For the location of the easement or right of way, refer to Bankson Engineers, Inc. Drawing(s) attached hereto and made a part hereof.

Together with free ingress, egress, and regress to and for the Grantee, its successors and assigns, at all times, hereafter, into, upon, and out of said lands.

By accepting this right of way or easement, Grantee covenants to restore the surface of the land itself to its same or similar condition whenever it is disturbed in the exercise of any rights granted hereunder. It is understood by the parties that this Deed of Easement is not a release for damage caused by the careless, negligent or reckless acts of the Grantee or any contractor employed by the Grantee. It is understood that Grantee will replace decorative trees, shrubs, grass, and other vegetation damaged in accessing the easement area, but will not replace any damaged trees, shrubs, or other vegetation which lies within the easement area.

To have and to hold all and singular the rights and privileges aforesaid, to the only proper use and behoof of the Grantee, its successors and assigns forever.

IN WITNESS WHEREOF, the Grantor has set the Grantor's hand and seal or caused this instrument to be executed the day and year first above written.

Signed, sealed and delivered
in the presence of

_____ _____
(Witness) (Property Owner)

_____ _____
(Witness) (Property Owner)

COMMONWEALTH OF PENNSYLVANIA]
[SS:
COUNTY OF WESTMORELAND]

On this _____ day of _____, 20__, at _____ a.m./p.m., before me, a notary public, in and for said County and State, personally appeared _____,
(Property Owner(s) Name(s))
from _____, PA, who acknowledged the foregoing Deed of Easement to be
(City)
his/her/their act(s) and deed(s) to the end that the same may be recorded as such.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

_____
Notary Public

Type of Notary Act
- ☐ Acknowledgment (1)
- ☐ Signature Witnessing (3)

Identification Method
- ☐ Personal Knowledge
- ☐ Acceptable ID _____
  (ID Type and Issue/Expiration Dates)
- ☐ Credible Witness _____
  (Name of Credible Witness)

DEED OF EASEMENT

THIS DEED OF EASEMENT, made this _____ day of _____, 2025, by and between **Kathy W. Leonard, Trustee of KWL Trust**, c/o Melissa Clement, 916 Talmadge Avenue, Apollo, PA 15613, whether a natural person, corporation, or other entity, and whether one or more, hereinafter referred to as the "Grantor,"

AND

Washington Township, 285 Pine Run Church Road, Apollo, PA 15613, a municipal corporation organized under the laws of the Commonwealth of Pennsylvania, hereinafter referred to as the "Grantee,"

WITNESSETH, the parties intending to be legally bound, and that the Grantor, for and in consideration of the sum of One Dollar ($1.00), the receipt of which is hereby acknowledged, by these presents does grant and convey to the said Grantee, its successors and assigns, a permanent and temporary right of way or easement for the construction, installation, operation, inspection, repair, maintenance, replacement, and removal of Municipal Separate Storm Sewer (MS4) Pollutant Reduction Plan storm water management facilities including but not limited to drainage channel and streambank restoration improvements, riprap, vegetation, plantings, access drive, grading, regrading, and the necessary appurtenances in, under, and through, all that certain piece, parcel, or lot of land situate in the Township of Washington, County of Westmoreland, Commonwealth of Pennsylvania, as shown on Tax Parcel Number 63-12-00-0-193.

See Westmoreland County Instrument Number 202306050013611.

For the location of the easement or right of way, refer to Bankson Engineers, Inc. Drawing Number 2-435-1-1 attached hereto.

Together with free ingress, egress, and regress to and for the Grantee, its successors and assigns, at all times, hereafter, into, upon, and out of said lands.

By accepting this right of way or easement, Grantee covenants to restore the surface of the land itself to its same or similar condition whenever it is disturbed in the exercise of any rights granted hereunder. It is understood by the parties that this Deed of Easement is not a release for damage caused by the careless, negligent or reckless acts of the Grantee or any contractor employed by the Grantee. It is understood that Grantee will not replace trees, shrubs and vegetation, other than grass, in the event any are damaged.

To have and to hold all and singular the rights and privileges aforesaid, to the only proper use and behoof of the Grantee, its successors and assigns forever.

IN WITNESS WHEREOF, the Grantor has set the Grantor's hand and seal or caused this instrument to be executed the day and year first above written.

Signed, sealed and delivered
in the presence of

_____
(Witness)

_____
Kathy W. Leonard, Trustee of KWL Trust

COMMONWEALTH OF PENNSYLVANIA]
[SS:
COUNTY OF WESTMORELAND]

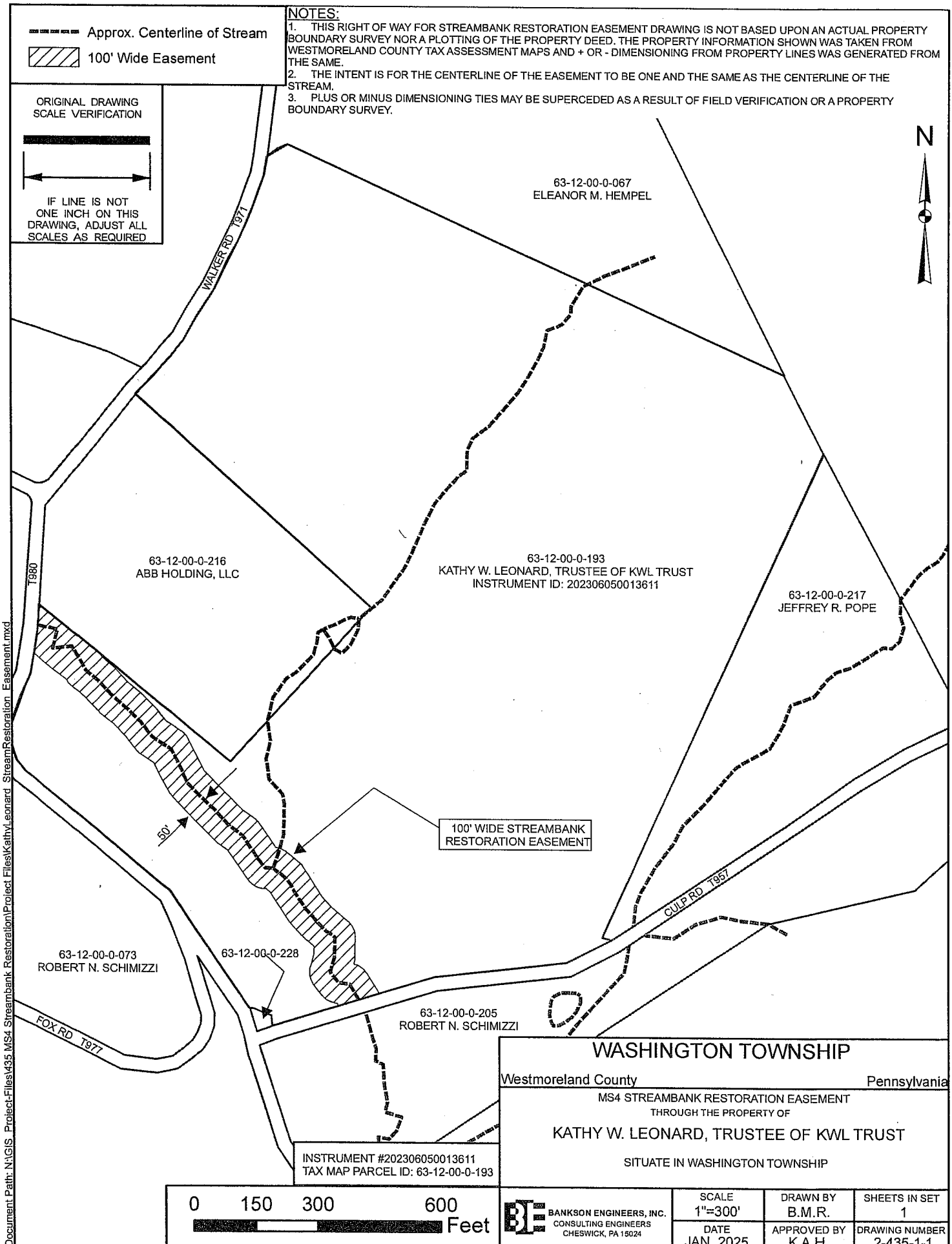
On this _____ day of _____, 2025, at _____ a.m./p.m., before me, a notary public, in and for said County and State, personally appeared Kathy W. Leonard, Trustee of KWL Trust, from Apollo, PA, who acknowledged the foregoing Deed of Easement to be her act and deed to the end that the same may be recorded as such.

IN WITNESS WHEREOF, I hereunto set my hand and official seal.

_____
Notary Public

Type of Notary Act
- ☐ Acknowledgment (1)
- ☐ Signature Witnessing (3)

Identification Method
- ☐ Personal Knowledge
- ☐ Acceptable ID _____ (ID Type and Issue/Expiration Dates)
- ☐ Credible Witness _____ (Name of Credible Witness)


Approx. Centerline of Stream
100' Wide Easement
ORIGINAL DRAWING SCALE VERIFICATION
IF LINE IS NOT ONE INCH ON THIS DRAWING, ADJUST ALL SCALES AS REQUIRED
NOTES:
1. THIS RIGHT OF WAY FOR STREAMBANK RESTORATION EASEMENT DRAWING IS NOT BASED UPON AN ACTUAL PROPERTY BOUNDARY SURVEY NOR A PLOTTING OF THE PROPERTY DEED. THE PROPERTY INFORMATION SHOWN WAS TAKEN FROM WESTMORELAND COUNTY TAX ASSESSMENT MAPS AND + OR - DIMENSIONING FROM PROPERTY LINES WAS GENERATED FROM THE SAME.
2. THE INTENT IS FOR THE CENTERLINE OF THE EASEMENT TO BE ONE AND THE SAME AS THE CENTERLINE OF THE STREAM.
3. PLUS OR MINUS DIMENSIONING TIES MAY BE SUPERCEDED AS A RESULT OF FIELD VERIFICATION OR A PROPERTY BOUNDARY SURVEY.
N
63-12-00-0-067
ELEANOR M. HEMPEL
WALKER RD T971
T980
63-12-00-0-216
ABB HOLDING, LLC
63-12-00-0-193
KATHY W. LEONARD, TRUSTEE OF KWL TRUST
INSTRUMENT ID: 202306050013611
63-12-00-0-217
JEFFREY R. POPE
50'
100' WIDE STREAMBANK RESTORATION EASEMENT
CULP RD T957
63-12-00-0-073
ROBERT N. SCHIMIZZI
63-12-00-0-228
63-12-00-0-205
ROBERT N. SCHIMIZZI
FOX RD T977
INSTRUMENT #202306050013611
TAX MAP PARCEL ID: 63-12-00-0-193
0 150 300 600 Feet
WASHINGTON TOWNSHIP
Westmoreland County Pennsylvania
MS4 STREAMBANK RESTORATION EASEMENT
THROUGH THE PROPERTY OF
KATHY W. LEONARD, TRUSTEE OF KWL TRUST
SITUATE IN WASHINGTON TOWNSHIP
BANKSON ENGINEERS, INC.
CONSULTING ENGINEERS
CHESWICK, PA 15024
SCALE 1"=300'
DRAWN BY B.M.R.
SHEETS IN SET 1
DATE JAN. 2025
APPROVED BY K.A.H.
DRAWING NUMBER 2-435-1-1
Document Path: N:\GIS Project-Files\435 MS4 Streambank Restoration\Project Files\KathyLeonard StreamRestoration Easement.mxd
Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet / Projection: Lambert Conformal Conic / Datum: North American 1983

COPY OF WRITTEN COMMENTS CONCERNING THE PRP AMENDMENT (TO BE INCLUDED ONCE AVAILABLE)

WASHINGTON TOWNSHIP'S RECORD OF CONSIDERATION OF PUBLIC COMMENTS

(TO BE INCLUDED ONCE AVAILABLE)

OFFICIAL ADOPTION OF POLLUTION REDUCTION PLAN AMENDMENT VIA RESOLUTION

(TO BE INCLUDED ONCE AVAILABLE)

B. PRP MAPPING

MAPPING SUMMARY

This Amendment to Washington Township's Pollution Reduction Plan for the Beaver Run Watershed was generated on behalf of the Township by Bankson Engineers, Inc. using the ESRI ArcGIS Desktop software suite. Included in this Plan are maps that encompass the entirety of the Beaver Run Watershed within Washington Township as an overall demonstration of the Urbanized Areas, Impaired and Unimpaired Streams, MS4 Outfalls and Planning Areas. Also included are maps specific to each of the proposed BMP which show the specific location, surrounding pervious and impervious areas, and the general layout of the BMP.

The following Bankson Engineers, Inc. Drawings are included in the Plan, intended to support the BMP that has been proposed in this PRP Amendment. All drawings below are included and shall be recognized as an integral part of the PRP Amendment.

Drawing List Title

- 1-435-1-1 – Stormwater System and MS4 Outfall Location Map Sheet 1
- 1-435-1-2 – Stormwater System and MS4 Outfall Location Map Sheet 2
- 1-435-1-3 – Stormwater System and MS4 Outfall Location Map Sheet 3
- 1-435-1-4 – Stormwater System and MS4 Outfall Location Map Sheet 4
- 1-435-1-5 – Stormwater System and MS4 Outfall Location Map Sheet 5
- 1-435-1-6 – Stormwater System and MS4 Outfall Location Map Sheet 6

- 2-435-3-1 – MS4 Pollutant Reduction Plan Retention Pond Restoration Project
- 2-435-3-2 – MS4 Pollutant Reduction Plan Streambank Restoration Project

C. BEAVER RUN WATERSHED POLLUTANTS OF CONCERN

POLLUTANTS OF CONCERN SUMMARY

The following summary of surface waters within the Beaver Run Watershed of the Township, outlined in the table below, are impaired per Appendix E of the individual NPDES permit, and must meet the minimum pollution removal requirements:

Table 2: Washington Township MS4 Requirements Table for Beaver Run Watershed (Municipal)

Name	Impairment(s)	Required Reduction(s)
Beaver Run Watershed	Appendix E - Siltation	21,177 lbs/yr of Sediment

All other streams within the Township which are not classified as impaired specifically according to Appendix E were omitted from this PRP Amendment, as they do not have pollution reduction requirements.

The required reductions above correspond with the Commonwealth's required removal rates for each pollutant: 10% of the impaired streams' current annual load for sediment.

D. EXISTING AND PROPOSED LOADING FOR POLLUTANTS OF CONCERN

EXISTING LOADING FOR POLLUTANTS OF CONCERN SUMMARY

The existing loading for these pollutants, which establishes the minimum pollutant removal requirements and quantities, was originally calculated for the permittee as part of the PRP that was approved in June 2019. The approved PRP derives a minimum pollutant removal requirement and quantity through a calculation which assumes that the entire urbanized area within the Beaver Run Watershed reaches Washington Township storm sewer system.

MODIFICATION TO THE EXISTING LOADING FOR POLLUTANTS OF CONCERN SUMMARY

This PRP Amendment proposes to revise the existing loading for the pollutants of concern. After field evaluations were performed, defined outfalls have been located, including new outfalls, which give a more accurate representation of the drainage area that is captured within the Municipally-owned storm sewers/facilities in the Beaver Run Watershed. Calculations to derive the minimum pollutant removal requirements have now been limited to the drainage areas within the urbanized areas of the Beaver Run Watershed that drain into the Washington Township storm sewer system. The change in loading from the Beaver Run Watershed are outlined in the table below:

Impaired Area	Current Pollutant Removal Drainage Area (acres)	Current Pollutant Removal Requirement (lbs/yr)	Revised Pollutant Removal Drainage Area (acres)	Revised Pollutant Removal Requirement (lbs/yr)
Beaver Creek Watershed	1,443 acres	60,947 lbs/yr Sediment	501.38 acres	21,177 lbs/yr Sediment

E. SELECTED BMPs TO ACHIEVE MINIMUM REDUCTION IN POLLUTANT LOADING

SELECTED BMPs SUMMARY

As part of this PRP Amendment, Washington Township is proposing to implement numerous additional BMPs in the Beaver Run Watershed which will achieve the required pollutant reductions for the impaired streams within the Beaver Run Watershed. The proposed BMPs have been selected to best suit the conditions and challenges in the watershed and include a streambank stabilization project and a stormwater pond retrofit project.

Given the unique timeframe in which this PRP Amendment is being implemented, each of these proposed BMPs will be implemented as soon as possible once all funding, planning, design, and necessary permitting is completed.

The project design concepts outlined below are preliminary and are subject to revision as necessary during the process of implementing the Township's Pollution Reduction Plan Amendment. The Township has been in communication with the Landowner regarding the easement needed for the streambank restoration project. A copy of the easement agreement draft is included herein. Should the negotiations with said property owner fail, the Township is committed to identifying a different location to implement a streambank restoration project of equivalent length.

PROPOSED BMPs AND SUPPORTING CALCULATIONS

BEAVER RUN WATERSHED – STREAMBANK RESTORATION

BEI Drawing Number: 2-435-3-1

Beaver Run is impaired for sediment according to Appendix E of the Township's individual NPDES permit. To accomplish the required reductions of 10% of total suspended solids (TSS) per year for this watershed, 21,177 lbs./year must be removed using BMPs.

It has been proposed to restore a streambank along Walker Road. The streambank restoration will be constructed on private property adjacent to the Walker Road right-of-way. Negotiation with the property owner of the proposed location of the streambank rehabilitation will be required. The PA DEP Effectiveness Value of a streambank stabilization project for sediment reduction is 44.88 lbs/ft/yr. Tributary 42961 to Poke Run is a 2nd order stream that does not have an adequate Riparian buffer and has been experiencing streambank erosion. It has been proposed to implement a streambank restoration project of approximately 410 linear feet with an overall annual TSS removal rate of 18,401 lbs/yr in order to partially achieve the required total sediment reductions required for Beaver Run. Existing conditions have been documented and are included herewith.

BEAVER RUN WATERSHED – STORMWATER POND RETROFIT

BEI Drawing Number: 2-435-3-2

A proposed retrofit of the Municipal Garage Stormwater Pond could be considered. The Township currently owns the property in which the stormwater pond resides. A concrete baffle could be installed within the pond which would divide the inlet pipe from the discharge pipe to create a sediment forebay area. The baffle would be 1.5 feet high. The pond volume required would be 0.135 acre-feet. The forebay would have a TSS removal efficiency of approximately 42% and would remove 2,885 lbs/year of TSS. Improving the hydraulic residence time within the pond would encourage greater sediment and nutrient removal.

The combination of the streambank restoration and retrofit of the municipal garage stormwater pond would achieve an annual reduction in sediment (TSS) loading of 22,286 lbs./year according to the PA DEP's Effectiveness Values Table and current loading analysis. This pollutant reduction exceeds the minimum requirement.

F. IDENTIFY FUNDING MECHANISM(S)

IDENTIFY FUNDING MECHANISM(S) SUMMARY

Washington Township recognizes that an integral component of a successful Pollutant Reduction Plan Amendment is the ability to adequately fund the proposed sediment removal projects. The financial feasibility of each of the proposed BMPs projects was a crucial aspect of the development of the conceptual plan.

All of the projects proposed in the PRP Amendment were selected with cost-effectiveness as a significant consideration, both in terms of initial construction cost and long-term operation and maintenance. This was done to maximize the likelihood that outside funding could be secured for the proposed BMPs and to minimize the financial and resource burden placed on the Township to implement and maintain the BMPs.

The Township intends to solicit outside funding sources as a means of financing the proposed construction projects. These projects will be required for the Township to comply with the requirements of the NPDES MS4 Permit. The Township may apply for funding through the Pennsylvania Infrastructure Investment Authority (PENNVEST), or to other grant agencies.

The Township may utilize existing General Funds or consider implementing a marginal stormwater management fee, which would generate revenue from the public taxpayers and residents, as a means to offset the capital costs of completing the requirements of the Pollutant Reduction Plan Amendment.

COST ESTIMATES FOR EACH BMPs

An initial project cost estimate has been prepared for each of the proposed BMPs and has been included herein.

Table 3: Streambank Restoration Cost Estimate

Quantity	Unit	Description	Unit Price	Amount
400	L.F.	Regrading of Bank Areas	$150.00	$60,000.00
100	C.Y.	Excavation (Total) Unclassified	$40.00	$4,000.00
400	L.F.	Reseeding of Disturbed Areas	$15.00	$6,000.00
4,000	S.F.	Coconut Matting/Live Stakes	$20.00	$80,000.00
1	L.S.	Soil Erosion and Sedimentation Controls	$30,000.00	$10,000.00
1	L.S.	Property Acquisition	$5,000.00	$5,000.00
1	L.S.	Excavator Access to Streambank	$1,000.00	$1,000.00
1	Each	Mobilization	$5,000.00	$5,000.00
1	L.S.	Legal Fees, O&M Agreement, Recording	$5,000.00	$5,000.00
			Subtotal	$176,000.00
			Contingency (10%)	$17,60.00
			Engineering	$15,000.00
			Permitting	$15,000.00
			Administration	$5,000.00
			Total	$228,600.00

Table 4: Municipal Garage Stormwater Pond Retrofit Cost Estimate

Quantity	Unit	Description	Unit Price	Amount
1	L.S.	General Grading/Sediment Removal	$5,000.00	$5,000.00
100	C.Y.	Miscellaneous Excavation (Unclassified)	$40.00	$4,000.00
1	L.S.	Rebuild Existing Riser Structure	$7,500.00	$7,500.00
50	L.F.	18” Diameter HDPE Drain Line	$105.00	$5,250.00
30	L.F.	Concrete Baffle Wall	$50.00	$1,500.00
1	L.S.	Soil Erosion and Sedimentation Controls	$5,000.00	$5,000.00
1	L.S.	Excavator Access to Pond	$1,000.00	$1,000.00
5	C.Y.	Course Stone Aggregate	$50.00	$250.00
1	L.S.	Landscaping and Restoration	$3,000.00	$3,000.00
			Subtotal	$32,500.00
			Contingency (10%)	$3,250.00
			Engineering	$5,000.00
			Permitting	$5,000.00
			Administration	$1,000.00
			Total	$46,750.00

G. RESPONSIBLE PARTIES FOR OPERATION AND MAINTENANCE (O&M) OF BMPs

RESPONSIBLE PARTIES FOR OPERATION AND MAINTENANCE (O&M) OF BMPs

Washington Township will be primarily responsible for the operation and maintenance of all BMPs that are proposed for installation in this PRP Amendment.

Once installed, the BMPs must be properly maintained in order to continue to remove the pollutants at their optimal rates. It is anticipated that one of the proposed BMPs will be located on Washington Township property. In the event that BMPs need to be constructed on private property, Washington Township will enter into an Easement Agreement and an Operation and Maintenance Agreement (O&M Agreement) with the Landowner in which the BMP is to be installed.

The O&M Agreement will serve as a binding contractual agreement signed by all parties involved and will clearly demonstrate the maintenance responsibilities associated with each of the BMPs facilities and who is responsible for conducting said maintenance. The O&M Agreement will also clearly demonstrate the frequency in which maintenance shall be performed (i.e., monthly, annually, etc.).

A copy of the Operation and Maintenance Agreements for each of the BMPs will be kept permanently at the Washington Township Office.

MS4 permittees and communities will need to identify actual O&M activities in Annual MS4 Status Reports. Permanent recordkeeping, including dates in which inspections were performed and notes identifying what maintenance activities occurred shall be maintained by the responsible party and shall be available for future reporting, as necessary.

TYPICAL OPERATION AND MAINTENANCE SCHEDULES

The following table outlines the standard operation and maintenance procedures to be used to ensure the streambank restoration and retrofitted pond continue to perform as designed and ensure the optimal pollutant removal rates with the BMPs.

These are typical maintenance schedules. A detailed Operation and Maintenance Plan for each of the BMPs to be installed by the Township will be generated as part of the design and permitting process. The parties responsible for conducting and completing operation and maintenance duties, as outlined in their respective O&M Plans, will be identified in the O&M Agreement for each of the BMPs.

Typical Operation and Maintenance Schedule for Retrofitted Pond

Maintenance Activity	Maintenance Schedule	Notes
Mowing	Twice annually	Mow when basin is dry.
Removal of accumulated sediment/cattails	Annually	Remove sediment at a time when the basin is completely dry. Basin should be returned to original lines and grades. Dispose of sediment at a PA DEP approved facility.
Cleaning outlet control structure and discharge culvert	Monthly	Dispose of sediment at a PA DEP approved facility.
Correct erosion problems	As needed	
Repair forebay concrete wall, riprap, etc.	As needed	
Remove invasive species	As needed	

Typical Operation and Maintenance Schedule for Streambank Restoration Areas

Maintenance Activity	Maintenance Schedule	Notes
Mowing	Twice annually until tree canopy is established	Mow when streambanks are dry.
Replant dead live stakes and plants	As needed	If live stakes can be gently pulled from the ground, they must be replaced.
Correct erosion problems	As needed	
Remove invasive species	As needed	
Stabilize eroding or undercut portions of the bank	As needed	

APPENDIX

PROPOSED STREAMBANK RESTORATION PICTURES AND CHECKLIST

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Clean Water

MS4 STREAM RESTORATION ELIGIBILITY CHECKLIST

Permittee Name: Washington Township, Westmoreland County Project Name.: Streambank Restoration Project

I. ELIGIBILITY EVALUATION		
A. Siting Criteria (DEP Stream Restoration Eligibility Guidance)	**Yes**	**No**
1. Did the permittee provide documentation that demonstrates existing channel or streambank erosion and an actively enlarging or incising urban stream condition prior to restoration?	☒	☐
2. Is the project location on a 1st - 3rd order stream?	☒	☐
3. Does the project address at least 100 linear feet of stream channel?	☒	☐
4. Did the permittee provide documentation that the impervious area upstream of the project is sufficiently treated to address peak flows that may exceed engineering design threshold or compromise channel form and function?	☒	☐
5. Does the project address both sides of the channel on sites where a need to do so is evident?	☒	☐
B. Restoration Techniques (DEP Stream Restoration Eligibility Guidance)	**Yes**	**No**
6. Does the restoration design apply a comprehensive approach (i.e., a mix of techniques appropriate to the site) that will create long-term stability of the streambed, streambanks, and floodplain?	☒	☐
7. Does the restoration design avoid the use of hard armoring (i.e., armoring that involves the placement of hard structures along the stream channel for the express purpose of limiting the movement of a stream along its horizontal and/or vertical dimensions?	☒	☐
8. Does the restoration design maximize floodplain reconnection, with a minimal channel invert election increase required to achieve this objective? Is the restoration bank height ratio 1.0 or less?	☒	☐
9. Does the restoration design include a 35-foot (average width) minimum riparian buffer?	☒	☐
10. Does the restoration design include an operations and maintenance (O&M) plan that identifies O&M activities, frequencies, and responsible parties?	☒	☐

Note: Stream restoration projects that satisfy all the siting and techniques criteria listed above may be credited as an MS4 BMP. If a restoration project does not satisfy all the eligibility criteria, DEP may still approve credit for a project if it can be demonstrated that the project will have long-term stability and improve water quality.

Comments:

Recommendation:

☒ Eligible ☐ Ineligible ☐ Insufficient information provided by permittee

Reviewer Name: Thomas J. Stephens, P.E. Date: 10/17/2024

Photo 1: Tributary 42961 to Poke Run.

Photo 2: Area of Undercutting of the tree root ball due to erosion.

Photo 3: Area of heavy erosion of the streambank.

Photo 4: Area of heavy erosion along the streambank.

DRAWINGS NUMBERED 2-435-3-1 AND 2-435-3-2 – LOCATION MAPS

DRAWINGS NUMBERED 1-435-1-1 THROUGH 1-435-1-6 – BEAVER RUN WATERSHED STORMWATER AND MS4 OUTFALL LOCATION MAPS

LEGEND

- Outfall
- Observation Point
- Detention Pond
- Drainage Area
- State Road
- Local Road
- Stream
- Index Grid
- US Census Urbanized Area 11/22/2023
- US Census Urbanized Area 2016
- Washington Township Boundary

SHEET 2

SHEET 3

SHEET 4

SHEET 5

SHEET 6

OUTFALL ID	LATITUDE	LONGITUDE	ACREAGE
11	40° 34' 12.553" N	79° 34' 45.480" W	5.04
12	40° 34' 9.887" N	79° 34' 45.094" W	0.83
14	40° 33' 46.372" N	79° 34' 51.128" W	4.51
15	40° 33' 46.496" N	79° 34' 53.542" W	4.07
16	40° 33' 46.886" N	79° 34' 56.247" W	7.61
21	40° 34' 20.277" N	79° 34' 3.583" W	4.03
22	40° 34' 22.756" N	79° 34' 4.829" W	3.59
30	40° 26' 35.080" N	79° 35' 0.010" W	54.24
9	40° 34' 26.759" N	79° 34' 32.109" W	7.73
100	40° 26' 31.307" N	79° 35' 54.484" W	4.43
101	40° 26' 31.324" N	79° 35' 32.136" W	23.07
102	40° 26' 31.445" N	79° 35' 51.259" W	3.54
103	40° 26' 33.298" N	79° 35' 35.953" W	3.8
104	40° 26' 33.332" N	79° 35' 29.777" W	7.56
105	40° 26' 33.346" N	79° 35' 36.993" W	2.52
106	40° 26' 33.846" N	79° 35' 23.109" W	27.77
107	40° 26' 34.578" N	79° 35' 17.514" W	3.72
108	40° 26' 35.477" N	79° 35' 13.580" W	4.81
109	40° 27' 1.593" N	79° 35' 47.845" W	1.62
110	40° 27' 11.004" N	79° 35' 14.548" W	5.46
111	40° 27' 12.436" N	79° 35' 18.911" W	6.86
112	40° 27' 4.095" N	79° 35' 42.972" W	16.89
113	40° 27' 5.887" N	79° 35' 36.843" W	9.76
114	40° 27' 7.530" N	79° 35' 30.711" W	23.98
115	40° 30' 33.566" N	79° 36' 20.354" W	3.72
116	40° 30' 40.307" N	79° 36' 21.922" W	1.63
117	40° 30' 42.315" N	79° 36' 20.493" W	1.74
118	40° 30' 44.163" N	79° 36' 17.627" W	4.81
119	40° 30' 51.330" N	79° 36' 22.546" W	3.32
120	40° 30' 54.195" N	79° 36' 25.222" W	2.93
121	40° 31' 0.908" N	79° 36' 29.538" W	1.64
122	40° 31' 10.124" N	79° 35' 54.877" W	1.9
123	40° 31' 11.738" N	79° 35' 57.530" W	8.46
124	40° 31' 13.041" N	79° 35' 45.232" W	2.15
125	40° 31' 13.877" N	79° 36' 1.647" W	0.48
126	40° 31' 14.619" N	79° 35' 46.894" W	2
127	40° 31' 14.808" N	79° 36' 1.369" W	0.59
128	40° 31' 18.900" N	79° 35' 52.790" W	25.01
129	40° 31' 19.584" N	79° 36' 24.443" W	6.36
130	40° 31' 2.149" N	79° 36' 29.202" W	2.72
131	40° 31' 26.702" N	79° 36' 24.693" W	2.56
132	40° 31' 4.225" N	79° 35' 50.342" W	2.23
133	40° 31' 45.107" N	79° 35' 31.636" W	9.31
134	40° 31' 45.693" N	79° 35' 28.267" W	3.65
135	40° 31' 46.542" N	79° 35' 21.229" W	5.7
136	40° 31' 47.409" N	79° 34' 49.545" W	12.66
137	40° 31' 47.974" N	79° 34' 53.451" W	20.83
138	40° 31' 48.484" N	79° 35' 42.658" W	5.93
139	40° 31' 49.074" N	79° 35' 17.117" W	6.14
140	40° 31' 49.886" N	79° 35' 7.604" W	8.24
141	40° 31' 49.966" N	79° 35' 4.716" W	24.01
142	40° 31' 5.169" N	79° 36' 28.695" W	4.31
143	40° 31' 59.031" N	79° 35' 24.968" W	5.15
144	40° 32' 0.585" N	79° 35' 28.649" W	2.13
145	40° 32' 10.256" N	79° 35' 37.707" W	0.81
146	40° 32' 8.192" N	79° 35' 30.476" W	4.61
147	40° 33' 15.614" N	79° 35' 15.659" W	1.48
148	40° 33' 15.718" N	79° 35' 26.371" W	3
149	40° 33' 15.893" N	79° 35' 19.694" W	2
150	40° 33' 17.749" N	79° 35' 10.903" W	2.61
151	40° 33' 19.461" N	79° 35' 1.366" W	4.86
152	40° 33' 19.701" N	79° 34' 54.871" W	1.91
153	40° 33' 20.017" N	79° 34' 57.669" W	2.56
154	40° 33' 21.669" N	79° 35' 10.281" W	2.75
155	40° 33' 21.911" N	79° 35' 10.274" W	7.15
156	40° 33' 33.814" N	79° 34' 56.560" W	2.8
157	40° 33' 36.643" N	79° 34' 50.179" W	4.01
158	40° 33' 38.501" N	79° 34' 44.470" W	1.05
159	40° 33' 40.791" N	79° 34' 29.978" W	1.72
160	40° 33' 43.616" N	79° 34' 44.362" W	1.6
161	40° 34' 12.819" N	79° 34' 33.924" W	1.88
162	40° 34' 12.840" N	79° 34' 31.488" W	4.66
163	40° 34' 14.103" N	79° 34' 28.687" W	3.28
164	40° 34' 15.329" N	79° 34' 29.656" W	6.43
165	40° 34' 17.446" N	79° 34' 11.450" W	6.31
166	40° 34' 17.632" N	79° 34' 50.060" W	0.82
167	40° 34' 19.935" N	79° 34' 38.260" W	8.59
168	40° 34' 20.075" N	79° 34' 28.474" W	2.52
169	40° 34' 24.140" N	79° 34' 49.437" W	1.06
170	40° 34' 8.295" N	79° 34' 34.823" W	1.21

Aerial Imagery is from 2023/2024
Sanitary Sewer, Storm Sewer, and Potable Water features were taken from Municipal Authority of Washington Township's ArcGIS Online on 1/25/2024.

0 1,000 2,000 4,000 Feet

WASHINGTON TOWNSHIP

WESTMORELAND COUNTY PENNSYLVANIA

BEAVER RUN WATERSHED STORMWATER SYSTEM AND MS4 OUTFALL LOCATION MAP

SHEET 1

BANKSON ENGINEERS, INC.
CONSULTING ENGINEERS
CHESWICK, PA 15024

SCALE	DRAWN BY	SHEETS IN SET
AS SHOWN	B.M.R.	6
DATE	APPROVED BY	DRAWING NUMBER
SEPT. 2025	K.A.H.	1-435-1-1

Document Path: N:\GIS_Project Files\Washington Twp Westmoreland Co 435\MS4\MXD\MS4_PRP_Amendment\MS4_PRP_Amendment.aprx

Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet / Projection: Lambert Conformal Conic /

LEGEND

- Outfall
- Observation Point
- Detention Pond
- Existing Storm Inlet
- Storm Catch Basin
- Existing Storm Sewer
- Drainage Area
- State Road
- Local Road
- Stream
- Index Grid
- Washington Township Boundary
- US Census Urbanized Area 11/22/2023
- US Census Urbanized Area 2016

N

SHEET 2

SHEET 3

DA 9
7.73 Ac.

DA 169
1.06 Ac.

DA 166
0.82 Ac.

DA 167
8.59 Ac.

DA 168
2.52 Ac.

DA 22
3.59 Ac.

DA 21
4.03 Ac.

DA 164
6.43 Ac.

DA 11
5.04 Ac.

DA 165
6.31 Ac.

DA 161
1.88 Ac.

DA 163
3.28 Ac.

DA 170
1.21 Ac.

DA 162
4.66 Ac.

DA 12
0.83 Ac.

DA 16
7.61 Ac.

DA 15
4.07 Ac.

DA 14
4.51 Ac.

SR 4034 ORR AV

SR 4034 PINE RUN RD

SR 4052 RESERVOIR RD

SR 4105 HANCOCK AV

SR 0066 MAIN ST

SR 0066 SR 0066 SH

SR 0066 SR 0066 SH

SR 0356 SR 0356 SH

SR 4039 SHERIDAN RD

SR 2048 KISKI AV

SR 2048 CHERRY LANE RD

Trib 42933 To Beaver Run

Trib 42809 To Pine Run

Trib 42911 To Pine Run

Pine Run

Kiskiminetas River

Beaver Run

Aerial Imagery is from 2023/2024
Sanitary Sewer, Storm Sewer, and Potable Water features were taken from Municipal Authority of Washington Township's ArcGIS Online on 1/25/2024.

0 300 600 1,200 Feet

WASHINGTON TOWNSHIP

WESTMORELAND COUNTY PENNSYLVANIA

BEAVER RUN WATERSHED STORMWATER SYSTEM AND MS4 OUTFALL LOCATION MAP

SHEET 2

BANKSON ENGINEERS, INC.
CONSULTING ENGINEERS
CHESWICK, PA 15024

SCALE	DRAWN BY	SHEETS IN SET
AS SHOWN	B.M.R.	6
DATE	APPROVED BY	DRAWING NUMBER
SEP. 2025	K.A.H.	1-435-1-2

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Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet / Projection: Lambert Conformal Conic /

LEGEND

- Outfall
- Observation Point
- Detention Pond
- Existing Storm Inlet
- Storm Catch Basin
- Existing Storm Sewer
- Drainage Area
- State Road
- Local Road
- Stream
- Index Grid
- Washington Township Boundary
- US Census Urbanized Area 11/22/2023
- US Census Urbanized Area 2016

SHEET 2

SHEET 3

DA 16
7.61 Ac.

DA 15
4.07 Ac.

DA 14
4.51 Ac.

DA 159
1.72 Ac.

DA 160
1.6 Ac.

DA 158
1.05 Ac.

DA 157
4.01 Ac.

DA 156
2.8 Ac.

DA 155
7.15 Ac.

DA 154
2.75 Ac.

DA 148
3 Ac.

DA 147
1.48 Ac.

DA 149
2 Ac.

DA 150
2.61 Ac.

DA 152
1.91 Ac.

DA 153
2.56 Ac.

DA 151
4.86 Ac.

SR 0356 SR 0356 SH

SR 0066 SR 0066 SH

SR 0819 SR 0819 SH

SR 4071 PINE RUN RD

SR 9104 Y GOWN RD

Pine Run

Trib 42912 To Pine Run

Trib 42935 To Beaver Run

Beaver Run

Aerial Imagery is from 2023/2024
Sanitary Sewer, Storm Sewer, and Potable Water features were taken from Municipal Authority of Washington Township's ArcGIS Online on 1/25/2024.

0 300 600 1,200 Feet

WASHINGTON TOWNSHIP

WESTMORELAND COUNTY PENNSYLVANIA

BEAVER RUN WATERSHED STORMWATER SYSTEM AND MS4 OUTFALL LOCATION MAP

SHEET 3

BANKSON ENGINEERS, INC.
CONSULTING ENGINEERS
CHESWICK, PA 15024

SCALE	DRAWN BY	SHEETS IN SET
AS SHOWN	B.M.R.	6
DATE	APPROVED BY	DRAWING NUMBER
SEP. 2025	K.A.H.	1-435-1-3

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Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet / Projection: Lambert Conformal Conic /

LEGEND

- Outfall
- Observation Point
- Detention Pond
- Existing Storm Inlet
- Storm Catch Basin
- Existing Storm Sewer
- Drainage Area
- State Road
- Local Road
- Stream
- Index Grid
- Washington Township Boundary
- US Census Urbanized Area 11/22/2023
- US Census Urbanized Area 2016

N

SHEET 4

SHEET 5

DA 145
0.81 Ac.

DA 146
4.61 Ac.

DA 144
2.13
Ac.

DA 143
5.15 Ac.

DA 138
5.93 Ac.

DA 133
9.31 Ac.

DA 134
3.65 Ac.

DA 135
5.7 Ac.

DA 139
6.14 Ac.

DA 140
8.24 Ac.

DA 141
24.01 Ac.

DA 137
20.83 Ac.

DA 136
12.66 Ac.

DA 131
2.56 Ac.

DA 128
25.01 Ac.

SR 0066 SR 0066 SH

SR 9408 SR 9408 SH

SR 0400 GOLDEN MILE HW

SR 8044 RAMP C RD

SR 8044 RAMP D RD

SR 8044 RAMP A RD

SR 8044 RAMP B RD

SR 0066 FREEPORT RD

Trib 42914 Of Pine Run

Trib 42937 To Beaver Run

Trib 42942 Of Beaver Run

Trib 42943 To Beaver Run

Trib 42944 To Pine Run

Pine Run

Beaver Run

Aerial Imagery is from 2023/2024
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0 300 600 1,200 Feet

WASHINGTON TOWNSHIP

WESTMORELAND COUNTY PENNSYLVANIA

BEAVER RUN WATERSHED STORMWATER SYSTEM AND MS4 OUTFALL LOCATION MAP

SHEET 4

BANKSON ENGINEERS, INC.
CONSULTING ENGINEERS
CHESWICK, PA 15024

SCALE	DRAWN BY	SHEETS IN SET
AS SHOWN	B.M.R.	6
DATE	APPROVED BY	DRAWING NUMBER
SEP. 2025	K.A.H.	1-435-1-4

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Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet / Projection: Lambert Conformal Conic /

LEGEND

- Outfall
- Observation Point
- Detention Pond
- Existing Storm Inlet
- Storm Catch Basin
- Existing Storm Sewer
- Drainage Area
- State Road
- Local Road
- Stream
- Index Grid
- Washington Township Boundary
- US Census Urbanized Area 11/22/2023
- US Census Urbanized Area 2016

SHEET 4

SHEET 5

SR 0400 GOLDEN MILE HWY

SR 0066 FREEPORT RD

SR 4059 CRESTVIEW DR

SR 4006 N WASHINGTON - SALISBURG RD

Trib 42936 To Beaver Run

Trib 42963 To Poke Run

Trib 42961 To Poke Run

DA 131
2.56 Ac.

DA 129
6.36 Ac.

DA 128
25.01 Ac.

DA 126
2 Ac.

DA 124
2.15 Ac.

DA 127
0.59 Ac.

DA 125
0.43 Ac.

DA 123
8.46 Ac.

DA 122
1.9 Ac.

DA 132
2.23 Ac.

DA 142
4.31 Ac.

DA 130
2.72 Ac.

DA 121
1.64 Ac.

DA 120
2.93 Ac.

DA 119
3.32 Ac.

DA 118
4.81 Ac.

DA 117
1.74 Ac.

DA 116
1.63 Ac.

DA 115
3.72 Ac.

Aerial Imagery is from 2023/2024
Sanitary Sewer, Storm Sewer, and Potable Water features were taken from Municipal Authority of Washington Township's ArcGIS Online on 1/25/2024.

0 300 600 1,200 Feet

WASHINGTON TOWNSHIP

WESTMORELAND COUNTY PENNSYLVANIA

BEAVER RUN WATERSHED STORMWATER SYSTEM AND MS4 OUTFALL LOCATION MAP

SHEET 5

BANKSON ENGINEERS, INC.
CONSULTING ENGINEERS
CHESWICK, PA 15024

SCALE	DRAWN BY	SHEETS IN SET
AS SHOWN	B.M.R.	6
DATE	APPROVED BY	DRAWING NUMBER
SEP. 2025	K.A.H.	1-435-1-5

Document Path: N:\GIS Project Files\Washington Twp Westmoreland Co\435\MXD\MS4 PRP Amendment.mxd
Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet / Projection: Lambert Conformal Conic /

LEGEND

- Outfall
- Observation Point
- Detention Pond
- Existing Storm Inlet
- Storm Catch Basin
- Existing Storm Sewer
- Drainage Area
- State Road
- Local Road
- Stream
- Index Grid
- Washington Township Boundary
- US Census Urbanized Area 11/22/2023
- US Census Urbanized Area 2016

N

SHEET 6

DA 112
16.89 Ac.

DA 109
1.62 Ac.

DA 111
6.86 Ac.

DA 110
5.46 Ac.

DA 113
9.76 Ac.

DA 114
23.98 Ac.

DA 101
23.07 Ac.

DA 30
54.24 Ac.

DA 103
3.8 Ac.

DA 106
27.77 Ac.

DA 104
7.56 Ac.

DA 108
4.81 Ac.

DA 107
3.72 Ac.

DA 105
2.52 Ac.

DA 102
3.54 Ac.

DA 100
4.43 Ac.

Trib 42980 Of Thorn Run

Trib 42988 Of Thorn Run

Trib 42987 To Thorn Run

Trib 37194 To Steels Run

Trib 42989 To Thorn Run

Trib 42990 To Thorn Run

Trib 42991 To Thorn Run

Thorn Run

SR 4057 HILTY RD

SR 0066 FREEPORT RD

30

Aerial Imagery is from 2023/2024
Sanitary Sewer, Storm Sewer, and Potable Water features were taken from Municipal Authority of Washington Township's ArcGIS Online on 1/25/2024.

0 300 600 1,200 Feet

WASHINGTON TOWNSHIP

WESTMORELAND COUNTY PENNSYLVANIA

BEAVER RUN WATERSHED
STORMWATER SYSTEM
AND MS4 OUTFALL LOCATION MAP

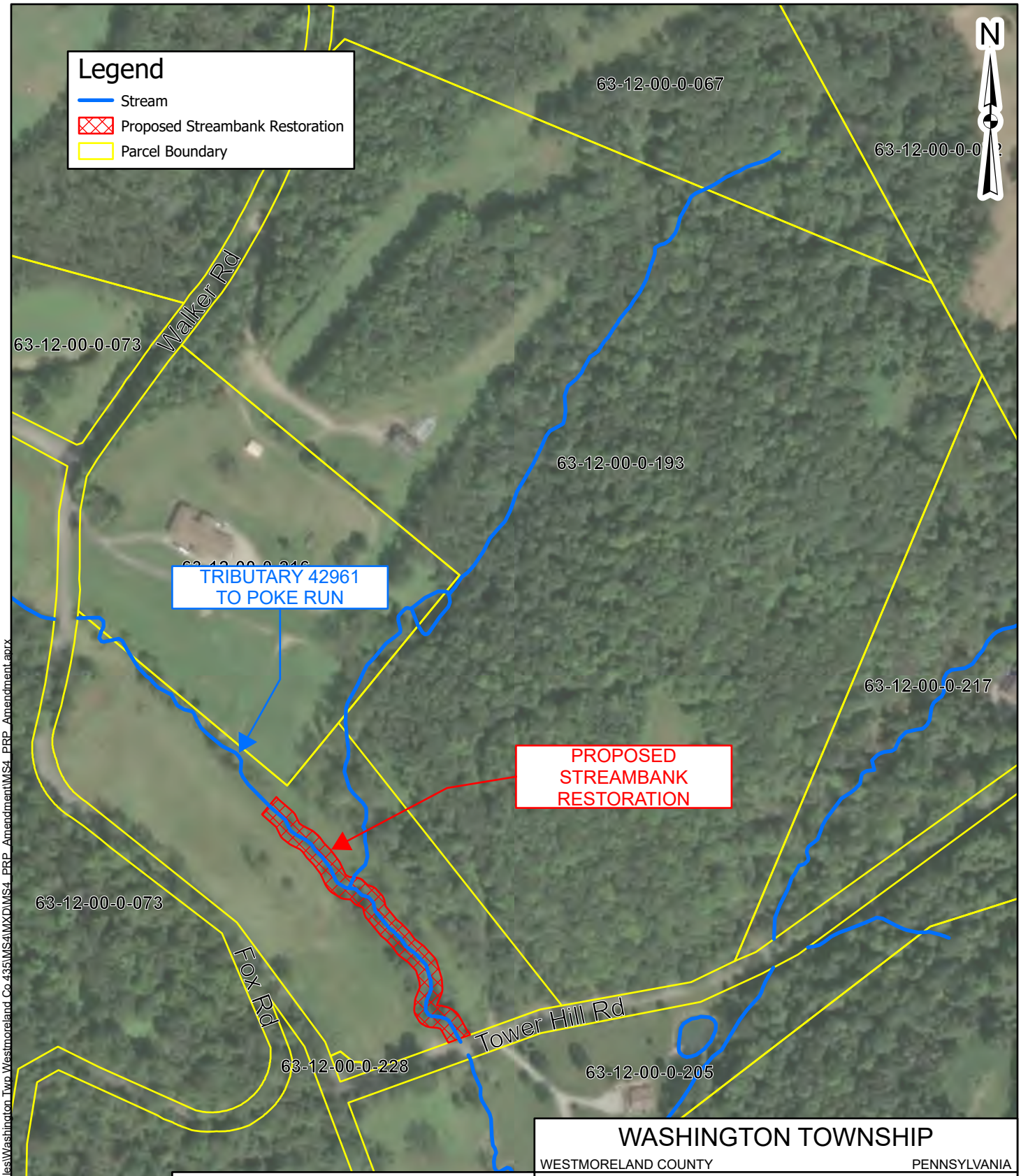
SHEET 6

BANKSON ENGINEERS, INC.
CONSULTING ENGINEERS
CHESWICK, PA 15024

SCALE	DRAWN BY	SHEETS IN SET
AS SHOWN	B.M.R.	6
DATE	APPROVED BY	DRAWING NUMBER
SEP. 2025	K.A.H.	1-435-1-6

Document Path: N:\GIS Projects\Files\Washington Twp Westmoreland Co 435\MS4 Maps\MS4 PRP Amendment.aprx

Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet / Projection: Lambert Conformal Conic /



WASHINGTON TOWNSHIP

WESTMORELAND COUNTY PENNSYLVANIA

MS4 POLLUTANT REDUCTION PLAN
STREAMBANK RESTORATION PROJECT

LOCATION MAP

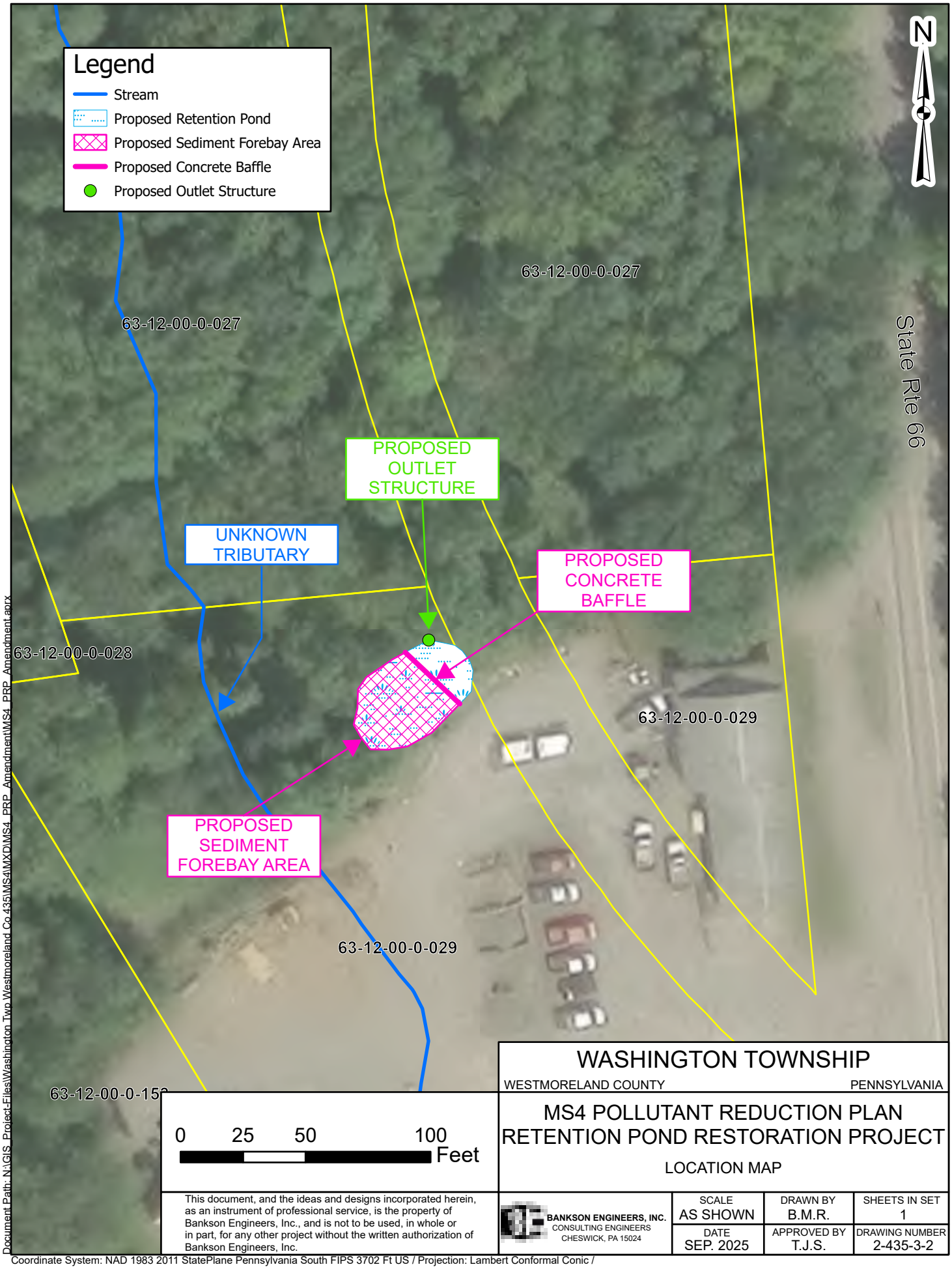
0 150 300 600 Feet

BANKSON ENGINEERS, INC.
CONSULTING ENGINEERS
CHESWICK, PA 15024

SCALE	DRAWN BY	SHEETS IN SET
AS SHOWN	B.M.R.	1
DATE	APPROVED BY	DRAWING NUMBER
AUG. 2025	T.J.S.	2-435-3-1

Document Path: N:\GIS_Project-Files\Washington Twp Westmoreland Co 435\MS4\MXD\MS4_PRP_Amendment\MS4_PRP_Amendment.aprx

Coordinate System: NAD 1983 2011 StatePlane Pennsylvania South FIPS 3702 Ft US / Projection: Lambert Conformal Conic /



WASHINGTON TOWNSHIP

WESTMORELAND COUNTY PENNSYLVANIA

MS4 POLLUTANT REDUCTION PLAN RETENTION POND RESTORATION PROJECT

LOCATION MAP

BANKSON ENGINEERS, INC.
CONSULTING ENGINEERS
CHESWICK, PA 15024

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