WETLAND and WATERS IDENTIFICATION & DELINEATION REPORT

Bryant Street
Stroudsburg Borough, Monroe County, PA

April 2025

Prepared By:

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ATTACHMENTS

FIGURES
(Located in Attachment A)

SUMMARY OF FINDINGS

Cherry Ridge Consulting LLC (Cherry Ridge LLC) identified and delineated one (1) wetland area, identified as Wetland A, within the Study Area on March 21, 2025. The Study Area is located north of Bryant Street in Stroudsburg Borough, Monroe County, Pennsylvania. The Study Area was limited to the northern portions of Parcels 18-5.2.14.22, 18-5.2.14.21, 18-5.2.14.20, 18-5.2.14.19, 18-5.2.14.18, 18-5.2.14.17, 18-5.2.14.16, 18-5.2.14.15, 18-5.2.14.14, 18-5.2.14.13, 18-5.2.14.12, and 18-5.2.14.11 based on the proposed limit of impact for construction related to proposed Interstate 80 improvements. Cherry Ridge LLC personnel identified the Parcel and Study Area boundary in the field based on existing natural and man-made features (i.e., roadways and existing buildings).

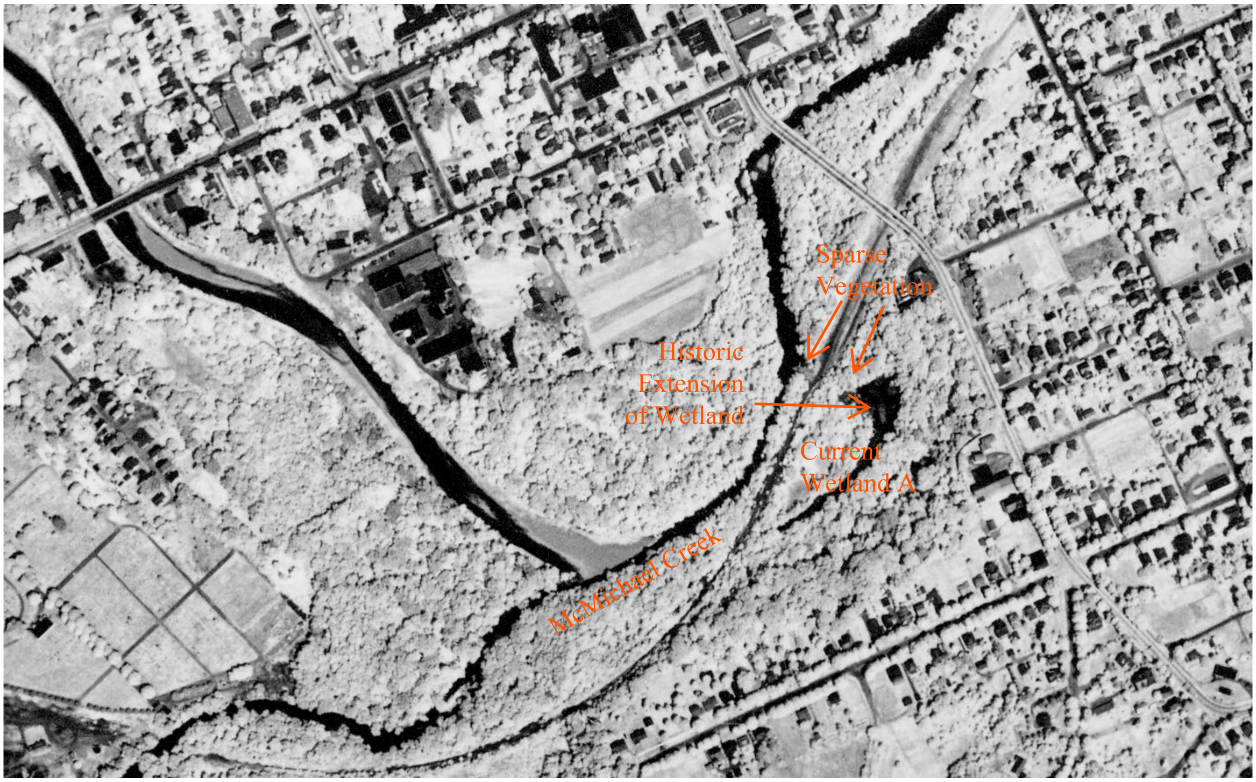
Wetland A is located in the northern portion of the Study Area. Wetland A is classified as a primary vernal pool with adjacent forested wetland fringe formed by accumulated precipitation runoff during the early spring, which tends to persist into the growing season. Spring seeps identified along the southern portion of Wetland A also contribute to the wetland's hydrology.

One (1) existing concrete culvert was observed along the northern boundary of Wetland A. This culvert appeared to be installed under the Interstate 80 Exit 307 entrance and exit ramps. Cherry Ridge LLC was unable to determine the direction of flow at this culvert during the site reconnaissance. One (1) existing historic clay pipe, presumably related to the Borough's stormwater management system, was observed along the eastern boundary of Wetland A. The clay pipe was observed to be broken and discharge from the pipe was observed to have historically caused erosion along the southeastern boundary of Wetland A. It is unclear whether this pipe continues to discharge stormwater or if this portion of the stormwater management system has been disconnected. Any contribution of stormwater discharge from the pipe to Wetland A is likely minimal.

Historic aerial photographs available through online resources (PennPilot Aerial Imagery) were reviewed for the Study Area prior to site reconnaissance to determine the potential historic presence of wetland and/or water features over time. Aerial photographs dated May 31, 1939, August 1, 1952, May 6, 1959, and October 4, 1969 were reviewed. Inundation was observed within the northern portion of the Study Area on the 1939, 1952, and 1959 historic aerial photographs, consistent with the current location of Wetland A. Tree cover was observed to be dense on the 1969 aerial photograph and distinct site features were not readily distinguishable.

Cherry Ridge LLC also noted that the identified Wetland A appears to have historically extended east-northeast within the land area currently constructed as the Interstate 80 Exit 307 exit and entrance ramps on the 1939 and 1952 historic aerial photographs. This north-northeastern historical extent of the current Wetland A may have had a connection to McMichael Creek or its assumed floodplain based on proximity to the railroad easement and evidence of sparse vegetation adjacent to the railroad along its northern (adjacent to McMichael Creek) and southern sides (adjacent to visible inundation/wetland area) in the 1952 historic aerial photograph. The relevant sections of the 1939 and 1952 historic aerial photographs are included below with annotations.

1939 Historic Aerial Photograph



1952 Historic Aerial Photograph

Historic aerial photographs were also reviewed through the Google Earth Pro platform for years 1985, 1992, 1999, 2005, 2008, 2010, 2012, 2014, 2016, 2017, 2018, 2020, 2022 and 2024. Inundation was observed within the northern portions of the Study Area on the 1992, 1999, 2005, 2014, 2016, and 2017 historic aerial photographs, consistent with the identified location of Wetland A.

Cherry Ridge LLC recommends a review of applicable municipal ordinances to determine construction setback requirements from the identified wetland area, as well as appropriate protective measures during and after any construction activities related to the proposed Interstate 80 improvements.

Cherry Ridge LLC has completed this Wetland and Waters Delineation at the subject property in a professional manner using that degree of skill and care exercised by reputable and competent environmental consultants for similar projects under similar conditions at this point in time. The purpose of this Wetland and Waters Delineation was limited to the scope described herein. This assessment is valid for a period of five (5) years from the date of site reconnaissance, so long as there are no changes to site vegetation, soils, or hydrology.

1.0 INTRODUCTION

Cherry Ridge LLC prepared this Wetland Identification and Delineation Report in accordance with the *U.S. Army Corps of Engineers Wetland Delineation Manual Y-87-01* (Environmental Laboratory, 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (January 2012), and the "Revised Definition of Waters of the United States" (effective March 20, 2023, as amended August 29, 2023). Hydric soils were identified based on the Field Indicators of Hydric Soil in the United States (USDA NRCS, Version 9.0, 2024) and the Regional Supplement.

The purpose of this report is to describe the existing characteristics and extent of wetlands and waters within the defined Study Area. Cherry Ridge LLC was contracted to identify and delineate wetlands and waters within the Study Area shown on Figures 1, 2, and 3 in Attachment A.

The Study Area is located north of Bryant Street in Stroudsburg Borough, Monroe County, Pennsylvania (Attachment A, Figure 1). The Study Area was limited to the northern portions of Parcels 18-5.2.14.22, 18-5.2.14.21, 18-5.2.14.20, 18-5.2.14.19, 18-5.2.14.18, 18-5.2.14.17, 18-5.2.14.16, 18-5.2.14.15, 18-5.2.14.14, 18-5.2.14.13, 18-5.2.14.12, and 18-5.2.14.11 based on the proposed limit of impact for construction related to proposed Interstate 80 improvements. The Study Area is approximately four (4) acres in size and is shown on the attached Figures. The Study Area consists entirely of undeveloped wooded land that continues offsite to the east and west. Interstate 80 borders the Study Area to the north. The southern portions of the subject parcels border the Study Area to the south and are residentially developed. The Site location and topography are shown in Figure 1.

The mapped soil series within the Study Area according to the NRCS Report for Monroe County, Pennsylvania (Attachment B) are listed in Table 1: Summary of Soil Characteristics. The extent of these soil series within the Study Area are shown on the Soil Map included in Attachment B.

The Pope silt loam, high bottom (Pp) soil unit mapped within the Study Area is listed as partially hydric on the National Hydric Soils List (2018) (Table 1).

TABLE 1: Summary of Soil Characteristics

Soil Series Name (Mapping Symbol) Subgroup	Hydric Status	Flooding Frequency	Depth to Seasonally High-Water Table	On National Hydric Soils List?	On Local Hydric Soils List?
Cut and fill land (Cy)	Not Hydric	None	12 – 72”	No	No
Pope silt loam, high bottom (Pp)	Partially Hydric	Rare	48 – 72”	Yes	Partially Hydric (10% Holly component)

According to the National Wetlands Inventory (NWI) Map (Figure 2, Attachment A), no wetlands or water features are mapped within the Study Area. Pocono Creek and McMichael Creek (R2UBH and R2USA, respectively) are mapped to the northwest of the Study Area.

The Study Area is shown on Figures 1, 2, and 3 in Attachment A.

1.1 Project Description

The Study Area is located north of Bryant Street in Stroudsburg Borough, Monroe County, Pennsylvania (Attachment A, Figure 1). The Study Area was limited to the northern portions of Parcels 18-5.2.14.22, 18-5.2.14.21, 18-5.2.14.20, 18-5.2.14.19, 18-5.2.14.18, 18-5.2.14.17, 18-5.2.14.16, 18-5.2.14.15, 18-5.2.14.14, 18-5.2.14.13, 18-5.2.14.12, and 18-5.2.14.11 based on the proposed limit of impact for construction related to proposed Interstate 80 improvements.

The Study Area is approximately four (4) acres in size and is shown on the attached Figures.

1.2 Identification of Project Site

The Study Area is shown on Figures 1, 2, and 3 in Attachment A. The Study Area is located north of Bryant Street in Stroudsburg Borough, Monroe County, Pennsylvania. The project location is shown on Figure 1 (Stroudsburg, PA USGS 7.5-Minute Series Quadrangle).

2.0 SECONDARY DATA

Background information on the Site's landforms and watershed characteristics, including vegetation, soils, and hydrology, was obtained and reviewed prior to initiation of the field investigation. Data sources included aerial photography obtained from online sources, site topography obtained from the PAMAP Program Topographic Contours of Pennsylvania, (PAMAP Program, PA DCNR, Bureau of Topographic and Geologic Survey), the Stroudsburg, PA USGS 7.5-Minute Topographic Quadrangle (Figure 1), the Natural Resource Conservation Service Report of Monroe County, the Soil Survey of Monroe County, PA, and the National Wetlands Inventory Map of the Stroudsburg, PA Quadrangle (Figure 2).

According to the National Wetlands Inventory (NWI) Map (Figure 2, Attachment A), no wetlands or water features are mapped within the Study Area. Pocono Creek and McMichael Creek (R2UBH and R2USA, respectively) are mapped to the northwest of the Study Area.

The mapped soil series within the Study Area according to the NRCS Report for Monroe County, Pennsylvania (Attachment B) are listed in Table 2: Mapped Soil Unit Characteristics. The extent of these soil series within the Study Area are shown on the Soil Map included in Attachment B.

TABLE 2: Mapped Soil Unit Characteristics

Soil Series Name	Mapping Symbol	Drainage Class	Hydric Rating	Depth to Seasonally High-Water Table
Cut and fill land	Cy	Well drained	No	12 – 72”
Pope silt loam, high bottom	Pp	Well drained	Partially Hydric (10% Holly component)	48 – 72”

Historic aerial photographs available through online resources (PennPilot Aerial Imagery) were reviewed for the Study Area prior to site reconnaissance to determine the potential historic presence of wetland and/or water features over time. Aerial photographs dated May 31, 1939, August 1, 1952, May 6, 1959, and October 4, 1969 were reviewed. Inundation was observed within the northern portion of the Study Area on the 1939, 1952, and 1959 historic aerial photographs, consistent with the current location of Wetland A. Tree cover was observed to be dense on the 1969 aerial photograph and distinct site features were not readily distinguishable.

Cherry Ridge LLC also noted that the identified Wetland A appears to have historically extended east-northeast within the land area currently constructed as the Interstate 80 Exit 307 exit and entrance ramps on the 1939 and 1952 historic aerial photographs. This north-northeastern historical extent of the current Wetland A may have had a connection to McMichael Creek or its assumed floodplain based on proximity to the railroad easement and evidence of sparse vegetation adjacent to the railroad along its northern (adjacent to McMichael Creek) and southern sides (adjacent to visible inundation/wetland area) in the 1952 historic aerial photograph.

Historic aerial photographs were also reviewed through the Google Earth Pro platform for years 1985, 1992, 1999, 2005, 2008, 2010, 2012, 2014, 2016, 2017, 2018, 2020, 2022 and 2024. Inundation was observed within the northern portions of the Study Area on the 1992, 1999, 2005, 2014, 2016, and 2017 historic aerial photographs, consistent with the identified location of Wetland A.

3.0 WETLAND DELINEATION METHODS

Field investigation was conducted by Cherry Ridge LLC on March 21, 2025. Wetland identification and delineation was completed in accordance with the technical criteria set forth in the *U.S. Army Corps of Engineers Wetland Delineation Manual Y-87-01* (Environmental Laboratory, 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (January 2012), and the "Revised Definition of Waters of the United States" (effective March 20, 2023, as amended August 29, 2023).

According to the *U.S. Army Corps of Engineers Wetland Delineation Manual Y-87-01* (Environmental Laboratory, 1987), the regulatory definition of a wetland is those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. This definition refers to the three essential characteristics of a wetland: wetland hydrology, hydric soils, and hydrophytic vegetation. These three technical criteria must be met (under normal circumstances) for an area to be classified as a wetland. When delineating problem areas or disturbed wetlands, field indicators for one or more of the technical criteria may be absent.

3.1 Hydrophytic Vegetation

Vegetation in wetland areas must be dominated by species that are hydrophytic. Hydrophytic species (hydrophytes) are those plants that have specialized morphological, physiological, or other adaptations for living, growing, and reproducing in water or substrates that are subject to frequent and prolonged saturation near the surface. The U.S. Fish and Wildlife Service (USFWS), the Natural Resources Conservation Service (NRCS), USACE, and EPA, in cooperation with botanists and wetland experts, developed the *National Wetland Plant List* (2022). Since many plants have wide ecological ranges and are, therefore, not restricted to a single type of habitat, the USFWS, NRCS, USACE, and EPA assign an indicator status to plant species. The indicator status is an index of wetland fidelity that is based on the species frequency and abundance in wetlands versus uplands, while taking into account the landscape component (i.e., relative percentages of wetlands and uplands in the landscape):

Plant Affinity for Wetland Conditions

Classification	Occurrence in Wetlands
Obligate (OBL)	Almost always is a hydrophyte, rarely in uplands
Facultative Wet (FACW)	Usually is a hydrophyte, but occasionally found in uplands
Facultative (FAC)	Commonly occurs as either hydrophyte or non-hydrophyte
Facultative Upland (FACU)	Occasionally is a hydrophyte, but usually occurs in uplands
Upland (UPL)	Rarely is a hydrophyte, almost always in uplands

When OBL, FACW, and/or FAC species compose greater than 50% of the dominant species for all vegetative strata, the criterion for hydrophytic vegetation is met. While most wetlands are dominated by species rated OBL, FACW, and FAC, some wetland communities may be dominated by FACU species and cannot be identified by dominant species alone. In those cases, other indicators of hydrophytic vegetation must also be considered, particularly where indicators of hydric soils and wetland hydrology are present.

3.2 Hydric Soils

In order for an area to be classified as wetland, the predominant substrate soils must exhibit hydric characteristics. According to the USDA Natural Resource Conservation Service (NRCS), hydric soils are defined as "soils that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part." For the purposes of this definition, the following assumptions must be made:

1. Long enough is defined as at least 14 days;
2. The growing season is the period when soil temperatures are above biologic zero (41ºF);
3. Anaerobic conditions are caused by the displacement of air by water; and
4. The upper part is the B horizon or root zone of the soil.

Hydric soil criteria are further defined by the National Technical Committee for Hydric Soils (NTCHS) as:

1. All Histels except Folistels and Histosols except Folists, or
2. Soils in Aquic suborders, great groups, or subgroups, Albolls suborder, Historthels great group, Histoturbels great group, Andic, Vitrandic, and Pachic subgroups, or Cumulic subgroups that are:
    a. Somewhat poorly drained with a water table equal to 0.0 foot (ft) from the surface during the growing season, or
    b. Poorly drained or very poorly drained and have either:
        i. Water table equal to 0.0 ft during the growing season if textures are coarse sand, sand, or fine sand in all layers within 20 inches (in), or for other soils
        ii. Water table at less than or equal to 0.5 ft from the surface during the growing season if permeability is equal to or greater than 6.0 in/hour (h) in all layers within 20 in, or
        iii. Water table at less than or equal to 1.0 ft from the surface during the growing season if permeability is less than 6.0 in/h in any layer within 20 in, or
3. Soils that are frequently ponded for long duration or very long duration during the growing season, or
4. Soils that are frequently flooded for long duration or very long duration during the growing season.

Field indicators of hydric soils have been developed by the NTCHS in cooperation with the USDA NRSC (USDA NRCS, Version 9.0, 2024). Detailed hydrologic data are not often available for a particular site; therefore, field indicators are used to determine the presence and extent of hydric soils. Soils are generally examined to a depth of 20 inches, where field conditions allow. Common field indicators of hydric soil conditions include:

- A low chroma (1 chroma) matrix, either with or without redoxymorphic features;
- Low chroma (2 chroma) matrix with redoxymorphic features;
- Oxidized rhizospheres (root channel oxidations);
- Iron or manganese concretions;
- Leaching or streaking of organic material;
- A high organic content in the upper part of the profile;
- Sulfidic material;
- Reducing (anaerobic) soil conditions; and/or
- Field identification of a soil series which appears in the *Hydric Soils of the United States* (USDA Soil Conservation Service, SCS and the National Technical Committee for Hydric Soils, 1987).

When evaluating mineral soils, the soil color is the best indicator of the frequency of influence by hydrology. The *Munsell Soil Color Charts* (Kollmorgen Corporation, 2009 Revision), which evaluate hue, value, and chroma, may be used to determine if a mineral soil meets the hydric soil criteria.

3.3 Wetland Hydrology

The term “wetland hydrology” encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface for one week or more during the growing season. Areas with evident characteristics of wetland hydrology are those where the presence of water has an over-riding influence on characteristics of vegetation and soils due to anaerobic and reducing conditions, respectively. Such characteristics are usually present in areas that are inundated or have soils that are saturated to the surface for sufficient duration to develop hydric soils and support vegetation typically adapted for life in periodically anaerobic soil conditions. Hydrology is generally the least exact of the three technical criteria and is the most difficult to establish in the field due to annual, seasonal, and daily fluctuations. However, it is essential to establish that a wetland area is periodically inundated or has saturated soils during the growing season.

Numerous factors, such as precipitation, stratigraphy, topography, soil permeability, and plant cover influence the wetness of an area. However, the characteristic common to all wetlands is the presence of an abundant supply of water. The source of water may be direct precipitation runoff, headwater or backwater flooding, tidal influence, groundwater, or some combination of these sources. Field indicators that suggest a periodic, hydrologic influence are used to locate wetland boundaries in the field. These field indicators include:

- Inundation or soil saturation;
- Oxidized channels (rhizospheres) associated with living roots;
- Water marks;
- Drift lines;
- Water-borne sediment deposits;
- Water stained leaves;
- Surface scoured areas; and/or
- Morphological plant adaptations.

Location specific data were collected throughout the Study Area to determine the wetland boundaries. These data include: soil texture, taxonomic classification, color and composition from 0 to 18 inches (0 to 45 centimeters) or refusal, whichever occurs first; vegetative species composition based on relative dominance; and evidence of surface or groundwater hydrology. Wetland Determination Field Data Forms – Northcentral and Northeast Region were completed at each observation point to document the vegetative, soil and hydrologic conditions present. A soil auger was used to obtain soil samples for classification.

Cherry Ridge LLC personnel identified the Parcel and Study Area boundary in the field based on existing natural and man-made features (i.e., roadways and existing buildings).

Survey flags, sequentially numbered, define the outermost boundaries of the delineated wetland area within the Study Area. The flag locations were surveyed by Cherry Ridge LLC personnel using Ecobot Collector software for Android. The approximate boundary of the identified wetland area is shown on the included Figure 3, Approximate Wetland Boundary Map, in Attachment A.

4.0 RESULTS

Aerial photography, topographic mapping (Figure 1), soil mapping (Attachment B), and the National Wetlands Inventory Map (Figure 2) were referenced to determine the possible presence of wetlands and water features within the Study Area prior to on-site investigation. A routine field investigation of vegetation, soils, and hydrologic conditions was performed on March 21, 2025 for the purpose of delineating the identified wetland area within the defined Study Area.

The Study Area is located north of Bryant Street in Stroudsburg Borough, Monroe County, Pennsylvania. The Study Area was limited to the northern portions of Parcels 18-5.2.14.22, 18-5.2.14.21, 18-5.2.14.20, 18-5.2.14.19, 18-5.2.14.18, 18-5.2.14.17, 18-5.2.14.16, 18-5.2.14.15, 18-5.2.14.14, 18-5.2.14.13, 18-5.2.14.12, and 18-5.2.14.11 based on the proposed limit of impact for construction related to proposed Interstate 80 improvements.

Cherry Ridge LLC personnel who performed the wetland delineation followed the field methodology procedures established in the *U.S. Army Corps of Engineers Wetland Delineation Manual Y-87-01* (Environmental Laboratory, 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (January 2012), and the "Revised Definition of Waters of the United States" (effective March 20, 2023, as amended August 29, 2023).

Historic aerial photographs available through online resources (PennPilot Aerial Imagery) were reviewed for the Study Area prior to site reconnaissance to determine the potential historic presence of wetland and/or water features over time. Aerial photographs dated May 31, 1939, August 1, 1952, May 6, 1959, and October 4, 1969 were reviewed. Inundation was observed within the northern portion of the Study Area on the 1939, 1952, and 1959 historic aerial photographs, consistent with the current location of Wetland A. Tree cover was observed to be dense on the 1969 aerial photograph and distinct site features were not readily distinguishable.

Cherry Ridge LLC also noted that the identified Wetland A appears to have historically extended east-northeast within the land area currently constructed as the Interstate 80 Exit 307 exit and entrance ramps on the 1939 and 1952 historic aerial photographs. This north-northeastern historical extent of the current Wetland A may have had a connection to McMichael Creek or its assumed floodplain based on proximity to the railroad easement and evidence of sparse vegetation adjacent to the railroad along its northern (adjacent to McMichael Creek) and southern sides (adjacent to visible inundation/wetland area) in the 1952 historic aerial photograph.

Historic aerial photographs were also reviewed through the Google Earth Pro platform for years 1985, 1992, 1999, 2005, 2008, 2010, 2012, 2014, 2016, 2017, 2018, 2020, 2022 and 2024. Inundation was observed within the northern portions of the Study Area on the 1992, 1999, 2005, 2014, 2016, and 2017 historic aerial photographs, consistent with the identified location of Wetland A.

The field investigation of vegetation, soils, and hydrologic conditions within the Study Area on March 21, 2025 resulted in the identification and delineation of one (1) wetland area, identified as Wetland A.

Survey flags, sequentially numbered, define the outermost boundary of the delineated wetland area within the Study Area. The flag locations were surveyed by Cherry Ridge LLC personnel using Ecobot Collector software for Android. Sample points were chosen for detailed documentation of soils, vegetation, and hydrology at the identified wetland area (Attachment C). Representative soil sample logs obtained during the wetland delineation at the Site are presented in Attachment C.

Wetland A is located in the northern portion of the Study Area. Wetland A is classified as a primary vernal pool with adjacent forested wetland fringe formed by accumulated precipitation runoff during the early spring, which tends to persist into the growing season. Spring seeps identified along the southern portion of Wetland A also contribute to the wetland's hydrology. Surface water, saturation, water-stained leaves, aquatic fauna, and a hydrogen sulfide odor were observed within Wetland A during field investigation.

One (1) existing concrete culvert was observed along the northern boundary of Wetland A. This culvert appeared to be installed under the Interstate 80 Exit 307 entrance and exit ramps. Cherry Ridge LLC was unable to determine the direction of flow at this culvert during the site reconnaissance. One (1) existing historic clay pipe, presumably related to the Borough's stormwater management system, was observed along the eastern boundary of Wetland A. The clay pipe was observed to be broken and discharge from the pipe was observed to have historically caused erosion along the southeastern boundary of Wetland A. It is unclear whether this pipe continues to discharge stormwater or if this portion of the stormwater management system has been disconnected. Any contribution of stormwater discharge from the pipe to Wetland A is likely minimal.

Observed dominant vegetation within Wetland A included red maple (*Acer rubrum*), American hornbeam (*Carpinus caroliniana*), giant rhododendron (*Rhododendron maximum*), Japanese barberry (*Berberis thunbergii*), skunk cabbage (*Symplocarpus foetidus*), cinnamon fern (*Osmundastrum cinnamomeum*), common duckweed (*Lemna minor*), American wisteria (*Wisteria frutescens*), and sphagnum moss (*Sphagnum sp.*).

Cherry Ridge LLC recommends a review of applicable municipal ordinances to determine construction setback requirements from the identified wetland area as well as appropriate protective measures during and after any construction activities.

The Approximate Wetland Boundary Map (Figure 3) showing the approximate wetland boundary (Attachment A), Field Data Sheets (Attachment C), and color photographs (Attachment D) are included as attachments.

5.0 SUMMARY AND CONCLUSIONS

The field investigation of vegetation, soils, and hydrologic conditions within the Study Area on March 21, 2025 resulted in the identification and delineation of one (1) wetland area, identified as Wetland A.

The Study Area is located north of Bryant Street in Stroudsburg Borough, Monroe County, Pennsylvania. The Study Area was limited to the northern portions of Parcels 18-5.2.14.22, 18-5.2.14.21, 18-5.2.14.20, 18-5.2.14.19, 18-5.2.14.18, 18-5.2.14.17, 18-5.2.14.16, 18-5.2.14.15, 18-5.2.14.14, 18-5.2.14.13, 18-5.2.14.12, and 18-5.2.14.11 based on the proposed limit of impact for construction related to Interstate 80 improvements. Cherry Ridge LLC personnel identified the Parcel and Study Area boundary in the field based on existing natural and man-made features (i.e., roadways and existing buildings).

Wetland A is located in the northern portion of the Study Area. Wetland A is classified as a primary vernal pool with adjacent forested wetland fringe formed by accumulated precipitation runoff during the early spring, which tends to persist into the growing season. Spring seeps identified along the southern portion of Wetland A also contribute to the wetland's hydrology.

One (1) existing concrete culvert was observed along the northern boundary of Wetland A under Interstate 80. This culvert appeared to be installed under the Interstate 80 Exit 307 entrance and exit ramps. Cherry Ridge LLC was unable to determine the direction of flow at this culvert during the site reconnaissance. One (1) existing historic clay pipe was observed along the eastern boundary of Wetland A. The clay pipe was observed to be broken and causing erosion along the southeastern boundary of Wetland A. This pipe likely contributes a small amount of stormwater discharge to Wetland A from stormwater inlets along Bryant Street and/or Park Avenue.

Cherry Ridge LLC recommends a review of applicable municipal ordinances to determine construction setback requirements from the identified wetland area, as well as appropriate protective measures during and after any construction activities related to the proposed Interstate 80 improvements.

Cherry Ridge LLC has completed this Wetland and Waters Delineation at the subject property in a professional manner using that degree of skill and care exercised by reputable and competent environmental consultants for similar projects under similar conditions at this point in time. The purpose of this Wetland and Waters Delineation was limited to the scope described herein. This assessment is valid for a period of five (5) years from the date of site reconnaissance, so long as there are no changes to site vegetation, soils, or hydrology.

6.0 REFERENCES

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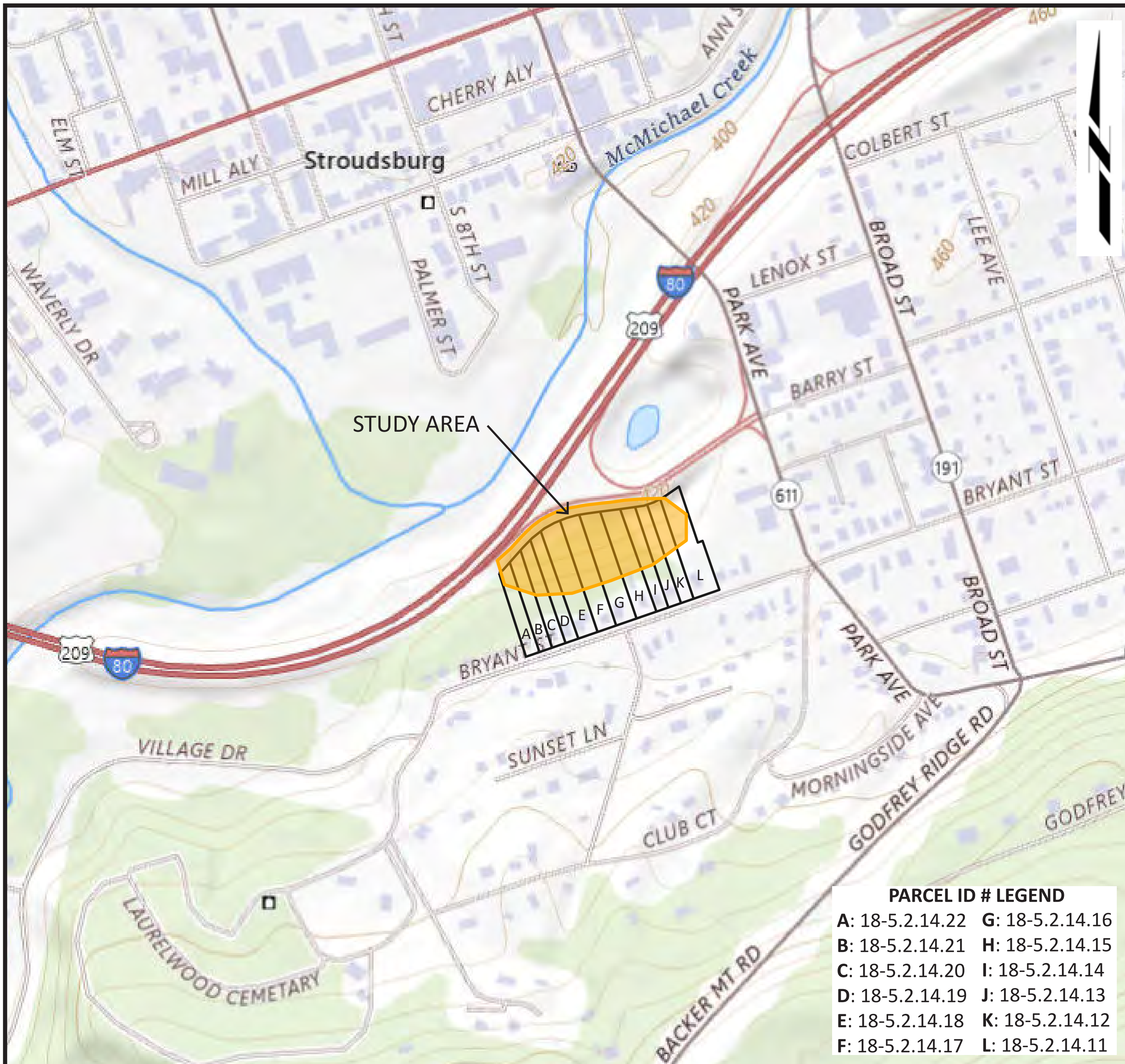
ATTACHMENT A

Figures



PARCEL ID # LEGEND

A: 18-5.2.14.22	**G**: 18-5.2.14.16
B: 18-5.2.14.21	**H**: 18-5.2.14.15
C: 18-5.2.14.20	**I**: 18-5.2.14.14
D: 18-5.2.14.19	**J**: 18-5.2.14.13
E: 18-5.2.14.18	**K**: 18-5.2.14.12
F: 18-5.2.14.17	**L**: 18-5.2.14.11

SOURCE: THE NATIONAL MAP
(https://www.usgs.gov/core-science-systems/national-geospatial-program/national-map)
USGS 7.5-Minute Topographic Quadrangle, Stroudsburg, PA.

1:9,000

0 0.05 0.1 0.2 mi

0 0.07 0.15 0.3 km

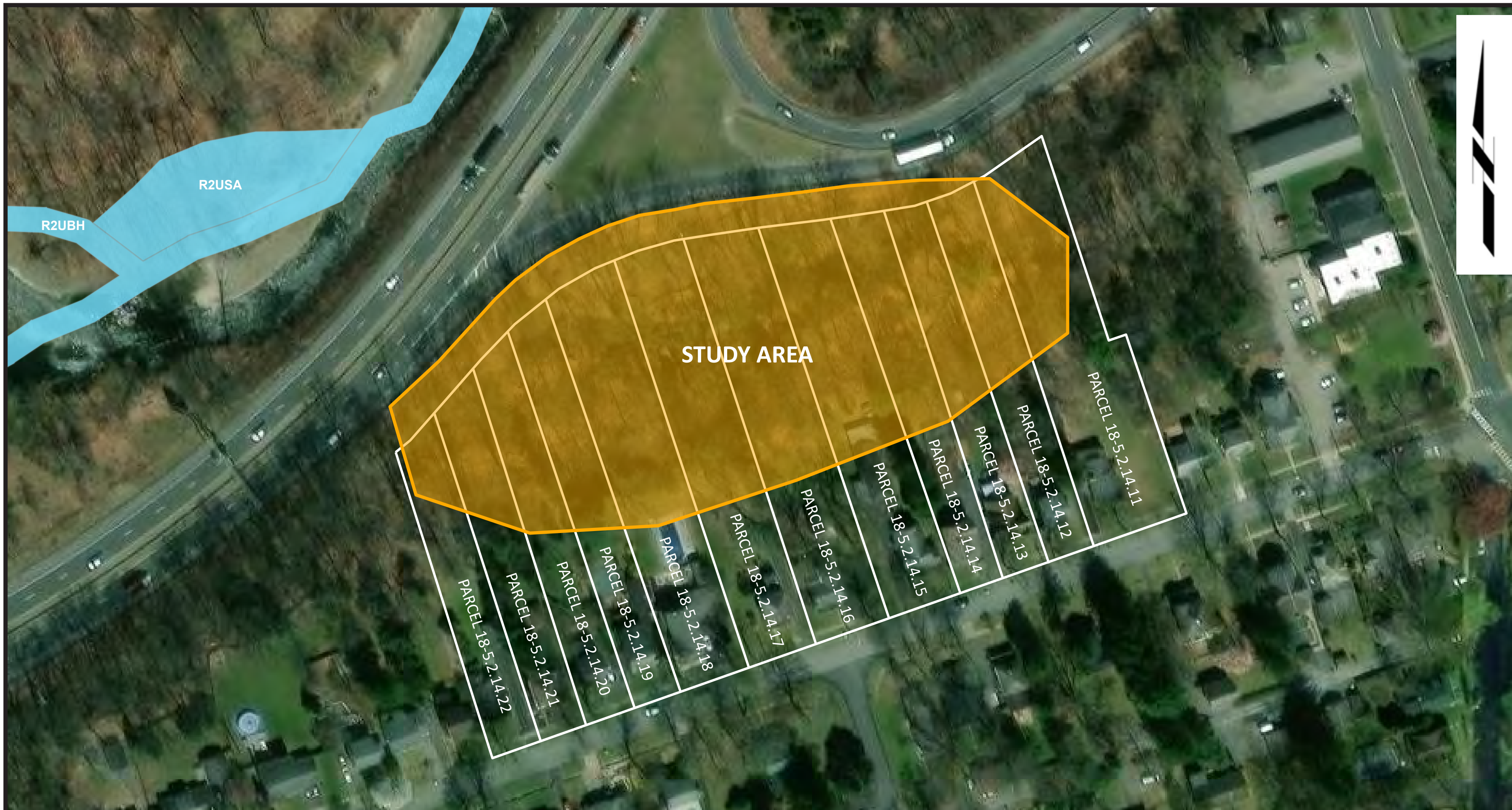
APPROX. STUDY AREA BOUNDARY

APPROX. PARCEL BOUNDARIES

CHERRY RIDGE CONSULTING LLC

P.O. BOX 267
SCIOTA, PA 18354
(570) 350-0809

FIGURE 1
SITE LOCATION MAP
BRYANT STREET
STROUDSBURG BOROUGH, MONROE COUNTY, PA



Riverine
Freshwater Forested/Shrub Wetland
Freshwater Emergent Wetland
Lake
Approximate Study Area Boundary

1:2,500

0 0.01 0.03 0.06 mi

0 0.03 0.05 0.1 km

Cherry Ridge Consulting LLC

P.O. BOX 267
SCIOTA, PA 18354
(570) 350-0809

SOURCES:
U.S FISH AND WILDLIFE SERVICE, NATIONAL WETLANDS INVENTORY. ARCGIS PA WETLANDS LAYER. MONROE COUNTY PARCELS LAYER. ESRI WORLD IMAGERY.

FIGURE 2
NATIONAL WETLANDS INVENTORY MAP
BRYANT STREET
STROUDSBURG BOROUGH, MONROE COUNTY, PA

SOURCES: Monroe County Tax Assessment GIS Parcels Layer. Esri World Imagery Hybrid.

APPROX. PARCEL BOUNDARIES

APPROX. STUDY AREA BOUNDARY

APPROX. WETLAND BOUNDARY

APPROX. SOIL SAMPLE LOCATIONS

APPROX. CULVERT & PIPE LOCATIONS

1:2,500

0 0.01 0.03 0.06 mi

0 0.03 0.05 0.1 km

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SCIOTA, PA 18354
(570) 350-0809

FIGURE 3
APPROXIMATE WETLAND BOUNDARY MAP
BRYANT STREET
STROUDSBURG BOROUGH, MONROE COUNTY, PA

ATTACHMENT B

Soil Survey Report

United States Department of Agriculture

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for

Monroe County, Pennsylvania

March 7, 2025

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

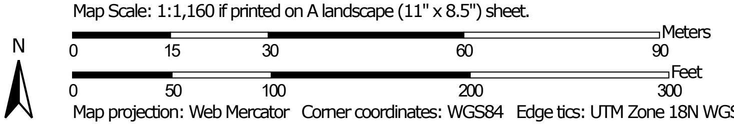
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Soil Map

Map Scale: 1:1,160 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Map Unit Polygons

Soil Map Unit Lines

Soil Map Unit Points

Special Point Features

Blowout

Borrow Pit

Clay Spot

Closed Depression

Gravel Pit

Gravelly Spot

Landfill

Lava Flow

Marsh or swamp

Mine or Quarry

Miscellaneous Water

Perennial Water

Rock Outcrop

Saline Spot

Sandy Spot

Severely Eroded Spot

Sinkhole

Slide or Slip

Sodic Spot

Spoil Area

Stony Spot

Very Stony Spot

Wet Spot

Other

Special Line Features

Water Features

Streams and Canals

Transportation

Rails

Interstate Highways

US Routes

Major Roads

Local Roads

Background

Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Monroe County, Pennsylvania
Survey Area Data: Version 19, Sep 5, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 3, 2022—Jul 20, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Cy	Cut and fill land	2.4	61.5%
Pp	Pope silt loam, high bottom	1.5	38.5%
Totals for Area of Interest		**3.9**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Monroe County, Pennsylvania

Cy—Cut and fill land

Map Unit Setting

National map unit symbol: 9y9x
Elevation: 590 to 1,970 feet
Mean annual precipitation: 34 to 51 inches
Mean annual air temperature: 40 to 50 degrees F
Frost-free period: 100 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Udorthents, cut and fill, and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents, Cut And Fill

Setting

Parent material: Man made and altered materials from mixed rock types

Properties and qualities

Slope: 0 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Depth to water table: About 12 to 72 inches
Frequency of flooding: None
Frequency of ponding: None

Pp—Pope silt loam, high bottom

Map Unit Setting

National map unit symbol: 9ycp
Elevation: 590 to 1,970 feet
Mean annual precipitation: 30 to 51 inches
Mean annual air temperature: 40 to 54 degrees F
Frost-free period: 100 to 187 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Pope and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pope

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Coarse-loamy alluvium derived from sandstone and siltstone

Typical profile

H1 - 0 to 10 inches: silt loam
H2 - 10 to 30 inches: silt loam
H3 - 30 to 60 inches: loamy very fine sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: About 48 to 72 inches
Frequency of flooding: Rare
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Ecological site: F140XY013PA - High Floodplain
Hydric soil rating: No

Minor Components

Holly

Percent of map unit: 10 percent
Landform: Depressions on flood plains, backswamps
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: Yes

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ATTACHMENT C

Field Data Sheets

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bryant Street City/County: Monroe County Sampling Date: 3/21/2025

Applicant/Owner: Stroudsburg Borough State: PA Sampling Point: SA-1

Investigator(s): J. Olsen, PWS A. Bish, WPIT Section, Township, Range: Stroudsburg Borough

Landform (hillslope, terrace, etc.): ______ Local relief (concave, convex, none): ______

Slope (%): ______ Lat: ______ Long: ______ Datum: ______

Soil Map Unit Name: Pope silt loam, high bottom (Pp) NWI classification: ______

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ______ (If no, explain in Remarks.)

Are Vegetation ______, Soil ______, or Hydrology ______ significantly disturbed? Are "Normal Circumstances" present? Yes X No ______

Are Vegetation ______, Soil ______, or Hydrology ______ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No ______	**Is the Sampled Area within a Wetland?**	**Yes** X **No** ______
Hydric Soil Present?	Yes X No ______		
Wetland Hydrology Present?	Yes X No ______	If yes, optional Wetland Site ID:	Wetland A

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☑ Surface Water (A1)
- ☑ High Water Table (A2)
- ☑ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ☑ Inundation Visible on Aerial Imagery (B7)
- ☑ Sparsely Vegetated Concave Surface (B8)
- ☑ Water-Stained Leaves (B9)
- ☑ Aquatic Fauna (B13)
- ___ Marl Deposits (B15)
- ☑ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Stunted or Stressed Plants (D1)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ Microtopographic Relief (D4)
- ☑ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X No ______	Depth (inches): < 4"	
Water Table Present?	Yes X No ______	Depth (inches): ~ 5"	
Saturation Present? (includes capillary fringe)	Yes X No ______	Depth (inches): ~ 8"	**Wetland Hydrology Present? Yes** X **No** ______

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland A is located in the northern portion of the Study Area. Wetland A is classified as a primary vernal pool with adjacent forested wetland fringe formed by accumulated precipitation runoff during the early spring, which tends to persist into the growing season. Spring seeps identified along the southern portion of Wetland A also contribute to the wetland's hydrology.

VEGETATION – Use scientific names of plants.

Sampling Point: SA-1

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	50%	Y	FAC
2. Carpinus caroliniana	25%	Y	FAC
3.			
4.			
5.			
6.			
7.			
	75% = Total Cover		
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. Rhododendron maximum	35%	Y	FAC
2. Berberis thunbergii	20%	Y	FACU
3.			
4.			
5.			
6.			
7.			
	55% = Total Cover		
Herb Stratum (Plot size: 5 ft.)			
1. Symplocarpus foetidus	10%	Y	OBL
2. Osmundastrum cinnamomeum	15%	Y	FACW
3. Carex sp.	5%	N	FACW
4. Lemna minor	10%	Y	OBL
5. Sphagnum sp.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	40% = Total Cover		
Woody Vine Stratum (Plot size: 30 ft.)			
1. Wisteria frutescens	15%	Y	FACW
2.			
3.			
4.			
	15% = Total Cover		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 87.5% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species		x 3 =	
FACU species		x 4 =	
UPL species		x 5 =	
Column Totals:	(A)		(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ Rapid Test for Hydrophytic Vegetation
- ✓ Dominance Test is >50%
- ___ Prevalence Index is ≤3.0[1]
- ___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** X **No** ___

Remarks: (Include photo numbers here or on a separate sheet.)

Sphagnum sp. was not included in the above calculations because it is a non-vascular species.

The identified plant community also passes the FAC-Neutral Test.

SOIL

Sampling Point: SA-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 2"	10 YR 3/2	100%					sandy loam	moist
2 - 12"	10 YR 5/2	96%	5 YR 5/4	4%	C	M	sandy loam	very moist

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ✓ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (**LRR R, MLRA 149B**)
- ___ Polyvalue Below Surface (S8) (**LRR R, MLRA 149B**)
- ___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
- ___ Loamy Mucky Mineral (F1) (**LRR K, L**)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ___ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ___ Dark Surface (S7) (**LRR K, L**)
- ___ Polyvalue Below Surface (S8) (**LRR K, L**)
- ___ Thin Dark Surface (S9) (**LRR K, L**)
- ___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ______

Depth (inches): ______

Hydric Soil Present? **Yes** X **No** ______

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: Bryant Street City/County: Monroe County Sampling Date: 3/21/2025

Applicant/Owner: Stroudsburg Borough State: PA Sampling Point: SA-2

Investigator(s): J. Olsen, PWS A. Bish, WPIT Section, Township, Range: Stroudsburg Borough

Landform (hillslope, terrace, etc.): ______ Local relief (concave, convex, none): ______

Slope (%): ______ Lat: ______ Long: ______ Datum: ______

Soil Map Unit Name: Pope silt loam, high bottom (Pp) NWI classification: ______

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ___ (If no, explain in Remarks.)

Are Vegetation ___, Soil ___, or Hydrology ___ significantly disturbed? Are "Normal Circumstances" present? Yes X No ___

Are Vegetation ___, Soil ___, or Hydrology ___ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ___	No X
Hydric Soil Present?	Yes ___	No X
Wetland Hydrology Present?	Yes ___	No X

Is the Sampled Area within a Wetland? **Yes** ___ **No** X

If yes, optional Wetland Site ID: ______

Remarks: (Explain alternative procedures here or in a separate report.)

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1)
___ Sediment Deposits (B2)
___ Drift Deposits (B3)
___ Algal Mat or Crust (B4)
___ Iron Deposits (B5)
___ Inundation Visible on Aerial Imagery (B7)
___ Sparsely Vegetated Concave Surface (B8)
___ Water-Stained Leaves (B9)
___ Aquatic Fauna (B13)
___ Marl Deposits (B15)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres on Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Tilled Soils (C6)
___ Thin Muck Surface (C7)
___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

___ Surface Soil Cracks (B6)
___ Drainage Patterns (B10)
___ Moss Trim Lines (B16)
___ Dry-Season Water Table (C2)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Stunted or Stressed Plants (D1)
___ Geomorphic Position (D2)
___ Shallow Aquitard (D3)
___ Microtopographic Relief (D4)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ______
Water Table Present?	Yes ___	No X	Depth (inches): ______
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ______

Wetland Hydrology Present? Yes ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION – Use scientific names of plants.

Sampling Point: SA-2

Tree Stratum (Plot size: 30 ft.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Acer rubrum	45%	Y	FAC
2. Quercus alba	30%	Y	FACU
3. Tilia americana	5%	N	FACU
4. Carya ovata	10%	N	FACU
5.			
6.			
7.			
	90%	= Total Cover	
Sapling/Shrub Stratum (Plot size: 15 ft.)			
1. Berberis thunbergii	20%	Y	FACU
2.			
3.			
4.			
5.			
6.			
7.			
	20%	= Total Cover	
Herb Stratum (Plot size: 5 ft.)			
1. Kalmia angustifolia	15%	Y	FAC
2. Dennstaedtia punctilobula	10%	N	UPL
3. Reynoutria japonica	25%	Y	FACU
4. Polystichum acrostichoides	5%	N	FACU
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	55%	= Total Cover	
Woody Vine Stratum (Plot size: 30 ft.)			
1. Vitis vinifera	15%	Y	UPL
2.			
3.			
4.			
	15%	= Total Cover	

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 33.33% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species		x 1 =	
FACW species		x 2 =	
FAC species	60%	x 3 =	180%
FACU species	95%	x 4 =	380%
UPL species	25%	x 5 =	125%
Column Totals:	180% (A)		685% (B)

Prevalence Index = B/A = 3.81

Hydrophytic Vegetation Indicators:

___ Rapid Test for Hydrophytic Vegetation

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

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Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks: (Include photo numbers here or on a separate sheet.)

SOIL

Sampling Point: SA-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0 - 4"	10 YR 2/2	100%					loam	dry
4 - 12"	10 YR 4/2	100%					sandy loam	moist, no redox

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
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___ Stratified Layers (A5)
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___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
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___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Dark Surface (S7) (**LRR R, MLRA 149B**)
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___ Thin Dark Surface (S9) (**LRR R, MLRA 149B**)
___ Loamy Mucky Mineral (F1) (**LRR K, L**)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

___ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
___ Coast Prairie Redox (A16) (**LRR K, L, R**)
___ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
___ Dark Surface (S7) (**LRR K, L**)
___ Polyvalue Below Surface (S8) (**LRR K, L**)
___ Thin Dark Surface (S9) (**LRR K, L**)
___ Iron-Manganese Masses (F12) (**LRR K, L, R**)
___ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
___ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
___ Red Parent Material (TF2)
___ Very Shallow Dark Surface (TF12)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

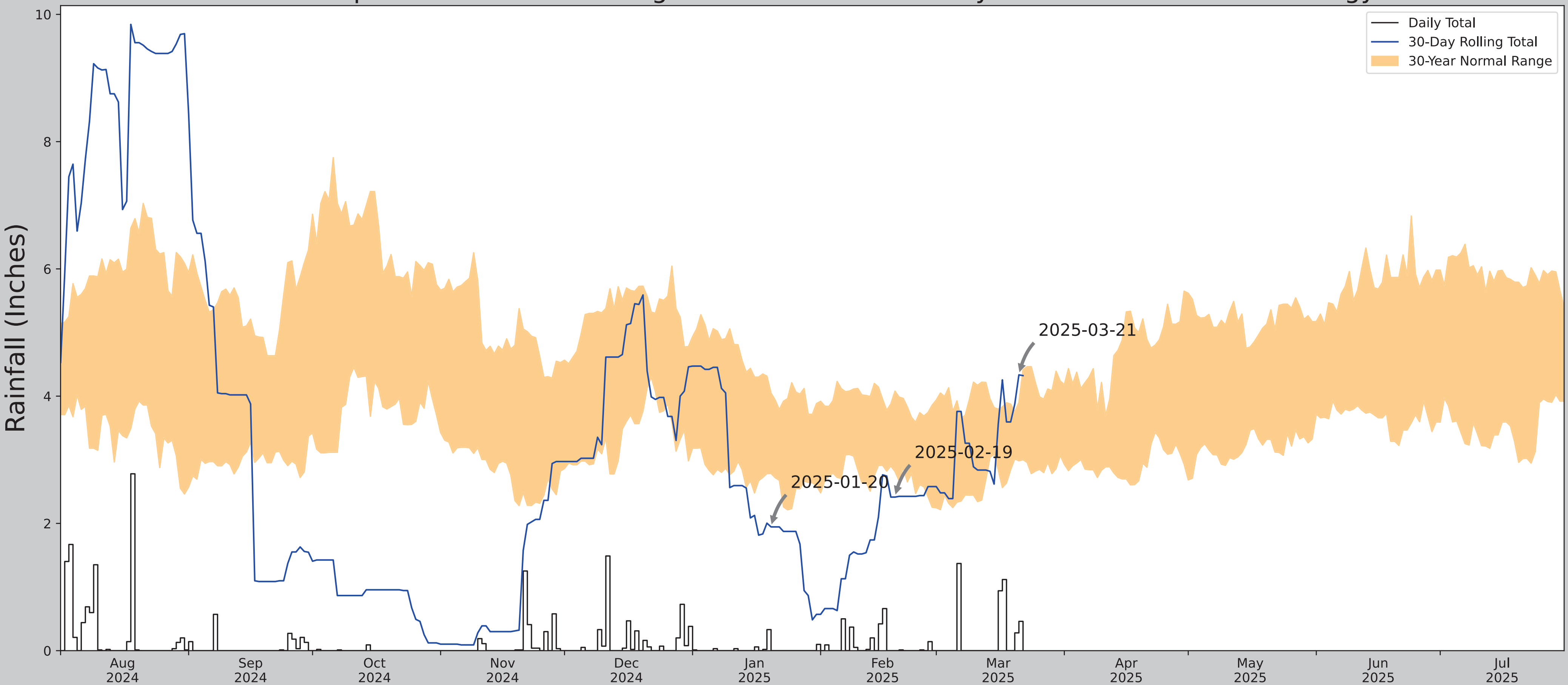
Type: ______________

Depth (inches): ______________

Hydric Soil Present? Yes ______ **No** X

Remarks:

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	40.98014, -75.19264
Observation Date	2025-03-21
Elevation (ft)	421.741
Drought Index (PDSI)	Moderate drought (2025-02)
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-03-21	2.983465	3.901181	4.334646	Wet	3	3	9
2025-02-19	2.815748	4.07874	2.413386	Dry	1	2	2
2025-01-20	2.784646	4.048032	1.944882	Dry	1	1	1
Result							Normal Conditions - 12

Figure and tables made by the
Antecedent Precipitation Tool
Version 1.0

Written by Jason Deters
U.S. Army Corps of Engineers

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
E STROUDSBURG	41.0147, -75.2072	471.129	2.506	49.388	1.251	10622	77
PORTLAND 2.7 WNW	40.9375, -75.1445	740.158	6.257	269.029	4.499	0	13
TANNERSVILLE 2E	41.0539, -75.2903	910.105	5.108	438.976	4.541	211	0
LIBERTY TWP 1.7 WSW	40.8549, -74.9815	465.879	16.146	5.25	7.35	31	0
BELVIDERE BRG	40.8292, -75.0833	263.123	14.357	208.006	9.447	489	0

ATTACHMENT D

Photographs

Photograph #1 – Looking Northeast at Approximate Center of Wetland A

Photograph #2 – Looking West at Approximate Center of Wetland A

Photograph #3 – Looking Northeast at Western Portion of Wetland A

Photograph #4 – Looking West at Western Portion of Wetland A

Photograph #5 – Looking Northeast at Eastern Portion of Wetland A

Photograph #6 – Looking West at Eastern Portion of Wetland A

Photograph #7 – Looking North at Concrete Culvert under Interstate 80 Exit 307 Entrance and Exit Ramps along Northern Boundary of Wetland A

Photograph #8 – Looking Southeast at Historic Clay Pipe along Eastern Boundary of Wetland A

Photograph #9 – Looking East at Typical Wetland A

Photograph #10 – Looking Southwest at Typical Wetland A