

**BERNARDS TOWNSHIP ENVIRONMENTAL COMMISSION**

**Regular Meeting of [August 28, 2023](#) - 7 pm**

**Municipal Building - Warren Craft Room**

**1 Collyer Lane, Basking Ridge, NJ**

**Meeting Agenda**

- 1. Call to Order**
- 2. Open Public Meeting Statement**
- 3. Flag Salute**
- 4. Roll Call**
- 5. Approval of EC meeting minutes regular – [July 24, 2023](#)**
- 6. Reports and Miscellaneous Correspondence**
  - a. [Waterway Clean Up](#)**

**Discussion**

**Subcommittee Reports**

- i. Applications Review: John Crane, John Valeri, Todd Edelstein
- ii. ANJEC email monitoring / important educational webinars: Todd Edelstein
- iii. Native Pollinator Group: Sarah Wolfson
  1. Small pollinator garden on township owned property.
- iv. Community Outreach / Education: Nancy Cook
- v. Tree Protection: John Valeri

**7. Old Business**

- a. Status on Current Projects:**

**8. New Business**

**Applications**

- i. [Signature Acquisitions LLC Add't Info – ZB 22-028](#)
- ii. [Faruk – Add't Info ZB 23-009 – 145 Bernards Dr](#)

**9. Comments by Public**

**10. Comments by Members**

**11. Adjournment**

Ellen Houlihan, Secretary



Please call (908) 204 - 3000 seventy-two (72) hours in advance if accommodations are required, including Assistive listening devices (ALD).



## ***Bernards Township Environmental Commission***



### **BERNARDS TOWNSHIP ENVIRONMENTAL COMMISSION MINUTES – July 24, 2023**

#### **CALL TO ORDER**

Chairperson Alice Smyk called the meeting to order at 7:03 pm in the Warren Craft Room, Bernards Township Municipal Building in accordance with the Open Public Meeting Act of 1975.

#### **ROLL CALL**

**Present:** Gary Baumann, Elizabeth Cirri, Nancy Cook, John Crane, Todd Edelstein, Alice Smyk, John Valeri, Jr. Sarah Wolfson

**Absent:** None

**Also Present:** Kate Ferrante, Recording Secretary

#### **APPROVAL OF MEETING MINUTES**

Motion to approve the June 26, 2023, meeting minutes made by John Crane seconded by John Valeri. Abstention Gary Baumann and Nancy Cook. All in favor, motion carried.

#### **REPORTS & MISCELLANEOUS CORRESPONDENCE**

- a. **Lee Cleary Email** – John Crane suggest she attend our meetings, Nancy Cook suggests that she may want to help work with her on “Weekly Tips” for the website, Todd Edelstein suggested she may want to review the information on the website to learn more about what we do.
- b. **Compost Email** – Gary Baumann – Composting needs a large area to accommodate and many considerations such as run off, odor and maintenance. Todd Edelstein – proactively reached out to the DPW and the response was that there are several concerns, and this may not be in the best interest of the town. John Crane – It may be best to provide resources to the residence on DIY composting. Sarah Wolfe – Perhaps the water shed ambassador may be able to provide education for our residents to promote individual household composting. Gary Baumann– Our area yard waste contains an overage of nitrogen due to fertilizers and may not create the hummus desired with composting. Sarah Wolfe – Will identify the water shed ambassador and contact them to discuss. Gary Baumann will inquire with the Township Committee and report back with their feedback.



## ***Bernards Township Environmental Commission***



### **DISCUSSION**

#### **Subcommittee Reports**

- a. **Applications** – No applications
- a. **ANJEC email monitoring/important educational webinars** - Todd Edelstein – NJ inland flood protection webinar Tuesday, 7pm August 1<sup>st</sup>. John Valeri – DEP storm water rule change
- c. **Native Pollinator Group/Guerilla Gardening** – Sarah Wolfe– Susan Kessel created plans for the Basking Ridge Library gardens. Next steps are to meet with the Library and DPW this week to discuss the new plans. Susan Kessel submitted an application to Rutgers for plant donation. Todd Edelstein would like to ensure that the area is handicap accessible. John Crane suggests reaching out to local landscapers who may be willing to donate their services. Alice Smyk - suggested a video of the completed project to share as a resource for residents for their home landscape options. - Plan attached
- d. **Community Outreach/Education** - Nancy Cook and Elizabeth Cirri will be working on an initiative to prevent sump pumps from emptying into sewer ways, dryer balls and DIY composting. Todd Edelstein – suggested information on pool installation with ultraviolet light. The light cuts the usage of chlorine and may be a cost effective environmentally positive consideration for the public.
- e. **Tree Protection** – No applications

### **OLD BUSINESS**

- a. **Status on Current Projects**
  - a. **Styrofoam** – Todd Edelstein reported that he found that Long Hill is only able to take limited quantities from surrounding Townships, it is required that product is not contaminated and clean when delivered, final product must be bagged. At this time the process and workload it is not feasible, however they are exploring options to expand use of the machine and he will be notified when that happens.
  - b. **Town Garage Sale** – Posted on website, residents can register through the website and the Town will publicize, charities will be available to pick-up leftover items

### **NEW BUSINESS**

- a. **Applications** - None

### **PUBLIC COMMENT**

None



## ***Bernards Township Environmental Commission***



### **MEMBER COMMENT**

Todd Edelstein - reminder that the quarry is sold and would like the committee to follow any news in relation to the future use of land.

Alice Smyk will miss the September Meeting Nancy Cook will substitute. Also, she will recommend Todd Edelstein and Sarah Wolfe should move from alternates to appointed Committee members.

### **ADJOURNMENT**

Meeting was adjourned at 8:05 pm. Motion by Todd Edelstein seconded by John Valeri All in favor, motion carried.

Respectfully submitted,  
Kathleen Ferrante, Meeting Secretary



1/2" = 24"	
(grid square = 1/2")	

32 South Maple Avenue, Basking Ridge, NJ 07920

Dry Shade:

Fern A: Christmas Fern	5
Fern B: Marginal Shield Fern	5
C: Alumroot	6
D: Solomon's Plume	5

Dry Part Shade:

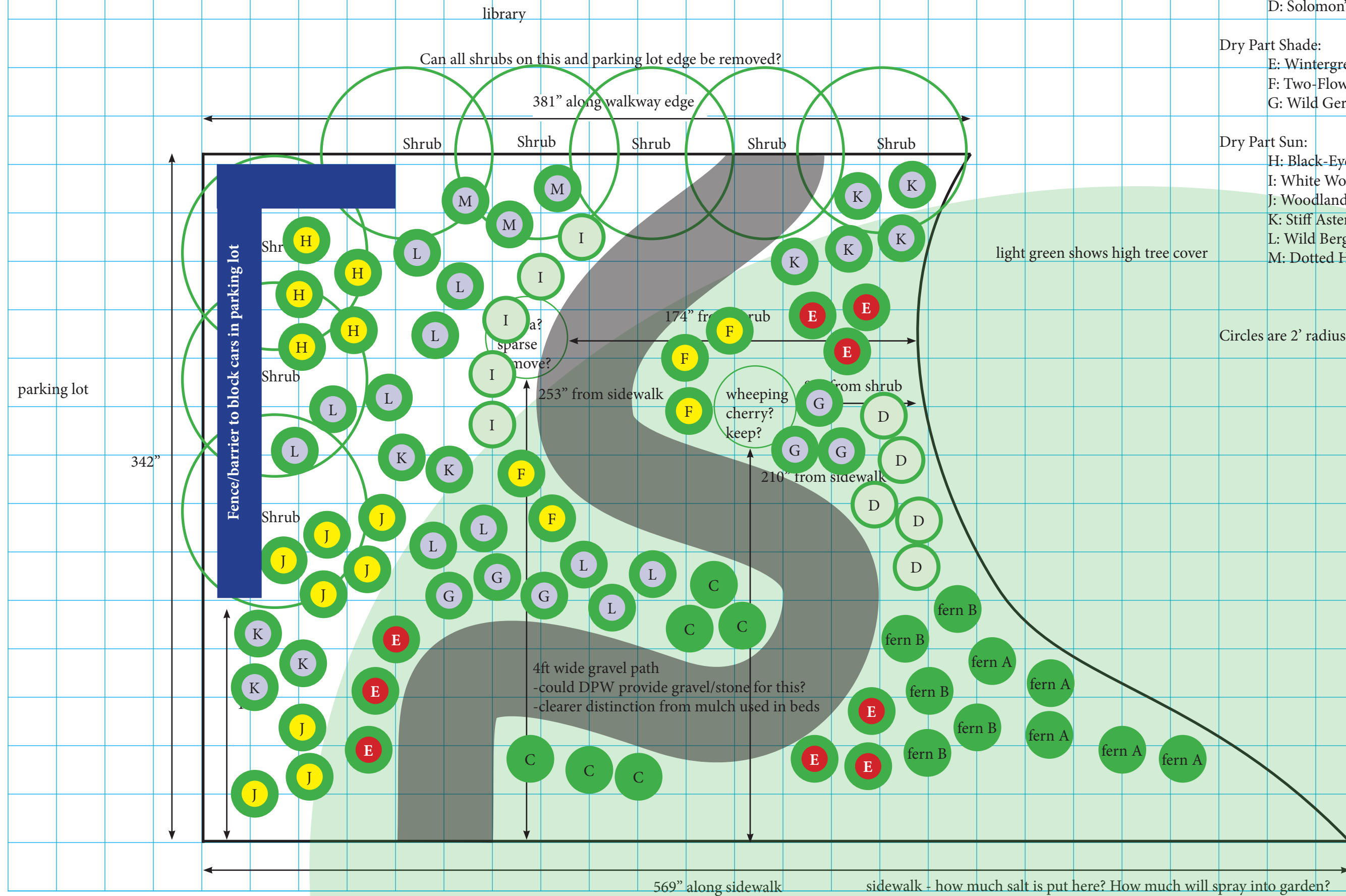
E: Wintergreen	9
F: Two-Flowered Cynthia	5
G: Wild Geranium	6

Dry Part Sun:

H: Black-Eyed Susan	5
I: White Wood Aster	5
J: Woodland Sunflower	8
K: Stiff Aster	10
L: Wild Bergamot	11
M: Dotted Horsemint	3

Total	83
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Circles are 2' radius - generally safe spacing



## Ellen Houlihan

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**From:** Alex Campbell <Alex.Campbell@weloveuusa.org>  
**Sent:** Tuesday, August 1, 2023 11:16 AM  
**To:** Ellen Houlihan  
**Subject:** Waterway Clean Up | International WeLoveU Foundation

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Dear Ellen,

My name is Alex, and I'm reaching out on behalf of the International WeLoveU Foundation. The International WeLoveU Foundation is an NGO associated with the United Nations Department of Global Communications.

On Sunday, September 10, 2023, the WeLoveU Foundation will host a waterway cleanup which aligns with your mission to restore, and conserve the Raritan Watershed. WeLoveU's Oceans and Waterways Cleanup campaign aims to restore ecosystems affected by plastic pollution by cleaning the total distance of the East Coast shoreline, which is nearly 2,200 miles long.

I'd like to discuss how we can work together by identifying an area needing our volunteer support. My contact information is below. Feel free to respond with a few times that work for a phone call or Zoom meeting. To learn more about WeLoveU, visit [weloveuusa.org](https://weloveuusa.org) or click one of the social media logos below.

Thank you,

Alex F. Campbell | Event Representative  
**International WeLoveU Foundation**  
18 Snake Hill Rd | New Windsor, NY 12553  
O: (845) 245-4300 | C: (609) 339-1980  
[alex.campbell@weloveuusa.org](mailto:alex.campbell@weloveuusa.org) | [weloveuusa.org](https://weloveuusa.org)





**DiFrancesco Bateman**  
Kunzman, Davis, Lehrer & Flaum, P.C.

**15 Mountain Boulevard  
Warren, New Jersey 07059**

Telephone: (908) 757-7800  
Fax: (908) 757-8039  
[www.newjerseylaw.net](http://www.newjerseylaw.net)

**Michael E. Silbert**  
Associate  
Extension 128  
[msilbert@newjerseylaw.net](mailto:msilbert@newjerseylaw.net)

July 28, 2023

**VIA HAND DELIVERY AND EMAIL**

Ms. Cyndi Kiefer, Zoning Board of Adjustment Secretary  
Township of Bernards Planning & Zoning  
277 South Maple Avenue  
Basking Ridge, New Jersey 07920

**Re: Submission of Additional Materials  
Signature Acquisitions, LLC – Allen Road  
Application #22-028-ZB  
Block 11201, Lots 2 & 3**

Dear Ms. Kiefer:

As you are aware, this firm represents Signature Acquisitions, LLC ("Signature") in connection with an application for preliminary and final major site plan approval with certain "d" and "c" variance relief. As a part of the ongoing hearing process, the Township's Zoning Board of Adjustment (the "Board") and its Professionals formally requested that Signature furnish additional materials. This request of Signature was made with particular attention to the inclusion of Lot 2 and the proposed building height calculations.

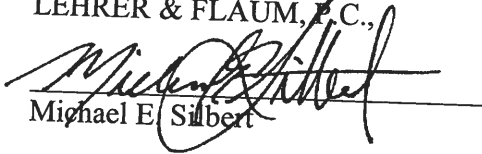
In response to the Board's request, Signature is pleased to submit the following additional materials, which materials are being submitted well in advance of the next scheduled hearing before the Board on August 9, 2023:

1. Seventeen (17) copies of a Survey (depicting Lot 2) prepared by Kurt T. Hanie, P.L.S., N.J. Lic. No. GS40376 of Gladstone Design, Inc., dated July 21, 2022;
2. Seventeen (17) copies of a plan entitled "Building Height Calculation" prepared by Robert C. Moschello, P.E., N.J. Lic. No. GE44279 of Gladstone Design, Inc., dated July 14, 2023; and

3. Seventeen (17) copies of a letter entitled "Wetlands Assessment 80-foot-wide Access Easement in Block 11201, Lot 2 Township of Bernards Somerset County, New Jersey" prepared by Karin Tekel, Senior Professional Wetlands Scientist #1621 of EcolSciences, Inc., dated July 18, 2023.

Thank you for your attention to this matter. Digital copies of the enclosed materials will be provided to you under separate cover.

Respectfully submitted,  
DIFRANCESCO BATEMAN  
KUNZMAN, DAVIS,  
LEHRER & FLAUM, P.C.,



Michael E. Silbert

CC (all via Email): Steven Warner, Esq., Board Attorney  
David Schley, PP, Township Planner  
Jeffrey Lehrer, Esq.  
Donald Berlin, Esq.  
Robert Simon, Esq.  
Jennifer Smith, Esq.  
Rob Moschello, P.E.  
Chris Fairfield, P.E.  
Rich Travaglini  
Shloimy Reichman



# EcolSciences, Inc.

Environmental Management & Regulatory Compliance

July 18, 2023

Mr. Rich Travaglini  
Senior Vice President – Director of Development/Leasing  
Signature Acquisitions, LLC  
20 Commerce Drive, Suite 140  
Cranford, New Jersey 07016

*VIA EMAIL* ([rttravaglini@signatureacq.com](mailto:rttravaglini@signatureacq.com))

Re: Wetlands Assessment  
80-foot-wide Access Easement in Block 11201, Lot 2  
Township of Bernards  
Somerset County, New Jersey

Dear Rich:

In accordance with your authorization, EcolSciences, Inc. conducted a wetland assessment in and adjacent to the 80-foot-wide access easement within the above-referenced property. The existing 80-foot-wide access easement provides access from the adjacent Block 11201, Lot to Allen Road. The existing boulevard access to Allen Road is proposed to be improved. The purpose of the investigation was to determine the extent of wetlands or transition areas (wetland buffers) regulated in accordance with the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-3 et seq.). Based upon EcolSciences' site investigation conducted on July 18, 2023, no wetlands or transition areas were observed within the 80-foot-wide access easement. The results of EcolSciences' investigation are discussed below.

## Wetlands

The absence of wetlands on the site was determined during EcolSciences' site inspection utilizing the procedures detailed within the Federal Manual for Identifying and Delineating Jurisdictional Wetlands (Federal Interagency Committee for Wetland Delineation, 1989) as mandated within the New Jersey Freshwater Wetlands Protection Act Rules (N.J.A.C. 7:7A). This approach generally requires a coincidence of hydric soils, positive hydrological indicators and a prevalence of hydrophytic vegetation for a determination that an area is a wetland.

Vegetation within the upland woodlands is characterized by upland species such as sassafras, white ash, eastern red cedar, black oak, northern red oak, greenbrier, Virginia creeper, privet, Japanese honeysuckle, fox grape, hop-hornbeam, ironwood, and Canada mayflower. No evidence of wetlands hydrology was observed. The soils are characterized either by upland very dark brown (7.5 YR 2.5/2 – Munsell notation) clay loam or dark brown (7.5 YR 3/3) stony silt loam. Vegetation within the maintained lawn is characterized by upland species such as turf grasses,

Mr. Rich Travaglini  
July 18, 2023  
Page 2

white clover, wood-sorrel, crabgrass, and common dandelion. No evidence of wetlands hydrology was observed. The soils are characterized by upland dark brown (7.5 YR 3/4) silt loam.

### **Wetland Transition Areas**

In addition to regulating wetlands, the Act also regulates activities within wetland transition areas or buffers. Transition areas range in width from 0 to 150 feet based on the resource value classification of the wetlands. Exceptional resource value wetlands discharge to FW1 or FW2-TP (trout production) waters or are documented habitat for threatened or endangered species. They have a standard transition area of 150 feet. Ordinary resource value wetlands have no transition area and include certain isolated wetlands, ditches, swales, and stormwater detention facilities. All other wetlands are intermediate resource value with a standard transition area of 50 feet.

During EcolSciences' site inspection, no wetlands were observed within 150 feet of the 80-foot-wide access easement.

Please do not hesitate to contact me if you have any questions or need anything else.

Very truly yours,

EcolSciences, Inc.



Karin Tekel  
Senior Professional Wetlands Scientist #1621

KT/bms

cc: Mr. Michael Kovacs











ADD

FARUK  
ZB 23-009

July 15, 2015

From:

Anthony Froonjian  
Professional Wetland Scientist 3282  
114 Tolland Ave.  
Stafford Springs, CT 06076  
(860) 869-3994  
[ajfroonjian@gmail.com](mailto:ajfroonjian@gmail.com)

To:

Bernards Township Engineering  
Services Department  
Engineering Services Building  
277 South Maple Ave.  
Basking Ridge, NJ 07920

**RE: Wetlands and open waters site investigation. Block 6404, Lot 13**

Dear Engineering Services Personnel,

This letter-report presents the results of a site investigation that I conducted on July 10, 2023 to determine the presence or absence of state-regulated freshwater wetlands and open waters on an approximately 0.5-acre parcel known as Block 6404, Lot 13 in Bernards Township (Figure 1). The property's street address is 145 Bernard Drive.

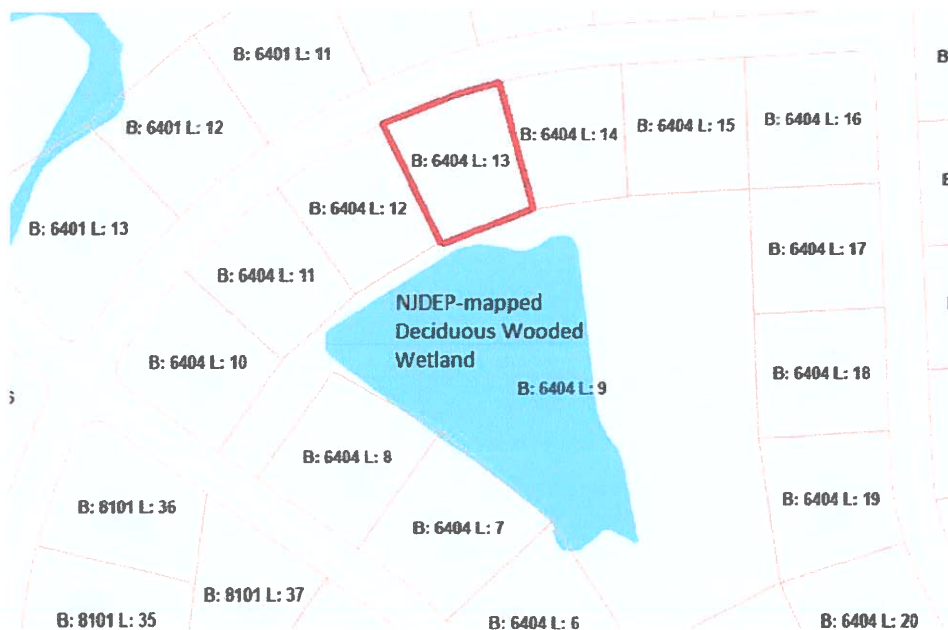


Figure 1. Location of 145 Bernard Dr. Also shown is a NJDEP mapped wetland discussed below.

The property centers approximately at the following coordinates (NAD 83):

	"x"	"y"
Geodetic:	74.545558° West	40.674431° North
Zone 2900 – New Jersey; U.S. Survey Feet:	479,489 East	670,594 North

The NJ-GeoWeb (NJDEP 2023) maps an area of Deciduous Wooded Wetlands to the south of the property (Figure 1). No other wetland or open water resources are mapped in the immediate vicinity of the property. However, the presence of a mapped wetland near the property triggered the need for this site investigation to determine potential conflicts with future planning on the parcel.

### **Methodology**

The investigation was conducted in accordance with *The Federal Manual for Identifying and Delineating Jurisdictional Wetlands* (FICWD 1989) (89 Manual) as required by the New Jersey Department of Environmental Protection (NJDEP) Freshwater Wetland Rules (NJAC 7:7A). The *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region (Version 2.0)* (USACE 2012) (the Supplement) was referenced for additional delineation guidance based on updated regional wetland indicators. The delineation of streams is based on the "ordinary highwater mark" as defined in the Code of Federal Regulations at 33 CFR 328.3.

A hand shovel was used to obtain undisturbed samples of the upper soil horizons from several test pits. *Munsell® Soil Color Charts* (2021) were used to assign standard notations to the samples. Hydric soil indicators established in the Manual, the Supplement, and in *Field Indicators of Hydric Soils in the United States, Version 8.2* (USDA-NRCS, 2018) were used to determine the presence of characteristic soil morphologies resulting from prolonged saturation and/or inundation. Hydric soil indicators for Major Land Resource Area 148 - Northern Piedmont of Land Resource Region S - Northern Atlantic Slope Diversified Farming Region (USDA-NRCS 2006) apply to this investigation.

The U.S. Army Corps of Engineers administers the list of wetland plants. Therefore, scientific names and wetland indicator statuses for the vegetation conform to those listed in *The National Wetland Plant List: 2020 Wetland Ratings, version 3.5* (USACE, 2022) (NWPL).

Sampling plots were established at three representative points to determine the presence of wetland hydrology, hydric soils, and hydrophytic vegetation. Each sampling plot was composed of three circular, concentric sub-plots in graduated sizes: The tree and vine strata were assessed within a sub-plot with a radius of 30 feet, the shrub and sapling stratum sub-plot radius was 15 feet, and the herbaceous stratum was assessed within a 5-foot radius sub-plot.

The midpoint of sampling plot SP-1 was approximately 75 feet south of the southwest part of the property. The midpoint of SP-2 was approximately 100 feet south of the central part of the property. The midpoint of sampling plot SP-3 was approximately 75 feet south of the property's southeast part. This layout allowed for a comprehensive analysis of conditions south of the property in areas tentatively mapped as wetlands by the NJDEP. The three sampling pots totaled 180 feet in diameter, leaving essentially no uninvestigated habitat parallel to the southern limit of the property.

**Results**

The south lawn of the property is manicured with areas of ornamental shrubs. South of the lawn is an off-site strip of land used as a garden. The vegetation community south of the garden is comprised of an upland deciduous forest dominated by sugar maple (*Acer saccharum*), black cherry (*Prunus serotina*), black walnut (*Juglans nigra*), pin oak (*Quercus palustris*) and flowering dogwood (*Cornus florida*). The shrub layer is dominated by a dense community of the non-native shrub, multiflora rose (*Rosa multiflora*). Other shrubs were black raspberry (*Rubus occidentalis*), wineberry (*Rubus phoenicolasius*), smooth blackhaw (*Viburnum prunifolium*), and European privet (*Ligustrum vulgare*). The herbaceous layer was dominated by jumpseed (*Persicaria virginiana*), path rush (*Juncus tenuis*), Japanese stiltgrass (*Microstegium vimineum*), garlic mustard (*Alliaria petiolata*), and narrow-leaf bittercress (*Cardamine impatiens*), with one small colony of sweet wood-reed (*Cinna arundinacea*) observed. Woody vines including Virginia creeper (*Parthenocissus quinquefolia*), poison ivy (*Toxicodendron radicans*), Asian bittersweet (*Celastrus orbiculatus*), and Japanese honeysuckle (*Lonicera japonica*) were present as ground cover and climbing in the tree and shrub layers. An area dominated by common bamboo (*Bambusa vulgaris*) is located just to the southeast of the property, extending somewhat northward and onto the property.

Soils extracted from test pits within the sampling plots did not exhibit any field indicators of hydric soils. The samples were relatively dry except for the upper 3 to 4 inches, which were moist from recent heavy rains. The soils, all silt loams, were neither saturated nor inundated and a water table was not encountered.


Evidence of wetland hydrology or stream flow was not present on the property or within the off-site habitats to the south and within approximately 130 feet of the property. Investigations farther south were not conducted to determine the actual northern extent of state-mapped wetlands.

**Conclusion**

The investigation results show that neither wetlands nor state open waters are present on the property or within approximately 130 feet from the property boundaries, based on the distance of the midpoint of sampling point SP-2 from the property line (approximately 100 feet) in addition to its radius of 30 feet. Photographs that document site conditions at the time of the investigation are presented as Exhibit A. Wetland Determination Data Forms that document non-wetland conditions are included as Exhibit B.

If your department has any questions or comments regarding this determination of the absence of wetlands and state open waters on the referenced property, please do not hesitate to contact me at the telephone number or email address provided above.

Respectfully,

  
Anthony Froonjian

## References

- Code of Federal Regulations. Definition of Waters of the United States. 33 CFR Part 328
- Federal Interagency Committee for Wetland Delineation. 1989. Federal Manual for Identifying and Delineating Jurisdictional Wetlands. U.S. Army Corps of Engineers, U.S. Environmental Protection Agency, U.S. Fish and Wildlife Service, and U.S.D.A. Soil Conservation Service, Washington, D.C. Cooperative technical publication.
- Federal Register. Feb. 24, 1995. Changes in Hydric Soils of the United States. Washington, DC.
- Munsell Color. 2009 (2021 production). Munsell Soil Color Book. Grand Rapids, Michigan.
- New Jersey Department of Environmental Protection. 2023. NJ-GeoWeb. Available at: <https://njdep.maps.arcgis.com/apps/webappviewer/>
- U.S. Army Corps of Engineers. 2012. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region Version 2.0, ed. J. F. Berkowitz, J. S. Wakeley, R. W. Lichvar, C. V. Noble. ERDC/EL TR-12-9. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Army Corps of Engineers. 2020. National Wetland Plant List, version 3.5 Available at: <http://wetland-plants.usace.army.mil/>
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2018. Field Indicators of Hydric Soils in the United States, Version 8.2. L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2006. Land Resource Regions and Major Land Resource Areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture handbook 296.
- U.S. Department of Agriculture, Natural Resources Conservation Service. 2023. Web Soil Survey. Available at: <http://soils.usda.gov>
- U.S. Department of the Interior - Geological Survey. 2019. Bernardsville, NJ Quadrangle, 7.5-Minute Series (Topographic).

## **EXHIBIT A**

### **Photographs**



## **Exhibit A Photographs**



Photograph 1: View north at upland sampling point SP-1, south of the western part of the property.



Photograph 2: Non-hydric soils at SP-1.

Photographs: July 10, 2023



## **Exhibit A**

### **Photographs**



Photograph 3: View north at upland sampling point SP-2, south of the central part of the property.



Photograph 4: Non-hydric soils at SP-2.

Photographs: July 10, 2023



## **Exhibit A Photographs**



Photograph 5: View north at upland sampling point SP-3, south of the eastern part of the property.



Photograph 6: Non-hydric soils at SP-3.

Photographs: July 10, 2023



## **Exhibit A**

### **Photographs**



Photograph 7: View south from the central part of the property.



Photograph 8: View south from the central part of the property.

Photographs: July 10, 2023

## **EXHIBIT B**

### **Wetland Determination Data Forms**

## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: 145 Bernard Drive City/County: Bernards Twp. / Somerset Sampling Date: 7/10/2023  
Applicant/Owner: Private Landowner State: New Jersey Sampling Point: SP-1  
Investigator(s): Anthony Froonjian, PWS Section, Township, Range: Block 6404; Lot 13  
Landform (hillslope, terrace, etc.): Flat Local Relief (concave, convex, none): None Slope (%): 2  
Subregion (LRR or MLRA): LRR S, MLRA 148 Lat: 40.674005° Long: -74.545451° Datum: NAD 1983  
Soil Map Unit Name: Amwell gravelly silt loam, rock substratum, 2 to 6% slopes (AmnrB) NWI Classification: Not mapped by the NWI  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)  
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area	
Hydric Soils Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	If yes, optional Wetland Site ID:	
Remarks: (Explain alternative procedures here or in a separate report.) <u>Upland sampling point approximately centering 75 feet south of the western part of the property. Alternative Procedure: Hydrophytic Cover Index calculations are provided in the Vegetation section remarks.</u>			

### HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)	
Primary Wetland Hydrology Indicators (minimum of one is required; check all that apply)			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)	
		<input type="checkbox"/> FAC-Neutral Test (D5)	
<b>Field Observations:</b>			
Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/>	Wetland Hydrology Present? <u>No</u>	
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/>		
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/>		
(includes capillary fringe)			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			



# VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: **SP-1**

Tree Stratum		Absolute % Cover	Dominant Species?	Indicator Status	<b>DominanceTest worksheet:</b> Number of Dominant Species That are OBL, FACW, or FAC <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>5</u> (B)  Percent of Dominant Species That are OBL, FACW, or FAC <u>40.0%</u> (A/B)
1.	<i>Quercus palustris</i>	30	Yes	FACW	
2.	<i>Juglans nigra</i>	25	Yes	FACU	
3.	<i>Acer saccharum</i>	5	No	FACU	
4.	<i>Cornus florida</i>	5	No	FACU	
5.					
6.					
7.					
		65	=Total Cover		
50% of total cover =		32.5	20% of total cover =	13	

Sapling/Shrub Stratum		Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b> Total % Cover of: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>30</u> x 2 = <u>60</u> FAC species <u>50</u> x 3 = <u>150</u> FACU species <u>122</u> x 4 = <u>488</u> UPL species <u>0</u> x 5 = <u>0</u>  Column Totals (A) <u>202</u> (B) <u>698</u>  Prevalence Index (B/A) = <u>3.5</u>
1.	<i>Rosa multiflora</i>	60	Yes	FACU	
2.	<i>Rubus phoenicolasius</i>	5	No	FACU	
3.	<i>Ligustrum vulgare</i>	5	No	FACU	
4.					
5.					
6.					
7.					
8.					
9.					
		70	=Total Cover		
50% of total cover =		35	20% of total cover =	14	

Herb Stratum		Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is > 50% 3 - Prevalence Index is ≤ 3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)  <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1.	<i>Persicaria virginiana</i>	40	Yes	FAC	
2.	<i>Toxicodendron radicans</i>	5	No	FAC	
3.	<i>Juncus tenuis</i>	5	No	FAC	
4.	<i>Parthenocissus quinquefolia</i>	5	No	FACU	
5.	<i>Ageratina altissima</i>	3	No	FACU	
6.	<i>Lonicera japonica</i>	2	No	FACU	
7.					
8.					
9.					
10.					
11.					
12.					
		60	=Total Cover		
50% of total cover =		30	20% of total cover =	12	

Woody Vine Stratum		Absolute % Cover	Dominant Species?	Indicator Status	<b>Definitions of Four Vegetation Strata:</b> Tree - Woody plants, excluding vines, 3 in. (7.6 cm.) or more in diameter at breast height (DBH), regardless of height. Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 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 Vine - All woody vines greater than 3.28 ft. in height.
1.	<i>Celastrus orbiculatus</i>	5	Yes	FACU	
2.	<i>Parthenocissus quinquefolia</i>	2	No	FACU	
3.					
4.					
5.					
6.					
		7	=Total Cover		
50% of total cover =		3.5	20% of total cover =	1.4	

Hydrophytic Vegetation Present?	
<u>No</u>	

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

Alternative Procedure:	OBL 0.0%	$HCI = \frac{(\sum OBL + \sum FACW + \sum FAC)}{(\sum OBL + \sum FACW + \sum FAC + \sum FACU + \sum UPL)} \times 100 = 39.6\%$
Hydrophytic Cover Index calculations	FACW 30.0%	
Source: ERDC/CRREL TR-19-19 (USACE, 2014)	FAC 50.0%	
	FACU 122.0%	
	UPL 0.0%	
	Total Cover 202.0%	Is a Hydrophytic Vegetation Community Present per the HCI (HCI > 50)? <u>No</u>

**Sampling Point:** SP-1

[illegible]<sup>2</sup>Location: PL=Pore Lining, M=Matrix

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Dark Surface (S7)	<input type="checkbox"/> <del>2-cm Muck (A10) (MLRA 147)</del>
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Polyvalue Below Surface (S8) (MLRA 147, 148)	<input type="checkbox"/> Coast Prairie Redox (A16) (MLRA 147, 148)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Thin Dark Surface (S9) (MLRA 147, 148)	<input type="checkbox"/> <del>Piedmont Floodplain Soils (F19) (MLRA 136, 147)</del>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Very Shallow Dark Surface (F22) (Formerly TF12) (For use in MLRA 138 and West Florida portions of MLRA 152A and 154. For testing in all other MLRAs and LRRs.)
<input type="checkbox"/> Stratified Layers (A5)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> <del>2-cm Muck (A10) (LRR-N)</del>	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Other (Explain):
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1) (LRR N, MLRA 147, 148)	<input type="checkbox"/> <del>Iron-Manganese Masses (F12) (LRR-N, MLRA 136)</del>	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> <del>Umbria Surface (F13) (MLRA 136, 122)</del>	
<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> Piedmont Floodplain Soils (F19) (MLRA 148)	
<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> <del>Red Parent Material (F21) (MLRA 127, 147)</del>	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

Hydric Soil Present? **No**

Upper part moist from recent heavy rains. No saturation or water table encountered.

## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: 145 Bernard Drive City/County: Bernards Twp. / Somerset Sampling Date: 7/10/2023  
Applicant/Owner: Private Landowner State: New Jersey Sampling Point: SP-2  
Investigator(s): Anthony Froonjian, PWS Section, Township, Range: Block 6404; Lot 13  
Landform (hillslope, terrace, etc.): Flat Local Relief (concave, convex, none): None Slope (%): 2  
Subregion (LRR or MLRA): LRR S, MLRA 148 Lat: 40.673968° Long: -74.545265° Datum: NAD 1983  
Soil Map Unit Name: Amwell gravelly silt loam, rock substratum, 2 to 6% slopes (AmnrB) NWI Classification: Not mapped by the NWI  
Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)  
Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes ☒ 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area	
Hydric Soils Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	If yes, optional Wetland Site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)  
Upland sampling point approximately centering 90 feet south of the central part of the property. Alternative Procedure: Hydrophytic Cover Index calculations are provided in the Vegetation section remarks.

### HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Wetland Hydrology Indicators (minimum of one is required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> True Aquatic Plants (B14)	<input type="checkbox"/> Surface Soil Cracks (B6)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Moss Trim Lines (B16)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Water-Stained Leaves (B9)		<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Aquatic Fauna (B13)		<input type="checkbox"/> Microtopographic Relief (D4)
		<input type="checkbox"/> FAC-Neutral Test (D5)

<b>Field Observations:</b>	
Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u>	Wetland Hydrology Present? <u>No</u>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u>	
Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>          </u>	
(includes capillary fringe)	

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

Remarks:

# VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: **SP-2**

Tree Stratum (Plot size: <u>30 ft. radius</u> )					DominanceTest worksheet:	
	Absolute % Cover	Dominant Species?	Indicator Status			
1. <u>Quercus palustris</u>	<u>40</u>	<u>Yes</u>	<u>FACW</u>	Number of Dominant Species		
2. <u>Prunus serotina</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	That are OBL, FACW, or FAC	<u>2</u>	(A)
3. <u>Acer saccharum</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	Total Number of Dominant		
4. <u>Cornus florida</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	Species Across All Strata:	<u>4</u>	(B)
5. _____	_____	_____	_____	Percent of Dominant Species		
6. _____	_____	_____	_____	That are OBL, FACW, or FAC	<u>50.0%</u>	(A/B)
7. _____	<u>75</u>	=Total Cover				
50% of total cover = <u>37.5</u>				20% of total cover = <u>15</u>		
Sapling/Shrub Stratum (Plot size: <u>15 ft. radius</u> )					Prevalence Index worksheet:	
	Absolute % Cover	Dominant Species?	Indicator Status			
1. <u>Rosa multiflora</u>	<u>65</u>	<u>Yes</u>	<u>FACU</u>	Total % Cover of:		Multiply by:
2. <u>Rubus occidentalis</u>	<u>10</u>	<u>No</u>	<u>UPL</u>	OBL species	<u>0</u>	x 1 = <u>0</u>
3. <u>Fraxinus americana</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	FACW species	<u>40</u>	x 2 = <u>80</u>
4. _____	_____	_____	_____	FAC species	<u>55</u>	x 3 = <u>165</u>
5. _____	_____	_____	_____	FACU species	<u>130</u>	x 4 = <u>520</u>
6. _____	_____	_____	_____	UPL species	<u>10</u>	x 5 = <u>50</u>
7. _____	_____	_____	_____	Column Totals (A)	<u>235</u>	(B) <u>815</u>
8. _____	_____	_____	_____	Prevalence Index (B/A) =	<u>3.5</u>	
9. _____	<u>80</u>	=Total Cover				
50% of total cover = <u>40</u>				20% of total cover = <u>16</u>		
Herb Stratum (Plot size: <u>5 ft. radius</u> )					Hydrophytic Vegetation Indicators:	
	Absolute % Cover	Dominant Species?	Indicator Status			
1. <u>Persicaria virginiana</u>	<u>40</u>	<u>Yes</u>	<u>FAC</u>	1 - Rapid Test for Hydrophytic Vegetation		
2. <u>Toxicodendron radicans</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	2 - Dominance Test is > 50%		
3. <u>Alliaria petiolata</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	3 - Prevalence Index is ≤ 3.0 <sup>1</sup>		
4. <u>Celastrus orbiculatus</u>	<u>10</u>	<u>No</u>	<u>FACU</u>	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)		
5. <u>Parthenocissus quinquefolia</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)		
6. <u>Juncus tenuis</u>	<u>5</u>	<u>No</u>	<u>FAC</u>			
7. _____	_____	_____	_____			
8. _____	_____	_____	_____			
9. _____	_____	_____	_____			
10. _____	_____	_____	_____			
11. _____	_____	_____	_____			
12. _____	<u>80</u>	=Total Cover				
50% of total cover = <u>40</u>				20% of total cover = <u>16</u>		
Woody Vine Stratum (Plot size: <u>30 ft. radius</u> )					Definitions of Four Vegetation Strata:	
	Absolute % Cover	Dominant Species?	Indicator Status			
1. _____	_____	_____	_____	Tree - Woody plants, excluding vines, 3 in. (7.6 cm.) or more in diameter at breast height (DBH), regardless of height.		
2. _____	_____	_____	_____	Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft. (1 m) tall.		
3. _____	_____	_____	_____	Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.		
4. _____	_____	_____	_____	Woody Vine - All woody vines greater than 3.28 ft. in height.		
5. _____	_____	_____	_____			
6. _____	<u>0</u>	=Total Cover				
50% of total cover = <u>0</u>				20% of total cover = <u>0</u>		
				Hydrophytic Vegetation Present? <u>No</u>		
Remarks: (Include photo numbers here or on a separate sheet.)						
<div> <div> <div>Alternative Procedure:</div> <div> <div>OBL 0.0%</div> <div>FACW 40.0%</div> <div>FAC 55.0%</div> <div>FACU 130.0%</div> <div>UPL 10.0%</div> <div>Total Cover 235.0%</div> </div> </div> <div> <div>HCI -</div> <div> <math display="block">\frac{(\sum OBL + \sum FACW + \sum FAC)}{(\sum OBL + \sum FACW + \sum FAC + \sum FACU + \sum UPL)}</math> </div> <div>*100 - <u>40.4%</u></div> </div> </div>						
<div> <div>Hydrophytic Cover Index calculations</div> <div>Source: ERDC/CRREL TR-19-19 (USACE, 2014)</div> </div>						
<div> <div>Is a Hydrophytic Vegetation Community Present per the HCI (HCI &gt; 50)?</div> <div><u>No</u></div> </div>						

**Sampling Point:** SP-2

Eastern Mountains and Piedmont Region – Version 2.0



## WETLAND DETERMINATION DATA FORM – Eastern Mountains and Piedmont Region

Project/Site: 145 Bernard Drive City/County: Bernards Twp. / Somerset Sampling Date: 7/10/2023  
 Applicant/Owner: Private Landowner State: New Jersey Sampling Point: SP-3  
 Investigator(s): Anthony Froonjian, PWS Section, Township, Range: Block 6404; Lot 13  
 Landform (hillslope, terrace, etc.): Flat Local Relief (concave, convex, none): None Slope (%): 2  
 Subregion (LRR or MLRA): LRR S, MLRA 148 Lat: 40.674053° Long: -74.545188° Datum: NAD 1983  
 Soil Map Unit Name: Amwell gravelly silt loam, rock substratum, 2 to 6% slopes (AmnrB) NWI Classification: Not mapped by the NWI  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks)  
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soils Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, optional Wetland Site ID: _____
Remarks: (Explain alternative procedures here or in a separate report.) <u>Upland sampling point approximately centering 75 feet south of the eastern part of the property. Alternative Procedure: Hydrophytic Cover Index calculations are provided in the Vegetation section remarks.</u>	

### HYDROLOGY

<b>Wetland Hydrology Indicators:</b> <u>Primary Wetland Hydrology Indicators (minimum of one is required; check all that apply)</u> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Surface Water (A1)  <input type="checkbox"/> High Water Table (A2)  <input type="checkbox"/> Saturation (A3)  <input type="checkbox"/> Water Marks (B1)  <input type="checkbox"/> Sediment Deposits (B2)  <input type="checkbox"/> Drift Deposits (B3)  <input type="checkbox"/> Algal Mat or Crust (B4)  <input type="checkbox"/> Iron Deposits (B5)  <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)  <input type="checkbox"/> Water-Stained Leaves (B9)  <input type="checkbox"/> Aquatic Fauna (B13)         </div> <div style="width: 50%;"> <input type="checkbox"/> True Aquatic Plants (B14)  <input type="checkbox"/> Hydrogen Sulfide Odor (C1)  <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)  <input type="checkbox"/> Presence of Reduced Iron (C4)  <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)  <input type="checkbox"/> Thin Muck Surface (C7)  <input type="checkbox"/> Other (Explain in Remarks)         </div> </div>	<u>Secondary Indicators (minimum of two required)</u> <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8) <input type="checkbox"/> Drainage Patterns (B10) <input type="checkbox"/> Moss Trim Lines (B16) <input type="checkbox"/> Dry-Season Water Table (C2) <input type="checkbox"/> Crayfish Burrows (C8) <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) <input type="checkbox"/> Stunted or Stressed Plants (D1) <input type="checkbox"/> Geomorphic Position (D2) <input type="checkbox"/> Shallow Aquitard (D3) <input type="checkbox"/> Microtopographic Relief (D4) <input type="checkbox"/> FAC-Neutral Test (D5)
<b>Field Observations:</b> Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ Saturation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____ (includes capillary fringe)	Wetland Hydrology Present? <u>No</u>
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:  	
Remarks:  	

# VEGETATION (Four Strata) - Use scientific names of plants.

Sampling Point: **SP-3**

Tree Stratum (Plot size: <u>30 ft. radius</u> )				DominanceTest worksheet:	
1. <u>Juglans nigra</u>	Absolute % Cover <u>35</u>	Dominant Species? <u>Yes</u>	Indicator Status <u>FACU</u>	Number of Dominant Species That are OBL, FACW, or FAC <u>2</u> (A)	
2. <u>Acer saccharum</u>	<u>30</u>	<u>Yes</u>	<u>FACU</u>		
3. <u>Quercus palustris</u>	<u>15</u>	<u>No</u>	<u>FACW</u>	Total Number of Dominant Species Across All Strata: <u>7</u> (B)	
4. <u>Cornus florida</u>	<u>5</u>	<u>No</u>	<u>FACU</u>		
5. _____	_____	_____	_____	Percent of Dominant Species That are OBL, FACW, or FAC <u>28.6%</u> (A/B)	
6. _____	_____	_____	_____		
7. _____	<u>85</u> =Total Cover				
50% of total cover = <u>42.5</u> 20% of total cover = <u>17</u>					
Sapling/Shrub Stratum (Plot size: <u>15 ft. radius</u> )				Prevalence Index worksheet:	
1. <u>Rosa multiflora</u>	<u>60</u>	<u>Yes</u>	<u>FACU</u>	Total % Cover of: _____ Multiply by: _____	
2. <u>Rubus occidentalis</u>	<u>15</u>	<u>No</u>	<u>UPL</u>	OBL species <u>0</u> x 1 = <u>0</u>	
3. <u>Viburnum prunifolium</u>	<u>5</u>	<u>No</u>	<u>FACU</u>	FACW species <u>25</u> x 2 = <u>50</u>	
4. _____	_____	_____	_____	FAC species <u>58</u> x 3 = <u>174</u>	
5. _____	_____	_____	_____	FACU species <u>177</u> x 4 = <u>708</u>	
6. _____	_____	_____	_____	UPL species <u>15</u> x 5 = <u>75</u>	
7. _____	_____	_____	_____		
8. _____	_____	_____	_____	Column Totals (A) <u>275</u> (B) <u>1007</u>	
9. _____	<u>80</u> =Total Cover			Prevalence Index (B/A) = <u>3.7</u>	
50% of total cover = <u>40</u> 20% of total cover = <u>16</u>					
Herb Stratum (Plot size: <u>5 ft. radius</u> )				Hydrophytic Vegetation Indicators:	
1. <u>Persicaria virginiana</u>	<u>25</u>	<u>Yes</u>	<u>FAC</u>	1 - Rapid Test for Hydrophytic Vegetation	
2. <u>Lonicera japonica</u>	<u>20</u>	<u>Yes</u>	<u>FACU</u>	2 - Dominance Test is > 50%	
3. <u>Microstegium vimineum</u>	<u>20</u>	<u>Yes</u>	<u>FAC</u>	3 - Prevalence Index is ≤3.0 <sup>1</sup>	
4. <u>Bambusa vulgaris</u>	<u>15</u>	<u>No</u>	<u>FACU</u>	4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)	
5. <u>Toxicodendron radicans</u>	<u>10</u>	<u>No</u>	<u>FAC</u>	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
6. <u>Cinna arundinacea</u>	<u>10</u>	<u>No</u>	<u>FACW</u>		
7. <u>Cardamine impatiens</u>	<u>3</u>	<u>No</u>	<u>FAC</u>		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
12. _____	<u>103</u> =Total Cover			<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
50% of total cover = <u>51.5</u> 20% of total cover = <u>20.6</u>					
Woody Vine Stratum (Plot size: <u>30 ft. radius</u> )				Definitions of Four Vegetation Strata:	
1. <u>Celastrus orbiculatus</u>	<u>5</u>	<u>Yes</u>	<u>FACU</u>	Tree - Woody plants, excluding vines, 3 in. (7.6 cm.) or more in diameter at breast height (DBH), regardless of height.	
2. <u>Parthenocissus quinquefolia</u>	<u>2</u>	<u>No</u>	<u>FACU</u>	Sapling/Shrub - Woody plants, excluding vines, less than 3 in. DBH and greater than or equal to 3.28 ft. (1 m) tall.	
3. _____	_____	_____	_____	Herb - All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft. tall.	
4. _____	_____	_____	_____	Woody Vine - All woody vines greater than 3.28 ft. in height.	
5. _____	_____	_____	_____		
6. _____	<u>7</u> =Total Cover			HydrophyticVegetation Present? <u>No</u>	
50% of total cover = <u>3.5</u> 20% of total cover = <u>1.4</u>					
Remarks: (Include photo numbers here or on a separate sheet.)					
<div> <div> Alternative Procedure: </div> <div> OBL 0.0%  FACW 25.0%  FAC 58.0%  FACU 177.0%  UPL 15.0%  Total Cover 275.0% </div> </div> <div> HCI = <math>\frac{(\sum OBL + \sum FACW + \sum FAC)}{(\sum OBL + \sum FACW + \sum FAC + \sum FACU + \sum UPL)} * 100</math> = <u>30.2%</u> </div> <div> Is a Hydrophytic Vegetation Community Present per the HCI (HCI &gt; 50)? <u>No</u> </div>					

Sampling Point: **SP-3**

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