



**Application Form**  
**Submitted By: Anonymous user**  
**Submitted Time:**  
**February 22, 2022 11:55 AM**

**PLUS ID: 2022-03-06**

**State Strategy Level: 1**

**PLUS Application Type - Site Plan Review**

**Title:** Middletown Storage

**County:** New Castle County

**Municipality:** Middletown

**Description of PLUS project/plan:**

Mixed use retail and storage facilities

**Section I: Project Location**

How many parcels are involved in this project?

One Parcel

Total number of parcels being reviewed for this project

Parcel ID(s): 2300100141

Project Location: 0 Summit Bridge Road

If contiguous to a municipality, are you seeking Annexation? No

**Section II: Project Contact Information**

**Owner Contact Information**

Reybold Venture Group IX LLC, c/o Jerome Heisler

116 E Scotland Dr

Bear, DE 19701

Phone: (302) 832-7100

Email: jeromeheisler4@gmail.com

Fax: (302) 392-3038

**Equitable Owner/Developer Contact Information**

Is there an Equitable Owner/Developer for this project? **No**

,

Phone: ( ) -  
Email:  
Fax: ( ) -

### Project Engineer/Designer Contact Information

Is there a Project Engineer or Designer for this project? Yes  
Becker Morgan Group, Inc.  
Ryan Musacchio  
Phone: (302) 369-3700  
Email: rmusacchio@beckermorgan.com  
Fax: (302) 734-7965

Please designate a Primary Contact for this Project/Application.  
Project Designer/Engineer

### **Section III: Project Details**

Project Area (Acres): **13.12**  
Type of Development: **Commercial**  
If Mixed Use, what types are included:

#### Previous PLUS Information

Was this property a subject of a previous PLUS Review? **No**  
If Previous PLUS, what was the PLUS ID:

#### Zoning Information

Present Zoning for this project area: **C-3**  
Proposed Zoning for this project: **C-3**

#### Land Use Information

Present Use for this project area: **Vacant Lot**  
Proposed Use for this project: **Mixed use retail and self storage facility**

### Residential Development Information

Type of Residential:  
If mixed residential, what types of residential?

Residential Target Market:

Type of Homeownership:  
Total number of Homeownership units:

Type of Rental Units:  
Total number Rental Units:

### Table of Residential Units Proposed

Total Res. Units	Single Family	Multi-Family	Duplex/Townhouse

### Commercial Development Information

Type of Commercial: **Retail Shopping Center**

Type of Industrial:

Institution Type:

Total Square footage: **113,125**

### School Development Information

School Level:

Estimated Square Footage of School:

Estimated Number of Students:

What Fiscal Year (FY) do you anticipate applying for the Certificate of Necessity (CN)?

Does this project require a Conditional Use decision? **Yes**

If yes, please provide a brief description of the conditional use justification:

**recieved approval from Town of Middletown for conditional use: self storage facility in C-3 zone**

Are there any Federal permits, licensing, or funding anticipated for this project?

**No**

If yes, please describe/elaborate

### Site Visit Option

To promote an accurate review of your project's features, would you permit a State agency site visit? **Yes**

If yes, please provide a contact name and phone number to schedule a site visit:

**Jerome Heisler**

### **Section IV: Utilities**

#### Water Supply Details

What type of water provider will be used for this project? **Public Utility**

Who is the Water Service Provider: **Municipal**

Will a new public well be located at this site? **No**

Wastewater Supply Details

What type of wastewater Supply provider will be used for this project? **Public Utility**

Who is the Wastewater Service Provider: **Municipal**

Will a new public wastewater system be located at this site?

**No**

**Section V: Environmental Details**

Forestland detail

Existing Forested Area (Y/N)	Existing Forest (acres)	Will any forest be removed? (Y/N)	Estimated Removed Forest (acres)
Yes	2.95	Yes	1.44

Wetlands Details

Based on your PLUS Pre-Check report, are there any wetlands, as defined by the U.S. Army Corps of Engineers OR the Delaware Department of Natural Resources and Environmental Control (DNREC) on this site?

**Yes**

Tidal Wetlands

Are there Tidal Wetlands? **No**

If yes, estimated Acres of Tidal Wetlands:

Non-tidal Wetlands

Are there Non-Tidal Wetlands? **Yes**

If yes, estimated Acres of Non-Tidal Wetlands: **0.79**

Wetland Impact

Will the site design proposed directly impact these wetland areas and/or do you anticipate a wetlands permit will be required?

**No**

If yes, estimated acres of wetlands impacted:

Wetland Delineation

Have the wetlands been delineated? **Yes**

If delineated, has the U.S. Army Corps of Engineers signed off on the delineation?

**Yes**

Tax Ditch Details

Based on your PLUS Pre-Check report, is this site within the buffer area or contain a Tax Ditch, public ditch, or private ditch (that directs water off-site)?

**No**

Stormwater Management Details

List the proposed stormwater management practices for this site:



## Extended detention

### Open Space Details

Is there Open Space proposed for this project? **Yes**

Estimated acres of Open Space proposed: **5.8**

What kind of Open Space? **Active Recreation, Passive Recreation, Stormwater Management, Wildlife Habitat**

Please list the "other" type of Open Space:

Will any land from this project be dedicated for community use (e.g. police, fire, school)?

**No**

Please describe anticipated community use

## Section VI: Transportation / Mobility / Connectivity

### Vehicle Trip Details

Do you have estimated vehicle trip information? **Yes**

Please provide estimated vehicle trips this project will generate on an average weekday.

**2,485**

What percentage of these trips will be from school buses, large commercial trucks such as Tractor-trailers, and/or delivery trucks (larger than a van or pick-up)?

**10**

### Road Connectivity Details

Will this project connect to State maintained roads? **Yes**

Please list any locations where this project could physically be connected to existing or future development or adjacent land for connectivity/mobility and indicate your willingness to discuss making these connections.

**Connection has been proposed to adjacent shopping center**

### Mobility Details

Is there a proposed or existing accessway (sidewalk transition from infrastructure in ROW to internal pathways)?

**Yes**

Have there already been discussions with DTC Planning staff of the need for new or improving existing transit stops on-site, near the site but within right-of-way, and/or as a companion stop?

**Yes**

Is there an opportunity to connect to a larger bike, pedestrian, or transit network?

**No**

### Table of Mobility Connectivity Parameters

	<b>Sidewalks</b>	<b>Bike Paths</b>	<b>Bus Stops</b>
<b>Currently exist?</b>	No	No	No
<b>Type existing</b>			
<b>Proposed to add?</b>	Yes	Yes	
<b>Type proposed</b>	Internal, Within Right-of-Way	Internal, Within Right-of-Way	

## Section VII: Historic / Cultural Information

Based on your PLUS Pre-Check report, has a cultural resource professional previously evaluated the site for historic and/or cultural resources?

**No**

If no, I acknowledge that the Pre-Check against the CHRIS system did not identify any historic/cultural resource areas on this site.

**Acknowledge**

If yes, please provide details regarding evaluation by a cultural resource professional.

Based on your PLUS Pre-Check report, is this site in the VICINITY of any known historic/cultural resources or sites?

**No**

If no, I acknowledge that the Pre-Check against the CHRIS system did not identify any historic/cultural resource areas near this site.

**Acknowledge**

If yes, please provide details regarding known historic/cultural resources near the project site.

## Section IX: Signatures

Is the person completing this form the Property Owner? **No**

If yes, Signature of Owner completing form

**If no, after you submit this application, you will be emailed with a request to upload the Owner Signature Form to the Delaware Planning Drop Box site.**

Signature of Person completing form on behalf of the Property Owner

*Dr. Manohar*

**As the project contact, I acknowledge that this application will not be complete until OSPC receives the Owner Signature  
Acknowledge**



**Project Owner Signature**

This page needs to accompany the completed PLUS application for any project. The person signing this form shall be the actual owner of the property where the proposed project is located.

Project Name: Middletown Storage

Project ID (to be completed by OSPC): \_\_\_\_\_

I hereby certify that I am the owner of the property identified in the accompanying PLUS application.

 \_\_\_\_\_

Signature of Property Owner

8-22-22

Date

\_\_\_\_\_

Signature of Additional Owner (if applicable)

\_\_\_\_\_

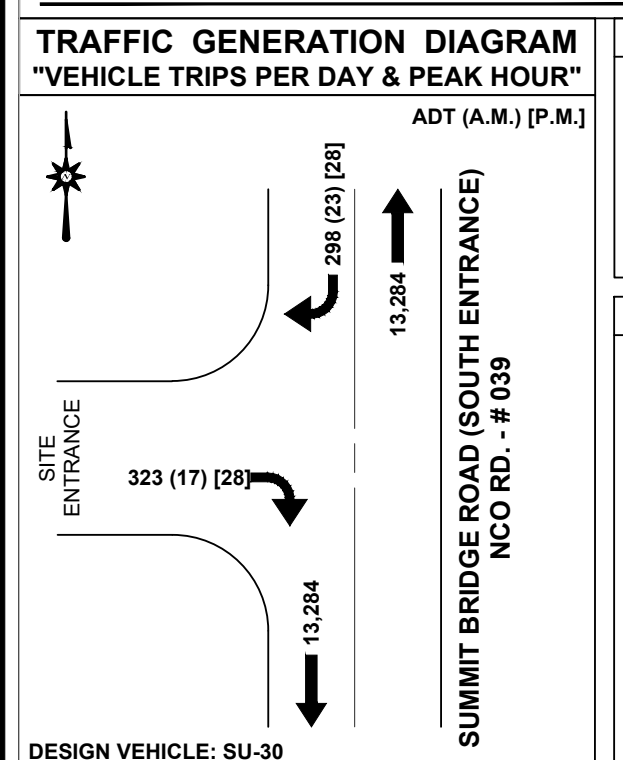
Date







**VICINITY MAP**  
SCALE: 1" = 2000'



**ROAD TRAFFIC DATA:**  
NCO RD. # 039 (SUMMIT BRIDGE ROAD), SPEED LIMIT = 45 MPH  
AADT = 26,568 Trips (from 2019 DelDOT Traffic Summary)  
10 YEAR PROJECTED AADT: (1.0110) x AADT = 29,348 TRIPS  
10 YEAR PROJECTED AADT + SITE ADT: 31,833 TRIPS  
DIRECTIONAL SPLIT: 50% / 40%  
PEAK HOUR: 11:32% = 3,603 TRIPS (Design Hourly Volume (DHV))  
9.79% TRUCKS: 3116  
PEAK HOUR TRUCKS: 11.32% = 353 TRIPS

**SITE TRIPS GENERATED:**  
SOURCE: ITE TRIP GENERATION MANUAL (10TH EDITION)  
ITE: 820 - SHOPPING CENTER (25,160 S.F.)  
SITE ADT = LN(T) = 0.68LN(25.16) + 5.57 = 2,352 TRIPS  
A.M. PEAK HR. TRIPS = 0.50(25.16) + 151.78 = 164 (62% IN / 38% OUT) (102 IN / 62 OUT)  
P.M. PEAK HR. TRIPS = LN(T) = 0.74LN(25.16) + 2.89 = 196 (48% IN / 52% OUT) (94 IN / 102 OUT)  
ITE: 151 - MINI-WAREHOUSE (87,970 S.F.)  
SITE ADT = 133 TRIPS (WEIGHTED AVERAGE RATE)  
A.M. PEAK HR. TRIPS = 9 (60% IN / 40% OUT) (5 IN / 4 OUT)  
P.M. PEAK HR. TRIPS = 15 (47% IN / 53% OUT) (7 IN / 8 OUT)  
**TOTAL:**  
ADT = 2,352 + 133 = 2,485 TRIPS  
A.M. PEAK HR = 164 + 9 = 173 TRIPS (107 IN / 66 OUT)  
P.M. PEAK HR = 196 + 15 = 211 TRIPS (107 IN / 104 OUT)  
**DIRECTIONAL DISTRIBUTION + ENTRANCE ASSIGNMENT:**  
PER MIDDLETOWN SELF - STORAGE TOA PREPARED BY RK&K IN JULY 2019.

**GENERAL NOTES:**

- BOUNDARY AND TOPOGRAPHIC DATA SHOWN HEREON WAS PREPARED BY TRANSITIONS ENGINEERING SURVEY AND FORESTRY ASSOCIATES, INC. VERTICAL DATUM IS BASED ON NAVD 88. HORIZONTAL DATUM IS BASED ON DELAWARE STATE PLANE GROUND COORDINATES AND 83 (2011).
- THE EXISTING UTILITIES SHOWN WERE TAKEN FROM THE BEST AVAILABLE RECORDS. THE CONTRACTOR SHALL CONTACT MISS UTILITY OF DELMARVA (1-800-282-8555) TO VERIFY THEIR EXACT LOCATION PRIOR TO THE START OF ANY CONSTRUCTION. ANY DAMAGE INCURRED TO ANY UTILITIES SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTORS EXPENSE. IF THE CONTRACTOR RELIES ON THE UTILITY LOCATIONS SHOWN HEREON, HE DOES SO AT HIS OWN RISK AND WILL NOT BE ENTITLED TO ADDITIONAL COMPENSATION DUE TO TIME DELAYS FROM SAID RELIANCE.
- THE BOUNDARY LINES PORTRAYED HEREON HAVE BEEN ESTABLISHED BASED CAD FILES RECEIVED FROM TRANSITIONS ENGINEERING SURVEY AND FORESTRY ASSOCIATES INC. AND SOURCE OF TITLE AND ADJACENT DEED RECORD INFORMATION.
- PROJECT BENCHMARK DESCRIPTION: A MAG NAIL WAS SET ALONG SUMMIT BRIDGE ROAD, NORTHING IS 534117 6037 AND EASTING IS 570346 1508 AND BASED ON NAD83 2011. THE ELEVATION OF THE MONUMENT IS 60.36' BASED ON NAVD 88.
- PROPERTY SHOWN HEREON IS SUBJECT TO ANY RIGHT-OF-WAY, EASEMENTS, RESTRICTIONS, ETC. AS MAY BE SHOWN OR NOTED IN ANY RECORD, PUBLIC OR OTHERWISE, OR ANY REQUIREMENT OR REGULATION OF ANY PUBLIC AGENCY.
- FEMA: THIS SITE IS LOCATED WITHIN THE ONE HUNDRED YEAR FLOOD PLAIN ZONE, BASED ON FIRM MAP 10003C0305L, PANEL 305 OF 475, DATED JANUARY 22, 2020. BASE FLOOD ELEVATION: 56'00".
- WRPA: THIS SITE IS LOCATED WITHIN A DESIGNATED WATER RESOURCE PROTECTION AREA AS SHOWN ON WATER RESOURCE PROTECTION AREA MAP IN NEW CASTLE COUNTY (MAP 3 OF 3) DATED 1987 AND LAST REVISED MARCH 2017. THE SITE IS LOCATED WITHIN THE RECHARGE AREAS.
- ALL ROADS, PARKING AND OTHER PAVED AREAS WILL BE PRIVATELY OWNED AND MAINTAINED AND ARE NOT INTENDED FOR DEDICATION.
- DELAWARE REGULATIONS PROHIBIT THE BURIAL OF CONSTRUCTION DEMOLITION DEBRIS, INCLUDING TREES AND STUMPS ON CONSTRUCTION SITES. ANY SOLID WASTE FOUND DURING EXCAVATION MUST BE REMOVED AND PROPERLY DISCARDED.
- ALL HANDICAPPED PARKING DEMARCATION, STALLS, AND BUILDING ACCESSIBLE ROUTES SHALL COMPLY WITH THE "AMERICAN WITH DISABILITIES ACT".
- THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENT FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERE TO APPURTENANT.
- BEFORE THE CONTRACTOR CAN BEGIN CONSTRUCTION HE MUST OBTAIN THE PROPER PERMITS AND/OR APPROVALS FROM THE TOWN OF MIDDLETOWN, DELAWARE DEPARTMENT OF TRANSPORTATION (DELDOT), MIDDLETOWN DEPARTMENT OF PUBLIC WORKS AND APPROPRIATE STATE AND COUNTY AGENCIES.
- ALL CONSTRUCTION METHODS AND MATERIALS SHALL BE ACCORDING TO THE TOWN OF MIDDLETOWN AND THE STATE OF DELAWARE STANDARDS, MIDDLETOWN DEPARTMENT OF PUBLIC WORKS AND CONSTRUCTION SPECIFICATIONS.
- WATER SUPPLY: TOWN OF MIDDLETOWN, SUBJECT TO THE APPROVAL OF THE DELAWARE STATE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL AND THE DELAWARE DIVISION OF PUBLIC HEALTH, AND THE TOWN OF MIDDLETOWN THE TOWN OF MIDDLETOWN OWNS THE WATER MAIN AND SERVICE CONNECTION UP TO THE SHUT OFF VALVE, LOCATED AT THE PROPERTY LINE. THE TOWN OF MIDDLETOWN HAS OWNERSHIP AND MAINTENANCE RESPONSIBILITY FOR THE WATER METER, THE WATER METER PIT OR VALVE, ON SITE WATER MAIN AND SERVICE LINES, AND ON SITE HYDRANTS ARE TO BE OWNED AND MAINTAINED BY THE PROPERTY OWNER.
- SANITARY SEWER: TOWN OF MIDDLETOWN, SUBJECT TO THE APPROVAL OF THE TOWN OF MIDDLETOWN, SUBJECT TO THE APPROVAL OF THE DELAWARE STATE DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENTAL CONTROL AND THE DIVISION OF PUBLIC HEALTH AND THE TOWN OF MIDDLETOWN.
- STORM DRAINAGE: ALL ON-SITE DRAINAGE FACILITIES (INCLUDING BUT NOT LIMITED TO SWALES, STORM DRAINAGE SYSTEM, STORMWATER MANAGEMENT FACILITIES, ETC.) SHALL BE PRIVATELY OWNED AND MAINTAINED. DRAINAGE FACILITIES SHALL BE IN ACCORDANCE WITH THE NEW CASTLE COUNTY DRAINAGE CODE AND THE DELAWARE SEDIMENT AND STORMWATER MANAGEMENT REGULATIONS DATED FEBRUARY 2019 OR AS LATER AMENDED.
- ELECTRIC: TOWN OF MIDDLETOWN, SUBJECT TO THE APPROVAL OF THE TOWN OF MIDDLETOWN ELECTRICAL DEPARTMENT.
- A 20' UTILITY EASEMENT, 10' RESPECTIVELY, ON EACH SIDE OF THE CENTERLINE OF THE PIPE SHALL BE CREATED, WHENEVER POSSIBLE, WHERE SANITARY SEWER, STORM SEWER, WATER OR ELECTRIC IS DESIGNATED FOR PUBLIC USE AND IS OUTSIDE OF THE DEDICATED PUBLIC RIGHTS OF WAY.
- A 6' WIDE EASEMENT ON EACH SIDE OF EACH SIDE AND REAR LOT SHOWN ON THIS PLAN, SUBSEQUENTLY, ESTABLISHED WITHIN THE PERIMETER BOUNDARIES SHOWN ON SAID PLAN IS HEREBY DEDICATED TO BE AVAILABLE FOR ANY UTILITY USE, PROVIDED THAT ANY LOT LINE IS ELIMINATED. THE EASEMENT ALONG SAID LOT LINE IS EXTINGUISHED EXCEPT AS TO UTILITIES THEN EXISTING IN SAID EASEMENT.
- DEVELOPER SHALL PRESERVE ALL TREES ON THIS SITE, EXCEPT WHERE NECESSARY TO CONSTRUCT BUILDING, PARKING, ACCESSWAYS, RECREATIONAL FACILITIES AND UTILITIES, AN SELECTIVE THINNING OF EXISTING TREES. SPECIFIC SPECIES OF PLANTS MATERIAL AS DESIGNATED ON THIS PLAN OF THE LANDSCAPE PLAN (IF SUCH A PLAN IS AN INTEGRAL PART OF THIS PLAN) SHALL BE PRESERVED AND PROPERLY PROTECTED DURING CONSTRUCTION.
- ALL COMMON FACILITIES INCLUDING, BUT NOT LIMITED TO, PAVED AREAS, SIDEWALKS, CURBING, LANDSCAPING PUBLIC OPEN SPACE, AND/OR DRAINAGE FACILITIES SHALL BE KEPT IN GOOD REPAIR AND MAINTAINED IN A SAFE SANITARY CONDITION.
- ALL PUBLIC UTILITIES INCLUDING, BUT NOT LIMITED TO, ELECTRIC, GAS, TELEPHONE SHALL BE PLACED UNDERGROUND WITHIN THE SUBDIVISION AND LAND DEVELOPMENT, SUCH UTILITIES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE PREVAILING STANDARDS AND PRACTICES OF THE UTILITY OR OTHER COMPANY PROVIDING SERVICE, EXCEPT WHERE IT IS DEMONSTRATED TO THE SATISFACTION OF THE TOWN OF MIDDLETOWN THAT UNDERGROUND INSTALLATION ARE NOT FEASIBLE BECAUSE OF PHYSICAL CONDITIONS OF THE LAND.
- A LANDSCAPE PLAN PREPARED BY BECKER MORGAN GROUP, INC., LAST DATED 08/18/2021 OR AS AMENDED AND APPROVED IN WRITING BY THE TOWN OF MIDDLETOWN, IS HEREBY CONSIDERED A PART OF THE RECORD SITE PLAN.
- FOR MAINTENANCE DECLARATION OF OPEN SPACES, LANDSCAPING, AND/OR STORMWATER MANAGEMENT FACILITIES SHOWN ON THIS PLAN, SEE DEED OF RESTRICTIONS, DATED 11/14/2000, AND OF THE RECORD IN THE OFFICE OF THE RECORDER OF DEEDS IN AND FOR NEW CASTLE COUNTY, STATE OF DELAWARE, DEED # 20201112-0101626 AND BK 2786 PG 218.
- SITE LIGHTING SHALL BE HIGH PRESSURE SODIUM TYPE FIXTURES OR LED LIGHTS.
- WETLANDS SHOWN HEREON WERE FIELD DELINEATED BY JAMES C. McCULLLEY IV ON AUGUST 2018 AND FIELD LOCATED FORESTRY ASSOCIATES ON OCTOBER 2018. SEE WETLANDS REPORT DATED OCTOBER 10, 2018 AND PREPARED BY WATERSHED ECO LLC.
- THE DEVELOPER SHALL CONSTRUCT 6-FOOT WIDE CONCRETE SIDEWALK AS SHOWN ON PLAN.
- 48-HOUR NOTICE MUST BE GIVEN TO THE TOWN OF MIDDLETOWN PRIOR TO ANY CONSTRUCTION STARTING.
- ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE TOWN OF MIDDLETOWN'S "MANUAL OF CONSTRUCTION SPECIFICATIONS AND DETAILS FOR ROADS AND UTILITIES".
- DURING UTILITY INSTALLATION, THE CONTRACTOR SHALL INSTALL TRACER WIRE IN ACCORDANCE WITH THE TOWN OF MIDDLETOWN'S "MANUAL OF CONSTRUCTION SPECIFICATIONS AND DETAILS FOR ROADS AND UTILITIES".
- ALL SITE IMPROVEMENT INCLUDING LANDSCAPING, PERMANENT SITE STABILIZATION, AND PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE IN PLACE AND APPROVED PRIOR TO THE ISSUANCE OF THE CERTIFICATION OF OCCUPANCY.
- A STORMWATER MANAGEMENT ACCESS EASEMENT IN FAVOR OF TOWN OF MIDDLETOWN, ITS AGENTS AND ASSIGNS IS HERBY CREATED ON, OVER, UNDER, AND ACROSS THE ENTIRE AREA OF ALL STORMWATER MANAGEMENT FACILITIES INCLUDING, STORMWATER CONVEYANCE SYSTEMS, BASINS, AND ALL COMPONENTS THEREOF, IDENTIFIED ON THE PLAN AND ALL WATER COURSES FOR THE PURPOSES OF INSPECTING, EVALUATING AND MAINTAINING THE STORMWATER MANAGEMENT FACILITIES AND WATERCOURSES.
- PRELIMINARY MAJOR LAND DEVELOPMENT PLAN WAS GRANTED BY MAYOR AND COUNCIL ON AUGUST 6, 2018 MEETING. CONDITIONAL USE APPROVAL WAS GRANTED BY MAYOR AND COUNCIL ON OCTOBER 1, 2018 MEETING.

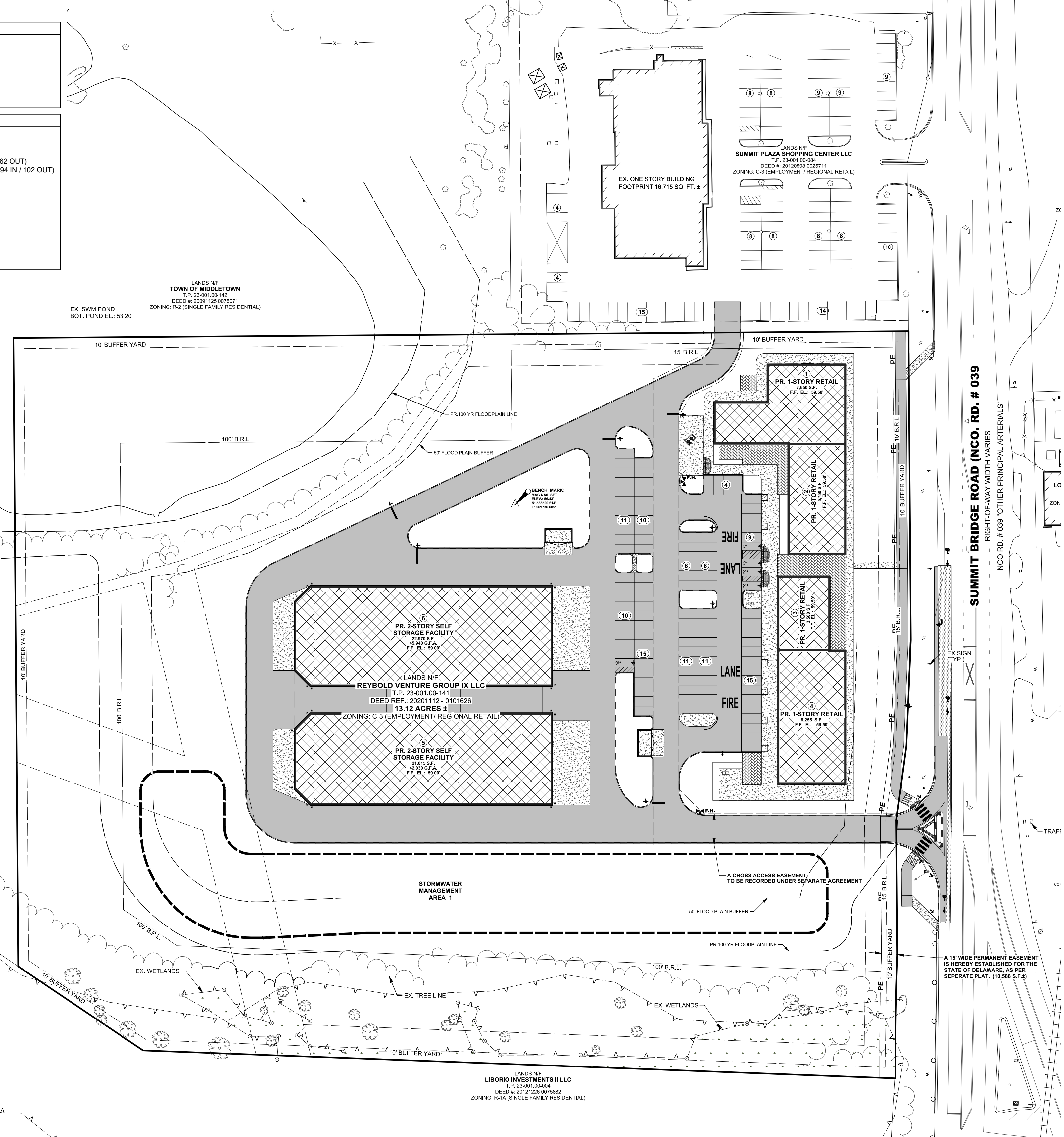
**LEGEND**

ITEM	EXISTING	PROPOSED	ITEM	EXISTING	PROPOSED
CONCRETE CURB & GUTTER			SANITARY GRAVITY SEWER LINE, SIZE & FLOW DIRECTION	EX. 10" S	10" S
CONCRETE SIDEWALK, SLAB / PAVING			SANITARY SEWER FORCE MAIN, SIZE & FLOW DIRECTION	EX. 10" F.M.	12" F.M.
IMPERVIOUS SURFACED ROAD, DRIVE OR PARKING LOT			SANITARY SEWER MANHOLE (S.M.H.)		
INDIVIDUAL TREE OR BUSH	EVERGREEN DECIDUOUS	N/A	SANITARY SEWER CLEANOUT		
WIRE FENCE			WATER MAIN SIZE	EX. 10" W	12" W
CHAINLINK FENCE			FIRE HYDRANT	EX. F.H.	F.H.
STOCKADE FENCE			WATER VALVE (W.V.) OR METER (W.M.)	W.M. W.V.	W.M. W.V.
STRUCTURE (CONCRETE, WOOD, METAL, ETC.)			STORM DRAIN MANHOLE (S.D.M.H.)		
DRAINAGE DITCH OR SWALE			STORM DRAIN LINE (CMP OR RCP)		
EMBANKMENT SIDESLOPES (DOWN)			CATCH BASIN		
CONTOUR	49	25.50 T.C. 25.00 B.C.	UTILITY POLE W/ OVERHEAD SERVICE (TELEPHONE OR ELECTRIC OR BOTH)	U.E. U.T.	U.E. U.T.
ELEVATION SPOT SHOT	43.55		UNDERGROUND ELECTRIC	U.E.	U.E.
BENCH MARK			UNDERGROUND TELEPHONE	U.T.	U.T.
PROPERTY OR RIGHT-OF-WAY LINE			UNDERGROUND GAS MAIN	EX. 2" G	2" G
CENTERLINE			PAVEMENT TO BE REMOVED		
LIGHT POLE					

- FIRE MARSHAL GENERAL NOTES**
- ALL FIRE LANES, FIRE HYDRANTS, FIRE DEPARTMENT CONNECTIONS, SPRINKLERS, STANDPIPE CONNECTIONS, AND FIRE EXITS SHALL BE MARKED AND/OR PROTECTED IN ACCORDANCE WITH THE DELAWARE STATE FIRE REGULATIONS.
  - LOCK BOXES SHALL BE PROVIDED AND INSTALLED ADJACENT TO THE MAIN ENTRANCE DOOR TO ALL BUILDINGS OR AS DIRECTED BY THE FIRE MARSHAL.
  - ADDRESS NUMBERS OF AT LEAST 12 INCHES IN HEIGHT MUST BE PLACED ON THE STREET SIDE OF THE BUILDING VISIBLE FROM THE STREET.
  - ANY NATURAL OR LP GAS BOTTLES, METERS, REGULATORS, ETC. MUST HAVE IMPACT PROTECTION.
  - ANY GAS FIRED HVAC EQUIPMENT MUST BE EQUIPPED WITH EMERGENCY CUT OFF SWITCHES REMOTELY LOCATED.
  - FIRE DEPARTMENT CONNECTION TO BE 4" SIAMISE IN ACCORDANCE WITH DELAWARE STATE FIRE MARSHAL AND TOWN OF MIDDLETOWN STANDARDS.
  - THE PROPOSED BUILDING ARE REQUIRED TO BE PROTECTED BY AUTOMATIC SPRINKLERS IN ACCORDANCE WITH NFPA 13.
  - PROPOSED STANDPIPES ARE REQUIRED FOR BOTH OF THE 2-STORY SELF STORAGE BUILDINGS.
  - FIRE HYDRANT FLOW TEST DATA:  
STATIC PRESSURE: 62 PSI  
RESIDUAL PRESSURE: 50 PSI  
FLOW RATE: 840 GPM  
FLOW RATE @ 20PSI: 1,750 GPM  
LOCATION: CORNER OF ASH BLVD. (BURGER KING)
- PURPOSE OF PLAN**
- TO CONSTRUCT TWO SELF STORAGE BUILDING (87,970 G.F.A.) AND ASSOCIATED PARKING AND UTILITIES.
  - TO CONSTRUCT RETAIL BUILDINGS (25,155 G.F.A.) AND ASSOCIATED PARKING AND UTILITIES.
  - TO CONSTRUCT SHARED ACCESS BETWEEN MIDDLETOWN STORAGE PROJECT AND SUMMIT PLAZA SHOPPING CENTER

**SITE DATA**

1. OWNER OF RECORD:	REYBOLD VENTURE GROUP IX LLC MIDDLETOWN, DE 19709 116 E SCOTLAND DRIVE BEAR DE 19701 (302) 832-1100
2. SITE ADDRESS:	0 SUMMIT BRIDGE ROAD MIDDLETOWN, DE 19709
3. ENGINEER / SURVEYOR:	BECKER MORGAN GROUP INC. THE TOWER AT STAR CAMPUS 100 DISCOVERY BOULEVARD, SUITE 102 NEWARK, DE 19713 (302) 369-3700
4. PROPERTY MAP NUMBER:	23-001.00-141
5. ZONING CLASSIFICATION:	EXISTING: C-3 (EMPLOYMENT / REGIONAL RETAIL) PROPOSED: C-3 (EMPLOYMENT / REGIONAL RETAIL)
6. DEED SUMMARY:	20201112-0101626
7. MICROFILM #:	20010406-0024238
8. PRESENT USE:	OPEN SPACE / VACANT
9. PROPOSED USE:	MIXED USE RETAIL AND STORAGE FACILITY
10. TOTAL SITE AREA:	13.12 ACRES
11. PROPOSED BUILDING:	TYPE: RETAIL FOOTPRINT: 25,155 S.F. G.F.A.: 25,155 S.F. SELF STORAGE: 43,985 S.F. G.F.A.: 87,970 S.F.
12. LOT COVERAGE:	TOTAL: 69,140 S.F. 113,125 S.F. PERMITTED: 80% PROPOSED: 42%
13. PARKING CALCULATIONS:	ADJACENT SHOPPING CENTER (16,715 S.F.) REQUIRED: 60 ((16,715/1000)*3 + (18/2)) EXISTING: 125 PROVIDED: 122 HANDICAP PARKING SPACES: 4 LOADING SPACES: 2 BICYCLE SPACES: 18 (16 REQUIRED)
14. SETBACKS:	RIGHT-OF-WAY: 15 FEET NON RESIDENTIAL: 15 FEET RESIDENTIAL: 100 FEET
15. LOD AREA BREAKDOWN:	IMPERVIOUS: ± 7.76 AC. WOODS: ± 1.44 AC. OPEN AREA: ± 9.06 AC. TOTAL: ± 10.56 AC.
16. NUMBER OF LOTS:	EXISTING: 1 PROPOSED: 1
17. WETLANDS:	± 0.79 ACRES FEDERAL NONTIDAL 404 WETLANDS EXIST ON THIS PROPERTY
18. FIRE HYDRANTS:	EXISTING: 0 PROPOSED: 2
19. BUILDING HEIGHT:	PERMITTED: 4 STORY / 50 FT PROPOSED: 2 STORY & 1 STORY
20. SOURCE OF WATER:	TOWN OF MIDDLETOWN
21. SOURCE OF SEWER:	TOWN OF MIDDLETOWN
22. SOURCE OF GAS:	CHESAPEAKE UTILITIES
23. SOURCE OF ELECTRIC:	TOWN OF MIDDLETOWN
24. SURVEY BENCHMARK:	MAC NAIL SET VERTICAL: N.A. V.D. 88 HORIZONTAL: NAD 83 DELAWARE STATE PLANE
25. MONUMENTATION:	EXISTING: 0 PROPOSED: R.O.W. MONUMENTS SHALL BE PLACED ALONG ONE SIDE OF ALL PUBLIC ROADS OF EVERY CHANGE IN HORIZONTAL ALIGNMENT TO PROVIDE PERMANENT REFERENCE FOR RE-ESTABLISHING THE CENTERLINE AND R.O.W. LINE
26. TOTAL DISTURBED AREA:	± 10.56 ACRES
27. BUILDING CONST. TYPE:	TYPE I
28. SANITARY SEWER FLOW:	AVERAGE DAILY FLOW: 649 GPD [1,000 (0.02 GPD / S.F.)] + [25,155 (0.025 GPD / S.F.)] PEAK DAILY FLOW: 2,596 GPD = 649 GPD * 4 (PEAKING FACTOR)
29. PROXIMITY TO T.I.D.:	ADJACENT TO EASTTOWN T.I.D. (MIDDLETOWN)
30. STATE INVESTMENT LEVEL:	LEVEL 1 (2020)



**SURVEY LEGEND**

ITEM	EXISTING	PROPOSED
UNMARKED POINT	○	○
CONCRETE MONUMENT	⊠	⊠
IRON PIPE	⊙	⊙
IRON PIPE W/ CAP	⊙	⊙
IRON ROD	⊙	⊙
IRON ROD W/ CAP	⊙	⊙
DRILL HOLE	⊙	⊙
STONE	⊙	⊙
PK NAIL	⊙	⊙

**SHEET INDEX**

C-001	COVER SHEET
C-101	EXISTING CONDITION / DEMOLITION PLAN
C-201	SITE PLAN
C-301	UTILITY PLAN
C-302	UTILITY SCHEDULES
C-401	GRADING PLAN
C-500	SEDIMENT AND STORMWATER MANAGEMENT COVER SHEET
C-501	PRE-CONSTRUCTION SEDIMENT & STORMWATER MANAGEMENT PLAN
C-502	CONSTRUCTION SEDIMENT & STORMWATER MANAGEMENT PLAN
C-503	POST-CONSTRUCTION S.W.M. PLAN, FACILITY #1, (DRY END POND)
C-504	POST-CONSTRUCTION S.W.M. PLAN, FACILITY NOTES & DETAILS
C-505 - C-509	EROSION AND SEDIMENT CONTROL DETAILS
C-600 - C-609	ENTRANCE PLANS
C-701	SANITARY SEWER PROFILE SHEET
C-901 - C-904	CONSTRUCTION DETAILS
L-101	LANDSCAPE PLAN

**CERTIFICATION OF OWNERSHIP**

I, JEROME HEISLER HEREBY CERTIFY THAT ALL LAND CLEARING, CONSTRUCTION AND DEVELOPMENT ACTIVITIES SHALL BE DONE PURSUANT TO THE APPROVED PLANS, AND IN ACCORDANCE WITH THE TOWN OF MIDDLETOWN SUBDIVISION REGULATIONS AND ZONING CODE.

REYBOLD VENTURE GROUP IX LLC	DATE
SUMMIT PLAZA SHOPPING CENTER LLC	DATE

**CERTIFICATION OF OWNERSHIP**

I, \_\_\_\_\_ HEREBY CERTIFY THAT ALL LAND CLEARING, CONSTRUCTION AND DEVELOPMENT ACTIVITIES SHALL BE DONE PURSUANT TO THE APPROVED PLANS, AND IN ACCORDANCE WITH THE TOWN OF MIDDLETOWN SUBDIVISION REGULATIONS AND ZONING CODE.

REYBOLD VENTURE GROUP IX LLC	DATE
SUMMIT PLAZA SHOPPING CENTER LLC	DATE

**CERTIFICATION OF PLAN ACCURACY**

I, \_\_\_\_\_ HEREBY CERTIFY THAT I AM A REGISTERED PROFESSIONAL ENGINEER (LAND SURVEYOR) IN THE STATE OF DELAWARE AND THAT ALL OF THE INFORMATION ON THIS PLAN IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY ACCEPTED SURVEYING STANDARDS AND PRACTICES, AND IN ACCORDANCE WITH THE TOWN OF MIDDLETOWN SUBDIVISION REGULATIONS AND ZONING CODE.

CHRISTOPHER D. DUKE	P. E. NO. 16378	DATE
---------------------	-----------------	------

**BECKER MORGAN GROUP**

ARCHITECTURE  
ENGINEERING  
Delaware

309 South Governors Avenue  
Dover, DE 19904  
302.734.7950

The Tower at STAR Campus  
100 Discovery Boulevard, Suite 102  
Newark, DE 19713  
302.369.3700

Maryland

312 West Main Street, Suite 300  
Salisbury, MD 21801  
410.546.9100

North Carolina

3333 Jaeckle Drive, Suite 120  
Wilmington, NC 28403  
910.341.7600

www.beckermorgan.com

PROJECT TITLE

**MIDDLETOWN STORAGE**

0 SUMMIT BRIDGE ROAD  
MIDDLETOWN HUNDRED  
NEW CASTLE COUNTY, DE

SHEET TITLE

**COVER SHEET**

SCALE: 1" = 60'

ISSUE BLOCK

3	1/25/22	REVISED PER TOWN OF MIDDLETOWN COMMENTS
2	1/21/22	REVISED PER DELDOT COMMENTS
1	8/13/21	REVISED PER TOWN OF MIDDLETOWN COMMENTS

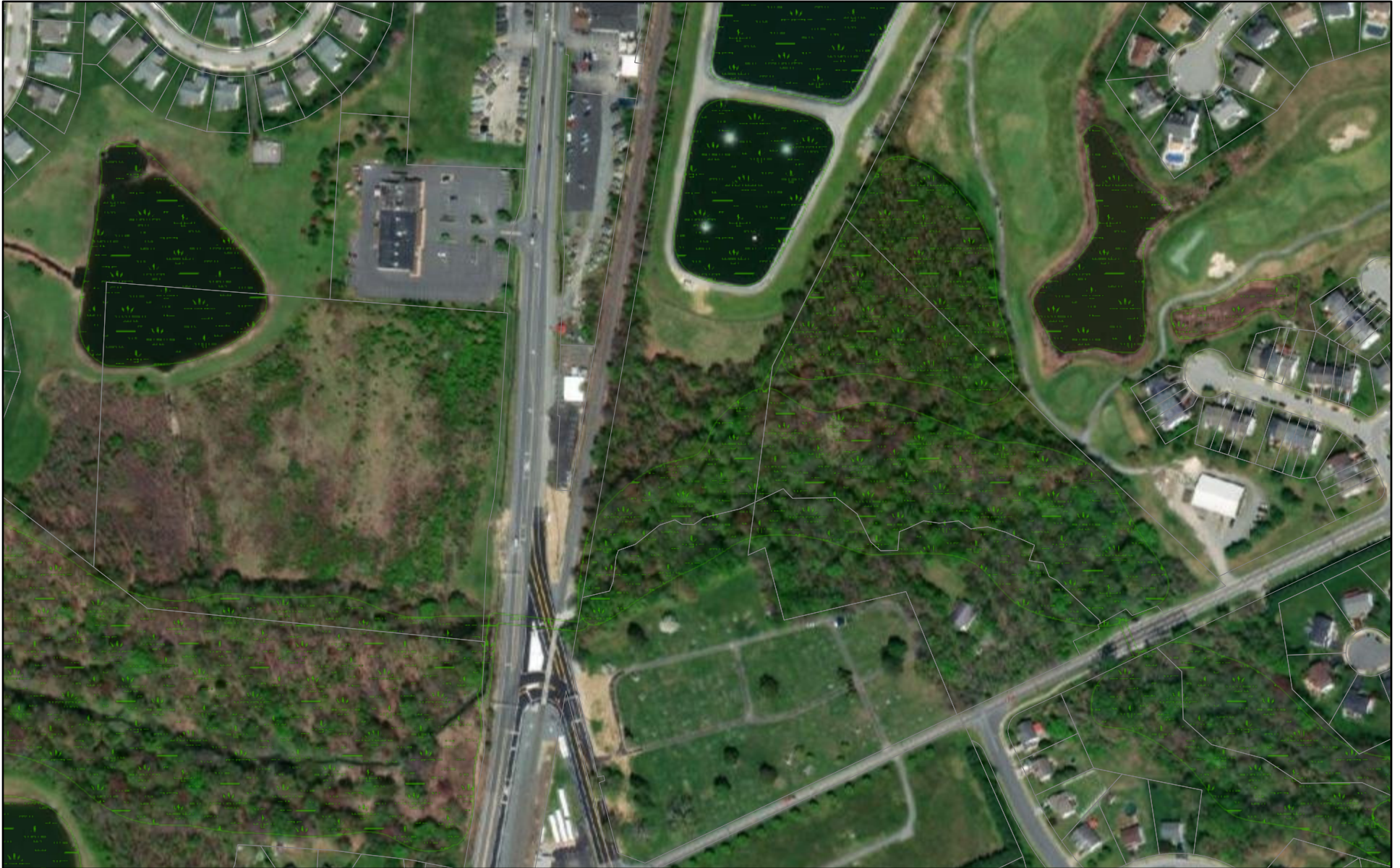
MARK DATE DESCRIPTION

PROJ. NO.: 2020181.00  
DATE: 01/25/2022  
SCALE: 1" = 60'  
DRAWN BY: R.J.M. / PROJ. MGR.: C.D.D.  
SHEET

**C-001**  
COPYRIGHT: 2021



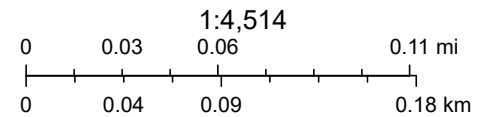
# DE PLUS - PreCheck



2/9/2022, 9:16:47 AM

 DE\_StateParcels - State Parcels  Class A Wellhead

 2017 Wetlands (not regulatory)



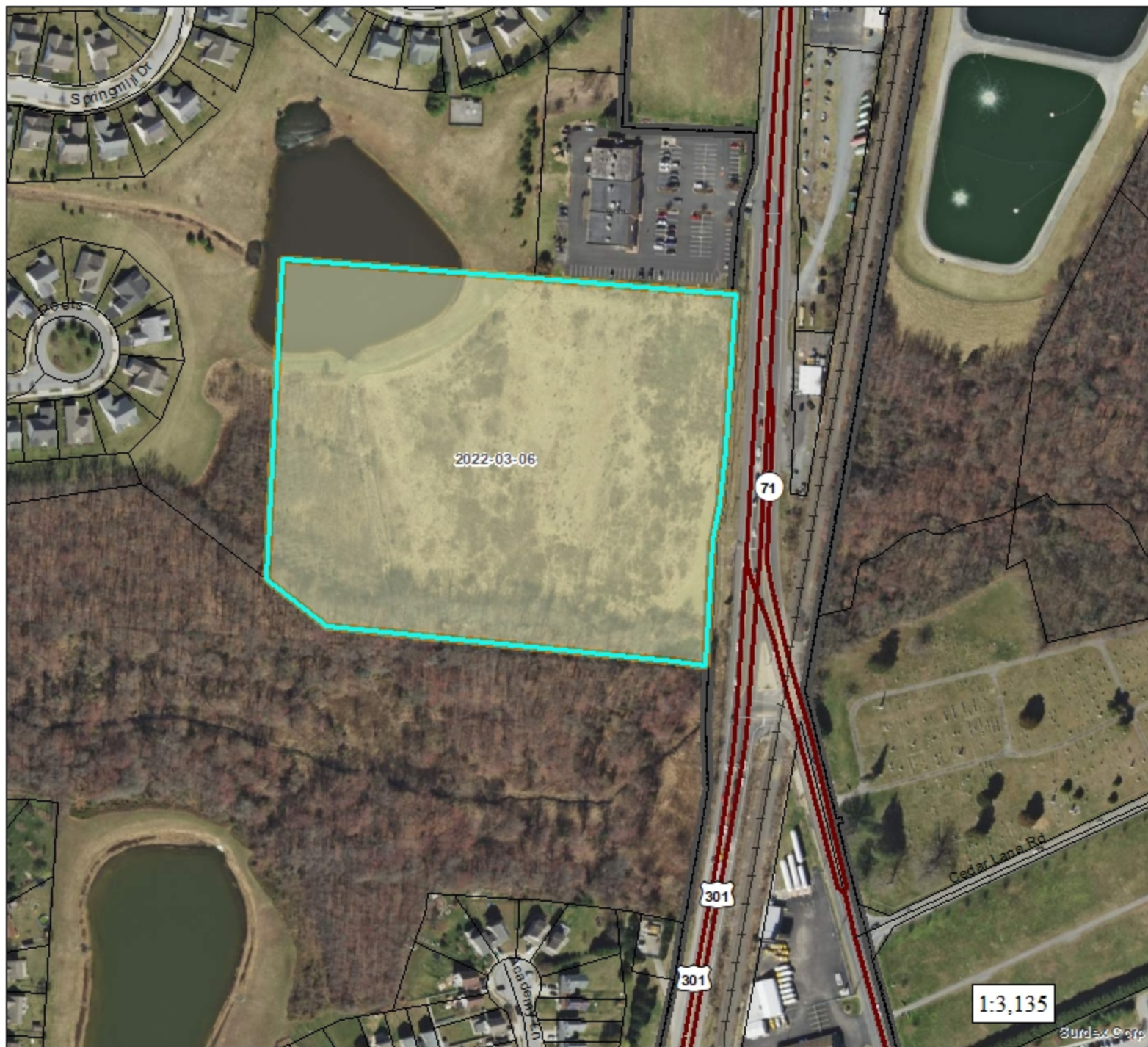
Wetland mapping is supported with funding provided by the Environmental Protection Agency., Maxar

ArcGIS Web AppBuilder



# Preliminary Land Use Service (PLUS)

PLUS 2022-03-06  
Middletown Storage



**Legend**

**PLUS Project Areas**

- Comp Plans
- All Other PLUS Reviews
- Municipal Boundaries

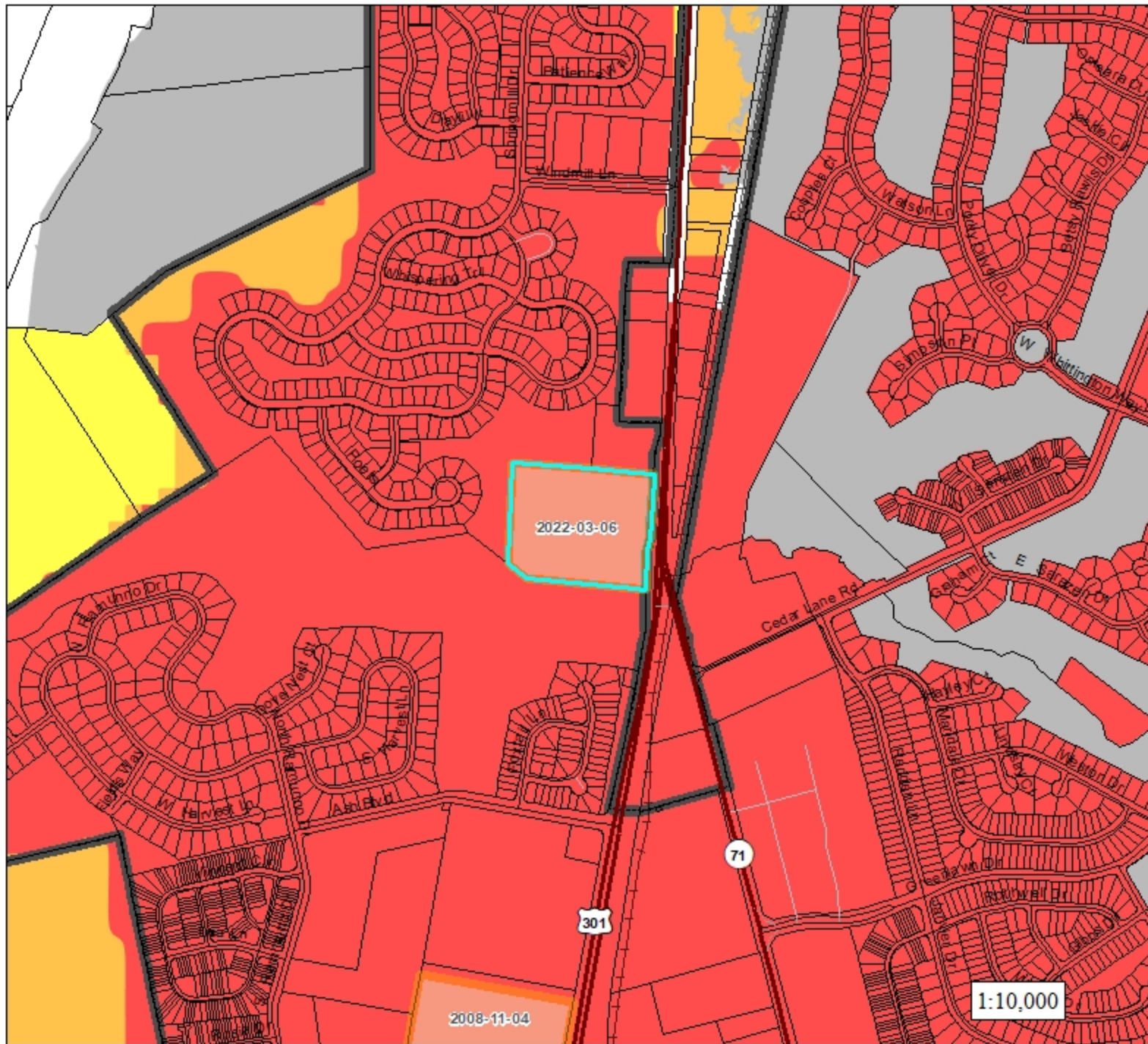
## Location Map





# Preliminary Land Use Service (PLUS)

PLUS 2022-03-06  
Middletown Storage



**Legend**

**PLUS Project Areas**

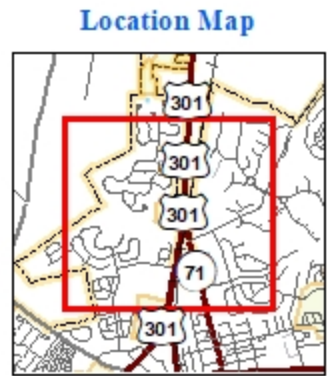
- Comp Plans
- All Other PLUS Reviews

**2020 State Strategies**

- 1
- 2
- 3
- 4

Out of Play

Municipalities








STATE OF DELAWARE  
**DEPARTMENT OF TRANSPORTATION**  
800 BAY ROAD  
P.O. BOX 778  
DOVER, DELAWARE 19903

JENNIFER COHAN  
SECRETARY

**MEMORANDUM**

**TO:** Sireen Muhtaseb, New Castle Review Coordinator  
**FROM:** Troy Brestel, Project Engineer   
**DATE:** February 14, 2020  
**SUBJECT:** **Middletown Storage (Protocol Tax Parcel #2300100141)  
Results of Traffic Operational Analysis**

---

We have reviewed the traffic operational analysis (TOA) and associated work for the proposed Middletown Storage development in the Town of Middletown, New Castle County. The analysis was prepared by Rummel, Klepper & Kahl (RK&K) during the fall of 2019. The analysis evaluated the traffic impacts of installing a new traffic signal at a proposed access location along Summit Bridge Road, to be shared by the proposed development and the existing Summit Plaza shopping center, north of the intersection of Summit Bridge Road and Broad Street (Delaware Route 71).

After extensive review by both DelDOT's Development Coordination and Traffic Sections of the initial analysis and associated work, it was determined that installation of a signal at the access location mentioned above would not be appropriate at the current time, and that a rights-in, rights out access to the proposed development on Summit Bridge Road, along with interconnection to the Summit Plaza shopping center, would be acceptable. The access needs to be designed in accordance with the current version of DelDOT's Development Coordination Manual.

A copy of the analysis and associated work that RK&K prepared has been uploaded to the Planning and Development Coordination Application (PDCA).

If you have any additional questions or comments, please let me know.

TB:km

cc: Jerome Heisler, Reybold Venture Group  
James Burnett, Rummel, Klepper & Kahl, Inc.  
Pamela Steinebach, Assistant Director, Project Development North, DOTS  
J. Marc Coté, Assistant Director, Development Coordination  
T. William Brockenbrough, Jr., County Coordinator, Development Coordination  
Peter Haag, Chief Traffic Engineer, Traffic, DOTS  
Matthew Vincent, Canal District Public Works Engineer, Canal District, DOTS  
Pao Lin, Subdivision Manager, Development Coordination  
Claudy Joinville, Project Engineer, Development Coordination





[www.WatershedEco.com](http://www.WatershedEco.com)

*Creating Value*

January 20, 2021

Foresite Associates, Inc.  
208 Delaware Street  
New Castle, Delaware 19720

Attention: Mr. Andrew Hayes P.E.

Subject: Forest Stand Delineation for Middletown Self Storage  
Tax Parcel No. 23-001.00-141

Dear Drew:

Watershed Eco, LLC. conducted a detailed forest stand delineation within the 13.12 acres subject property on January 12, 2021 to accurately characterize and define limits of forest cover to assist with site planning associated with future development of the property. Since the Town of Middletown does not have specific forest conservation regulations, the Town requested we utilize Delaware Department of Natural Resources and Environmental Control (DNREC) definition which is defines forest cover as “a biological community dominated by trees and other woody plants covering a land area of one contiguous acre or greater, and that have at least 100 trees per acre with at least 50% of those trees having a two inch or greater diameter at 4.5 feet above the ground and larger”.

### **Methods:**

A site plan showing property boundaries, roads and other points of reference was used in conjunction with aerial photographs to estimate probable forest types and data points within the subject property. This plan was taken into the field during data collection where data point locations were adjusted based on actual observed field conditions. The data collected was then compared to the site conditions observed on historical aerial imagery from 1937, 1954, 1961, 1968, 1992, 1997, 2002, 2007, 2012, 2017, and 2019.

The forest stand delineations were based on visual observation of the on-site forest cover. Watershed Eco established 1/10<sup>th</sup> acre sample plot locations to accurately characterize the existing forest community. All trees within the plots were identified to species, diameter measured at breast height (DBH), and cataloged by size. A detailed list of understory trees, shrubs, herbaceous plants, vines, and invasive species was also collected. In addition, canopy coverage, understory, herbaceous ground cover, invasive ground cover, number of shrubs, and downed-woody debris was estimated at the center point of each plot as well as the four outer edges of the plot. The number of standing dead trees >6” DBH within the plot was also counted. Basal area was calculated utilizing a 10-factor wedge prism. Forest types were determined based on species composition and size and the areas were corroborated by comparison to historical

302-464-0831

*Jim@WatershedEco.com*

aerial photos. Forest data points and limits of forest stand boundaries were located by sub-meter global positioning systems for mapping purposes.

**Site History –**

The 1937 aerial photo depicts the northern and central portions of the site in agricultural use with a swale near the western boundary and young woodlands in the south. A structure appears north of the woodlands along Summit Bridge Road.



**Figure 1: 1937 Aerial Photo**



The 1954 aerial photo depicts the majority of the site remains in agricultural production. Widening of Summit Bridge Road and straightening of the stream along the southern boundary are apparent.



**Figure 2: 1954 Aerial Photo**

The 1968 aerial photo depicts similar conditions to 1954, however, the structure appears to have been removed from the northern woods line.



**Figure 3: 1961 Aerial Photo**



The 1968 aerial photo depicts the majority of the site remaining in agricultural use. Woody vegetation is colonizing along the swale in the southwestern portion of the property. Land disturbance is apparent along the stream channel on the adjacent property to the south.



**Figure 4: 1968 Aerial Photo**



The 1992 aerial photo depicts construction of a convenience store north of the subject property. The subject property remains in agricultural use and the woody vegetation along the swale has been removed.



**Figure 5: 1992 Aerial Photo**



The 1997 aerial photo depicts similar conditions as the 1992 imagery within the subject property.



**Figure 6: 1997 Aerial Photo**



The 2002 aerial photo depicts construction of the adjacent stormwater pond in the northwest corner and construction within the ditch in the western portion of the subject property. Grading activity is evident on the central portion of the subject property. Surrounding land use has changed to residential development north and south of the subject property.



**Figure 7: 2002 Aerial Photo**



The 2007 aerial photo depicts similar conditions to the 2002 aerial. The homes within the residential subdivision to the northwest have been constructed.



**Figure 8: 2007 Aerial Photo**



The 2012 aerial photo depicts similar conditions to the 2007 aerial imagery. The western portion of the property appears to have been left fallow with pioneering old field vegetation.



**Figure 9: 2012 Aerial Photo**



The 2017 aerial photo depicts the majority of the subject property is fallow field. The western portion of the property appears to be colonized by woody vegetation with pioneering old field vegetation in the central and eastern portions of the property.



**Figure 10: 2017 Aerial Photo**



The 2019 aerial photo depicts the majority of the subject property is fallow field. The western portion of the property appears to be colonized by woody vegetation with old field vegetation in the central and eastern portions of the property.



Figure 11: 2019 Aerial Photo

### Field Investigation –

The site was investigated on January 12, 2021 by William S. Twupack, a Maryland Department of Natural Resources (DNR) Qualified Forest Professional. The investigation included a visual review of the different vegetation communities within the subject property and measuring the diameter at breast height (dbh) within established 1/10<sup>th</sup> acre forest stand data plots. A handheld GPS was used to locate sample plots and accurately map the existing limits of forest cover within the subject property.

## Results –

The site consisted of the following vegetation communities:

**Old Field/Scrub-Shrub Vegetation** – fallow field and dense scrub-shrub vegetation were observed in the north-central and eastern portions of the property. Common sapling trees observed included Bradford pear (*Pyrus calleryana*), sweetgum (*Liquidambar styraciflua*), white mulberry (*Morus alba*), eastern red cedar (*Juniperus virginiana*), black cherry (*Prunus serotina*), pin oak (*Quercus palustris*), persimmon (*Diospyros virginiana*), and staghorn sumac (*Rhus typhina*). Shrub/herbaceous species included Russian olive (*Eleagnus anustifolia*), multiflora rose (*Rosa multiflora*), Northern Arrowwood (*Viburnum dentatum*), old field blackberry (*Rubus allegheniensis*), deer-tongue panic grass (*Dicanthelium clandestinum*), Virginia broomsedge (*Andropogon virginicus*), soft rush (*Juncus effusus*), ground ivy (*Glechoma hederacea*), Chinese bush clover (*Lespedeza cuneata*), poison ivy (*Toxicodendron radicans*), goldenrod (*Solidago spp.*), Japanese stiltgrass, dogbane (*Apocynum cannabinum*), and Japanese honeysuckle (*Lonicera japonica*).

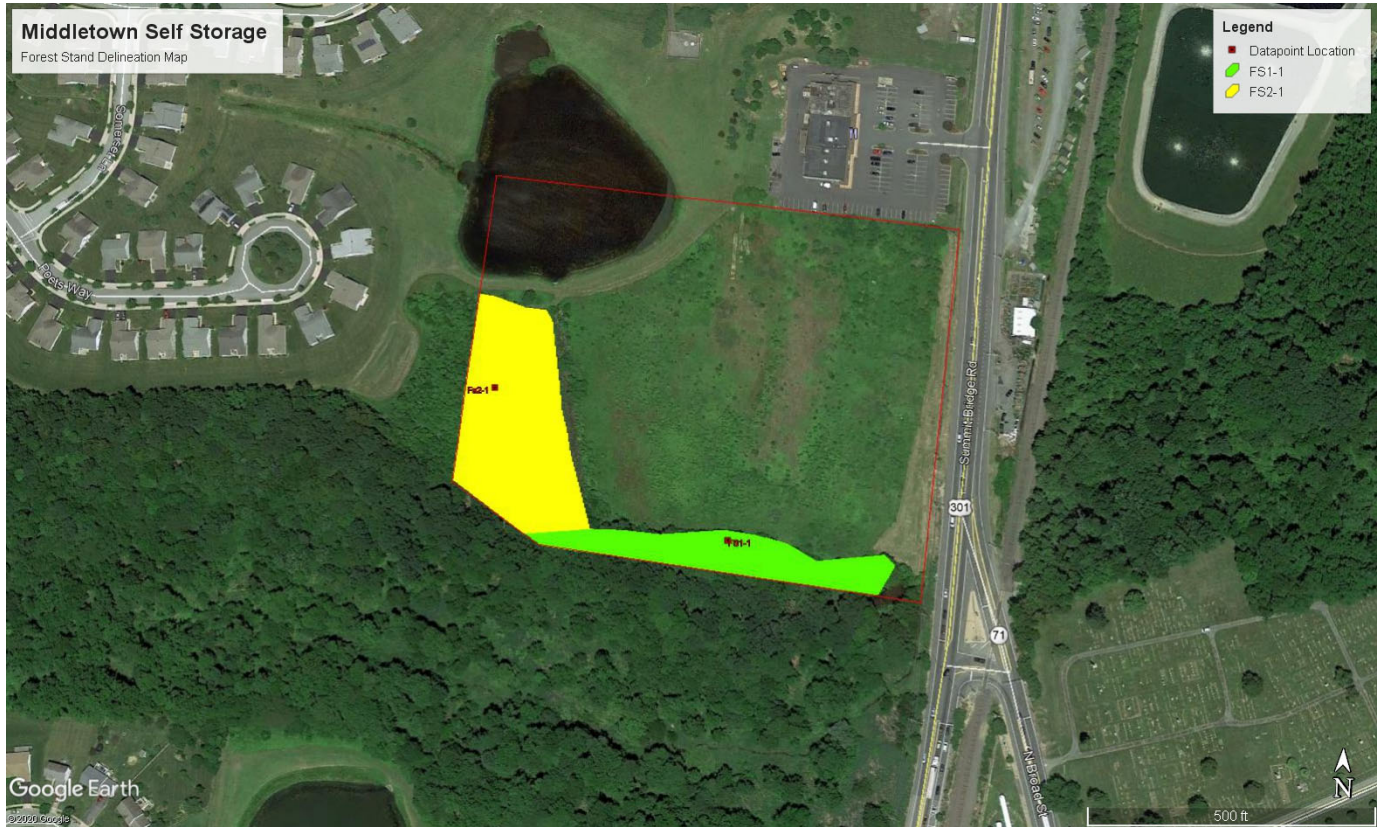
**Stormwater Management Facility** – A maintained stormwater management facility was observed in the northwestern portion of the property. This open water pond outfalls and drain southerly across the subject property via a man-made drainage swale. Common vegetation observed within the swale included black willow (*Salix nigra*), boxelder (*Acer negundo*), broad-leaf cattail (*Typha latifolia*), soft rush, and spike rush (*Eleocharis palustris*).

**Mid-Successional Woodlands** – The southern portion of the property was dominated by deciduous bottomland species consisting of red maple (*Acer rubrum*), and sweetgum in the (12-18” DBH range). Other canopy species observed outside the plot included pin oak, American sycamore (*Platanus occidentalis*), willow oak (*Quercus phellos*). Understory trees consisted of persimmon, white mulberry, black cherry and sweetgum. Common shrub/herbaceous species consisted of European privet (*Ligustrum vulgare*), wineberry (*Rubus phoenicolasius*), Northern arrowwood, multiflora rose, common periwinkle (*Vinca minor*), common greenbrier (*Smilax rotundifolia*), Japanese stiltgrass (*Microstegium vimineum*), deer-tongue panic grass, and Japanese honeysuckle. Fox grape (*Vitis labrusca*) was observed within the vine layer. Detailed information for this stand is provided on Datasheet FS1-1. Aerial imagery suggests that this area has been wooded since 1937. Large soil piles were observed along the stream channel as evidence of past site disturbance in this area. Larger trees >16” DBH were located during a prior study by Watershed Eco, LLC. in 2018 and are shown on Figure 13 and identified in Table 2. Based on the GPS data this stand is approximately 0.77 acres in size within the subject property.

**Early-Successional Woodlands** – The western portion of the property was dominated by pioneering sweetgum in the 2-6” DBH range. Other tree species observed within this young stand included red maple, persimmon, black cherry, eastern red cedar, and Bradford pear. Shrub/herbaceous species consisted of Russian olive, American holly (*Ilex opaca*), multiflora rose, common greenbrier, Japanese stiltgrass, field garlic (*Allium canadense*), and Japanese honeysuckle. Scattered areas of fox grape were observed within the stand. Based on aerial imagery this area was left fallow between 2012 and 2017. Detailed information for this stand is



provided on Datasheet FS2-1. Approximately 1.65 acres is located within the subject property and this stand extends off-site to the west.



**Figure 12: Forest Stand Delineation Mapping**

**Table 1. Land Use Summary Table**

Land Use ID	Stand Type	Acreage	Structural Diversity Rating
FS1	Mid-Successional Red Maple/Sweetgum Forest	0.77	Low
FS2	Early-Successional Sweetgum Forest	1.65	Moderate
Old Field	Sapling Sweetgum/Bradford Pear	9.64	N/A
SWM Pond	Open water pond and drainage	1.06	N/A

**Table 2. Trees >16" DBH**

Tree ID Number	DBH (inches)	Common Name	Scientific Name
1	18	Sweetgum	<i>Liquidambar styraciflua</i>
2	20	Pin Oak	<i>Quercus palustris</i>
3	21	Sugar Maple	<i>Acer saccharum</i>
4	16	Sweetgum	<i>Liquidambar styraciflua</i>
5	23	Pin Oak	<i>Quercus palustris</i>
6	19	Sweetgum	<i>Liquidambar styraciflua</i>
7	20	Red Maple	<i>Acer rubrum</i>
8	26	Sweetgum	<i>Liquidambar styraciflua</i>
9	26	Sycamore	<i>Platanus occidentalis</i>
10	38	Sycamore	<i>Platanus occidentalis</i>
11	22	Sweetgum	<i>Liquidambar styraciflua</i>
12	22	Pin Oak	<i>Quercus palustris</i>
13	30	Red Maple	<i>Acer rubrum</i>
14	20	Red Maple	<i>Acer rubrum</i>
15	22	Southern Red Oak	<i>Quercus falcata</i>
16	42	Red Maple	<i>Acer rubrum</i>
17	30	Southern Red Oak	<i>Quercus falcata</i>
18	32	Willow Oak	<i>Quercus phellos</i>
19	26	Red Maple	<i>Acer rubrum</i>
20	20	Sweetgum	<i>Liquidambar styraciflua</i>
21	30	White Oak	<i>Quercus alba</i>
22	38	Willow Oak	<i>Quercus phellos</i>





**Figure 13: Mature Tree Mapping**

### **Conclusions –**

Watershed Eco, LLC. conducted a thorough field survey of the subject property in January 2021 using standard professional environmental practices. A total of two, 1/10<sup>th</sup> acre sample plot locations were established to accurately characterize the existing forest community.

Based on the field data collected and forest structural analysis the site contains approximately 2.42 acres of low and medium priority forest cover consisting of two separate forest stands. The remainder of the site consists of old field and scrub-shrub vegetation and a stormwater management facility. Almost the entire site has been disturbed since at least 1937, initially through agricultural practices including plowing and ditching followed by site grading.

If you have any questions, please feel free to give me a call.

302-750-6595  
Jim@WatershedEco.com

Sincerely,



James C. McCulley IV, PWS#000471  
Environmental Scientist



# Forest Stand Delineation

## Field Sampling Data Sheet

P R O P E R T Y	Property Name:	Middletown Self Storage-Reybold Venture Group, LLC.																
	Prepared by:	W.Twupack																
	Stand #:	FS1																
	Plot #:	1																
	Plot Size:	0.1 Ac																
	Date of Survey:	1/12/2021																
T R E E S P E C I E S	Tree Species	NUMBER OF TREES PER SIZE CLASS																
	(note dominant* & co-dominant** species)	2-5.9" DBH			6-11.9" DBH			12-17.9" DBH			18-29.9" DBH			>30" DBH			Totals	
	Crown Position	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other		
	<i>Liquidambar styraciflua</i> *			5	9			2										16
	<i>Acer rubrum</i> **			2		1												3
	<i>Prunus serotina</i>				1													1
	<i>Morus alba</i>			1														1
																		0
																		0
																		0
																		0
	Total	0	0	8	10	1	0	2	0	0	0	0	0	0	0	0	0	21
Number & Size Standing Dead Trees		0																
U N D E R S T O R Y	*Most common																	
	Herbaceous Species	Shrub Species					Vines Species											
	<i>Lonicera japonica</i> *	<i>Ligustrum vulgare</i> *					<i>Vitis labrusca</i>											
	<i>Smilax rotundifolia</i>	<i>Viburnum dentatum</i>																
	<i>Microstegium vimineum</i> *	<i>Rosa multiflora</i> *																
	<i>Dicanthelium clandestinum</i>	<i>Rubus phoenicolasius</i> *																
<i>Vinca minor</i>																		
O T H E R	Basal Area (ft <sup>2</sup> ):	7 x 10 = 70																
	Specimen Trees:	0																
	Plot Successional Stage/Age:	Mid-Succession																
	Stand Condition: (health, regeneration, disease, stress, etc.)	Good																
F O R E S T S T R U C T U R E	Sample Points	PC	N	S	E	W	Totals											
	Canopy Closure (Y/N)	Yes	Yes	Yes	Yes	Yes	100%											
	Understory Cover (3' - 20') (Y/N)	No	Yes	Yes	Yes	No	60%											
	Herbaceous Ground Cover (0-3') (Y/N)	Yes	Yes	Yes	Yes	Yes	100%											
	Invasive Plant Cover (Y/N)	Yes	Yes	Yes	Yes	Yes	100%											
	# Shrub Species	1	1	1	2	0	1											
	% Downed Woody Debris	Yes	No	No	No	No	20%											
List of Major Invasive Species and Percent Cover: <i>Lonicera japonica</i> 30%, <i>Vinca minor</i> 10%, <i>Microstegium vimineum</i> 15%, <i>Rubus phoenicolasius</i> 5%, <i>Rosa multiflora</i> 10%																		
Comments: Forest plot located in the southern portion of the property abutting stream channel. Area has been disturbed based on large soil berm piles along stream corridor. Other species observed within the stand outside of the forest plot included Pin Oak, American Sycamore, Willow Oak, and Persimmon. Some beaver activity observed along stream channel.																		



**FOREST STRUCTURE ANALYSIS**  
37.2" Radius (1/10 Acre) Within BAF-10 Plot

Forest Stand# FS-1 Point Sample# \_\_\_\_\_ Plot 1 Structural Diversity Value: 7

The following parameters will be measured and evaluated at each site. Each parameter at point sample locations will be given a value of 3, 2, 1 or 0. Three represents the most valuable structure and 0 the least. Upon completion of the sampling, calculate the forest structure value for each stand. This analysis along with the other forest stand data will be used to determine retention potential of the stand.

To determine the total habitat value, use the following scale:

November to March (**Leaf Off**)  
Exclude Parameters 1 & 6

April to October (**Leaf On**)  
All Parameter Apply

11-15 Priority Structural Diversity  
**6-10 Good Structural Diversity**  
0-5 Poor Structural Diversity

15-21 Priority Structural Diversity  
7-14 Good Structural Diversity  
0-6 Poor Structural Diversity

<p>1. Percent Canopy Closure (Trees &gt;6" DBH)</p> <table border="0"> <tr><td>70-100%</td><td>3</td></tr> <tr><td>40-69%</td><td>2</td></tr> <tr><td>10-39%</td><td>1</td></tr> <tr><td>0-9%</td><td>0</td></tr> </table>	70-100%	3	40-69%	2	10-39%	1	0-9%	0	<p>5. Size Class of Dominant Trees</p> <table border="0"> <tr><td>Greater than 18"</td><td>3</td></tr> <tr><td>6-17.9"</td><td>2</td></tr> <tr><td>2-5.9"</td><td>1</td></tr> <tr><td>0-1"</td><td>0</td></tr> </table>	Greater than 18"	3	6-17.9"	2	2-5.9"	1	0-1"	0
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0-1"	0																
<p>2. Number of Shrubs per 1/100 Acre</p> <table border="0"> <tr><td>6 or more</td><td>3</td></tr> <tr><td>4-5</td><td>2</td></tr> <tr><td>2-3</td><td>1</td></tr> <tr><td>0-1</td><td>0</td></tr> </table>	6 or more	3	4-5	2	2-3	1	0-1	0	<p>6. Percent Herbaceous Coverage</p> <table border="0"> <tr><td>75-100%</td><td>3</td></tr> <tr><td>25-74%</td><td>2</td></tr> <tr><td>5-24%</td><td>1</td></tr> <tr><td>0-4%</td><td>0</td></tr> </table>	75-100%	3	25-74%	2	5-24%	1	0-4%	0
6 or more	3																
4-5	2																
2-3	1																
0-1	0																
75-100%	3																
25-74%	2																
5-24%	1																
0-4%	0																
<p>3. Number Dead Trees &gt;6" DBH/ 1/10<sup>th</sup> Acre</p> <table border="0"> <tr><td>3 or more</td><td>3</td></tr> <tr><td>2</td><td>2</td></tr> <tr><td>1</td><td>1</td></tr> <tr><td>0</td><td>0</td></tr> </table>	3 or more	3	2	2	1	1	0	0	<p>7. Number Tree Species &gt;6" DBH</p> <table border="0"> <tr><td>6 or more</td><td>3</td></tr> <tr><td>4-5</td><td>2</td></tr> <tr><td>2-4</td><td>1</td></tr> <tr><td>0-1</td><td>0</td></tr> </table>	6 or more	3	4-5	2	2-4	1	0-1	0
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0	0																

Project/Site: Middletown Self Storage  
County: New Castle  
Investigator (s): WT  
Sampling Date: 1/12/21

\*Percent Canopy Closure and Percent Herbaceous Coverage were not included within the Structural Diversity scoring.

# Forest Stand Delineation

## Field Sampling Data Sheet

P R O P E R T Y	Property Name:	Middletown Self Storage-Reybold Venture Group, LLC.																
	Prepared by:	W.Twupack																
	Stand #:	FS2																
	Plot #:	1																
	Plot Size:	0.1 Ac																
	Date of Survey:	1/12/2021																
T R E E S  S P E C I E S	Tree Species	NUMBER OF TREES PER SIZE CLASS																
	(note dominant* & co-dominant** species)	2-5.9" DBH			6-11.9" DBH			12-17.9" DBH			18-29.9" DBH			>30" DBH			Totals	
	Crown Position	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other		
	<i>Liquidambar styraciflua</i> *			74	3													77
	<i>Acer rubrum</i>			7														7
	<i>Diospyros virginiana</i>			2														2
																		0
																		0
																		0
																		0
	Total	0	0	83	3	0	0	0	0	0	0	0	0	0	0	0	0	86
Number & Size Standing Dead Trees		0																
U N D E R S T O R Y	*Most common																	
	Herbaceous Species					Shrub Species					Vines Species							
	<i>Lonicera japonica</i> *					<i>Eleagnus angustifolia</i> *					Vitis labrusca							
	<i>Allium canadense</i> *					<i>Ilex opaca</i>												
	<i>Microstegium vimineum</i> *					<i>Rosa multiflora</i> *												
	<i>Smilax rotundifolia</i>					<i>Rubus allegheniensis</i> *												
O T H E R	Basal Area (ft <sup>2</sup> ):	5 x 10 = 50																
	Specimen Trees:	0																
	Plot Successional Stage/Age:	Early-Succession																
	Stand Condition: (health, regeneration, disease, stress, etc.)	Fair/Stand lacks species diversity																
F O R E S T S T A T I S T I C S	Sample Points	PC			N			S			E			W			Totals	
	Canopy Closure (Y/N)	Yes			Yes			Yes			Yes			Yes			100%	
	Understory Cover (3' - 20') (Y/N)	No			No			No			No			No			0%	
	Herbaceous Ground Cover (0-3') (Y/N)	Yes			Yes			Yes			Yes			Yes			100%	
	Invasive Plant Cover (Y/N)	Yes			No			Yes			No			Yes			60%	
	# Shrub Species	0			1			1			1			1			1	
	% Downed Woody Debris	No			No			No			No			No			0%	
List of Major Invasive Species and Percent Cover: <i>Lonicera japonica</i> 15%, <i>Eleagnus angustifolia</i> 20%, <i>Microstegium vimineum</i> 20%, <i>Rosa multiflora</i> 10%																		
Comments: Forest plot located in the western portion of the property. Other species observed within the stand outside of the forest plot included black cherry, Bradford Pear, and Eastern Red Cedar. Based on aerial imagery this area was left fallow around 2013.																		



**FOREST STRUCTURE ANALYSIS**  
37.2" Radius (1/10 Acre) Within BAF-10 Plot

Forest Stand# FS-2 Point Sample# \_\_\_\_\_ Plot 1 Structural Diversity Value: 1

The following parameters will be measured and evaluated at each site. Each parameter at point sample locations will be given a value of 3, 2, 1 or 0. Three represents the most valuable structure and 0 the least. Upon completion of the sampling, calculate the forest structure value for each stand. This analysis along with the other forest stand data will be used to determine retention potential of the stand.

To determine the total habitat value, use the following scale:

November to March (**Leaf Off**)  
Exclude Parameters 1 & 6

April to October (**Leaf On**)  
All Parameter Apply

11-15 Priority Structural Diversity  
6-10 Good Structural Diversity  
**0-5 Poor Structural Diversity**

15-21 Priority Structural Diversity  
7-14 Good Structural Diversity  
0-6 Poor Structural Diversity

<p>1. Percent Canopy Closure (Trees &gt;6" DBH)</p> <table border="0"> <tr><td>70-100%</td><td>3</td></tr> <tr><td>40-69%</td><td>2</td></tr> <tr><td>10-39%</td><td>1</td></tr> <tr><td>0-9%</td><td>0</td></tr> </table>	70-100%	3	40-69%	2	10-39%	1	0-9%	0	<p>5. Size Class of Dominant Trees</p> <table border="0"> <tr><td>Greater than 18"</td><td>3</td></tr> <tr><td>6-17.9"</td><td>2</td></tr> <tr><td>2-5.9"</td><td>1</td></tr> <tr><td>0-1"</td><td>0</td></tr> </table>	Greater than 18"	3	6-17.9"	2	2-5.9"	1	0-1"	0
70-100%	3																
40-69%	2																
10-39%	1																
0-9%	0																
Greater than 18"	3																
6-17.9"	2																
2-5.9"	1																
0-1"	0																
<p>2. Number of Shrubs per 1/100 Acre</p> <table border="0"> <tr><td>6 or more</td><td>3</td></tr> <tr><td>4-5</td><td>2</td></tr> <tr><td>2-3</td><td>1</td></tr> <tr><td>0-1</td><td>0</td></tr> </table>	6 or more	3	4-5	2	2-3	1	0-1	0	<p>6. Percent Herbaceous Coverage</p> <table border="0"> <tr><td>75-100%</td><td>3</td></tr> <tr><td>25-74%</td><td>2</td></tr> <tr><td>5-24%</td><td>1</td></tr> <tr><td>0-4%</td><td>0</td></tr> </table>	75-100%	3	25-74%	2	5-24%	1	0-4%	0
6 or more	3																
4-5	2																
2-3	1																
0-1	0																
75-100%	3																
25-74%	2																
5-24%	1																
0-4%	0																
<p>3. Number Dead Trees &gt;6" DBH/ 1/10<sup>th</sup> Acre</p> <table border="0"> <tr><td>3 or more</td><td>3</td></tr> <tr><td>2</td><td>2</td></tr> <tr><td>1</td><td>1</td></tr> <tr><td>0</td><td>0</td></tr> </table>	3 or more	3	2	2	1	1	0	0	<p>7. Number Tree Species &gt;6" DBH</p> <table border="0"> <tr><td>6 or more</td><td>3</td></tr> <tr><td>4-5</td><td>2</td></tr> <tr><td>2-4</td><td>1</td></tr> <tr><td>0-1</td><td>0</td></tr> </table>	6 or more	3	4-5	2	2-4	1	0-1	0
3 or more	3																
2	2																
1	1																
0	0																
6 or more	3																
4-5	2																
2-4	1																
0-1	0																
<p>4. Percent Dead or Downed Woody Debris</p> <table border="0"> <tr><td>15-100%</td><td>3</td></tr> <tr><td>5-14%</td><td>2</td></tr> <tr><td>0-1%</td><td>1</td></tr> <tr><td>0</td><td>0</td></tr> </table>	15-100%	3	5-14%	2	0-1%	1	0	0									
15-100%	3																
5-14%	2																
0-1%	1																
0	0																

Project/Site: Middletown Self Storage  
County: New Castle  
Investigator (s): WT  
Sampling Date: 1/12/21

\*Percent Canopy Closure and Percent Herbaceous Coverage were not included within the Structural Diversity scoring.





Scrub-shrub vegetation along Middletown Warwick Road in the eastern portion of the property facing.



View looking north at Old field area with scattered trees in the east-central portion of the property.





View looking north at old field and scrub-shrub vegetation in the central portion of the property.



View looking east at old field area with scattered trees in the south-central portion of the property.





Pioneering forest cover (left) in the south-central portion of the property abutting stormwater drainage channel.



View looking south from outfall of stormwater management facility. Pioneering forest cover to (right) of photo.





Typical forest cover observed in the southern portion of the property abutting stream channel.



Forest cover at Datapoint FS1-1 in the southern portion of the property, facing south.





Pioneering forest cover in the west-central portion of the property at Datapoint FS2-1.



Maintained lawn area surrounding stormwater pond in the northwestern portion of the property looking west.





Old field area in the north-central portion of the property looking southeast.



View looking west at forest cover in the southwestern portion of the property.





Parris N. Glendening  
*Governor*

Kathleen Kennedy Townsend  
*Lt. Governor*

**Maryland Department of Natural Resources**

Tawes State Office Building  
Annapolis, Maryland 21401

Sarah J. Taylor-Rogers, Ph.D.  
*Secretary*

Stanley K. Arthur  
*Deputy Secretary*

July 31, 2001

William S. Twupack  
Frederick Ward Associates  
P.O. Box 727  
5 South Main St.  
Bel Air, MD 21014-0727

Dear Mr. Twupack:

The Maryland Department of Natural Resources has reviewed your application for qualified professional status for the purpose of developing Forest Stand Delineations and Forest Conservation Plans. We are happy to inform you that you meet the requirements of COMAR 08.19.06.01 for qualified professional status.

Your name will be included on a list of qualified professionals to be sent to the jurisdictions with authority to review Forest Stand Delineations and Forest Conservation Plans.

Participation by professionals like you is key to successful implementation of the Forest Conservation Act. Thank you for submitting your application.

Sincerely,

Steven W. Koehn, Acting  
Director/State Forester

**Wetlands/Waters Delineation Report for**  
**Middletown Property**

**Completed: October 10, 2018**

**Fieldwork: August 23 and 28, 2018**



**Prepared by:**

**Watershed Eco LLC**

James C. McCulley IV, PWS

#000471

P.O. Box 1225

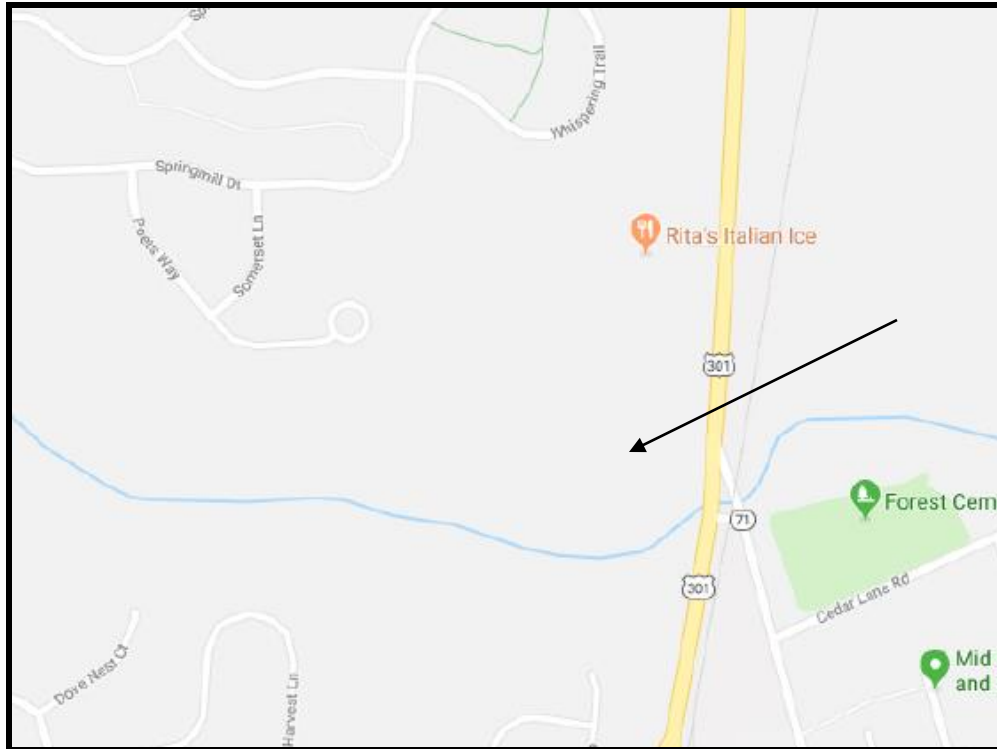
Middletown, Delaware 19709

[www.WatershedEco.com](http://www.WatershedEco.com)



## A. Site Description, Landscape Setting

This site lies on the west side of Summit Bridge Road at the intersection with Broad Street (Route 71), just south of the existing shopping center in Middletown, Delaware at approximate Latitude and Longitude: 39.463663, -75.722464. The site is surrounded by residential and commercial uses.



**Figure 1: Location Map**

The site appears to have been disturbed in the past by stripping topsoil, ditching and construction of a pond. The southern portion along the creek is more natural woodlands with the remainder in scrub/shrub habitat.

The site drains south to an unnamed tributary to Drawyer Creek which flows east and offsite.

All portions of the site have been disturbed at some time in the past.

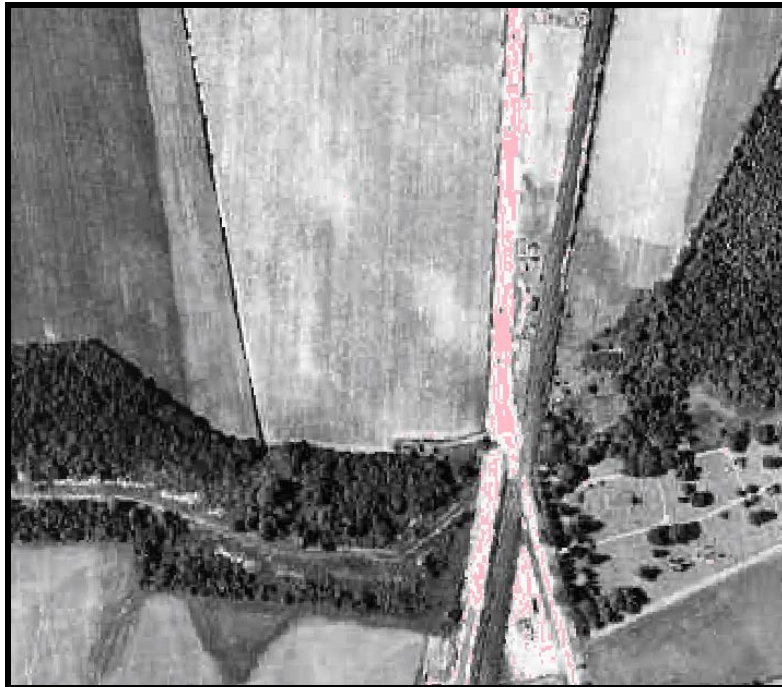
## B. Site Alterations Current and Past Land Use

The 1937 aerial photo depicts the site in agricultural use with a ditch on the western portion and young woodlands in the south. A home appears north of the woodlands along Summit Bridge Road.



**Figure 2: 1937 Aerial Photo**

The 1954 aerial photo depicts widening of Summit Bridge Road and straightening of the stream along the southern boundary. The majority of the site remains in agriculture.



**Figure 3: 1954 Aerial Photo**

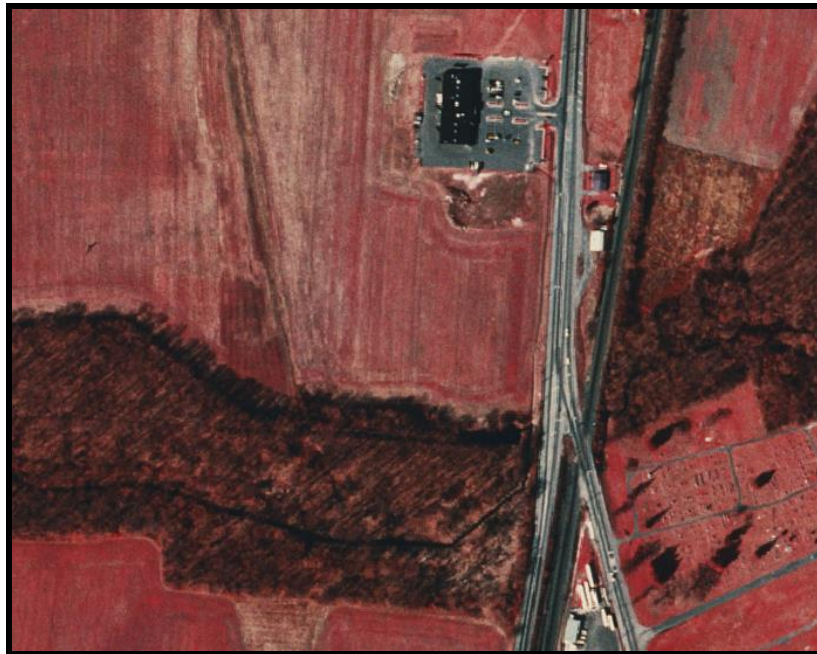


The 1968 aerial photo depicts similar conditions to 1954 with some additional stream work to the south, likely dredging.



**Figure 4: 1968 Aerial Photo**

The 1992 aerial photo depicts the adjacent shopping center and the Subject Property is still in agriculture.



**Figure 5: 1992 Aerial Photo**

The 2002 aerial photo depicts construction of the adjacent pond, work on the ditch in the west and the adjacent housing development under construction. Grading activity is evident on the central portion of the site.



**Figure 6: 2002 Aerial Photo**

The 2007 aerial photo depicts similar conditions to the 2002 aerial.



**Figure 7: 2007 Aerial Photo**



The 2013 aerial photo depicts similar conditions to the current site conditions.



**Figure 8: 2013 Aerial Photo**

## B.1 Soils -

The mapped soils are shown below, the majority of the site is mapped as well drained soils with poorly drained soils along the western and southern boundary (see details in attached soil report).



**Figure 9: Soils Map**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LO	Longmarsh and Indiantown soils, frequently flooded	0.1	0.9%
OtcA	Othello silt loams, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	3.5	28.8%
RdA	Reybold-Queponco complex, 0 to 2 percent slopes	8.5	70.3%
<b>Totals for Area of Interest</b>		<b>12.1</b>	<b>100.0%</b>

**Figure 10: Soil Chart**

The soils found on the site have been disturbed and appear to be imported fill material in some areas. Hydric soils were found in the areas mapped as wetlands.



## B.2 Hydrology –

The USGS Mapping indicates that the site occupies a flat spot on the landscape and drains to an unnamed tributary to Drawyer Creek. A ditch on the western portion of the property drains the storm water management pond to Summit Bridge Road where it connects to the unnamed tribu.



Figure 11: USGS Map

## B.3 Vegetation -

The site consisted of the following vegetation communities:

**Scrub/Shrub** – Pokeweed, Blackberry, Autumn Olive, Multiflora Rose, Tree of Heaven, Mimosa, Tulip Poplar, Silver Maple, Japanese Honeysuckle and Staghorn Sumac.

**Woodlands** – Southern Red Oak, White Oak, Sweetgum, Red Maple, Black Cherry, American Holly, Poison Ivy, Virginia Creeper.

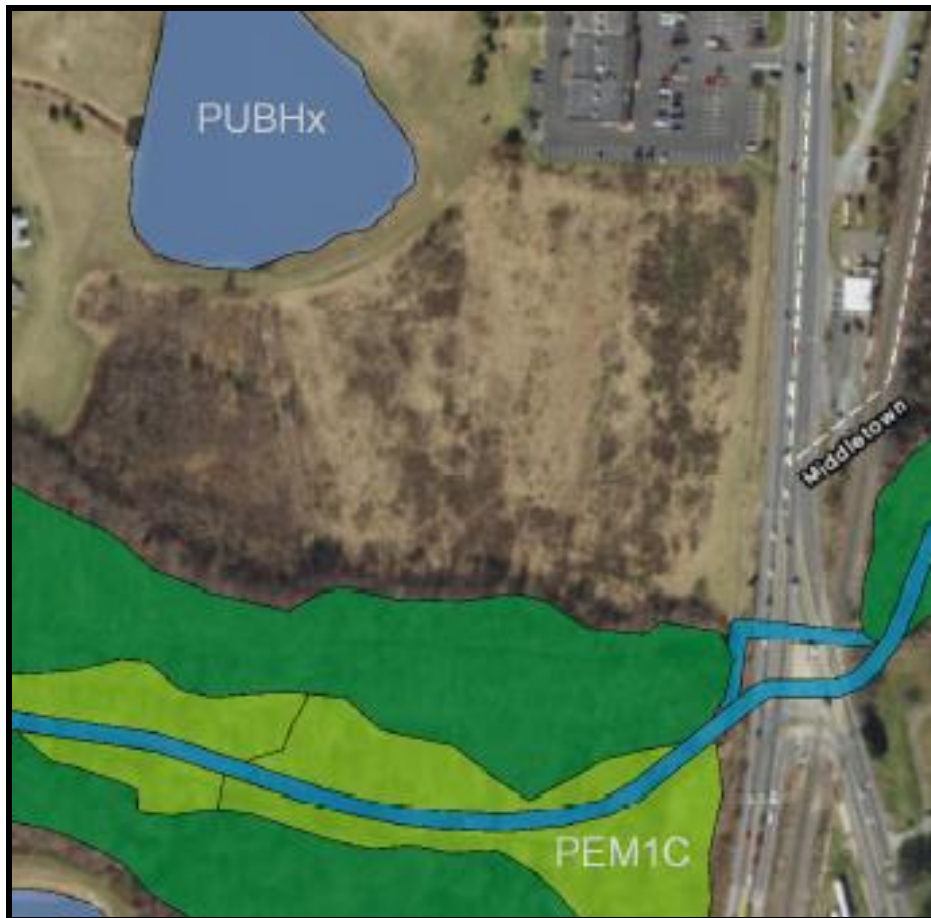
**Wetlands** – Cattail, Soft Rush, Spike Rush, Box Elder and Smartweed.

## C. Results and Conclusions

Based on the site investigation and collected data, it was determined that Waters, including wetlands were found on the site. These features were associated with the drainage ditch below the pond to Summit Bridge Road and and the unnamed tributary.

Based on the above, it is the opinion of Watershed Eco, LLC and James C. McCulley IV, PWS #000471, that wetlands or other Waters of the United States exist on the site.

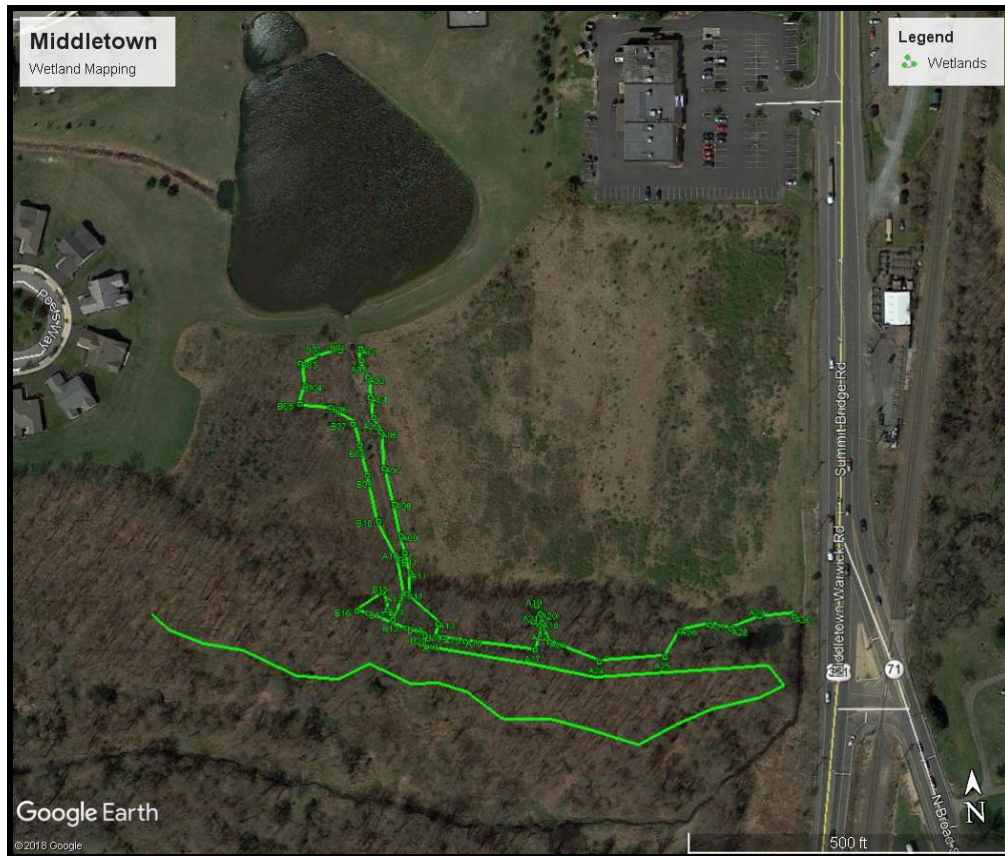
Additionally, the NWI Maps depict wetlands along the unnamed tributary.



**Figure 12: NWI Mapping**



Watershed Eco flagged the wetlands encountered on the site and located the flags with handheld GPS (Figure 13).



**Figure 13: Wetland Mapping**

## **D. Disclaimer Statement**

*This report documents the investigation, best professional judgment, and conclusions of the investigators. It should be considered a Preliminary Determination and used at your own risk until it has been approved in writing by the U.S. Army Corps of Engineers.*



## REPRESENTATIVE PHOTOS



**Photo 1: Scrub Shrub Area**



**Photo 2: Outlet from Pond**





**Photo 3: Pond**



**Photo 4: Man Made Ditch**





United States  
Department of  
Agriculture

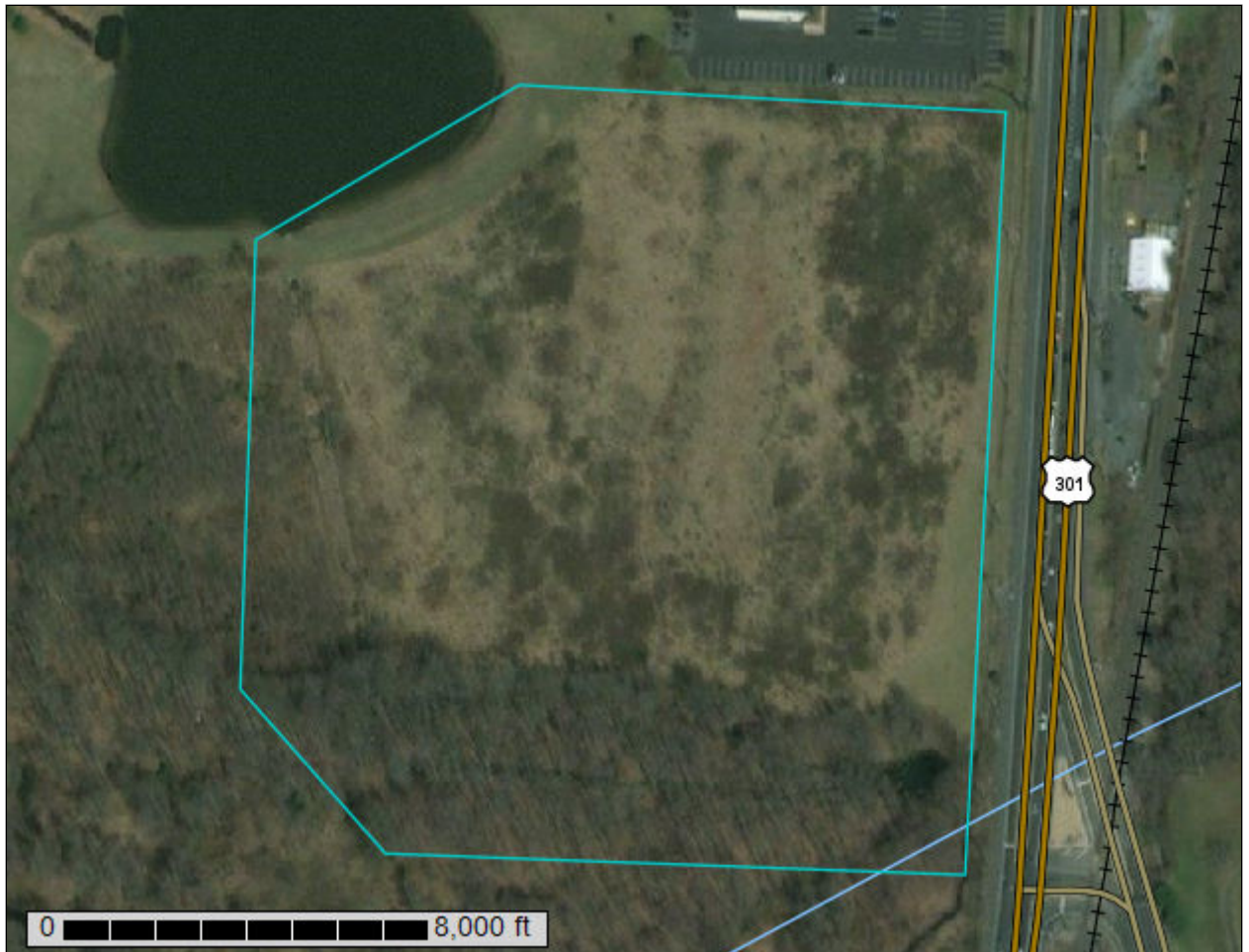
**NRCS**

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 New Castle County, Delaware

## Middletown



October 10, 2018



# 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](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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# 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



## Custom Soil Resource Report

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

## Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

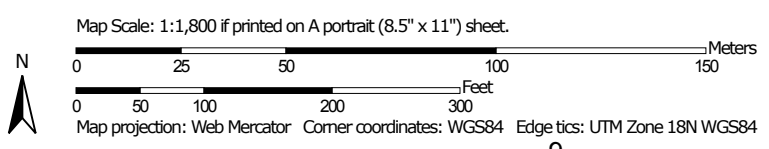


# Soil Map

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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.


# Custom Soil Resource Report Soil Map





### 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 1:24,000.

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: New Castle County, Delaware  
 Survey Area Data: Version 13, Sep 14, 2018

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

Date(s) aerial images were photographed: Dec 6, 2010—Mar 16, 2017

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
LO	Longmarsh and Indiantown soils, frequently flooded	0.1	0.9%
OtcA	Othello silt loams, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain	3.5	28.8%
RdA	Reybold-Queponco complex, 0 to 2 percent slopes	8.5	70.3%
<b>Totals for Area of Interest</b>		<b>12.1</b>	<b>100.0%</b>

## 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



## Custom Soil Resource Report

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.

## New Castle County, Delaware

### LO—Longmarsh and Indiantown soils, frequently flooded

#### Map Unit Setting

*National map unit symbol:* 2p7dm  
*Elevation:* 0 to 120 feet  
*Mean annual precipitation:* 42 to 48 inches  
*Mean annual air temperature:* 52 to 58 degrees F  
*Frost-free period:* 180 to 220 days  
*Farmland classification:* Not prime farmland

#### Map Unit Composition

*Longmarsh and similar soils:* 43 percent  
*Indiantown and similar soils:* 37 percent  
*Minor components:* 20 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

#### Description of Longmarsh

##### Setting

*Landform:* Flood plains  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Loamy alluvium

##### Typical profile

*Oe - 0 to 2 inches:* moderately decomposed plant material  
*A - 2 to 19 inches:* mucky loam  
*Cg1 - 19 to 34 inches:* sandy loam  
*Cg2 - 34 to 80 inches:* loamy sand

##### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Very poorly drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 5.95 in/hr)  
*Depth to water table:* About 0 to 10 inches  
*Frequency of flooding:* Frequent  
*Frequency of ponding:* Frequent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water storage in profile:* Moderate (about 8.6 inches)

##### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 5w  
*Hydrologic Soil Group:* B/D  
*Hydric soil rating:* Yes

#### Description of Indiantown

##### Setting

*Landform:* Flood plains



## Custom Soil Resource Report

*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* Loamy alluvium

### Typical profile

*Oe - 0 to 2 inches:* moderately decomposed plant material  
*A - 2 to 25 inches:* mucky silt loam  
*Cg - 25 to 80 inches:* loamy sand

### Properties and qualities

*Slope:* 0 to 1 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Very poorly drained  
*Runoff class:* Negligible  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.57 to 1.98 in/hr)  
*Depth to water table:* About 0 to 10 inches  
*Frequency of flooding:* Frequent  
*Frequency of ponding:* Frequent  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water storage in profile:* High (about 11.0 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 5w  
*Hydrologic Soil Group:* B/D  
*Hydric soil rating:* Yes

### Minor Components

#### Zekiah

*Percent of map unit:* 10 percent  
*Landform:* Flood plains  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

#### Klej

*Percent of map unit:* 5 percent  
*Landform:* Flats  
*Landform position (three-dimensional):* Rise  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* No

#### Manahawkin

*Percent of map unit:* 5 percent  
*Landform:* Swamps, flood plains  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Hydric soil rating:* Yes

## OtcA—Othello silt loams, 0 to 2 percent slopes, Mid-Atlantic Coastal Plain

### Map Unit Setting

*National map unit symbol:* 2thwn

*Elevation:* 0 to 100 feet

*Mean annual precipitation:* 40 to 50 inches

*Mean annual air temperature:* 46 to 68 degrees F

*Frost-free period:* 210 to 240 days

*Farmland classification:* Farmland of statewide importance

### Map Unit Composition

*Othello, drained, and similar soils:* 48 percent

*Othello, undrained, and similar soils:* 28 percent

*Minor components:* 24 percent

*Estimates are based on observations, descriptions, and transects of the mapunit.*

### Description of Othello, Drained

#### Setting

*Landform:* Swales, depressions, flats

*Landform position (two-dimensional):* Footslope

*Landform position (three-dimensional):* Dip, talf

*Down-slope shape:* Concave, linear

*Across-slope shape:* Linear, concave

*Parent material:* Silty eolian deposits over fluviomarine deposits

#### Typical profile

*Ap - 0 to 9 inches:* silt loam

*Btg - 9 to 29 inches:* silt loam

*2BCg - 29 to 34 inches:* sandy loam

*2Cg - 34 to 80 inches:* loamy sand

#### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Natural drainage class:* Poorly drained

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.57 in/hr)

*Depth to water table:* About 10 to 20 inches

*Frequency of flooding:* None

*Frequency of ponding:* Rare

*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

*Available water storage in profile:* Moderate (about 8.8 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified



## Custom Soil Resource Report

*Land capability classification (nonirrigated):* 3w  
*Hydrologic Soil Group:* C/D  
*Hydric soil rating:* Yes

### Description of Othello, Undrained

#### Setting

*Landform:* Flats, drainageways, swales, depressions  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Talf, dip  
*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Parent material:* Silty eolian deposits over fluviomarine deposits

#### Typical profile

*Oe - 0 to 2 inches:* peat  
*A - 2 to 4 inches:* silt loam  
*Eg - 4 to 10 inches:* silt loam  
*Btg - 10 to 29 inches:* silt loam  
*2BCg - 29 to 35 inches:* sandy loam  
*2Cg - 35 to 80 inches:* loamy sand

#### Properties and qualities

*Slope:* 0 to 2 percent  
*Depth to restrictive feature:* More than 80 inches  
*Natural drainage class:* Poorly drained  
*Capacity of the most limiting layer to transmit water (Ksat):* Moderately low to moderately high (0.06 to 0.57 in/hr)  
*Depth to water table:* About 0 to 10 inches  
*Frequency of flooding:* None  
*Frequency of ponding:* Occasional  
*Salinity, maximum in profile:* Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)  
*Available water storage in profile:* High (about 9.6 inches)

#### Interpretive groups

*Land capability classification (irrigated):* None specified  
*Land capability classification (nonirrigated):* 5w  
*Hydrologic Soil Group:* C/D  
*Hydric soil rating:* Yes

### Minor Components

#### Crosiadore

*Percent of map unit:* 7 percent  
*Landform:* Depressions, fluviomarine terraces, flats  
*Landform position (two-dimensional):* Footslope, summit  
*Landform position (three-dimensional):* Tread, dip, talf  
*Down-slope shape:* Concave, linear  
*Across-slope shape:* Concave, linear  
*Hydric soil rating:* No

#### Mattapex

*Percent of map unit:* 7 percent  
*Landform:* Broad interstream divides, swales, depressions, flats  
*Landform position (two-dimensional):* Summit, footslope  
*Landform position (three-dimensional):* Talf, dip

## Custom Soil Resource Report

*Down-slope shape:* Linear, concave  
*Across-slope shape:* Linear, concave  
*Hydric soil rating:* No

### **Fallsington, undrained**

*Percent of map unit:* 5 percent  
*Landform:* Drainageways, swales, depressions, flats  
*Landform position (two-dimensional):* Footslope  
*Landform position (three-dimensional):* Dip, talf  
*Down-slope shape:* Concave, linear  
*Across-slope shape:* Concave, linear  
*Hydric soil rating:* Yes

### **Kentuck, undrained**

*Percent of map unit:* 5 percent  
*Landform:* Depressions, flats, swales  
*Landform position (two-dimensional):* Toeslope  
*Landform position (three-dimensional):* Dip, talf  
*Down-slope shape:* Concave, linear  
*Across-slope shape:* Concave, linear  
*Hydric soil rating:* Yes

## **RdA—Reybold-Queponco complex, 0 to 2 percent slopes**

### **Map Unit Setting**

*National map unit symbol:* 2p7g5  
*Elevation:* 10 to 120 feet  
*Mean annual precipitation:* 42 to 48 inches  
*Mean annual air temperature:* 52 to 59 degrees F  
*Frost-free period:* 180 to 220 days  
*Farmland classification:* All areas are prime farmland

### **Map Unit Composition**

*Reybold and similar soils:* 45 percent  
*Queponco and similar soils:* 40 percent  
*Minor components:* 15 percent  
*Estimates are based on observations, descriptions, and transects of the mapunit.*

### **Description of Reybold**

#### **Setting**

*Landform:* Flats, interfluves  
*Down-slope shape:* Linear  
*Across-slope shape:* Linear  
*Parent material:* High silt loamy eolian deposits over fluviomarine deposits

#### **Typical profile**

*Ap - 0 to 10 inches:* silt loam  
*Bt - 10 to 30 inches:* silt loam  
*2BC - 30 to 39 inches:* gravelly coarse sandy loam



## Custom Soil Resource Report

2C - 39 to 80 inches: gravelly coarse sandy loam

### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Natural drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 2.00 in/hr)

*Depth to water table:* More than 80 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water storage in profile:* Moderate (about 7.7 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 1

*Hydrologic Soil Group:* B

*Hydric soil rating:* No

## Description of Queponco

### Setting

*Landform:* Flats, swales

*Down-slope shape:* Linear, concave

*Across-slope shape:* Linear

*Parent material:* High silt loamy eolian deposits over fluviomarine deposits

### Typical profile

*Ap - 0 to 10 inches:* silt loam

*Bt1 - 10 to 17 inches:* silt loam

*2Bt2 - 17 to 31 inches:* loam

*2CB - 31 to 36 inches:* sandy loam

*2C - 36 to 80 inches:* sand

### Properties and qualities

*Slope:* 0 to 2 percent

*Depth to restrictive feature:* More than 80 inches

*Natural drainage class:* Well drained

*Runoff class:* Low

*Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.57 in/hr)

*Depth to water table:* About 40 to 72 inches

*Frequency of flooding:* None

*Frequency of ponding:* None

*Available water storage in profile:* High (about 10.9 inches)

### Interpretive groups

*Land capability classification (irrigated):* None specified

*Land capability classification (nonirrigated):* 1

*Hydrologic Soil Group:* C

*Hydric soil rating:* No

## Minor Components

### Unicorn

*Percent of map unit:* 10 percent

*Landform:* Flats, swales

Custom Soil Resource Report

*Hydric soil rating: No*

**Matapeake**

*Percent of map unit: 5 percent*

*Landform: Rises*

*Hydric soil rating: No*



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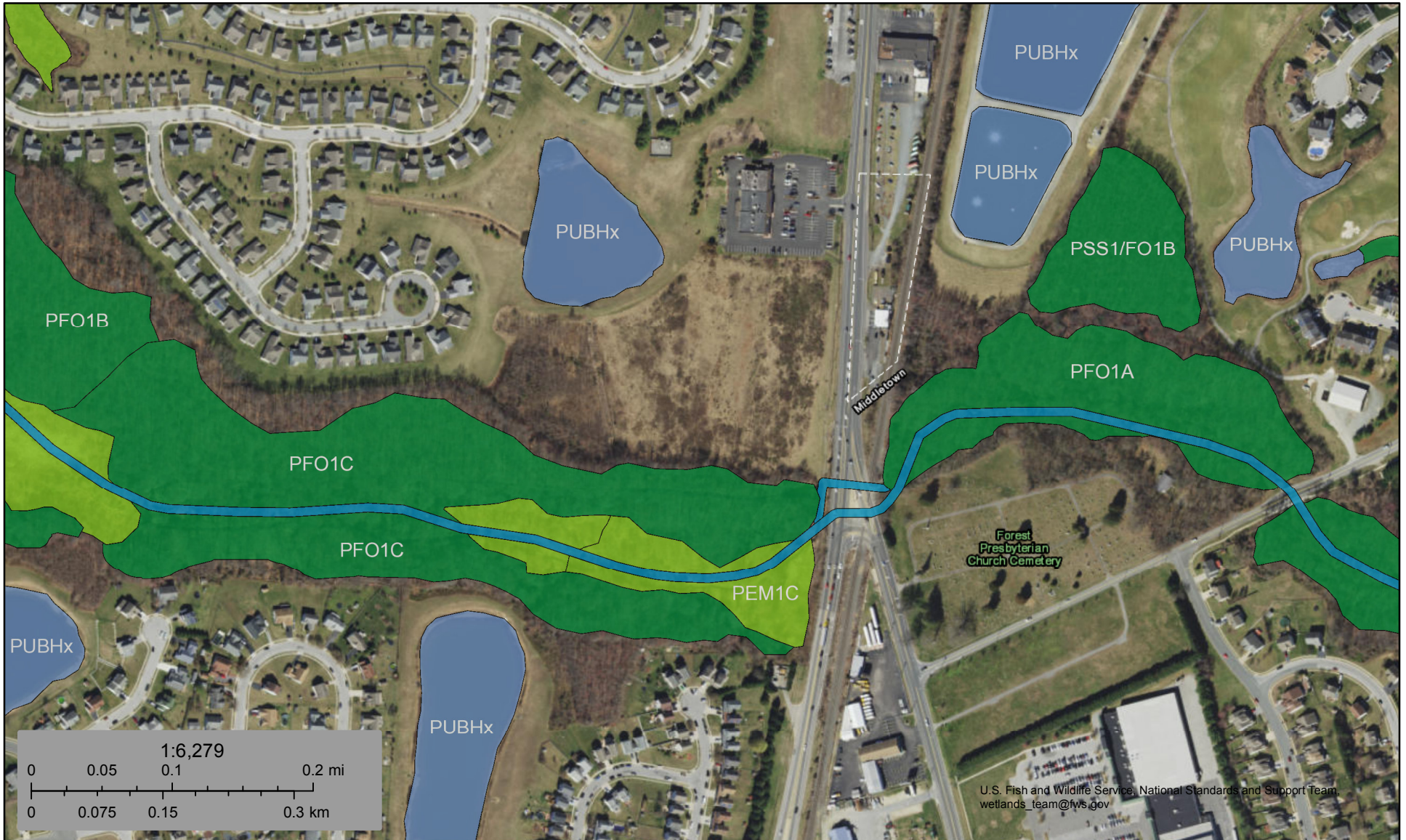
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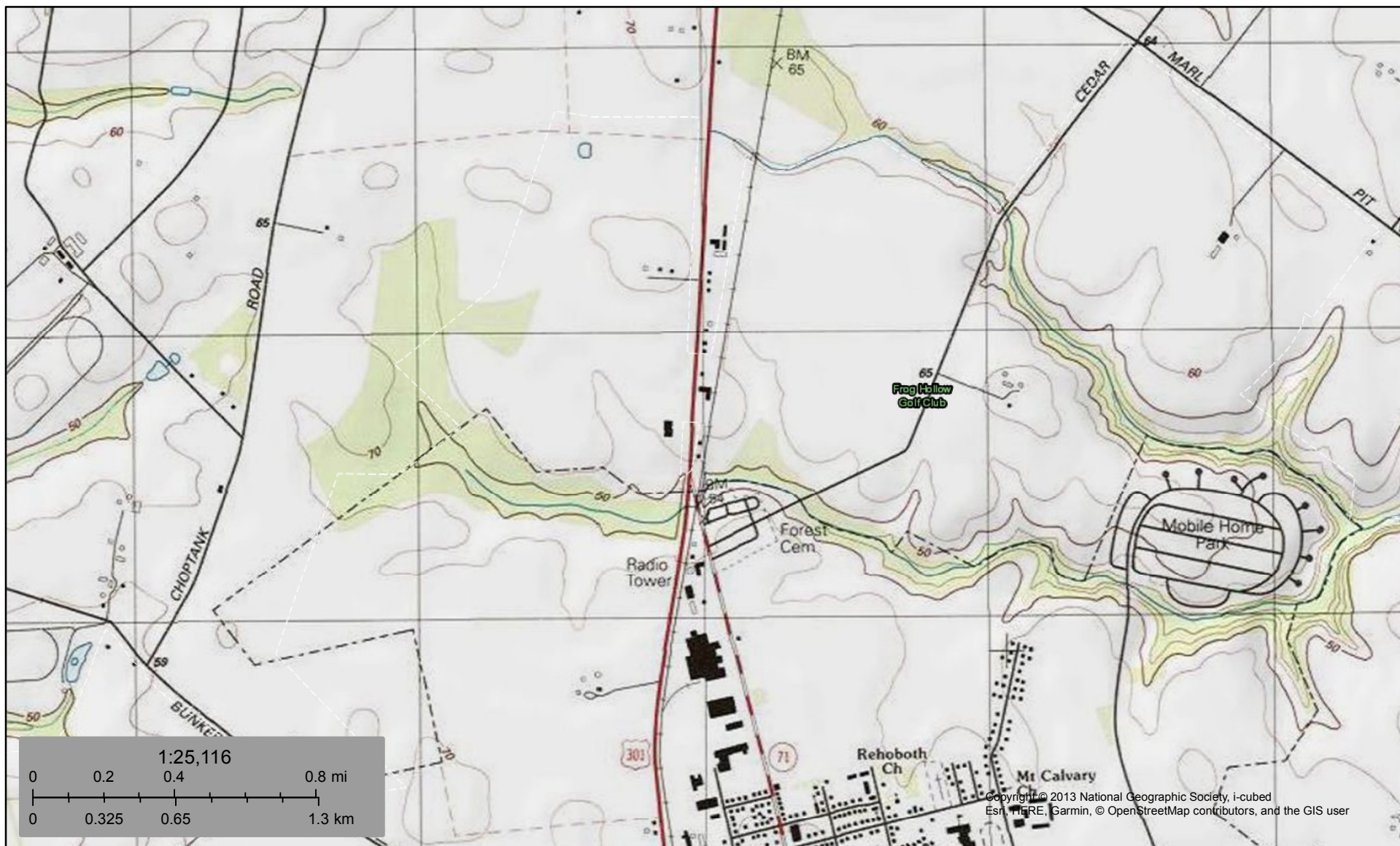
October 10, 2018

**Wetlands**

- |  |   |  |
|--|---|--|
|  Estuarine and Marine Deepwater |  Freshwater Emergent Wetland       |  Lake     |
|  Estuarine and Marine Wetland   |  Freshwater Forested/Shrub Wetland |  Other    |
|  |  Freshwater Pond                   |  Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

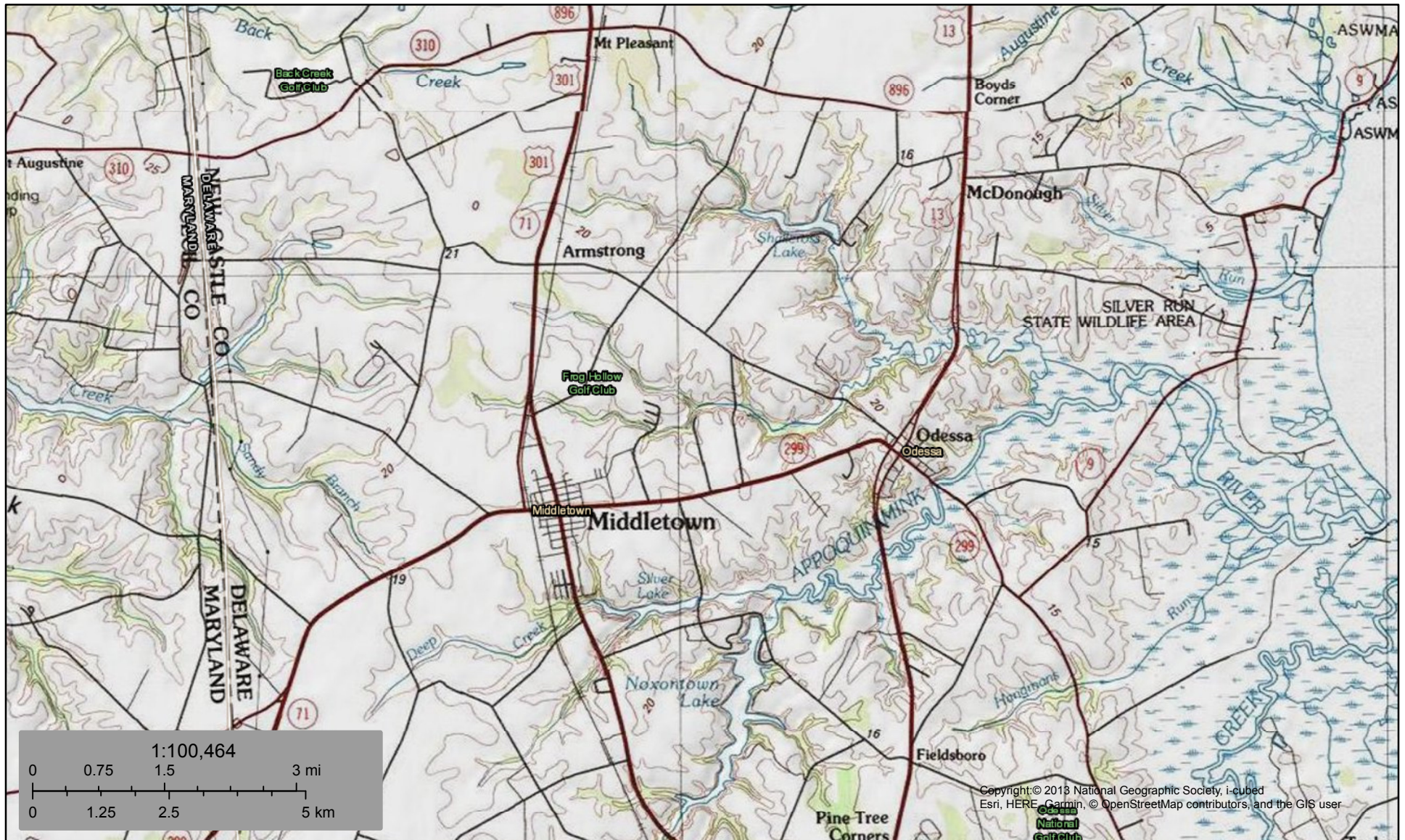




October 10, 2018

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October 10, 2018


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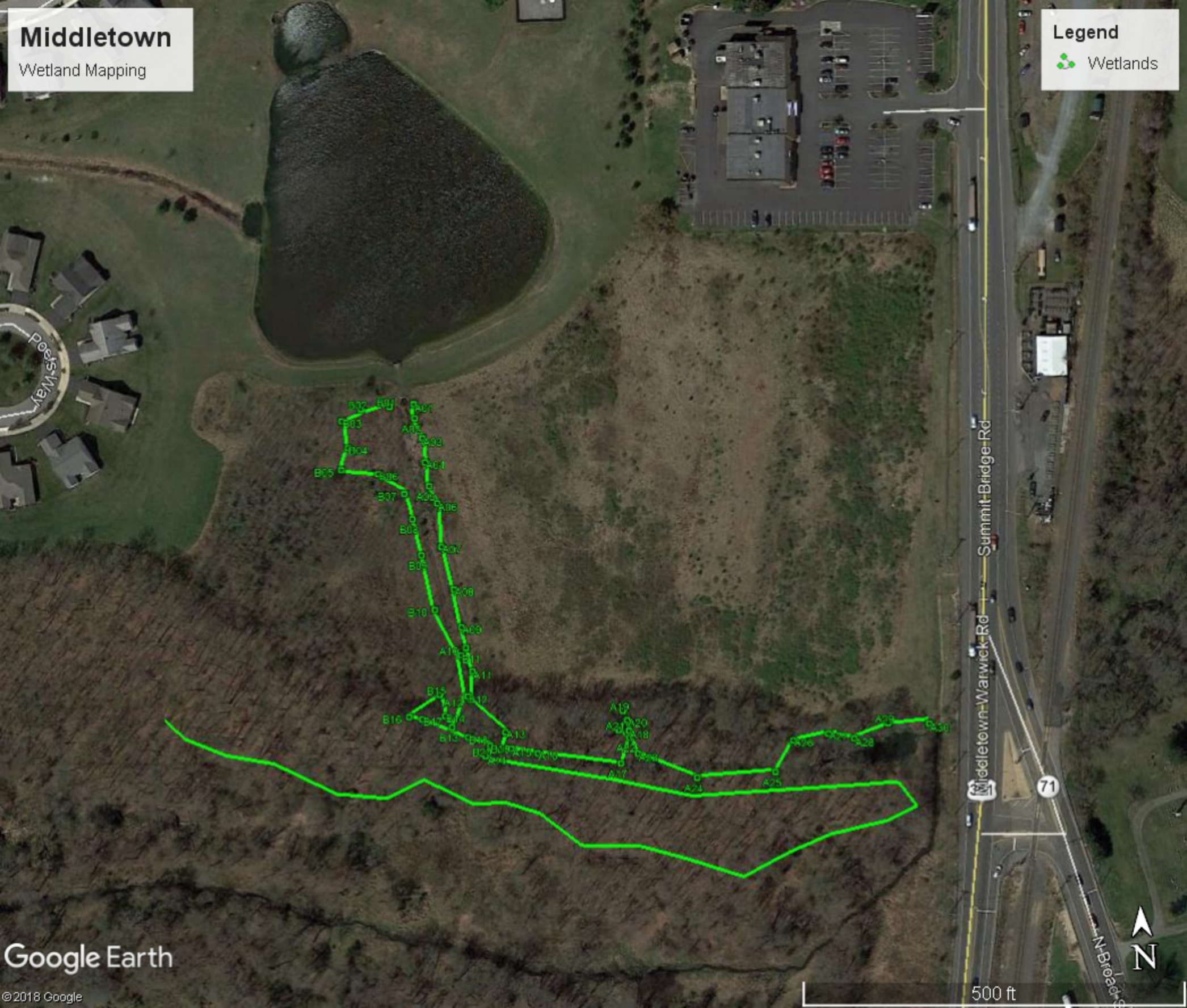


# Middletown

Wetland Mapping

## Legend

 Wetlands



Google Earth

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500 ft



PUBLIC PRE CHECK Results for State Parcel(s): No Area(s) Selected.

Underground Storage Tanks: Failed to execute. Parameters are not valid.  
ERROR 000735: Input Features: Value is required  
WARNING 000725: Output Layer: Dataset f"memory\\{fl\_name}" already exists.  
Failed to execute (MakeFeatureLayer).

SIRB Project Areas: Failed to execute. Parameters are not valid.  
ERROR 000735: Input Features: Value is required  
WARNING 000725: Output Layer: Dataset f"memory\\{fl\_name}" already exists.  
Failed to execute (MakeFeatureLayer).

Wetlands: Issue Found

WRPA: Issues Found

DE FIRM: Issues Found

Soils - New Castle County: Issues Found

Park Facilities: No Issues Found

Bay Area No Build Line: No Issues Found

Soils - Kent County: No Issues Found

Aglands Preservation Districts: No Issues Found

Soils - Sussex County: No Issues Found

Tax Ditch ROWs: No Issues Found

Tax Ditch Segments: No Issues Found

Land and Water Conservation Fund: No Issues Found

Well Head Protection Areas: No Issues Found

Delaware Ecological Network: No Issues Found

Ocean Area No Build Points: No Issues Found

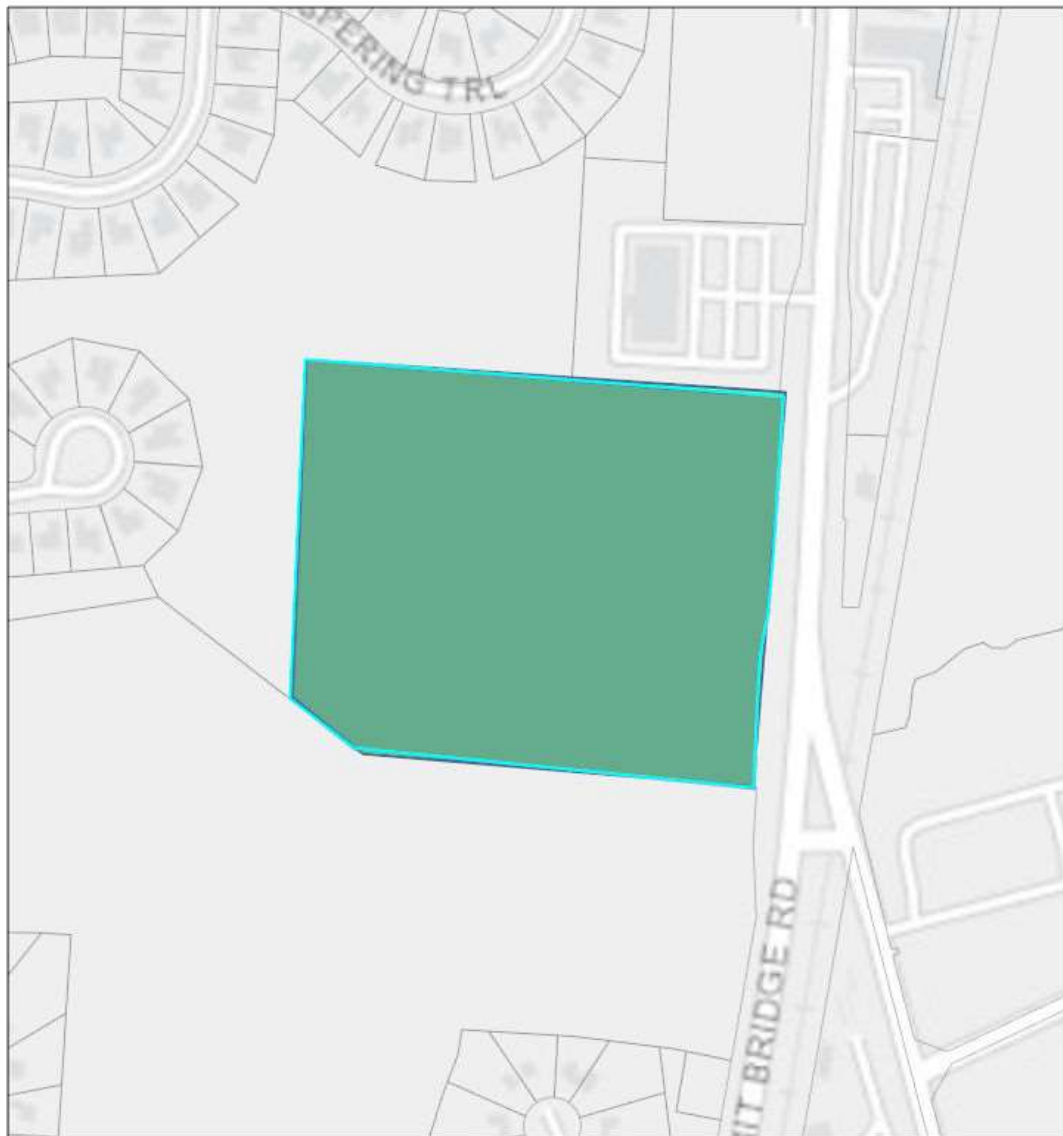





# Screening Report

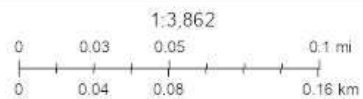
## Area of Interest (AOI) Information

Area : 12.95 acres

Mar 4 2022 12:25:33 Eastern Standard Time



-  Override 1
-  DE PLUS Project Areas
-  DE\_StateParcels - State Parcels



New Castle County, Delaware FirstMap, VITA, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, EPA, Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community



## Summary

Name	Count	Area(acres)	Length(mi)
Existing PLUS ID	1	12.80	N/A
State Parcel ID	4	12.92	N/A
National Register Place	0	N/A	N/A
Historic District	0	0	N/A
Historic Marker	0	N/A	N/A
Ag. Preserve	0	0	N/A
SIRB Project Area	0	0	N/A
Underground Storage Tanks	0	N/A	N/A
Ecological Network	0	0	N/A
Conservation Fund	0	0	N/A
Bay Area No Build	0	N/A	0
Ocean Area No BUILD	0	N/A	N/A
Tax Ditch	0	0	N/A
Tax Ditch Segment	0	N/A	0
Well Head Protection	0	0	N/A
Wetland High Water	0	N/A	0
Wetland Marsh	0	0	N/A
Wetlands	2	1.87	N/A
Low Marsh	0	0	N/A
Recharge Areas	1	12.70	N/A
Watershed	0	N/A	0
Class A Wellhead (150 Ft)	0	0	N/A
Class A Wellhead	0	0	N/A
Kent Soils	0	0	N/A
New Castle Soils	2	12.95	N/A
Sussex Soils	0	0	N/A

## Existing PLUS ID

#	PLUS ID	Area(acres)
1	No Data	12.80

## State Parcel ID

#	PIN	Acres	Area(acres)
1	2300100141	12.86	12.80
2	2300100004	61.30	0.06
3	2300100084	2.87	0.05
4	2300100142	9.39	0.02

## Wetlands

#	Type	Acres	Area(acres)
1	Freshwater Pond	2.90820436	1.08
2	Freshwater Forested/Shrub Wetland	23.2116454	0.79

### Recharge Areas

#	ID	Area(acres)
1	69	12.70

### New Castle Soils

#	Name	Area(acres)
1	B	9.14
2	C/D	3.81