
ENVIRONMENTAL IMPACT STATEMENT

for

**DRP Gibbstown Logistics Center, Phase I
Portion of Block 8, Lot 4
200 North Repauno Avenue
Township of Greenwich
Gloucester County, New Jersey**

Prepared For:

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LANGAN

**29 April 2016
130088802**

TABLE OF CONTENTS

	<u>Page No.</u>
1.0 INTRODUCTION.....	1
2.0 SITE DESCRIPTION AND LOCATION.....	1
3.0 PROPOSED PROJECT.....	1
4.0 REQUIRED PERMITS AND APPROVALS	2
5.0 EXISTING CONDITIONS AND POTENTIAL IMPACTS.....	2
5.1 Topography, Soils and Geology	2
5.2 Surface Waters, Freshwater Wetlands and Floodplain.....	4
5.3 Wildlife and Wildlife Habitat.....	7
5.4 Cultural Resources	8
5.5 Environmental Remediation	9
5.6 Traffic and Transportation	9
6.0 CRITICAL IMPACTS AND MITIGATIVE MEASURES	10
7.0 SUMMARY ENVIRONMENTAL EVALUATION.....	12

FIGURES

Figure 1	USGS Site Location Map
Figure 2	Vicinity Map
Figure 3	Tax Map
Figure 4	Aerial Photograph
Figure 5	Soils Map
Figure 6	Bedrock Geology Map
Figure 7	HUC-14 Watershed Map
Figure 8	NJDEP Surface Waters Map
Figure 9	Freshwater Wetlands Map
Figure 10	FEMA Preliminary FIRM Map
Figure 11	NJDEP Threatened and Endangered Species Habitat Map
Figure 12	Cultural Resources Map

TABLE OF CONTENTS
(CONTINUED)

DRAWINGS
(BOUND SEPARATELY)

Drawing CS001	Cover Sheet
Drawing CS003	General Information Sheet
Drawing VL101	Existing Conditions
Drawing CS101	Site Plan
Drawing CG101	Grading Plan
Drawing CG102	Drainage Plan
Drawing CG401	Basin Enlargement Detail
Drawing WN101	Wetland Disturbance Plan
Drawing CU101	Utility Plan
Drawing LP101	Landscape Plan
Drawing LP501	Landscape Notes and Details
Drawing LL101	Lighting Plan
Drawing LL501	Lighting Notes and Details
Drawing CE101	Soil Erosion & Sediment Control Plan
Drawing CE501	Soil Erosion & Sediment Control Details
Drawing CS101	Strom Profiles
Drawing CS501	Construction Details - 1
Drawing CS502	Construction Details - 2
Drawing CS503	Construction Details - 3
Drawing KT101	Truck Movement Plan

APPENDICES

Appendix A	Prior NJDEP Permits and Approvals
Appendix B	Stormwater Management Report (Bound Separately)
Appendix C	NJDEP Natural Heritage Program Correspondence
Appendix D	Qualifications of Preparers

1.0 INTRODUCTION

This Environmental Impact Statement (EIS) has been prepared pursuant to the requirements of the Township of Greenwich's ordinance for a proposed warehouse facility project in the Township of Greenwich, Gloucester County, New Jersey. The proposed warehouse facility project consists of an approximate 207,396-square foot facility and parking for cars, trucks, and trailers. The project site consists of a subdivided portion of an existing 928-acre parcel identified as Block 8, Lot 4 in the Township of Greenwich (Figures 1 and 2). Block 8, Lot 4 is a portion of the overall Repauno tract, which is approximately 1,600 acres. The EIS assesses the existing conditions of the project site, identifies potential environmental impacts of the project, evaluates the capacity of existing infrastructure, identifies mitigative measures for any unavoidable impacts, and summarizes the net environmental effects of the project. The EIS also provides a listing of all development approvals required for the project.

2.0 SITE DESCRIPTION AND LOCATION

The project site is comprised of approximately 16 acres located near North Repauno Avenue and A Line Road in the northern portion of Greenwich Township. The project site is located in the southern portion of an existing tax parcel, identified as Block 8, Lot 4 in Greenwich Township (Figure 3). The project site is currently undeveloped and primarily covered by forested wetlands and uplands (Figure 4).

The project site is bound by forested wetlands and uplands to the north; North Repauno Avenue, a residential development and a daycare facility to the east; A Line Road, railroad lines and a residential development to the south; and an existing road, railroad lines, and wooded land to the west. The Delaware River is located approximately 4,500 feet to the north of the project site.

3.0 PROPOSED PROJECT

The project consists of the construction of a new warehouse facility with a footprint of approximately 207,396 square feet and parking for cars, trucks, and trailers (Drawing CS101). The proposed warehouse facility will be constructed on the southern portion of the project site. Approximately 12,000 square feet of the proposed warehouse facility will be utilized as office space. Two site access points are proposed along A Line Road along the western portion of the project area. A total of 200 car parking spaces and 31 trailer parking stalls are provided onsite. A 50-foot landscape buffer is provided along the southeastern portion of the project site immediately adjacent to the residential lots.

4.0 REQUIRED PERMITS AND APPROVALS

The status of all required permits and approvals is provided in the table below:

Permit/Approval Description	Status	Date
Greenwich Township Planning Board Subdivision Approval	This Application	
Greenwich Township Planning Board Preliminary and Final Site Plan Approval	This Application	
Greenwich Township Building Department Building Permit	To be submitted	
County Planning Board Subdivision Approval	To be submitted	
County Planning Board Site Plan Approval	To be submitted	
County Soil Conservation District - Soil Erosion and Sediment Control Plan Certification	To be submitted	
NJDEP Freshwater Wetlands LOI- Line Verification	Approved	28 November 2007
NJDEP Freshwater Wetlands LOI- Line Verification Extension	Approved	31 January 2013
NJDEP Freshwater Wetland General Permit(s)	Submitted	20 April 2016
NJDEP Flood Hazard Verification and Individual Permit	Submitted	20 April 2016
NJDEP New Jersey Pollutant Discharge Elimination System Permit	To be submitted	

5.0 EXISTING CONDITIONS AND POTENTIAL IMPACTS

The following sections describe the existing environmental conditions of the project site.

5.1 Topography, Soils and Geology

Existing Condition

Topography

The project site generally slopes southeast to northwest. Existing surface elevations are between approximately 3 feet and 11 feet in the datum of North American Vertical Datum 1988 (NAVD88). The lower elevations are typically located in the forested wetlands in the northern portion of the project site and the higher elevations are located in the eastern and southern portions of the project site.

Soils

The Gloucester County Soil Survey maps a total of three soil types within the project site (Figure 5), which includes the following:

- Mannington-Nanticoke-Udorthents complex, 0 to 1 percent slopes, very frequently flooded (MamuAv), which is a dominant soil type and occurs in the northern portion of the project site;
- Udorthents, dredged coarse materials, 0 to 8 percent slopes (UddcB), which is a dominant soil type and occurs in the developed western and southern portions of the project site;
- Urban land-Downer complex, 0 to 5 percent slopes (USDOWB)

A preliminary geotechnical investigation conducted by Langan in October 2015 included drilling boreholes, digging test pits, installing temporary groundwater monitoring wells, and performing laboratory testing of soil samples. The subsurface conditions generally consisted of a surface layer of topsoil overlying successive layers of sand, clay, and a lower sand at the full depth explored of 50 feet. The soils on the project site do not appear to be well draining and evidence of seasonally high groundwater was found throughout the project site.

As discussed in Geology section below, acid-producing soils have the potential to exist on or in the vicinity of the project site.

Geology

Based on the available New Jersey Department of Environmental Protection (NJDEP) bedrock geology data, the project site is located within the Magothy Formation (Figure 6). The Magothy Formation is characterized as quartz sand, fine- to coarse-grained, interbedded with thin-bedded clay or clay-silt. This formation is known to contain acid-producing soils.

A preliminary subsurface investigation conducted by Langan in October 2015 included drilling boreholes up to 50 feet and bedrock was not encountered.

Potential Impacts

Topography

Finished-floor elevation for the proposed building is approximately 12.6 feet (NAVD88). The proposed grading is consistent with the generally flat topography across the project site.

Soils

Soils on the project site will be graded to provide a level area to construct the project. All movement of soil on to the project site will adhere to the Standards for Soil Erosion and Sediment Control in New Jersey, and will be certified by the Gloucester County Soil Conservation District through the issuance of a soil erosion and sediment control permit.

Geology

The Magothy Formation is known to contain acid-producing soils. If acid-producing soils are encountered during construction within flood hazard area, the mitigation, stabilization, and disposal standards outlined in the NJDEP Flood Hazard Area Control Act Rules (N.J.A.C. 7:13) and the Soil Erosion and Sediment Control Standards of New Jersey will be implemented.

5.2 Surface Waters, Freshwater Wetlands and Floodplain

Existing Condition

Surface Waters

As mapped by NJDEP, the project site is within the Repaupo Creek (below Tomlin Station Road) / Cedar Swamp and the Nehonsey Brook / Clonmell Creek (Lower Delaware River Valley to Mantua Creek) hydrologic unit code (HUC) 14 watersheds, which is a sub-watershed of the Cedar Swamp / Repaupo Creek / Clonmell Creek HUC 11 watershed (Figure 7).

There are no mapped surface waters located on the project site (Figure 8).

Freshwater Wetlands

The majority of the wetlands onsite are forested/scrub-shrub wetlands located in the northwestern portion of the project site (Figure 9). A Letter of Interpretation (LOI) – Line Verification was issued by NJDEP verifying the wetland boundaries and resource classification for wetlands on the project site, identified as proposed Block 8 Lot 4.04, on 28 November 2007 (See prior approval 0807-07-0002.1 FWW070001). A permit extension and freshwater wetland resource value classification change was issued on 31 January 2013 (See prior approval

0807-07-0002.1 FWW120001). The NJDEP LOI-approval letters are provided in Appendix A.

Exceptional resource value wetlands are classified by NJDEP based on their association with trout waters; the presence of habitat for threatened and endangered species; and documented habitat for threatened or endangered species that remains suitable for use by these species. Ordinary resource value wetlands generally include small, isolated wetlands; drainage ditches; swales; and stormwater facilities. Wetlands that do not meet the exceptional or ordinary resource value criteria are classified as intermediate resource value.

Wetlands identified on the project site are classified into two categories based on the LOI issued on 28 November 2007. Wetlands located in the northwestern portion of the project site and in the central portion of the project site are classified as intermediate resource value wetlands, which have a 50-foot wetland buffer. The wetland swale/ditch extending east from the wetlands located in the northwestern portion of the project site was classified an ordinary resource value wetland, which does not have a regulated wetland buffer.

An adjacent offsite wetland to the west of the project site was previously classified as an intermediate resource value wetland, with a 50-foot wetland buffer. Through permit extension request, the resource value classification was subsequently changed based on updated species information, which reclassified the freshwater wetland delineation line "x" as an exceptional resource value. A corresponding 150-foot buffer width along the reference wetland was subsequently applied. This 150-foot wetland buffer extends onto the project site.

No wetland areas on the project site are classified as exceptional resource value wetlands, indicating NJDEP does not feel threatened and endangered species habitat is present on the project site.

Floodplain

The Federal Emergency Management Agency (FEMA) Pending Flood Insurance Rate Map (FIRM), anticipated to be adopted in August 2016, is the most recent floodplain mapping available for the project site. The FEMA Pending FIRM identifies the project site in the 100-year tidal floodplain associated with Delaware River, with an approximate elevation of 9 feet (NAVD88) (Figure 10)

Potential Impacts

Surface Waters

The addition of impervious surfaces and buildings to the project site will alter the flow of stormwater during and after precipitation events. As such, stormwater management improvements are included as part of the project (Appendix B). A drainage system is proposed that has been designed to collect stormwater runoff and direct flows to two onsite stormwater management basins. Runoff in areas of development will be conveyed using subsurface collection pipes and structures that lead to two proposed basins. These basins are intended to retain and reduce peak flow stormwater runoff in compliance with the New Jersey Stormwater Management Rules (N.J.A.C. 7:8).

Freshwater Wetlands

The project has been designed to avoid direct impacts to wetlands to the extent possible. Several Freshwater Wetlands General Permits (FWWGP) will be required based on proposed activities in wetlands or transition areas. A FWWGP No. 7 for placement of fill in a ditch, a FWWGP No. 10B for a road crossing at the northwestern driveway, and two separate general permits under FWWGP No. 11 for the construction of two outfalls in wetlands. Two separate outfalls are necessary to meet the New Jersey Soil District Standards for off-site stability when discharging to wetlands with no defined downstream channel. In addition, a Transition Area Average Plan Waiver will be requested to address disturbance to freshwater wetlands transition areas in specific locations on the project site.

The applicant has submitted a multi-permit application to the NJDEP Division of Land Use Regulation (DLUR), which will address the compliance requirements of the NJDEP Freshwater Wetlands Protection Act Rules (N.J.A.C. 7:7A).

Floodplain

As part of this project, the applicant has submitted a Flood Hazard Area Verification to NJDEP in order to confirm the flood hazard area onsite using the FEMA Tidal Method (Method 2) at N.J.A.C. 7:13-3.3. The Flood Hazard Area Verification will confirm the extent of this regulatory floodplain and riparian zones onsite. The applicant has also submitted a Flood Hazard Area Individual Permit that will address regulatory compliance items identified in the New Jersey Flood Hazard Area Control Act Rules (N.J.A.C. 7:13).

Based on FEMA mapping, the 100-year tidal floodplain is an elevation 9 feet (NAVD88). The NJDEP generally accepts the 100-year floodplain as mapped by FEMA to be the flood hazard area elevation in a tidal floodplain. Furthermore, the NJDEP does not regulate displaced flood storage in a tidal floodplain. The finished-floor elevation of the proposed building is placed at approximately 12.6 feet (NAVD88), which is above the flood hazard area elevation and meets NJDEP requirements. The NJDEP has provided a preliminary determination to permit the location of a stormwater basin emergency spillway below the flood hazard area elevation of 9 feet (NAVD88) at an elevation of approximately 6.9 feet (NAVD88). The proposed stormwater management system will reduce the peak runoff rates to Delaware River.

5.3 Wildlife and Wildlife Habitat

Existing Condition

The existing wildlife habitat located on the project site is consistent with the undeveloped character of the majority of the overall site. The wildlife consists of common animals found in this setting such as deer, raccoon, groundhog, fox, opossum, gray squirrel, cottontail rabbit, turtle, frog and various songbirds. As shown on the NJDEP Threatened and Endangered Species Habitat Map (Figure 13), there is potential habitat for threatened and endangered species mapped on the project site. It should be noted that these habitat areas are only mapped features from the NJDEP GIS-based Landscape Project program.

Based on the correspondence received from the NJDEP Natural Heritage Program (NHP), dated 6 October 2015, the NHP response identified potential foraging and nesting habitat for the Bald Eagle (*Haliaeetus leucocephalus*), a state threatened species, foraging habitat for the Great Blue Heron (*Ardea Herodias*), a species of special concern, and a breeding sighting of a Cooper's Hawk (*Accipiter cooperii*), a species of special concern (Appendix C). The NHP response also identified potential vernal pool habitat. The NHP review also identified potential habitat on the project site for one species, the pink-streak moth, and two species of a noctuid moth, which is tracked by the NJDEP Endangered and Nongame Species Program. Additional species were identified offsite in the NHP response.

No wetland areas on the project site are classified as exceptional resource value wetlands, indicating NJDEP does not feel threatened and endangered species habitat is present on the project site.

Potential Impacts

As the project will involve development within forested upland and isolated wetland areas, the loss of potential habitat for wildlife is unavoidable. The NJDEP did not identify exceptional resource value wetlands based on the presence of threatened and endangered. As such, the project is not expected to impact threatened or endangered species or their habitat. Any existing common animals will be able to repopulate undeveloped lands onsite and within the vicinity of the project site.

5.4 Cultural Resources

Existing Condition

Based on available mapping from the NJDEP, there are no historic properties or districts located within the project site (Figure 14). The nearest historic resource is a historic property located at 102 North Repauno Avenue, which is adjacent to the project site. The project site is not mapped within an archaeological site grid. The nearest archaeological site grid to the project site are AD211, which is located to the southwest of the project site, and AD208, which is located to the northwest of the project site (Figure 14).

Potential Impacts

There are no listed historic properties or historic districts on or adjacent to the project site, therefore, the project is not anticipated to impact any historic properties.

As required by the NJDEP Freshwater Wetlands Protection Act Rules (N.J.A.C. 7:7A), the preparation of the Phase 1A Archaeological Survey is required by NJDEP as part of the NJDEP wetlands permitting process for this project site. This Phase IA Archeological Survey study and any required additional testing will be reviewed by the New Jersey State Historic Preservation Office (SHPO) as part of the NJDEP wetland permitting process discussed in Section 5.2 of this report. No construction will occur in any NJDEP-regulated areas onsite prior to the issuance of the necessary wetland permits and approval by SHPO.

5.5 Environmental Remediation

Existing Condition

Portions of the overall site were once utilized as former DuPont chemical manufacturing facility. The project site is located in an area of the overall site that had no prior manufacturing, associate storage, or disposal activities. A Phase I Environmental Site Assessment for the project site has been prepared by Ramboll Environ, Inc. dated May 2016.

In 1990, DuPont entered into an Administrative Consent Order (ACO) with the NJDEP, which required DuPont to conduct remedial investigations of several solid waste management units and areas of concern at the site. DuPont has continued remedial actions over the last decade, and has submitted remedial action reports to NJDEP, most recently in 2014 and 2015. The proposed warehouse facility and associated improvements are located in an area that has been identified as an area of no prior manufacturing. In connection with the sale of the project site, DuPont will continue to seek closure of remedial actions pursuant to the ACO and the New Jersey Industrial Site Remediation Act (N.J.A.C. 7:26B).

Potential Impacts

The project is not anticipated to affect any area previously identified as contaminated or any ongoing remediation effort.

5.6 Traffic and Transportation

Existing Condition

The project site is situated on the north side of A Line Road to the west of Repauno Avenue, which is a local road that provides one lane of travel in each direction. Near the project site, the speed limit is assumed to be 25 mile per hour and parking is permitted on one side of the road.

A Traffic Evaluation prepared by Langan dated 19 May 2016 includes manual turning movement counts at the intersections of Repauno Avenue and Route 44, and Repauno Avenue and Democrat Road. The traffic counts were conducted from 7:00 AM to 9:00 AM and from 2:00 PM to 6:00 PM. The manual turning movement counts indicate distinct peak hours where traffic volumes were the

highest during each count period. The morning peak hour occurred from 7:00 AM to 8:00 AM and the evening peak hour occurred from 4:30 PM to 5:30 PM.

Potential Impacts

Proposed access to the new warehouse facility will be provided by two full-access driveways along A Line Road. Based on trip generation estimates, approximately 150 inbound and outbound trips are estimated to occur during the weekday morning peak and approximately 120 inbound and outbound trips are estimated to occur during weekday evening peak hours. Based on the analysis conducted in the Traffic Impact Study, it is anticipated the two proposed access driveways along A line Road will function efficiently and facilitate turning into and out of the proposed warehouse building site. The Level of Service analysis provided in the Traffic Evaluation concluded that the proposed warehouse facility will not have a significant impact along the adjacent roads and any changes to area traffic operations will be minor.

A total of 200 car parking spaces and 31 trailer parking spaces are proposed onsite. The proposed passenger car parking provides 9 feet wide and 18 feet deep perpendicular parking spaces served by two-way aisles with a minimum width of 24 feet. The proposed trailer parking provides 12 feet wide and 55 feet deep parking spaces served by a two-way aisle with effectively a minimum width of 50 feet. As identified in the Traffic Evaluation, these parking space dimensions are consistent with current parking design standards.

6.0 CRITICAL IMPACTS AND MITIGATIVE MEASURES

Based on the review of the potential impacts discussed in Section 5.0, the critical impacts associated with the project may include impacts to water quality, vegetation, wetlands, and general construction impacts. The following measures are proposed to mitigate the potential impacts of the project during construction and operation phases. These measures will minimize or eliminate negative impacts onsite and offsite.

Avoidance and Minimization of Wetland Impacts

The project has been designed to avoid and minimize impacts to wetlands along the perimeter of the project site to the extent practicable. Impacts to these perimeter wetlands will be minimized through the implementation of soil erosion and sediment control measures and stormwater best management practices (BMPs) during the construction and operation phases of the project as discussed below. The wetland impact onsite will be reviewed by NJDEP pursuant to the freshwater wetlands permit

program of the NJDEP Freshwater Wetlands Protection Act Rules (N.J.A.C. 7:7A). A multi-permit permit application has been submitted to the NJDEP DLUR.

Acid-Producing Soils Stabilization and Mitigation (If Required)

If acid-producing soils are encountered during construction, the stabilization, mitigation and disposal standards outlined in the New Jersey Flood Hazard Area Control Act Rules (N.J.A.C. 7:13) will be implemented and New Jersey Soil Erosion and Sediment Control Standards. Specific details are provided in the notes on Soil Erosion and Sediment Control Details sheet (Drawing CE501).

Mitigation of Habitat Disturbance

Approximately 14.0 acres of undeveloped land will be developed within the project site, while approximately 2.3 acres of undeveloped land will be undisturbed. Limited work is proposed in the existing wetlands on the project site. Any existing common animals will be able to repopulate undeveloped lands onsite and within the vicinity of the project site.

Stormwater Management Design

The project incorporates the implementation of BMPs contained in the New Jersey Stormwater Best Management Practices Manual to reduce the impacts of development on local stormwater quality. Non-structural BMPs for the stormwater design have been incorporated into this project to the extent practicable. The stormwater management design of the project will comply with the requirements of the New Jersey Stormwater Management Rules (N.J.A.C. 7:8), thereby reducing potential impact to water quantity, water quality and groundwater recharge.

Soil Erosion and Sediment Control Plan

Soil erosion and sediment control measures will be employed to control erosion and minimize sedimentation of nearby wetlands and waters. A site-specific soil erosion and sediment control plan has been developed in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey, and will be certified by the Gloucester County Soil Conservation District. Soil erosion and sediment control measures including silt fence and inlet protection will be in place prior to any site disturbance activities and will be maintained throughout the construction phase of the project (Drawings CE100 and CE501).

Archeological Resource Review

A Phase IA Cultural Resource Study will be prepared for the project site. This report and any required additional testing will be reviewed by SHPO as part of the NJDEP permitting process. No construction will occur in any NJDEP regulated areas onsite prior to the issuance of the permits and approval by SHPO.

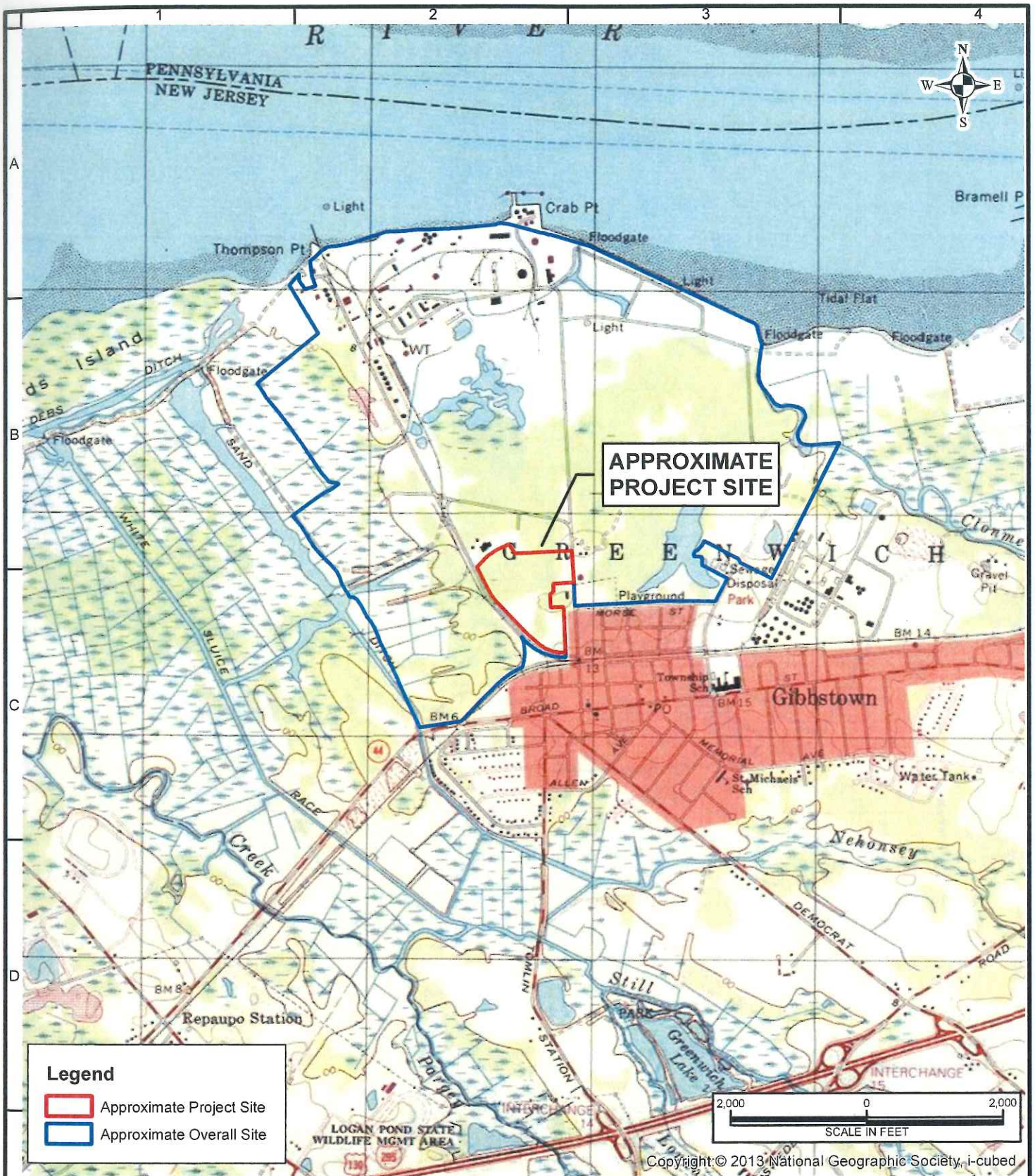
Public Health and Safety Measures

All appropriate safety measures will be initiated during construction of the project in order to maintain public health and safety.

7.0 SUMMARY ENVIRONMENTAL EVALUATION

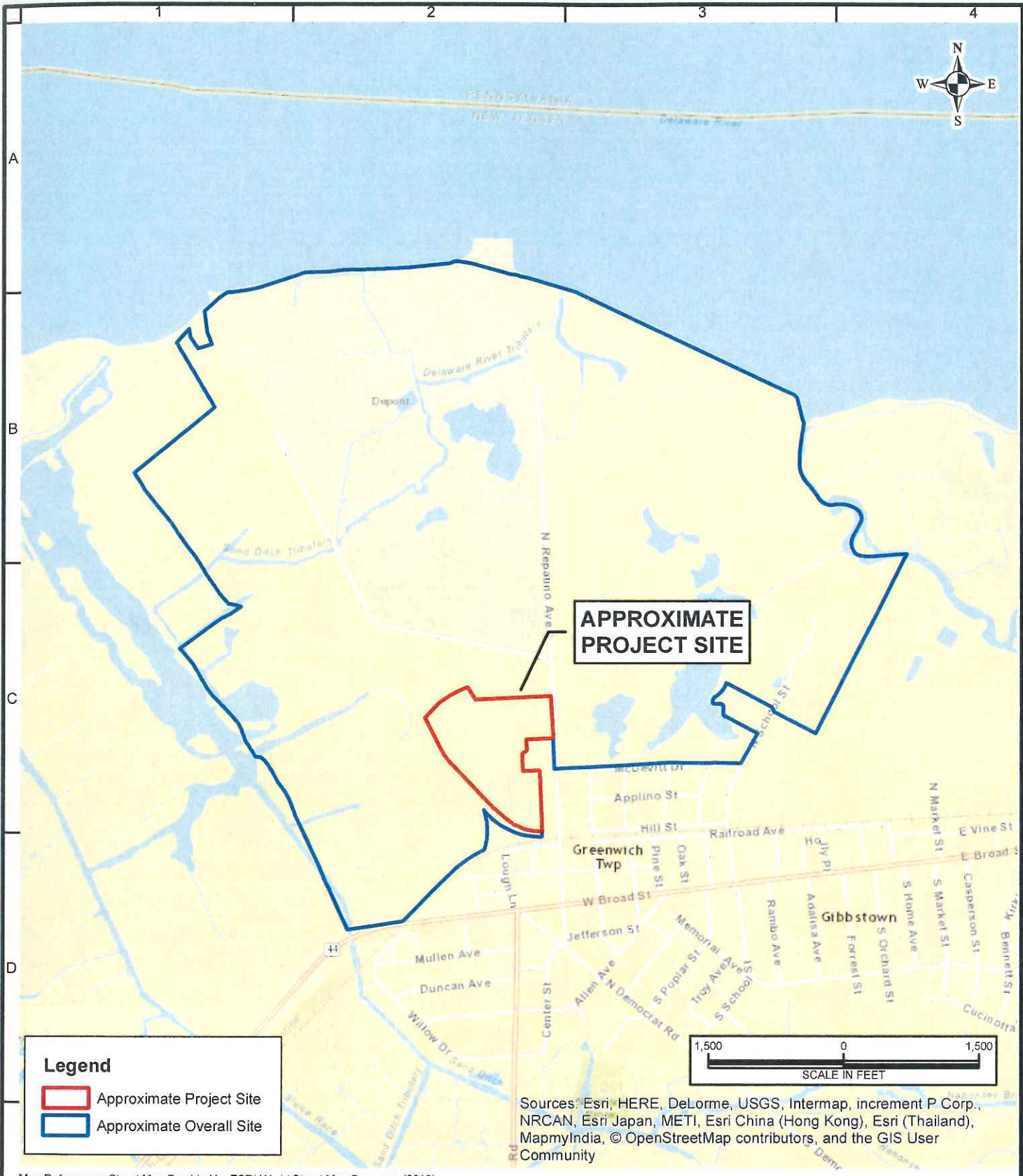
The redevelopment of the project site involves potential impacts to environmental resources, including freshwater wetlands, acid-producing soils and wildlife habitat. The project has been designed to avoid impacts to these environmental features onsite to the extent practicable. Where impacts are unavoidable, specific mitigation strategies have been incorporated to reduce the overall negative impact of the project.

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Map References: ESRI provided USA Topo Maps 2014 - USGS Quadrangle Bridgeport NJ-PA

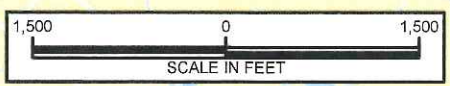
LANGAN 989 Lenox Drive, Suite 124 Lawrenceville, NJ 08648 T: 609.282.8000 F: 609.282.8001 www.langan.com Langan Engineering & Environmental Services, Inc. Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. Langan International LLC Collectively known as Langan NJ CERTIFICATE OF AUTHORIZATION No. 24GA2796400	Project	Drawing Title	Project No.	Figure	
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APPROXIMATE PROJECT SITE

Legend

- Approximate Project Site
- Approximate Overall Site



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

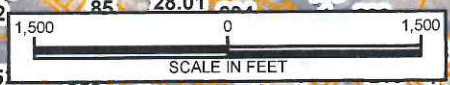
Map References: Street Map Provided by ESRI World Street Map Basemap (2013)

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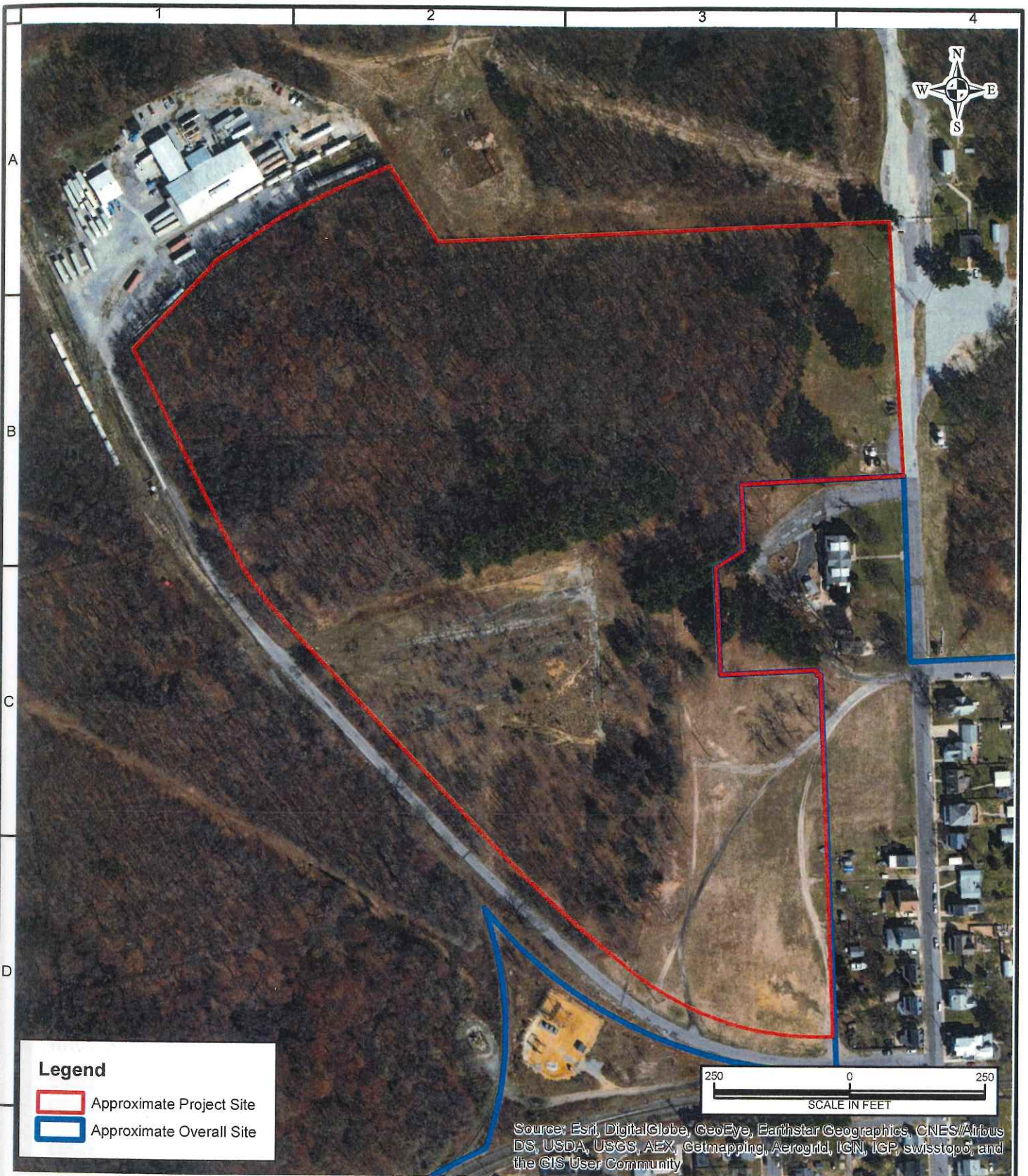
Legend

- Approximate Project Site
- Approximate Overall Site
- Gloucester County Parcels



Map References: Nearmap Aerial Imagery 2015; NJGIN Gloucester County, NJ GIS Tax Parcel Data (2014).

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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Map References: ESRI World Imagery 2013.

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 Collectively known as Langan

NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project

**DRP GIBBSTOWN
 LOGISTICS CENTER
 PHASE I**

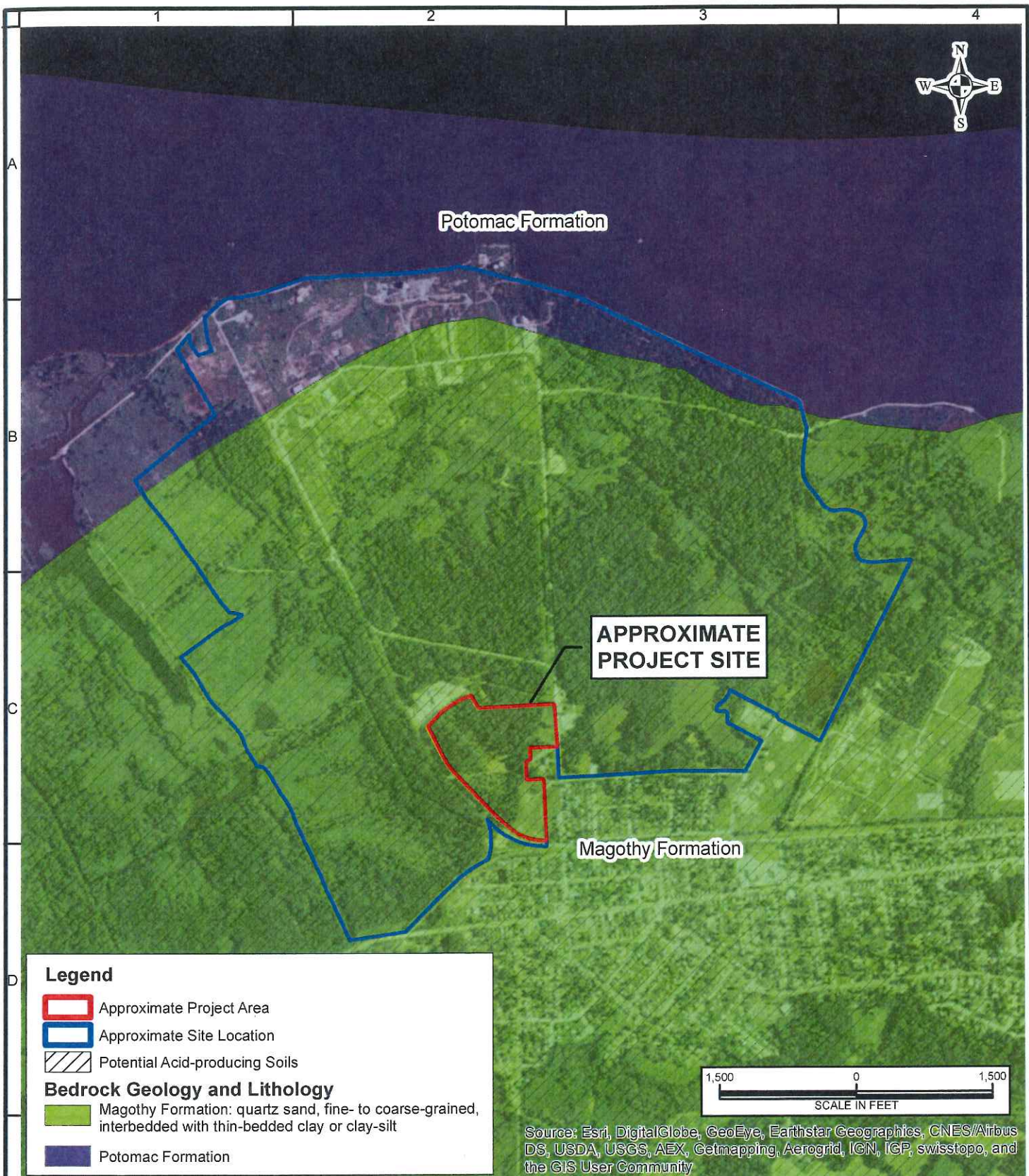
PORTION OF BLOCK 8, LOT 4
 TOWNSHIP OF GREENWICH

GLOUCESTER COUNTY NEW JERSEY

Drawing Title

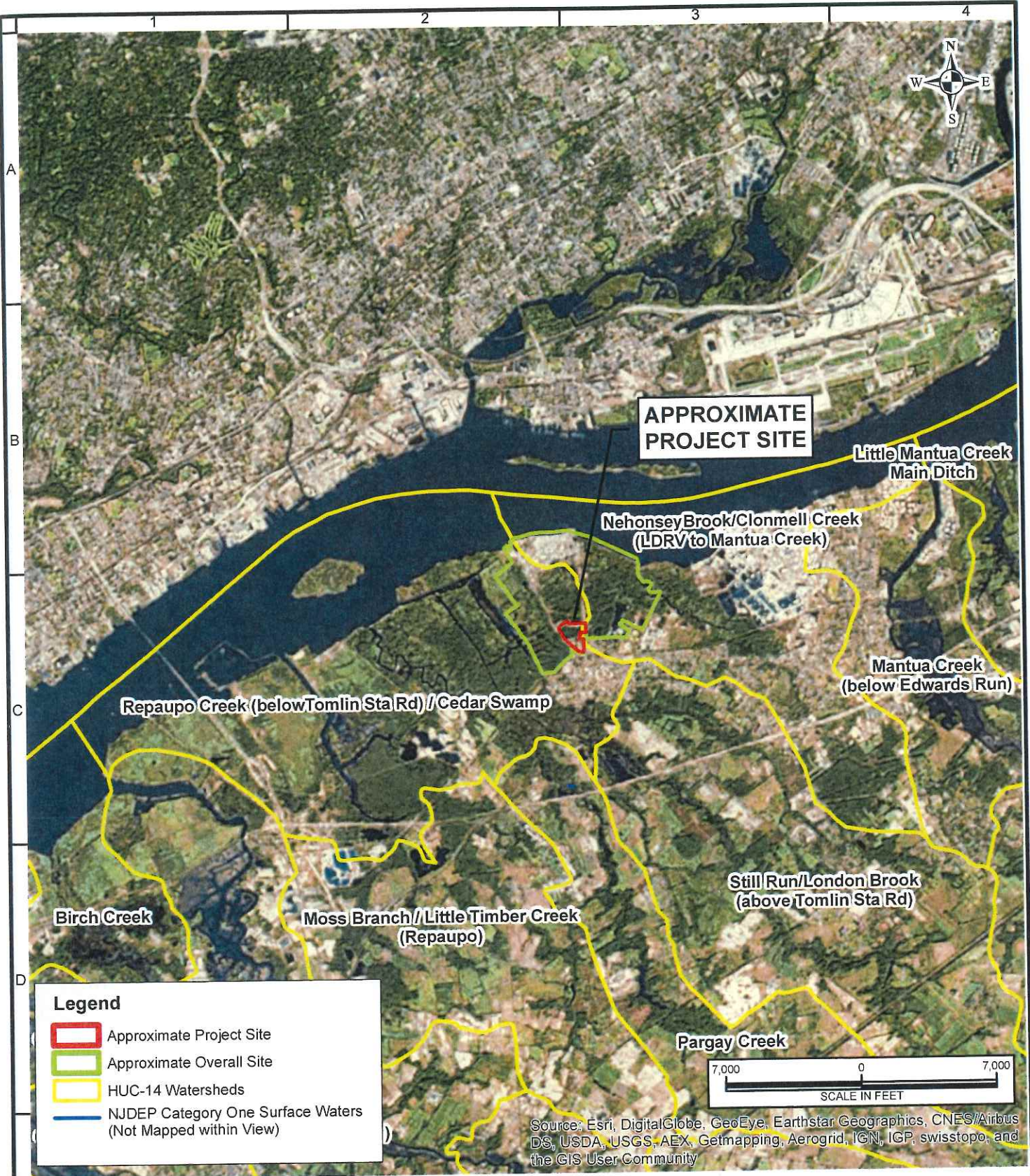
SOILS MAP

Project No. 130088802	Figure
Date 04/29/2016	5
Scale 1" = 250'	
Drawn By CHH	



Map References: NJDEP Bedrock Geology GIS Data 2009; ESRI World Imagery 2013.

<p>989 Lenox Drive, Suite 124 Lawrenceville, NJ 08648 T: 609.282.8000 F: 609.282.8001 www.langan.com</p> <p>Langan Engineering & Environmental Services, Inc. Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. Langan International LLC Collectively known as Langan</p> <p>NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400</p>	<p>Project</p> <p>DRP GIBBSTOWN LOGISTICS CENTER PHASE I</p> <p>PORTION OF BLOCK 8, LOT 4 TOWNSHIP OF GREENWICH</p> <p>GLOUCESTER COUNTY NEW JERSEY</p>	<p>Drawing Title</p> <p>BEDROCK GEOLOGY MAP</p>	<p>Project No. 130088802</p> <p>Date 04/29/2016</p> <p>Scale 1" = 1,500'</p> <p>Drawn By CHH</p>	<p>Figure</p> <p>6</p>
	<p>© 2015 Langan</p>			



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Map References: NJDEP Watershed GIS Data 2011; NJDEP Surface Water Quality Standards GIS Data 2011; ESRI World Imagery 2013.

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Langan Engineering & Environmental Services, Inc
 Langan Engineering, Environmental, Surveying and
 Landscape Architecture, D.P.C.
 Langan International LLC
 Collectively known as Langan

NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project
**DRP GIBBSTOWN
 LOGISTICS CENTER
 PHASE I**
 PORTION OF BLOCK 8, LOT 4
 TOWNSHIP OF GREENWICH
 GLOUCESTER COUNTY NEW JERSEY

Drawing Title
**HUC-14
 WATERSHED
 MAP**

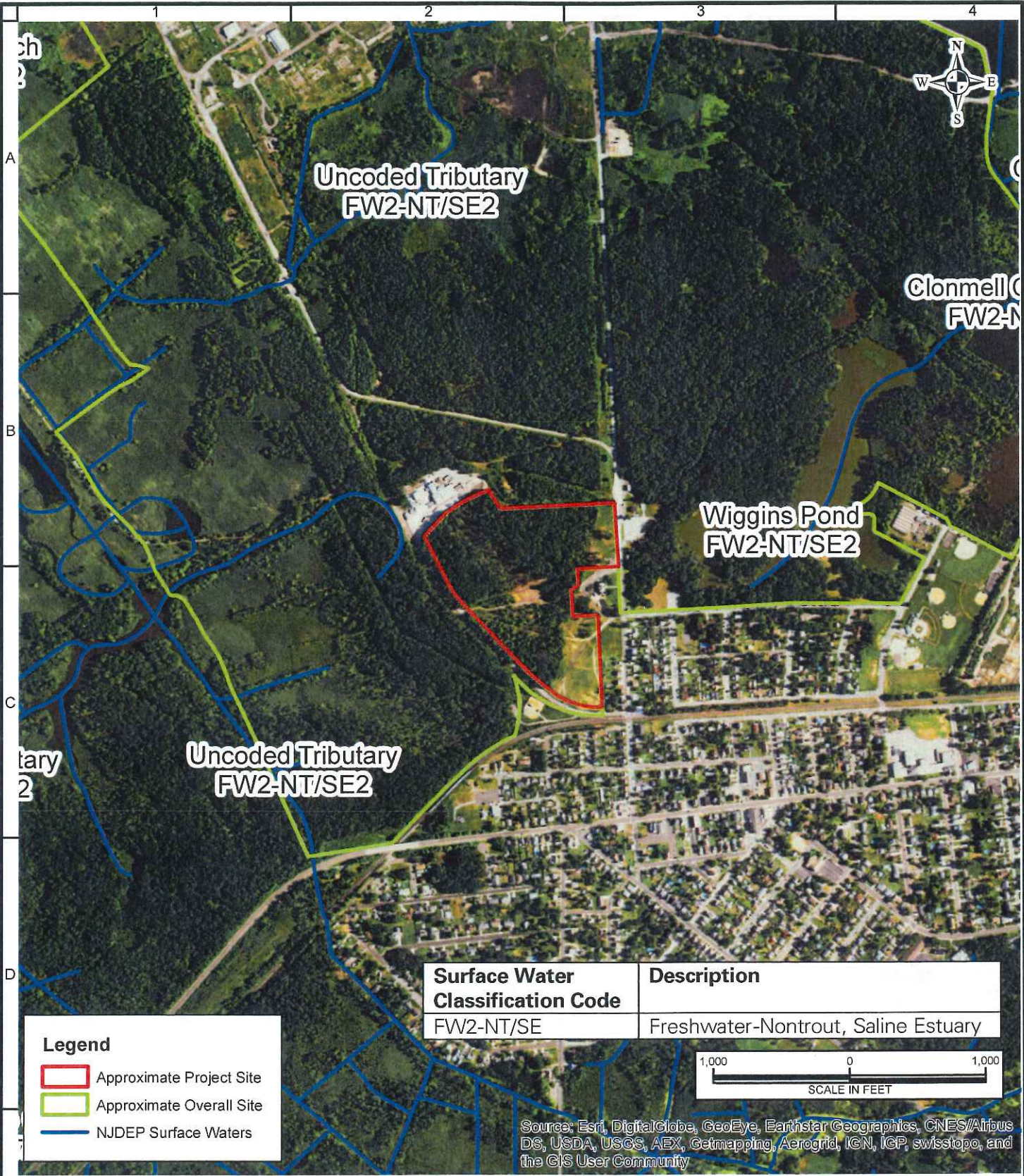
Project No.
130088802

Date
04/29/2016

Scale
1" = 7,000'

Drawn By
CHH

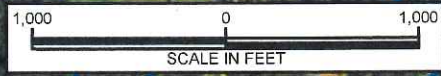
Figure
7



Surface Water Classification Code	Description
FW2-NT/SE	Freshwater-Nontrout, Saline Estuary

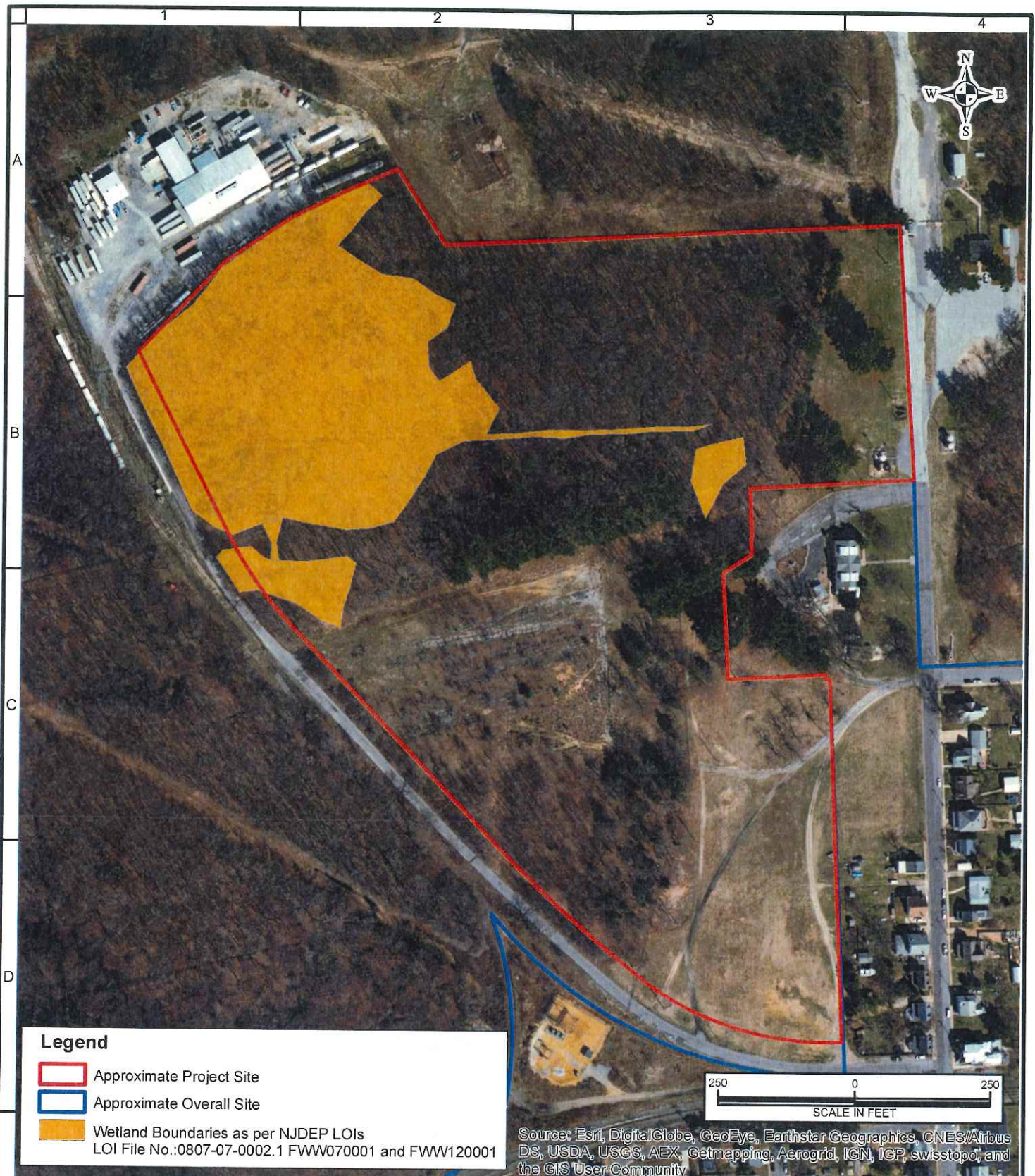
Legend

- Approximate Project Site
- Approximate Overall Site
- NJDEP Surface Waters



Map References: NJDEP Surface Water Quality Standards 2011; ESRI World Imagery 2013.

<p>989 Lenox Drive, Suite 124 Lawrenceville, NJ 08848 T: 609.282.8000 F: 609.282.8001 www.langan.com</p> <p>Langan Engineering & Environmental Services, Inc. Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. Langan International LLC Collectively known as Langan</p> <p>NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400</p>	<p>Project</p> <p>DRP GIBBSTOWN LOGISTICS CENTER PHASE I</p> <p>PORTION OF BLOCK 8, LOT 4 TOWNSHIP OF GREENWICH</p> <p>GLOUCESTER COUNTY NEW JERSEY</p>	<p>Drawing Title</p> <p>NJDEP SURFACE WATERS MAP</p>	<p>Project No.</p> <p>130088802</p>	<p>Figure</p> <p>8</p>
			<p>Date</p> <p>04/29/2016</p>	
			<p>Scale</p> <p>1" = 1,000'</p>	
			<p>Drawn By</p> <p>CHH</p>	



Legend

- Approximate Project Site
- Approximate Overall Site
- Wetland Boundaries as per NJDEP LOIs
LOI File No.:0807-07-0002.1 FWW070001 and FWW120001



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Map References: Wetland boundaries based on LOI plans prepared by Bruce R. McKenna P.E. (42562), dated 16 April 2007, last revised 14 November 2007; ESRI World Imagery 2014.

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 Landscape Architecture, D.P.C.
 Langan International LLC
 Collectively known as Langan

NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400

Project
**DRP GIBBSTOWN
 LOGISTICS CENTER
 PHASE I**
 PORTION OF BLOCK 8, LOT 4
 TOWNSHIP OF GREENWICH
 GLOUCESTER COUNTY NEW JERSEY

Drawing Title
**FRESHWATER
 WETLANDS
 MAP**

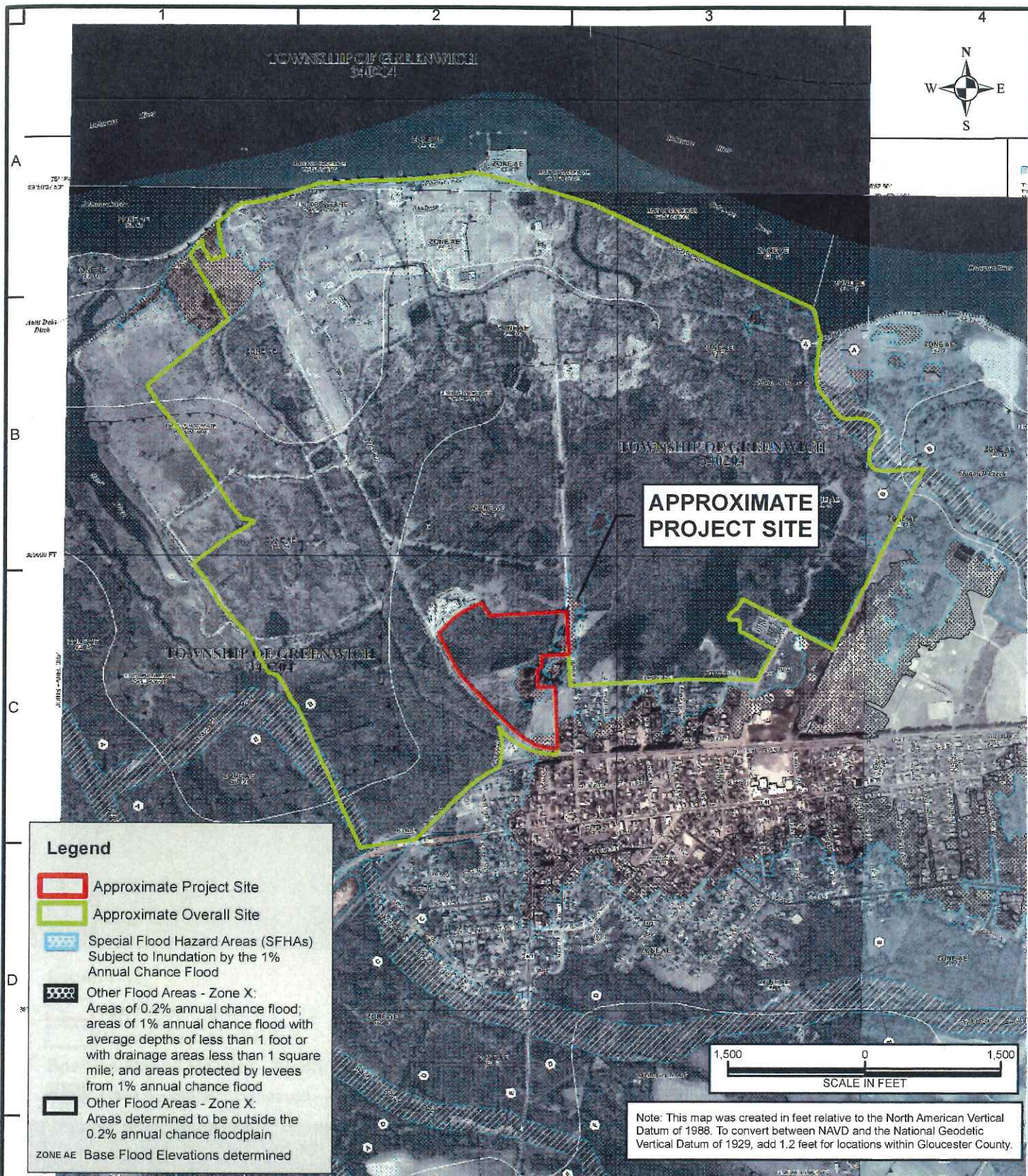
Project No.
130088802

Date
04/29/2016

Scale
1" = 250'

Drawn By
CHH

Figure
9



Legend

- Approximate Project Site
- Approximate Overall Site
- Special Flood Hazard Areas (SFHAs) Subject to Inundation by the 1% Annual Chance Flood
- Other Flood Areas - Zone X: Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood
- Other Flood Areas - Zone X: Areas determined to be outside the 0.2% annual chance floodplain
- ZONE AE Base Flood Elevations determined

Note: This map was created in feet relative to the North American Vertical Datum of 1988. To convert between NAVD and the National Geodetic Vertical Datum of 1929, add 1.2 feet for locations within Gloucester County.

Map References: FEMA Preliminary Flood Insurance Rate Map (FIRM) Gloucester County, NJ - Sheets 34015C0056F, 34015C0058F and 34015C0059F (Dated 09/19/2014)

<p>LANGAN 989 Lenox Drive, Suite 124 Lawrenceville, NJ 08648 T: 609.282.8000 F: 609.282.8001 www.langan.com</p> <p>Langan Engineering & Environmental Services, Inc. Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. Langan International LLC Collectively known as Langan</p> <p>NJ CERTIFICATE OF AUTHORIZATION No. 24GA27996400</p>	<p>Project DRP GIBBSTOWN LOGISTICS CENTER PHASE I PORTION OF BLOCK 8, LOT 4 TOWNSHIP OF GREENWICH</p> <p>GLOUCESTER COUNTY NEW JERSEY</p>	<p>Drawing Title FEMA PRELIMINARY FIRM MAP</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Project No. 130088802</td> <td rowspan="3" style="text-align: center; vertical-align: middle; font-size: 2em;">10</td> </tr> <tr> <td>Date 04/29/2016</td> </tr> <tr> <td>Scale 1" = 1,500'</td> </tr> <tr> <td>Drawn By CHH</td> <td></td> </tr> </table>	Project No. 130088802	10	Date 04/29/2016	Scale 1" = 1,500'	Drawn By CHH	
Project No. 130088802	10								
Date 04/29/2016									
Scale 1" = 1,500'									
Drawn By CHH									



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Map References: NJDEP Historic Districts GIS Data 2011; NJDEP Historic Properties GIS Data 2011; NJDEP Historic Archaeological Site Grid GIS Data 2011; ESRI World Imagery 2013.

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APPENDIX A

PRIOR NJDEP PERMITS AND APPROVALS

- | | |
|---|------------------|
| 1 - Freshwater Wetlands Letter of Interpretation-Line Verification | 28 November 2007 |
| 2 - Freshwater Wetlands Letter of Interpretation-Line Verification –
Permit Extension and Resource Value Classification Change | 31 January 2013 |



State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JON S. CORZINE
Governor

Division of Land Use Regulation
P.O. Box 439, Trenton, NJ 08625-0439
Fax # (609) 292-8115
Fax # (609) 777-3656
www.state.nj.us/landuse

LISA P. JACKSON
Commissioner

NOV 28 2007

Ben Gindville
Osprey Environmental
711 Jackson Road, Unit 1
Atco NJ 08004

Freshwater Wetlands Letter of Interpretation/Line Verification

File No.: 0807-07-0002.1-FWW070001
Applicant: E.I. DuPont deNemours & Co.
Block(s): 8; Lot(s): 4.04
Greenwich Twp., Gloucester County

Dear Mr. Gindville:

This letter is in response to your request for a Letter of Interpretation to verify the jurisdictional boundary of freshwater wetlands and waters on the referenced property. It remains valid for 5 years from the issuance date.

In accordance with established agreements, the New Jersey Department of Environmental Protection, Division of Land Use Regulation ("DLUR") is the lead agency for establishing the extent of State and Federally regulated wetlands and waters within the State. The U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency retain the right to reevaluate and modify a jurisdictional determination should information prove to be incomplete or inaccurate.

Based upon information submitted, the Division has determined that the freshwater wetland and/or State open water boundary line(s) as shown on the plan sheet entitled, "PLAN OF WETLANDS AND TOPOGRAPHY, E.I. duPONT deNEMOURS AND COMPANY, PROPOSED LOT 4.04, BLOCK 8, PLATE 5, TOWNSHIP OF GREENWICH, GLOUCESTER COUNTY, NEW JERSEY" dated April 16, 2007, last revised November 14, 2007, and prepared by Bruce R. McKenna, N.J.P.E. LIC. NO. 42562 & N.J.P.L.S. LIC. NO. 42562, is(are) accurate as shown.

The wetlands/waters boundary line(s), as determined in this letter, must be shown on any future site development plans. The line(s) should be labeled with the above DLUR file number and the following note: "Wetlands/Waters Boundary Line as verified by NJDEP on....(date of this letter)...., File No. (as referenced above)".

Wetlands Resource Value Classification ("RVC")

- Ordinary: Flag Points WL-A33 through WL-A47, WL-A56 through WL-A55B, WL-A55N to WL-A57. [0 foot wetland buffer]
- Exceptional: Flag Points WL-D1 through WL-D12. [150 foot wetland buffer]

- Intermediate: All other freshwater wetland flag points shown on the approved plans on the referenced property are considered Intermediate Resource value. [50 foot wetland buffer]

RVC may affect requirements for wetland and/or transition area permitting. Please refer to the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-1 et seq.) and implementing Freshwater Wetlands Protection Act rules at N.J.A.C. 7:7A-1 et seq. for additional information.

General Information

Wetlands resource value classification is based on the best information available to the Department. The classification is subject to reevaluation at any time if additional or updated information is made available, including, but not limited to, information supplied by the applicant. For exceptional resource value wetland reclassification requests, refer to N.J.A.C. 7:7A-2.4(c).

Regulated activities proposed within a wetland, wetland transition area or water area, as defined by N.J.A.C. 7:7A-2.2 and 2.6 of the Freshwater Wetlands Protection Act rules, require a permit from this office unless specifically exempted at N.J.A.C. 7:7A-2.8. The approved plan and supporting jurisdictional limit information are now part of the Division's public records.


This letter in no way legalizes any fill which may have been placed, or other regulated activities which may have occurred on-site. This determination of jurisdiction extent or presence does not make a finding that wetlands or water areas are "isolated" or part of a surface water tributary system. Furthermore, obtaining this determination does not affect your responsibility to obtain any local, State, or Federal permits which may be required.

Appeal Process

In accordance with N.J.A.C. 7:7A-1.7, any person who is aggrieved by this decision may request a hearing within 30 days of the date the decision is published in the DEP Bulletin by writing to: New Jersey Department of Environmental Protection, Office of Legal Affairs, Attention: Adjudicatory Hearing Requests, P.O. Box 402, Trenton, NJ 08625-0402. This request must include a completed copy of the Administrative Hearing Request Checklist. Hearing requests received after 30 days of publication notice shall be denied. The DEP Bulletin is available on the Department's website at www.state.nj.us/dep. [See *General Information* section above for initial resource value appeal protocol]

Please contact Brett N. Kosowski of our staff at (609) 292-1235 should you have any questions regarding this letter. Be sure to indicate the Division's file number in all communication.

Sincerely,


David B. Fanz, Supervisor
Bureau of Coastal Regulation

c: Municipal Clerk
Municipal Construction Official

DBF/bas



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

Division of Land Use Regulation
Mail Code 501-02A
P.O. Box 420
Trenton, New Jersey 08625-0420
www.state.nj.us/dep/landuse

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

JAN 31 2013

A. Moe Pirestani
E.I DuPont de Nemours & Co.
200 North Repauno Avenue
Gibbstown, NJ 08027

RE: Letter of Interpretation/Line Verification – Reissuance w/ RVC Change
File No.: 0807-07-0002.1-FWW120001
Applicant: E.I DuPont de Nemours & Co.
Block(s): 8; Lot(s): Proposed Lot 4.04
Logan Twp., Gloucester Co.

Dear Mr. Pirestani:

The New Jersey Department of Environmental Protection issued a Freshwater Wetland Letter of Interpretation Line Verification (LOI) File No. 0807-07-0002.1; Activity No: FWW 070001, for the referenced site on November 28, 2007. As per your request, the Department is extending that letter for an additional 5 years in accordance with the requirements at N.J.A.C. 7:7A-3.6, subject to a change in freshwater wetland resource value classification. Please be advised this Letter of Interpretation-extension shall remain in effect through November 26, 2017 and supersede approved LOI under File No. 0807-07-0002.1; Activity No.: FWW070001.

The original Letter of Interpretation, as referenced above, previously classified freshwater wetlands as ordinary, intermediate, and exceptional resource value freshwater wetlands. In review the present application, the Department has determined that physical site conditions, and wetland limits, have not changed. However, current species information is cause to reclassify *freshwater wetland delineation line "X"* as exceptional resource value, with a corresponding 150 foot standard buffer width.

In accordance with established agreements, the New Jersey Department of Environmental Protection, Division of Land Use Regulation ("DLUR" or Division) is the lead agency for establishing the extent of State and Federally regulated wetlands and waters within the State. The U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency retain the right to reevaluate and modify a jurisdictional determination should information prove to be incomplete or inaccurate.

Based upon information submitted, the Division has determined that the freshwater wetland and/or State open water boundary line(s) as shown on one (1) plan sheet entitled, "**PLAN OF WETLANDS AND TOPOGRAPHY, E.I. duPONT deNEMOURS AND COMPANY, PROPOSED LOT 4.04, BLOCK 8, PLATE 5, TOWNSHIP OF GREENWICH, GLOUCESTER COUNTY, NEW JERSEY**", dated April 16, 2007, last revised on November 14, 2007, and prepared by Bruce R. McKenna, N.J.P.E. LIC NO. 42562 & N.J.P.L.S. LIC. 42562, is (are) accurate as shown.

Appeal Process

In accordance with N.J.A.C. 7:7A-1.7, any person who is aggrieved by this decision may request a hearing within 30 days of the date the decision is published in the DEP Bulletin by writing to: New Jersey Department of Environmental Protection, Office of Legal Affairs, Attention: Adjudicatory Hearing Requests, P.O. Box 402, Trenton, NJ 08625-0402. This request must include a completed copy of the Administrative Hearing Request Checklist. Hearing requests received after 30 days of publication notice shall be denied. The DEP Bulletin is available on the Department's website at www.state.nj.us/dep. [See General Information section above for initial resource value appeal protocol].

Please contact Brett N. Kosowski of our staff by e-mail at Brett.Kosowski@dep.state.nj.us or (609) 633-2289 should you have any questions regarding this letter. Be sure to indicate the Department's file number in all communication.

Sincerely,



Ryan J. Anderson, Supervisor
Bureau of Coastal Regulation

c: Municipal Clerk
Municipal Construction Official
Original (agent) Bruce R. McKenna, P.O. Box 177, Pitman, NJ 08071.

APPENDIX B

**STORMWATER MANAGEMENT REPORT
(BOUND SEPARATELY)**

APPENDIX C

**NJDEP
NATURAL HERITAGE PROGRAM
CORRESPONDENCE**



State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION

State Forestry Services

Mail Code 501-04

ONLM - Natural Heritage Program

P.O. Box 420

Trenton, NJ 08625-0420

Tel. #609-984-1339

Fax. #609-984-1427

BOB MARTIN

Commissioner

CHRIS CHRISTIE

Governor

KIM GUADAGNO

Lt. Governor

October 6, 2015

Hilary Wayland
Ramboll Environ
1760 Market Street, Suite 1000
Philadelphia, PA 19103

Re: Flagler Parcel
Block(s) - 8, Lot(s) - 4
Greenwich Township, Gloucester County

Dear Ms. Wayland:

Thank you for your data request regarding rare species information for the above referenced project site in Greenwich Township, Gloucester County.

Searches of the Natural Heritage Database and the Landscape Project (Version 3.1) are based on a representation of the boundaries of your project site in our Geographic Information System (GIS). We make every effort to accurately transfer your project bounds from the topographic map(s) submitted with the Request for Data into our Geographic Information System. We do not typically verify that your project bounds are accurate, or check them against other sources.

We have checked the Landscape Project habitat mapping and the Biotics Database for occurrences of any rare wildlife species or wildlife habitat on the referenced site. The Natural Heritage Database was searched for occurrences of rare plant species or ecological communities that may be on the project site. Please refer to Table 1 (attached) to determine if any rare plant species, ecological communities, or rare wildlife species or wildlife habitat are documented on site. A detailed report is provided for each category coded as 'Yes' in Table 1.

We have also checked the Landscape Project habitat mapping and Biotics Database for all occurrences of rare wildlife species or wildlife habitat within one mile of the referenced site. Please refer to Table 2 (attached) to determine if any rare wildlife species or wildlife habitat is documented within one mile of the project site. Detailed reports are provided for each category coded as 'Yes' in Table 2. These reports may include species that have also been documented on the project site.

For requests submitted as part of a Flood Hazard Area Control Act (FHACA) rule application, we report records for all rare plant species and ecological communities tracked by the Natural Heritage Program that may be on your project site. (In some borderline cases these records may be described as on or in the immediate vicinity of your project site.) A subset of these plant species are also covered by the FHACA rules when the records are located within one mile of the project site. One mile searches for plant species will only report occurrences for those plant species identified under the FHACA regulations as being critically dependent on the watercourse. Please refer to Table 2 (attached) to determine if any rare plant species covered by the FHACA rules have been documented. Detailed reports are provided for each category coded as 'Yes' in Table 2. These reports may include species that have also been documented on the project site.

The Natural Heritage Program reviews its data periodically to identify priority sites for natural diversity in the State. Included as priority sites are some of the State's best habitats for rare and endangered species and ecological communities. Please refer to Tables 1 and 2 (attached) to determine if any priority sites are located on or within one mile of the project site.

NHP File No. 15-3907573-8509

A list of rare plant species and ecological communities that have been documented from the project site, referenced above, can be downloaded from <http://www.state.nj.us/dep/parksandforests/natural/heritage/countylist.html>. If suitable habitat is present at the project site, the species in that list have potential to be present.

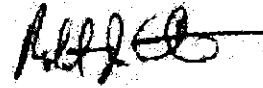
Status and rank codes used in the tables and lists are defined in EXPLANATION OF CODES USED IN NATURAL HERITAGE REPORTS, which can be downloaded from http://www.state.nj.us/dep/parksandforests/natural/heritage/nhpcodes_2010.pdf.

If you have questions concerning the wildlife records or wildlife species mentioned in this response, we recommend that you visit the interactive NJ-GeoWeb website at the following URL, <http://www.state.nj.us/dep/gis/geoweb splash.htm> or contact the Division of Fish and Wildlife, Endangered and Nongame Species Program at (609) 292-9400.

PLEASE SEE 'CAUTIONS AND RESTRICTIONS ON NHP DATA', which can be downloaded from <http://www.state.nj.us/dep/parksandforests/natural/heritage/newcaution2008.pdf>.

Thank you for consulting the Natural Heritage Program. The attached invoice details the payment due for processing this data request. Feel free to contact us again regarding any future data requests.

Sincerely,



Robert J. Cartica
Administrator

c: NHP File No. 15-3907573-8509

Table 1: On Site Data Request Search Results (7 Possible Reports)

<u>Report Name</u>	<u>Included</u>	<u>Number of Pages</u>
1. Possibly on Project Site Based on Search of Natural Heritage Database: Rare Plant Species and Ecological Communities Currently Recorded in the New Jersey Natural Heritage Database	No	0 pages included
2. On or In the Immediate Vicinity of the Project Site Based on Search of the Natural Heritage Database: Rare Plant Species and Ecological Communities Currently Recorded in the New Jersey Natural Heritage Database	No	0 pages included
3. Natural Heritage Priority Sites On Site	No	0 pages included
4. Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.1 Species Based Patches	Yes	1 page(s) included
5. Vernal Pool Habitat on the Project Site Based on Search of Landscape Project 3.1	Yes	1 page(s) included
6. Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.1 Stream Habitat File	No	0 pages included
7. Other Animal Species On the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	No	0 pages included

**Rare Wildlife Species or Wildlife Habitat on the Project
Site Based on Search of
Landscape Project 3.1 Species Based Patches**

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection Status	State Protection Status	Grank	Srank
Aves	Bald Eagle	Haliaeetus leucocephalus	Foraging	4	NA	State Endangered	G5	S1B,S2N
	Bald Eagle	Haliaeetus leucocephalus	Nest	4	NA	State Endangered	G5	S1B,S2N
	Cooper's Hawk	Accipiter cooperii	Breeding Sighting	2	NA	Special Concern	G5	S3B,S4N
	Great Blue Heron	Ardea herodias	Foraging	2	NA	Special Concern	G5	S3B,S4N

Vernal Pool Habitat on the
Project Site Based on Search of
Landscape Project 3.1

Vernal Pool Habitat Type	Vernal Pool Habitat ID
Potential vernal habitat area	1230
Total number of records:	1

Table 2: Within 1 Mile for FHACA Searches (6 possible reports)

<u>Report Name</u>	<u>Included</u>	<u>Number of Pages</u>
1. Rare Plant Species Covered by the Flood Hazard Area Control Act Rule Within One Mile of the Project Site Based on Search of Natural Heritage Database	No	0 pages included
2. Natural Heritage Priority Sites within 1 mile	Yes	See emailed attachments
3. Rare Wildlife Species or Wildlife Habitat Within One Mile of the Project Site Based on Search of Landscape Project 3.1 Species Based Patches	Yes	1 page(s) included
4. Vernal Pool Habitat Within One Mile of the Project Site Based on Search of Landscape Project 3.1	Yes	1 page(s) included
5. Rare Wildlife Species or Wildlife Habitat Within One Mile of the Project Site Based on Search of Landscape Project 3.1 Stream Habitat File	No	0 pages included
6. Other Animal Species Within One Mile of the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	Yes	1 page(s) included

**Rare Wildlife Species or Wildlife Habitat Within One
Mile of the Project Site Based on Search of
Landscape Project 3.1 Species Based Patches**

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection Status	State Protection Status	Grank	Strank	
<i>Aves</i>	Bald Eagle	Haliaeetus leucocephalus	Foraging	4	NA	State Endangered	G5	S1B,S2N	
	Bald Eagle	Haliaeetus leucocephalus	Nest	4	NA	State Endangered	G5	S1B,S2N	
	Bald Eagle	Haliaeetus leucocephalus	Wintering	3	NA	State Threatened	G5	S1B,S2N	
	Bobolink	Dolichonyx oryzivorus	Breeding Sighting	3	NA	State Threatened	G5	S2B,S3N	
	Cooper's Hawk	Accipiter cooperii	Breeding Sighting	2	NA	Special Concern	G5	S3B,S4N	
	Great Blue Heron	Ardea herodias	Foraging	2	NA	Special Concern	G5	S3B,S4N	
	Great Blue Heron	Ardea herodias	Nesting Colony	2	NA	Special Concern	G5	S3B,S4N	
	Osprey	Pandion haliaetus	Foraging	3	NA	State Threatened	G5	S2B	
	Osprey	Pandion haliaetus	Nest	3	NA	State Threatened	G5	S2B	
	Shortnose Sturgeon	Acipenser brevirostrum	Migration Corridor - Adult Sighting	5	Federally Listed Endangered	State Endangered	G3	S1	
	<i>Osteichthyes</i>								

**Vernal Pool Habitat
Within One Mile of the Project Site
Based on Search of
Landscape Project 3.1**

Vernal Pool Habitat Type	Vernal Pool Habitat ID
Vernal habitat area	1180
Potential vernal habitat area	1230
Total number of records:	2

Other Animal Species
 Within One Mile of the Project Site Based on
 Additional Species Tracked by
 Endangered and Nongame Species Program

Scientific Name	Common Name	Federal Protection Status	State Protection Status	Grank	Strank
<i>Faronta rubripennis</i>	Pink Streak			G3G4	S3
<i>Macrochilo louisiana</i>	A. Noctuid Moth			G4	S2S3
<i>Macrochilo santerivalis</i>	A. Noctuid Moth			G3G4	S1S3

Total number of records: 3

Invertebrate Animals

APPENDIX D

QUALIFICATIONS OF PREPARERS

GREGGORY L. WOODRUFF, PP, AICP, LEED-AP
Senior Project Manager

Planning
Natural Resources Permitting
Environmental Assessments
Environmental Impact Statements

EDUCATION Villanova University: M.S. Water Resources and Environmental Engineering
Muhlenberg College: B.S. Environmental Science

PROFESSIONAL CERTIFICATION New Jersey Professional Planner
American Institute of Certified Planners Certified Planner
Leadership in Energy and Environmental Design Accredited Professional

SUMMARY QUALIFICATIONS

Mr. Woodruff has over ten years of experience in planning, natural resources permitting, and sustainable design projects. Prior to joining Langan, his work included three years of experience at a non-profit environmental organization specializing in watershed planning and stream restoration activities. During graduate studies and a research position at Villanova University, Mr. Woodruff's research analyzed the pollutant removal efficiency of a storm water wetland best management practice as part of the Villanova University Urban Stormwater Partnership (VUSP) and the application to development and planning practices. While at Langan, his work has included overall project management as well as various focused land use consulting services, including preparing numerous federal and state permit applications, preparing municipal and state Environmental Impact Statements, testimony as a professional planner before municipal planning and zoning boards, and leading sustainable design efforts.

RELEVANT EXPERIENCE

NEPA Environmental Assessments, Multiple Sites, Camden NJ – Langan project manager completing Environmental Assessment documentation, pursuant to NEPA HUD Guidelines, for multiple redevelopment projects throughout Camden. Activities have included GIS mapping and analysis to identify existing conditions and potential impacts resulting from the redevelopment. Seven study areas analyzed totaling over 200 properties.

US Coast Guard NAVSTA Newport NEPA EA, Newport RI – Assisted with the completion of a NEPA EA for the US Coast Guard (USCG), who was planning a dredging project in Coddington Cove at NAVSTA Newport in Newport, Rhode Island. The project will provide sufficient water depths for the maneuvering and mooring of three USCG buoy tender vessels along the waterfront.

Parks System Sustainable Infrastructure Planning Study, Allentown, PA – Serving as overall project manager overseeing all Langan services on this project, which will evaluate the existing parks system, develop limited in-depth feasibility studies for sustainable infrastructure systems, and make recommendations for sustainable infrastructure investments. The study intends to contemplate the implementation of solar electricity generation systems, progressive on-site wastewater treatment and reuse systems, geothermal heating and cooling systems, and energy audits on energy intensive facilities.

Douglas Harrison Homes Redevelopment Project, Newark, NJ - Completed an Environmental Assessment, including a Noise Assessment, pursuant to NEPA HUD Guidelines

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Natural Resources Permitting
Environmental Assessments
Environmental Impact Statements

for a redevelopment project that included the demolition of twelve 5 to 6-story buildings and the construction three new residential affordable housing complexes and a public park.

Route 440-Culver Redevelopment Plan, Jersey City, NJ – Worked with the City of Jersey City on behalf of client within the proposed redevelopment area to conceptually plan for density, height, and uses that would be incorporated into the redevelopment planning document. Reviewed and modified redevelopment plan language to advocate for future redevelopment of the site consistent with the overall redevelopment plan, which accommodates a light rail line extension and road grid expansion.

Newark Sustainability Action Plan, Newark, NJ – Served as overall project manager overseeing all Langan services on this dynamic project. The planning team was charged with developing an action plan to elevate Newark's pursuit of sustainability goals in the following areas: energy efficiency, greenhouse gas reduction, waste management, water management, and asthma causing air pollution. The project includes significant stakeholder and public engagement processes as part of developing the overall action plan.

West Orange Sustainability Plan Element, West Orange, NJ – Served as Langan project manager developing the Sustainability Plan Element for the City of West Orange as part of its Master Plan Re-Evaluation. The code document outlined existing conditions and issues and defined goals, principles, and specific actions that should be taken to address sustainability issues within the township across multiple disciplines.

Family and Well Being Pavilion Redevelopment Project, Newark, NJ - Completed an Environmental Assessment Categorical Exclusion request application, including a Noise Assessment, pursuant to NEPA HUD Guidelines for a redevelopment project that included renovations and improvements to an existing medical care facility.

Journal Square Redevelopment Project, Jersey City, NJ – Completed an Environmental Assessment, including a Noise Assessment, pursuant to NEPA HUD Guidelines for a redevelopment project that included the construction of a new 67-story residential tower with 622 residential units including one level of retail and six levels of parking.

Haddon Redevelopment Project, Haddon Township, NJ – Completed background research and assisted with the preparation of professional planning testimony regarding an amendment to an existing redevelopment plan. The site was a former contaminated site proposed for complete redevelopment with a large mixed-use project.

Alexander Hamilton Redevelopment Project, Paterson, NJ – Completed a Noise Assessment, pursuant to NEPA HUD Guidelines for a redevelopment project that includes the demolition of five high-rise residential buildings and the construction of nine new three-story affordable housing buildings.

GREGGORY L. WOODRUFF, PP, AICP, LEED-AP
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Planning
Natural Resources Permitting
Environmental Assessments
Environmental Impact Statements

Professional Planning Testimony, Various Sites, NJ – Provided professional planner testimony before municipal planning board as part of site plan application process for variances from existing municipal ordinances.

Princeton Nurseries Property Inventory, Assessment and Mapping Report, Allentown, NJ – Completed a Property Inventory, Assessment and Mapping Report for an approximately 2,500 acre confidential site in southern New Jersey. The site was undergoing master planning efforts to locate and design a center containing approximately 1,000 residential units. The Property Inventory, Assessment and Mapping Report included creating a constraints mapping set and an accompanying permitting and site design analysis document.

Duke Farms LEED Improvements, Reuse & Renovation Project, Hillsborough, NJ – Served as project manager for a master planning infrastructure and natural resources review effort for an approximately 2,700-acre environmental and cultural landscape destination in central New Jersey. Serving as project manager for the capital improvement project, which will restore a historic barn to serve as an orientation center, utilize and supplement an existing on-site trail network, and incorporate many sustainable design components including a geothermal heat pump system, an on-site constructed wetland system to treat wastewater, and progressive stormwater best management practices. The project plans LEED platinum certification for the orientation center and LEED gold certification for a second building on the site.

Watershed Conservation Management Plans, Lehigh Valley, PA – Assisted with the completion of numerous watershed management plans that identified existing natural, cultural, and physical resources while outlining a watershed master plan for future management and restoration. The plans involved extensive public input and multiple meetings with local stakeholder groups. The watershed management plans were completed with a combination of funding sources including the Pennsylvania Department of Conservation and Natural Resources and various private foundations.

- o Lehigh River Watershed Conservation Management Plan;
- o Monocacy Creek Watershed Conservation Management Plan; and
- o Jordan Creek Watershed Conservation Management Plan.

TCNJ Stream Corridor Impact Mapping Project, Ewing, NJ – Served as project manager to assist The College of New Jersey (TCNJ) to comply with Delaware and Raritan Canal Commission (DRCC) requirements to map all floodplains throughout campus. Floodplain delineation includes use of the Approximation Method as per NJDEP requirements.

Jackson Street Park Redevelopment Project, Allentown, PA – Served as overall Langan project manager overseeing the conversion of this former urban vehicle fueling and repair station into an urban park. Project included acquiring Pa. ISR grant funding for the City to facilitate the redevelopment, environmental work plan development, and full site plan design package, including applicable development permits.

Stockton Housing V Project, Galloway, NJ – Prepared and received approval from NJDEP of an Environmental Impact Statement prepared in accordance with Executive Order No. 215.

GREGGORY L. WOODRUFF, PP, AICP, LEED-AP
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Planning
Natural Resources Permitting
Environmental Assessments
Environmental Impact Statements

Prepared and received approval of a New Jersey Pinelands Commission development application to construct four residential buildings and two surface parking areas on the campus of The Richard Stockton College of New Jersey, which is within the New Jersey Pinelands Preservation Area. Prepared and received approval of a NJDEP Reforestation Plan associated with the deforestation of approximately 7 acres of forested area to construct the two surface parking areas.

Stockton Lakeside Campus Improvements Project, Galloway, NJ – Prepared and received approval from NJDEP of an Environmental Impact Statement in accordance with Executive Order No. 215. Prepared a New Jersey Pinelands Commission development application to construct two residential buildings and restructure two existing parking areas on the campus of The Richard Stockton College of New Jersey, which is within the New Jersey Pinelands Preservation Area.

Rutgers University Livingston Housing Project, Piscataway, NJ – Served as Langan Project Manager for natural resources planning and permitting services associated with the planning and design of a 1,500-bed mixed-use dormitory project on Livingston campus. Natural resources planning and permitting services included accommodating the NJ No Net Loss Reforestation Act through the development of Reforestation Plans. Langan also prepared the Environmental Impact Statement pursuant to Executive Order No. 215.

Rutgers University Football Stadium Expansion, Piscataway, NJ – Served as Langan Project Manager for natural resources planning and permitting services associated with the planning and design of the football stadium expansion that created a fully enclosed facility, increasing seating capacity by roughly one-third. Natural resources planning and permitting services included accommodating the NJ No Net Loss Reforestation Act through the development of a Reforestation Plan. Langan also prepared the Environmental Assessment pursuant to Executive Order No. 215.

New Meadowlands Stadium, East Rutherford, NJ – Aided in the preparation of a Preliminary Environmental Impact Statement pursuant to New Jersey Sports and Exposition Authority (NJSEA) regulations. The report addresses potential impacts from the construction of the New Meadowlands Stadium Project to be located adjacent to the existing Giants Stadium. Submitted Federal Aviation Administration Obstruction Evaluation applications for the stadium structure.

Newark Circulation Improvements Project, Newark, NJ – Aided in the completion of a New Jersey EO-215 Environmental Impact Statement for the downtown roadway improvements to assess potential impacts.

Celadon Redevelopment Project, Elizabeth, NJ – Prepared an Environmental Impact Statement to accompany the site plan approval submission to the City of Elizabeth. The project involves the redevelopment of an approximately ±30-acre site along Newark Bay with approximately 5 million square feet of mixed-use development, a high-speed ferry terminal, a

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Planning
Natural Resources Permitting
Environmental Assessments
Environmental Impact Statements

transient marina, and a public walkway. The project proposed LEED Silver certification as part of the LEED Neighborhood Development Pilot Program.

PROFESSIONAL DEVELOPMENT AND AFFILIATIONS

USGBC New Jersey Chapter – New Jersey Board of Directors
ACE Mentor Program – New Jersey Executive Board & Paterson Team Leader
Paterson Garrett Morgan Academy – Partnership Council
Langan Green Team – Office Leader Team

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EDUCATION Rutgers University: Master of City and Regional Planning (M.C.R.P.)
The College of New Jersey: B.S. Economics

PROFESSIONAL CERTIFICATION New Jersey Professional Planner
American Institute of Certified Planners Certified Planner
LEED Green Associate

SUMMARY QUALIFICATIONS

Mr. Heydt has over five years of experience in planning, natural resources permitting, and sustainable design projects. During graduate studies at the Bloustein School of Planning and Public Policy and research positions with the Center for Urban Policy Research and Sustainable Jersey, Mr. Heydt's coursework and research focused on sustainable land use and transportation planning. Prior to joining Langan, his work included four years of experience at a local planning consulting firm specializing in the preparation of master plans, redevelopment plans, planning and zoning analyses, and testimony before planning and zoning boards. While at Langan, his work has focused on land use consulting services, including preparing redevelopment and sustainability plans, numerous federal and state permit applications, and municipal, State and Federal environmental impact statements.

RELEVANT EXPERIENCE

Lincoln Park Equities Redevelopment Plan, Piscataway, NJ – Prepared a redevelopment plan for the former Dow Chemical facility which involved remediation concerns, wetlands preservation and mitigation and proposed new light industrial uses in Piscataway, NJ.

South Avenue Redevelopment Plan, Marlton, NJ – Prepared a redevelopment plan for proposed residential development consisting of townhouses and apartment units in Marlton, NJ.

Cranbury Brick Yard State Plan Amendment Request, Cranbury, NJ – Prepared a report requesting a state plan amendment for a former industrial site in order to support the redevelopment for light industrial warehouse facility in Cranbury, NJ.

Middlebrook Crossing Improvement Project, Bridgewater, NJ – Prepared an Environmental Impact Statement in accordance with municipal requirements for the expansion of a mixed-use commercial/industrial park which was a former warehouse facility in Bridgewater, NJ.

Morristown Municipal Airport Hangar 18 Tarmac Expansion Project, Hanover, NJ – Prepared a Federal Aviation Authority (FAA) Short Environmental Assessment form to comply with FAA NEPA requirements associated with a proposed tarmac expansion at the Hangar 18 facility at the Morristown Municipal Airport.

Landmark Aviation Expansion Project, Teterboro, NJ – Prepared a Federal Aviation Authority Short Environmental Assessment form to construct two hangars and associated tarmac area at the existing Landmark Aviation Hangar facility at Teterboro Airport.

Rutgers University Mill Brook Culvert Replacement, Ewing, NJ – Assisted with the preparation of a Freshwater Wetlands General Permit, Flood Hazard Verification and Flood Hazard Area Individual Permit to comply with NJDEP requirements for the in-kind replacement of a failed culvert in Mill Brook.

Goethals Bridge, Staten Island, NY – Assisted with the preparation of various permit and approvals for all applicable regulatory agencies of the City of New York, including NYC Department of Environmental Protection, NYC Department of Transportation, NYC Department of Parks and Recreation.

Atlanta Falcons New Stadium Project, Atlanta, GA – Assisted with the preparation of an Environmental Effect Report in connection with the proposed relocation of the Georgia Dome in Atlanta, Georgia. A total of 21 parcels were evaluated based on approximately 20 environmental criteria. The new stadium is design to reduce environmental impacts in effort to achieve LEED certification.

Pound Ridge Cottages Development Plan, Pound Ridge, NY – Prepared a NY State Environmental Quality Review (SEQR) full environmental assessment form in accordance with the NYS Department of Environmental Conservation for a 47-unit residential development. The project incorporated innovative stormwater runoff mitigation strategies, including a bio-swale filtration process, and wastewater filtration strategies, including a constructed wetlands to filter and treat waste water.

PRIOR EXPERIENCE

Preparation of Master Plans and Reexamination Reports, Northern NJ – Involved with the preparation of Master Plans and Master Plan Reexamination Reports in accordance with the Municipal Land Use Law (N.J.A.C 40:55D) for various municipalities including Palisades Park, Wyckoff and.

Preparation of Redevelopment Plans, Northern NJ – Involved with the preparation of Redevelopment Plans in accordance with the Local Housing and Redevelopment Law (N.J.A.C 40A:12) for various municipalities including North Haledon, Wyckoff and Piscataway.

Planning and Zoning Board Consultant, NJ/NY – Provided consulting services for Planning and Zoning Boards in various municipalities including Palisades Park, North Haledon, Paramus and Saddle Brook

Expert Witness Planning Testimony, NJ/NY – Provided expert planning testimony before Planning and Zoning Boards across New Jersey and New York.

**Charles H. Heydt, P.P., AICP, LEED GA
Planner**

**Redevelopment
Environmental Impact Statements
Professional Planning**

PROFESSIONAL DEVELOPMENT AND AFFILIATIONS

USGBC New Jersey Chapter – Member
American Planning Association – Member
APA New Jersey Chapter – Emerging Professionals Chair

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