APPENDIX E
ECOLOGY

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ECOLOGICAL ANALYSIS
for
DRAFT GENERIC ENVIRONMENTAL IMPACT STATEMENT FOR DECLARATION AS SURPLUS AND SUBSEQUENT SALE OF 255 ACRES OF COUNTY OWNED LAND IN YAPHANK FOR MIXED USE DEVELOPMENT PURPOSES
SUFFOLK COUNTY, NEW YORK

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1.0 EXISTING ENVIRONMENTAL CONDITIONS

1.1 WATER RESOURCES

The project area is located in the region of the Upper Glacial Aquifer, Magothy Aquifer and the Atlantic Ocean/Long Island Sound watershed. This watershed covers marine waters of New York Harbor, Long Island Sound, Block Island Sound and the South Shore of Long Island and includes 1,650 square miles of land, 522 miles of freshwater rivers and streams, 132 freshwater lakes, ponds and reservoirs and 118 miles of Atlantic Ocean coastline.

1.1.1 Wetlands

A review of NYSDEC Wetland Maps, USFWS NWI maps and field surveys in August and September 2010 identified no wetlands or surface waters within Study Areas B, C, D, E and F (Figures 1 and 2).

The NYSDEC Wetland Map and the United States Fish and Wildlife Service National Wetland Inventory (NWI) Map indicate that palustrine forested (PFO) and palustrine unconsolidated bottom (PUBH) wetlands associated with the Carmans River are located approximately 1000 feet northeast of Study Area A (Figures 1 and 2). One of these wetlands, Weeks Pond, is a coastal plain pond described by the New York State Department of Environmental Conservation (NYSDEC) Natural Heritage Program as supporting several state-listed plant species (Appendix A).

1.1.2 Streams

A small intermittent stormwater diversion channel was identified in Study Area A east of the existing large road salt storage building. Runoff from the east and south drains to the

southeastern edge of Study Area A and flows to a level area behind an earthen berm in the forest. The channel does not appear to directly connect with the Carmans River (the closest perennial water body). Study Area A is approximately 1000 feet west of the Carmans River and is outside of the 100 year floodplain (Figure 3).

The Carmans River is located approximately 1000 feet east from Study Area A and is the closest perennial water body to Study Areas A, B, C, D, E or F. According to the Carmans River Environmental Assessment (Cashin Associates, 2002), the Carmans River is almost entirely fed by shallow groundwater; has been recognized by New York State as a Wild, Scenic and Recreational River; and provides a diversity of wildlife habitat for both aquatic and terrestrial organisms. Unlike most other surface waters on Long Island, baseflow within the Carmans River accounts for almost 100% of the discharge (Rozell, 2010). Groundwater discharge into the Carmans River appears to be from a much larger geographic area than that area suggested by the surface topography and is dominated by baseflow contributions from the shallow Upper Glacial Aquifer as well as the deeper Magothy Aquifer (O'Malley, 2008). Numerous existing sources of nutrients and other contaminants have been identified along the Carmans River including Federal and State Superfund sites, landfill leachate, historic duck farming areas, septic systems, residential lawns, road salt and agriculture (Cashin Associates, 2002; USGS, 1999; O'Malley, 2008).

Water quality data collected by the SCDHS at the USGS gauging station on the Carmans River at Yaphank indicate total nitrogen concentrations are in the 1-2 ppm range (Cashin Associates, 2002; Monti 2003). Intermittent traces of 1,1,1- trichloroethane have also been detected. Total polyaromatic hydrocarbons (PAH) in sediment associated with the Carmans River were reported to range from 345ppb to 744ppb (Zaikowski et al., 2008). Water quality data from the Carmans, Patchogue and Swan Rivers suggest that nutrient levels, temperature and pH were similar (Zaikowski et al., 2008).

The Carmans River was significantly less saline than the Patchogue and Swan Rivers. Zaikowski et al. (2008) indicated that the Carmans River experienced significantly less warm season hypoxia as compared with the Patchogue and Swan Rivers. Benthic invertebrate assessment of

the Carmans River suggests that the river is non-impacted to slightly impacted according to the biotic index and EPT criteria (Zaikowski et al., 2008). Zaikowski et al. (2008) suggest that the physical attributes of the river are a major factor contributing to warm season hypoxia rather than nutrient levels in the river.

1.2 ECOLOGY

1.2.1 Vegetation

Study Areas A, B, C, D, E and F all lie within the pitch pine-oak forest community type within the Coastal Lowlands Ecozone (Reschke 1990). This fire dependent natural community type is part of the broadly defined Pine Barrens Ecosystem. However, the study area is not within the regulated Pine Barrens Core or Compatible Growth Areas. Although the existing forest types contain a relatively small component of pitch pine, this is likely the result of fire exclusion and land use history and not representative of the suitability of these areas to support "characteristic" pine barrens communities. Specific vegetative diversity identified within each study area during site field visits in August and September 2010 is described in Table 1.

Study Area A contains 34.16+ acres within the northeastern parcel of county property (Figure 4). The site is bordered by the Long Island Expressway (LIE) to the north, Yaphank Avenue to the west, the Suffolk County Department of Public Works (DPW) complex to the south, and a buffer area along the Carmans River to the east. The northern/interior portion of Study Area A supports native vegetation while most of the disturbed perimeter habitats support several species of invasive vegetation along with some native plant species. The northern/interior portion of Study Area A is predominately mixed pitch pine/oak forest. The most dominant species within the forested portion of the property was white oak (*Quercus alba*) followed by pitch pine (*Pinus rigida*), black oak (*Quercus velutina*), blueberry (*Vaccinium pallidum*), huckleberry (*Gaylussacia baccata*) and American holly (*Ilex opaca*). Vegetation identified along disturbed edge areas bordering the highway yards and Yaphank Avenue include black locust (*Robinia pseudoacacia*), red maple (*Acer rubrum*), northern catalpa (*Catalpa speciosa*), multiflora rose (*Rosa multiflora*), autumn olive (*Elaeagnus umbellata*), eastern red cedar (*Juniperus virginiana*), black cherry (*Prunus serotina*), blackberry/bramble (*Rubus* sp.), rough-stemmed

goldenrod (*Solidago rugosa*), oriental bittersweet (*Celastrus orbiculata*) and bamboo. Land use within the majority of Study Area A includes the Suffolk County highway yards, public works buildings, a large road salt storage building, and vehicle parking. Discontinued traffic lights and traffic poles, approximately twenty (20) plus barrels of road paint and numerous county vehicles and drainage pipes are scattered around storage areas within the highway yards. The concern of potential contamination of the soils and water resources is high given the lack of containment measures in the storage areas. Fuel, lubricants and chemicals from the vehicles and paint barrels have the potential to leach into the ground and/or be washed away with storm runoff. The topography of Study Area A is generally flat to moderately sloped with the gradient gently sloping to the east.

Table 1. Plant species observed from Study Areas A-F.

Common Name	Scientific Name	Invasive	Study Area A	Study Area B	Study Area C	Study Area D	Study Area E	Study Area F
white oak	*Quercus alba*		X	X	X	X	X	X
black oak	*Quercus velutina*		X	X	X	X	X	X
scrub oak	*Quercus ilicifolia*			X	X	X	X	X
post oak	*Quercus stellata*			X	X			
scarlet oak	*Quercus coccinea*			X	X		X	X
pitch pine	*Pinus rigida*		X	X	X	X	X	X
black locust	*Robinia pseudoacacia*		X					
red maple	*Acer rubrum*		X					
northern catalpa	*Catalpa speciosa*		X					
sassafras	*Sassafras albidum*			X	X		X	X
multiflora rose	*Rosa multiflora*	X	X					
autumn olive	*Elaeagnus umbellata*	X	X					
eastern red cedar	*Juniperus virginiana*		X					
blueberry	*Vaccinium pallidum*		X	X	X		X	X
huckleberry	*Gaylussacia baccata*		X	X	X	X	X	X
bracken fern	*Pteridium aquilinum*			X	X	X	X	X
sweet fern	*Comptonia peregrina*					X		
Virginia creeper	*Parthenocissus quinquefolia*					X		
pipsissewa	*Chimaphila maculata*					X		
American holly	*Ilex opaca*		X					
black cherry	*Prunus serotina*		X					
blackberry/bramble	*Rubus* sp.		X					
rough-stemmed goldenrod	*Solidago rugosa*		X					
Oriental bittersweet	*Celastrus orbiculata*	X	X					
bamboo		X	X					

Study Area B is a 121.13+ acre rectangular parcel south of the County Farm, west of the Police Headquarters and north of the County Correctional Facility (Figure 4). Species within this mixed pitch pine/oak forest include pitch pine, white oak (dominant), black oak, scrub oak (*Quercus ilicifolia*), post oak (*Quercus stellata*), scarlet oak (*Quercus coccinea*), sassafras, blueberry, huckleberry and bracken fern. The greatest herbaceous diversity is along the power line right-of-way at the southern edge of the parcel. The topography of Study Area B is generally flat to moderately sloped with the gradient gently sloping to the south.

Study Area C contains 28.32+ acres immediately south of Area B and west of the County Correctional Facility (Figure 4). Species within this mixed pitch pine/oak forest include pitch pine, white oak (dominant), black oak, scrub oak, post oak, scarlet oak, sassafras, blueberry, huckleberry and bracken fern. The greatest herbaceous diversity is along the power line right-of-way at the northern edge of the parcel. The topography of Study Area C is generally flat to moderately sloped with the gradient gently sloping to the south.

Study Area D is a 94.75+ acre rectangular parcel in the southern portion of the County's holdings along Horseblock Road (Figure 4). An active quarry is located immediately to the west and The County Correctional Facility is located to the northeast. The entire parcel is mixed pitch pine/oak forest. The northern portion of Study Area D is dominated by white oak. The southern portion of Study Area D along Horseblock Road is dominated by pitch pine. Other species within Study Area D include black oak, scrub oak, blueberry, huckleberry and bracken fern, sweet fern (*Comptonia peregrina*), Virginia creeper (*Parthenocissus quinquefolia*) and pipsissewa (*Chimaphila maculata*). The greatest vegetative diversity is within the southern portion of Study Area D, along Horseblock Road. A dirt road traverses the center of Study Area D from the northern boundary with Study Area C to the southern boundary with Horseblock Road. Several side trails branch off the main dirt road in the interior of the study area. The topography of Study Area D is generally flat to moderately sloped with the gradient gently sloping to the south.

Study Area E contains 15.00 acres immediately east of Area D and adjacent to the County Correctional Facility (Figure 4). Species within this mixed pitch pine/oak forest include pitch

pine, white oak (dominant), black oak, scrub oak, scarlet oak, sassafras, blueberry, huckleberry and bracken fern. The topography of Study Area E is generally flat with the gradient gently sloping to the south.

Study Area F contains 10.49 acres immediately east of Area D and adjacent to the County Correctional Facility (Figure 4). Species within this mixed pitch pine/oak forest include pitch pine, white oak, black oak, scrub oak, scarlet oak, sassafras, blueberry, huckleberry and bracken fern. The topography of Study Area F is generally flat with the gradient gently sloping to the south.

1.2.2 Wildlife

Wildlife species observed during field surveys included white-tailed deer (*Odocoileus virginianus*), gray squirrel (*Sciurus carolinensis*) and a variety of songbird species. A network of deer trails meanders through the study areas. Mammal and bird species identified from the nearby Brookhaven National Laboratory property that are expected to inhabit similar pitch pine/oak habitats within the study areas include raccoon (*Procyon lotor*), eastern chipmunk (*Tamias striatus*), red fox (*Vulpes fulva*), gray fox, eastern mole (*Scalopus aquaticus*), masked shrew (*Sorex cinereus*), pine vole (*Microrus pinetorum*), white-footed mouse (*Peromyscus leucopus*), southern flying squirrel (*Glaucomys volans*), rufous-sided towhee (*Pipilo erythrophthalmus*), common yellowthroat (*Geothlypis trichas*), field sparrow (*Spizella pusilla*), prairie warbler (*Dendroica discolor*), pine warbler (*Dendroica pinus*), blue jay (*Cyanocitta cristata*) and whip-poor-will (*Caprimulgus vociferus*) (BNL, 1994; Reschke, 1990).

A review of the New York State Department of Environmental Conservation (NYSDEC) Natural Heritage Program database was conducted to describe the occurrence of rare or state-listed animals and plants, significant natural communities, and other significant habitats which occur or may occur on the project site or in the immediate vicinity (Appendix A). No state-listed animals, plants, natural communities, or habitats were identified on the project site. The NYSDEC database identified State-listed plant species from a coastal plain pond approximately 1000 feet northeast of Study Area A and from Yaphank in the town of Brookhaven and State-listed animal

species including a skipper species and a dragonfly species from Yaphank in the town of Brookhaven.

The Final Scope for this DGEIS raised the question of whether the gray fox (*Urocyon cinereoargenteus*) was found within the study area. During field studies in support of this investigation, no gray fox were observed within the study area. The gray fox typically prefers a mixture of hardwood and pine woodlands with dense understory, rocky areas, old fields bordering extensive forested areas and farmlands. These opportunistic feeders consume primarily small mammals and insects and they will forage on vegetation including acorns, grapes, apples and berries. The gray fox can climb trees and will make its den in rocky crevices, caves, hollow logs and trees.

The gray fox is not a species listed by the NYDEC as rare, threatened or endangered. This species ranges throughout New York State although little is known about the current status of their population on Long Island. Studies of the gray fox at the nearby Brookhaven National Laboratory have positively identified this species as recently as 2006 (Finn 2005; Mallin 2007; Fallier 2008; BNL 1994; T. Green pers. comm.). In addition, the Town of Brookhaven has observed the gray fox on property located directly across from the police headquarters, east of the Schmidt Farm (McConnell 2010; T. Green pers. comm.). No records or observations of gray fox within Study Area A, B, C, D, E or F were documented as part of this investigation. Beyond these observations, little is known about the population of gray fox on Long Island. Long Island is geographically isolated from the rest of New York State and contains habitats and geography unique to the state. It is very unlikely that gray fox or any other wildlife species are able to migrate beyond the limits of the island. Concern has been expressed for the protection of the gray fox on Long Island (McConnell 2010). While there may be merit to this concern, the New York Department of Environmental Conservation (NYDEC) maintains designated trapping and hunting seasons for red fox and gray fox throughout New York State, including Long Island (NYDEC Hunting and Trapping Guide, 2010-2011).

2.0 PROBABLE IMPACTS OF THE PROPOSED ACTION

2.1 WATER RESOURCES

2.1.1 Wetlands

No wetland areas were identified within study areas A, B, C, D, E or F. Therefore, the proposed plan will not directly impact any wetland resources.

2.1.2 Streams

No streams or surface water features were identified within study areas A, B, C, D, E or F. Therefore, the proposed plan will not directly impact any surface water resources.

Study Area A is the closest area to a perennial water body (i.e. Carmans River). This study area would support a variety of uses including an athletic field, roads, parking areas, buildings, lawns and landscaping. The proposed structures, including mixed-use commercial and residential buildings and an arena, would occupy approximately 6.0 acres of the area. Additional area would be utilized for parking and turfgrass.

The project proposed within Study Area A will result in a net increase in impervious surfaces and turfgrass. The area of impervious surfaces within Long Island watersheds has been documented to have a negative effect on fish and aquatic invertebrates within the stream (Ayers et al., 2000). Increased road density and parking areas may require increased use of deicing agents such as road salt and increased turfgrass and landscaped areas may require increased use of fertilizers. O'Malley (2008) reported a direct correlation between the density of roads and the concentration of both sodium and chloride ions in the Carmans River. The proposed development within Study Area A will also result in an increased water demand which will likely be met through additional withdrawal of groundwater by the municipal supplier. Increases in groundwater withdrawal within the Carmans River groundwater basin could negatively impact the hydrology of the river since the hydrology of the river is almost entirely dominated by baseflow (Rozell, 2010). Additionally, installation of sanitary sewers and stormwater conveyances could alter flow patterns of shallow groundwater. Conversely, the increase in impervious cover within Study Area A could result in increased surface runoff to the river.

Surface runoff from developed areas is often associated with increased levels of nutrients, sediment and other contaminants.

However, it should be noted that existing conditions within Study Area A may also contribute negatively to the water quality within the Carmans River. Current uses within the majority of Study Area A include 10 acres of County highway yards, 13,000 ft^2 of public works buildings, a 16,600 ft^2 road salt storage building, a 90 vehicle parking area and a doctor's cottage and shed. Discontinued traffic lights and traffic poles, road paint, county vehicles and drainage pipes are stored within the County highway yard. Therefore, existing uses within Study Area A also have potential for contamination of soils and shallow groundwater.

Study Areas B, C, D, E & F are greater than 1 mile from the Carmans River but within the estimated groundwater contributing area. The proposed development within Study Area B includes mixed income residential housing (785 units) and a 20,000ft^2 day care center. The proposed development within Study Area C includes athletic fields and trails. The proposed development within Study Area D includes light industrial and alternative energy production facilities. The proposed development within Study Area E and F includes relocation of the Suffolk County Department of Public Works facility from Study Area A. Although distant from the Carmans River, the proposed developments could negatively affect both water quality and quantity within the river if there were decreased groundwater recharge, increased groundwater withdrawal, introduction of contaminants into shallow groundwater from surface runoff and increased use of fertilizers and deicing materials.

The proposed project would result in increased withdrawal of groundwater from the Upper Glacial and Magothy aquifers. However, according to the Suffolk County Water Authority (SCWA) their wells are an interconnected system and water to serve this project could be supplied through dozens of wells, both existing and new, if needed. Some of these existing wells are screened in the Upper Glacial aquifer and some are screened in the Magothy aquifer. If new wells are needed, the decision on where the wells are screened is based upon water quality and that decision cannot be made until the location of the well is known. According to the SCWA, the proposed withdrawal from this project would not be anticipated to have a significant effect

on baseflow to the Carmans River due to the size of the watershed recharging the aquifer and the fact that the water supply would be from an interconnected system that draws from a large area and from both aquifers. It is important to note that the wastewater generated by the project will be treated and discharged to groundwater, thus maintaining the water table over the long term.

2.2 ECOLOGY

2.2.1 Vegetation

The proposed project will result in the clearing and conversion of existing forest land to other cover types. The surface area of the Carmans River watershed is approximately 22,700 acres with 6,064 acres (27%) currently preserved. The Town of Brookhaven contains approximately 42,989 acres (26%) of recreational and open space area (Suffolk County Department of Planning, 2007). According to U.S. Forest Service statistics, the area of forest land within Suffolk County, NY increased from 123,300 acres in 1980 to 182,600 acres in 1993 (Considine and Frieswyk, 1982; Alerich and Drake, 1994). This trend is similar to trends observed throughout the last half of the 20th century in the eastern U.S. as agricultural lands were abandoned and reverted to forest land (Houghton and Hacker, 2000). U.S. Geological Survey (USGS) land cover data indicate a decrease in forest land within the broader Atlantic Coastal Pine Barrens Ecoregion from 1,107,502 acres (4482 km^2) in 1973 to 1,021,511 acres (4134 km^2) in 2000 (Drummond and Loveland, 2010). It is unclear if the USGS data trends also apply specifically to Suffolk County or the Carmans River watershed.

Installation of buildings, roads and associated infrastructure would increase the fragmentation of habitats for plants and animals and would encourage the establishment of invasive plant species. Forest fragmentation can reduce the movements of wildlife species and limit the amount of genetic diversity within populations. The forest fragmentation would favor “edge” species at the expense of forest interior dwelling species.

2.2.2 Wildlife

The loss of upland, woodland habitat resulting from the proposed project is the most potentially significant impact to wildlife populations and species within the study area. The proposed project would clear or disturb approximately 75% of the existing forest within Study Areas A, B, C, D,

E and F and most of the shrub/transition fields and unmanaged grasslands. Approximately 15% of the existing forest and 1% of the existing grassland would be left intact. The total area of developed/impervious and lawn/landscaped surfaces would increase. As a result of the overall development plan, a small amount of natural habitat will remain for wildlife to inhabit. Resident wildlife populations would be expected to disperse from the project area and into adjacent natural areas during construction of the proposed project. The loss of natural habitat within the project areas may discourage the return of certain wildlife species. Those species most adapted to suburban habitats, fragmented natural habitats and human activity would be expected to return to the study areas and reestablish populations within the altered landscape.

3.0 MITIGATION MEASURES

3.1 WATER RESOURCES

3.1.1 Wetlands

No wetland areas will be impacted as a result of the proposed development.

3.1.2 Streams

No streams or surface water features will be directly impacted as a result of the proposed development. Due to the correlation between land use and water quality in the Carmans River, the proposed development activities could potentially affect the quality and quantity of baseflow discharge into the Carmans River. Potential mitigation measures may include limitations on impervious surfaces, preparation of a Stormwater Pollution Prevention Plan (SWPPP), construction of stormwater retention facilities to promote infiltration of surface runoff from impervious surfaces, construction of pre-treatment cells or wetlands to promote the removal of contaminants from stormwater runoff, restrictions on the use of fertilizers and pesticides in the proposed landscaping and turfgrass areas and limitations on the type and use of deicing materials. The proposed stormwater treatment design will allow for the detention and infiltration of up to 8 inches of precipitation from impervious surfaces within the proposed development. The use of fertilizers and pesticides on turfgrass areas would be mitigated by recently adopted regulations including:

- Local Law 41-2007 "A Local Law to Reduce Nitrogen Pollution by reducing Use of Fertilizer in Suffolk County" prevents the application of fertilizer on County owned property, and prohibits the application of fertilizer on all other property between November 1 and April 1 every year. Exceptions were provided for golf courses, the Suffolk County Farm, athletic fields, (provided, however, that the County department with jurisdiction of the fields shall develop and comply with an annual plan containing best management practices to reduce use of fertilizer and avoid fertilizer leachate) and newly-seeded or planted landscapes and newly-seeded or newly-sodded areas. Waivers may be granted with appropriate terms and conditions. Decision to grant waivers consider whether the uses of groundwater, surface water and drinking water supplies will be impaired, whether the application conforms to a comprehensive management plan and/or well accepted best management practices, and whether the proposed use can be modified so that the project will not require a waiver.
- Local Law 5-2009 "A Local Law to Reduce the Use of Fertilizer Near Surface Waters in Suffolk County" added another degree of protection as follows:

  Fertilizer shall not be applied to any County-owned property, nor to any turf on any non-owned County real property, within twenty (20) feet of any regulated surface water, except, that this restriction shall not apply where a contiguous natural vegetative buffer, at least ten (10) feet wide, separates a turf area and regulated surface water.

- Chapter 380 of the Suffolk County Code describes the County's Pest Control regulations, which state:

  Effective July 1, 2003, no County department or agency, or any pesticide applicator employed by the County or agency as a contractor or subcontractor for pest control purposes, shall apply any pesticide on County property (as owner ort tenant) except as provided for in Sections 380-3 of this Chapter.

Additionally, since the County currently owns the site of the proposed project, these limitations on fertilizer and pesticide use effectively limit the application of pesticides and fertilizer on the property. The County intends to continue this practice on this land following its sale as a

condition of sale. Therefore, these stringent requirements will apply in perpetuity to the land purchased by the Selected Developer.

The proposed project would result in increased withdrawal of groundwater from the Upper Glacial and Magothy aquifers. According to the SCWA their wells are an interconnected system and water to serve this project could be supplied through dozens of wells, both existing and new, if needed. Some of these existing wells are screened in the Upper Glacial aquifer and some are screened in the Magothy aquifer. If new wells are needed, the decision on where the wells are screened is based upon water quality and that decision cannot be made until the location of the well is known. According to the SCWA, the proposed withdrawal from this project would not be anticipated to have a significant effect on baseflow to the Carmans River due to the size of the watershed recharging the aquifer and the fact that the water supply would be from an interconnected system that draws from a large area and from both aquifers. In addition, the wastewater generated by the project will be treated and discharged to groundwater, thus maintaining the water table over the long term. Therefore, additional groundwater withdrawals resulting from the project will be mitigated by utilizing multiple supply aquifers and discharging treated wastewater back to groundwater. Additional mitigation measures may include the use of water conservation practices, limits on irrigation of turfgrass areas and installation of water conserving fixtures in residential and commercial facilities.

3.2 ECOLOGY

3.2.1 Vegetation

Removal of the native forest cover type could be partially mitigated through the use of native tree and shrub species in the proposed landscaping. Native grassland species could be substituted instead of maintained turfgrass. Additionally, specific project designs could strive to minimize the clearing of forest areas through cluster development or modifications to densities.

3.2.2 Wildlife

Maximizing the preservation of existing forest will mitigate the impacts on native wildlife populations. Specific project designs should strive to maintain travel corridors and contiguous

habitat. The use of native tree, shrub and grassland species will promote re-colonization of the developed areas by wildlife species.

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APPENDIX A

NYSDEC Natural Heritage Program Database Review

#3274

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Division of Fish, Wildlife & Marine Resources
New York Natural Heritage Program
625 Broadway, 5th Floor, Albany, New York 12233-4757
Phone: (518) 402-8935 • **Fax:** (518) 402-8925
Website: www.dec.ny.gov

Alexander B. Grannis
Commissioner

July 16, 2010

RECEIVED
JUL 19 2010
AMY S. GREENE
ENVIRONMENTAL CONSULTANTS, INC.

John Pabish
Amy S. Greene Environmental Consultants
4 Walter E. Foran Blvd, Suite 209
Flemington, NJ 08822

Dear Mr. Pabish:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to an Environmental Assessment for the possible Land Acquisition for the proposed Yaphank Center Development, Project # 3274, area indicated on the map you provided, including a ½ mile radius, located in the Town of Brookhaven, Suffolk County.

Enclosed is a report of rare or state-listed animals and plants, significant natural communities, and other significant habitats, which our databases indicate occur, or may occur, on your site or in the immediate vicinity of your site. For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our databases. We cannot provide a definitive statement as to the presence or absence of all rare or state-listed species or natural communities. This information should not be substituted for on-site surveys that may be required for environmental impact assessment.

The enclosed report may be included in documents that will be available to the public. However, any enclosed maps displaying locations of rare species are considered sensitive information, and are intended only for the internal use of the recipient; they should not be included in any document that will be made available to the public, without permission from the New York Natural Heritage Program.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g. regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, as listed at www.dec.ny.gov/about/39381.html.

733

This project location is adjacent to a designated Significant Coastal Fish and Wildlife Habitat. This habitat is part of New York State's Coastal Management Program (CMP), which is administered by the NYS Department of State (DOS). Projects which may impact the habitat are reviewed by DOS for consistency with the CMP. For more information regarding this designated habitat and applicable consistency review requirements, please contact:

Jeff Zappieri - (518) 474-6000
NYS Department of State
Office Coastal, Local Government and Community Sustainability
1 Commerce Plaza, 99 Washington Avenue,
Albany, NY 12231

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

Sincerely,

Tara Salerno

Tara Salerno, Information Services
New York Natural Heritage Program

Enc. #733

cc: Reg. 1, Wildlife Mgr.

This response includes reports and a map for rare species and significant natural communities within 0.5 mile of your project site.

Species lists for broad areas can now be obtained from our new online tool called New York Nature Explorer http://www.dec.ny.gov/natureexplorer/app/

Users may choose a county, town, or watershed, or may specify their own location on a map, and receive a list of the animals, plants, and natural communities that have been found there. Users may also choose a specific animal, plant, or natural community type, and get a list of the counties, towns, or watersheds where it has been found.

Included in Nature Explorer are the rare plants, rare animals, and significant natural communities (such as forests, wetlands, and other habitat types) documented by the Natural Heritage database; birds documented during the second NYS Breeding Bird Atlas from 2000 to 2005; and reptiles and amphibians documented during the NYS Herp Atlas from 1990 to 1999.

Natural Heritage Report on Rare Species and Ecological Communities

NY Natural Heritage Program, NYS DEC, 625 Broadway, 5th Floor,
Albany, NY 12233-4757
(518) 402-8935

~The information in this report includes only records entered into the NY Natural Heritage databases as of the date of the report. This report is not a definitive statement on the presence or absence of all rare species or significant natural communities at or in the vicinity of this site.
~Refer to the User's Guide for explanations of codes, ranks and fields.
~Location maps for certain species and communities may not be provided 1) if the species is vulnerable to disturbance, 2) if the location and/or extent is not precisely known, 3) if the location and/or extent is too large to display, and/or 4) if the animal is listed as Endangered or Threatened by New York State.

Natural Heritage Report on Rare Species and Ecological Communities

COMMUNITIES

Coastal plain pond

This occurrence of Coastal Plain Pond is considered significant from a statewide perspective by the NY Natural Heritage Program. It is either an occurrence of a community type that is rare in the state or a high quality example of a more common community type. By meeting specific, documented significance criteria, the NY Natural Heritage Program considers this occurrence to have high ecological and conservation value.

Office Use 6213

NY Legal Status: Unlisted
NYS Rank: S2
Federal Listing:
Global Rank: G3G4
Last Report: 1985-07-16
EO Rank:
County: Suffolk
Town: Brookhaven
Location: Weeks Pond
General Quality and Habitat: This is an excellent example, but very near the Long Island Expressway which is subject to runoff. This is a round, shallow pond with woods cleared from the margin, surrounded by wet meadow and successional shrubland.

VASCULAR PLANTS

Bartonia paniculata ssp. paniculata

Screw-stem

Office Use 12329

NY Legal Status: Endangered
NYS Rank: S1 - Critically imperiled
Federal Listing:
Global Rank: G5T5 - Secure
Last Report: 1997-08-22
EO Rank: Extant
County: Suffolk
Town: Brookhaven
Location: Weeks Pond
General Quality and Habitat: The plants are in a seepy/inundated sphagnaceous area along the river.

Carex bullata

Button Sedge

Office Use 4232

NY Legal Status: Endangered
NYS Rank: S1 - Critically imperiled
Federal Listing:
Global Rank: G5 - Secure
Last Report: 2001-07
EO Rank: Good
County: Suffolk
Town: Brookhaven
Location: Weeks Pond
General Quality and Habitat: There are over 500 clumps in good habitat. The plants are on the wet, muddy banks of Carmens River in a small sedge meadow dominated by Carex stricta.

Gamochaeta purpurea

Office Use 1345

Purple Everlasting

NY Legal Status: Endangered
NYS Rank: S1 - Critically imperiled
Federal Listing:
Global Rank: G5 - Secure
Last Report: 1984
EO Rank: Failed to find but search more
County: Suffolk
Town: Brookhaven
Location: Weeks Pond
General Quality and Habitat: Sought 1984-1986 with no luck. Wet disturbed pine barrens along major highway and Carmans River.

SC

Scleria pauciflora var. caroliniana

Office Use 1690

Few-flowered Nutrush

NY Legal Status: Endangered
NYS Rank: S1 - Critically imperiled
Federal Listing:
Global Rank: G5T4T5 - Apparently secure
Last Report: 1985-06-07
EO Rank: Fair
County: Suffolk
Town: Brookhaven
Location: Weeks Pond
General Quality and Habitat: There are two plants at the upper edge of the pond in successional pine barrens. This is a round, shallow pond with woods cleared from the margin. The plants are in a successional pine barrens.

Scleria triglomerata

Office Use 3839

Whip Nutrush

NY Legal Status: Threatened
NYS Rank: S1 - Critically imperiled
Federal Listing:
Global Rank: G5 - Secure
Last Report: 1991-08-29
EO Rank: Fair
County: Suffolk
Town: Brookhaven
Location: Weeks Pond
General Quality and Habitat: This is a fair population in good, protectable habitat. The plants were observed in a round, shallow pond with woods cleared from the pond margin. The plants are growing at the wet/dry interface around a disturbed pond in successional habitat.

Utricularia striata

Office Use 6832

Fibrous Bladderwort

NY Legal Status: Threatened
NYS Rank: S2 - Imperiled
Federal Listing:
Global Rank: G4G5 - Apparently secure
Last Report: 2004-08-26
EO Rank: Excellent or Good
County: Suffolk
Town: Brookhaven
Location: Weeks Pond
General Quality and Habitat: There are hundreds of vigorous plants in good habitat. Group 1: Plants were within Eleocharis acicularis in mud at the edge of a coastal plain pond. Group 2: This is a coastal plain pond shore. The plants are in the low vegetation and the mud around the edge of the pond.

7 Records Processed

More detailed information about many of the rare and listed animals and plants in New York, including biology, identification, habitat, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.acris.nynhp.org, from NatureServe Explorer at http://www.natureserve.org/explorer, from NYSDEC at http://www.dec.ny.gov/animals/7494.html (for animals), and from USDA's Plants Database at http://plants.usda.gov/index.html (for plants).

More detailed information about many of the natural community types in New York, including identification, dominant and characteristic vegetation, distribution, conservation, and management, is available online in Natural Heritage's Conservation Guides at www.acris.nynhp.org. For descriptions of all community types, go to http://www.dec.ny.gov/animals/29384.html and click on Draft Ecological Communities of New York State.

NY Natural Heritage Program, NYS DEC, 625 Broadway, 5th Floor,
Albany, NY 12233-4757
(518) 402-8935

HISTORICAL RECORDS

The following plants and animals were documented in the vicinity of the project site at one time, but have not been documented there since 1979 or earlier.
There is no recent information on these plants and animals in the vicinity of the project site and their current status there is unknown. In most cases the precise location of the plant or animal in this vicinity at the time it was last documented is also unknown and therefore location maps are generally not provided.
If appropriate habitat for these plants or animals is present in the vicinity of the project site, it is possible that they may still occur there.

Natural Heritage Report on Rare Species and Ecological Communities

BUTTERFLIES and SKIPPERS

Erynnis persius persius

Office Use 459

Persius Duskywing

NY Legal Status: Endangered
NYS Rank: S1 - Critically imperiled
Federal Listing:
Global Rank: G5T1T3 - Critically imperiled
Last Report: -----05-17
EO Rank: Historical, no recent information

ESU

County: Suffolk
Town: Brookhaven
Location: Yaphank
Directions: The specimen label reports the location as "Yaphank".
General Quality and Habitat:

M

DRAGONFLIES and DAMSELFLIES

Anax longipes

Office Use 12585

Comet Darner

NY Legal Status: Unlisted
NYS Rank: S2 - Imperiled
Federal Listing:
Global Rank: G5 - Secure
Last Report: 1908-07-26
EO Rank: Historical, no recent information

County: Suffolk
Town: Brookhaven
Location: Yaphank
Directions: The dragonfly was seen in Yaphank in Brookhaven on Long Island.
General Quality and Habitat: The dragonfly was observed in a small town on Long Island.

VASCULAR PLANTS

Crataegus uniflora

Office Use 4037

Dwarf Hawthorn

NY Legal Status: Endangered
Federal Listing:
Last Report: 1907-07-14

NYS Rank: S1 - Critically imperiled
Global Rank: G5 - Secure
EO Rank: Historical, no recent information

County: Suffolk
Town: Brookhaven
Location: Yapank
Directions: Specimen label: Yaphank.
General Quality and Habitat:

M

Lechea tenuifolia

Office Use 3562

Slender Pinweed

NY Legal Status: Threatened
Federal Listing:
Last Report: 1912-09-01

NYS Rank: S2 - Imperiled
Global Rank: G5 - Secure
EO Rank: Historical, no recent information

County: Suffolk
Town: Brookhaven
Location: Yapank
Directions: Specimen label: Yaphank.
General Quality and Habitat:

M

---

4 Records Processed

More detailed information about many of the rare and listed animals and plants in New York, including biology, identification, habitat, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.acris.nynhp.org, from NatureServe Explorer at http://www.natureserve.org/explorer, from NYSDEC at http://www.dec.ny.gov/animals/7494.html (for animals), and from USDA's Plants Database at http://plants.usda.gov/index.html (for plants).

USERS GUID' 'O NY NATURAL HERITAGE DATA

New York Natural Heritage Program, 625 B. Broadway, 5th Floor, Albany, NY 12233-4757 phone (518) 402-8935

NATURAL HERITAGE PROGRAM: The NY Natural Heritage Program is a partnership between the NYS Department of Environmental Conservation (NYS DEC) and The Nature Conservancy. Our Mission is to facilitate the conservation of New York's biodiversity by providing comprehensive information and scientific expertise on rare species and natural ecosystems to resource managers and other conservation partners. We accomplish this mission by combining thorough field inventories, scientific analyses, expert interpretation, and the most comprehensive database on New York's distinctive biodiversity to deliver the highest quality information for natural resource planning, protection, and management.

DATA SENSITIVITY: The data provided in the report are ecologically sensitive and should be treated in a sensitive manner. The report is for your in-house use and should **not** be released, distributed or incorporated in a public document without prior permission from the Natural Heritage Program.

EO RANK: A letter code for the quality of the occurrence of the rare species or significant natural community, based on population size or area, condition, and landscape context.

A-E = Extant: A=Excellent, B=Good, C=Fair, D=Poor, E=Extant but with insufficient data to assign a rank of A-D.
F = Failed to find. Did not locate species during a limited search, but habitat is still there and further field work is justified.
H = Historical. Historical occurrence without any recent field information.
X = Extirpated. Field/other data indicates element/habitat is destroyed and the element no longer exists at this location.
U = Extant/Historical status uncertain.
Blank = Not assigned.

LAST REPORT: The date that the rare species or significant natural community was last observed at this location, as documented in the Natural Heritage databases. The format is most often YYYY-MM-DD.

NY LEGAL STATUS – Animals:

Categories of Endangered and Threatened species are defined in New York State Environmental Conservation Law section 11-0535. Animals listed as Endangered, Threatened, or Special Concern are protected against taking, importation, transportation, possession, or sale without a permit. Endangered, Threatened, and Special Concern species are listed in regulation 6NYCRR 182.5.

E - **Endangered Species**: any species which meet one of the following criteria:
- Any native species in imminent danger of extirpation or extinction in New York.
- Any species listed as endangered by the United States Department of the Interior, as enumerated in the Code of Federal Regulations 50 CFR 17.11.

T - **Threatened Species**: any species which meet one of the following criteria:
- Any native species likely to become an endangered species within the foreseeable future in NY.
- Any species listed as threatened by the U.S. Department of the Interior, as enumerated in the Code of the Federal Regulations 50 CFR 17.11.

SC - **Special Concern Species**: those species which are not yet recognized as endangered or threatened, but for which documented concern exists for their continued welfare in New York.

P - **Protected Wildlife** (defined in Environmental Conservation Law section 11-0103): wild game, protected wild birds, and endangered species of wildlife.

U - **Unprotected** (defined in Environmental Conservation Law section 11-0103): the species may be taken at any time without limit; however a license to take may be required.

G - **Game** (defined in Environmental Conservation Law section 11-0103): any of a variety of big game or small game species as stated in the Environmental Conservation Law; many normally have an open season for at least part of the year, and are protected at other times.

NY LEGAL STATUS – Plants:

The following categories are defined in regulation 6NYCRR part 193.3 and apply to NYS Environmental Conservation Law section 9-1503.

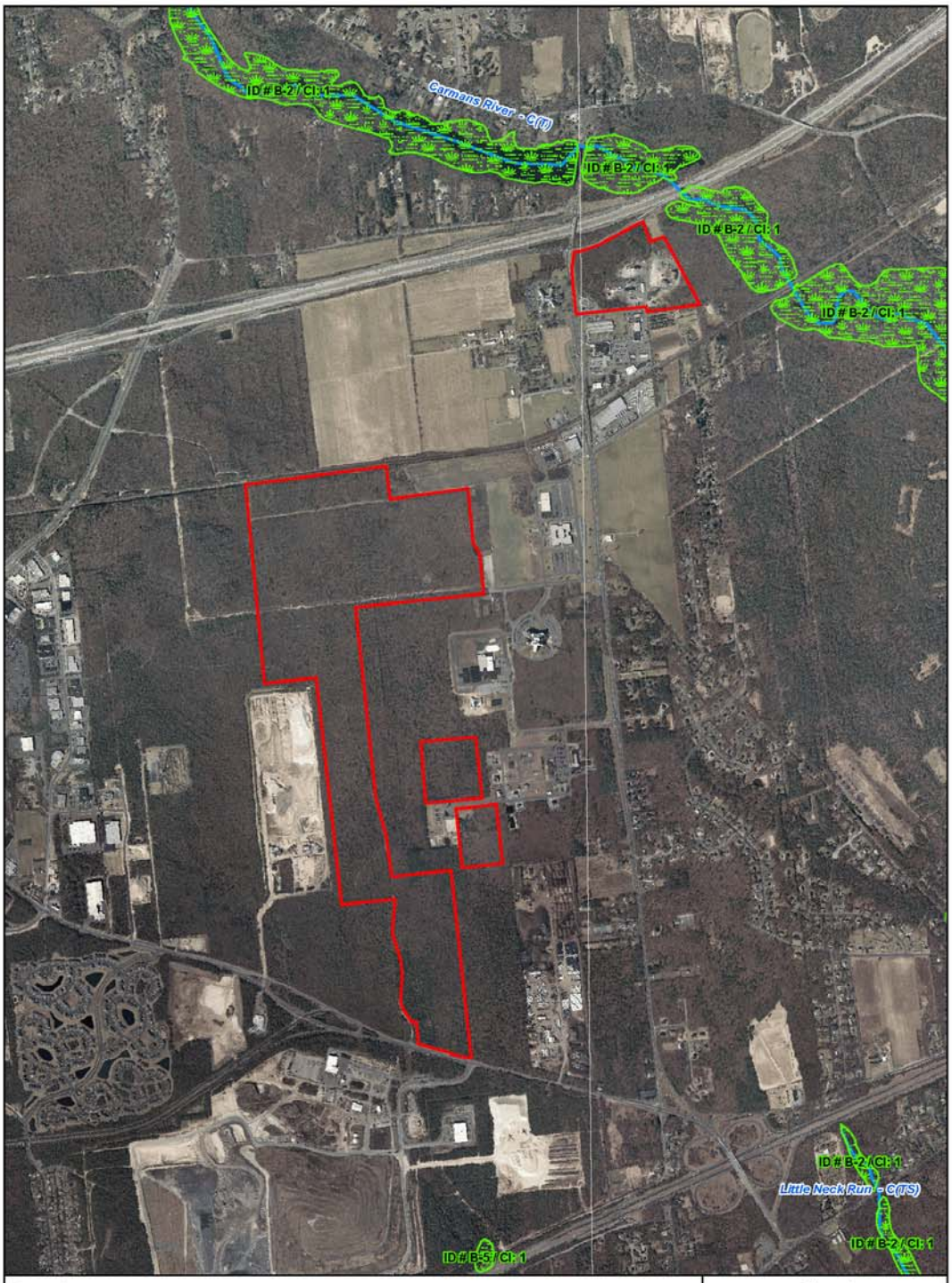
E - **Endangered Species**: listed species are those with:
- 5 or fewer extant sites, or
- fewer than 1,000 individuals, or
- restricted to fewer than 4 U.S.G.S. 7 ½ minute topographical maps, or
- species listed as endangered by U.S. Dept. of Interior, as enumerated in Code of Federal Regulations 50 CFR 17.11.

T - **Threatened**: listed species are those with:
- 6 to fewer than 20 extant sites, or
- 1,000 to fewer than 3,000 individuals, or
- restricted to not less than 4 or more than 7 U.S.G.S. 7 and ½ minute topographical maps, or
- listed as threatened by U.S. Department of Interior, as enumerated in Code of Federal Regulations 50 CFR 17.11.

APPENDIX B

FIGURES

Figure 1	**NYDEC Wetland Map**
Figure 2	**NWI Wetland Map**
Figure 3	**Floodplain Map**
Figure 4	**Study Area Map**



Legend

- Project Area
- Stream (with classification)
- NYSDEC Wetlands

Stream Classifications:
C(T) - The best usage of Class C waters is fishing which shall be suitable for fish propagation and survival. (T) waters are designated as trout waters.
C(TS) - The best usage of Class C waters is fishing which shall be suitable for fish propagation and survival. (TS) waters are designated as trout spawning.

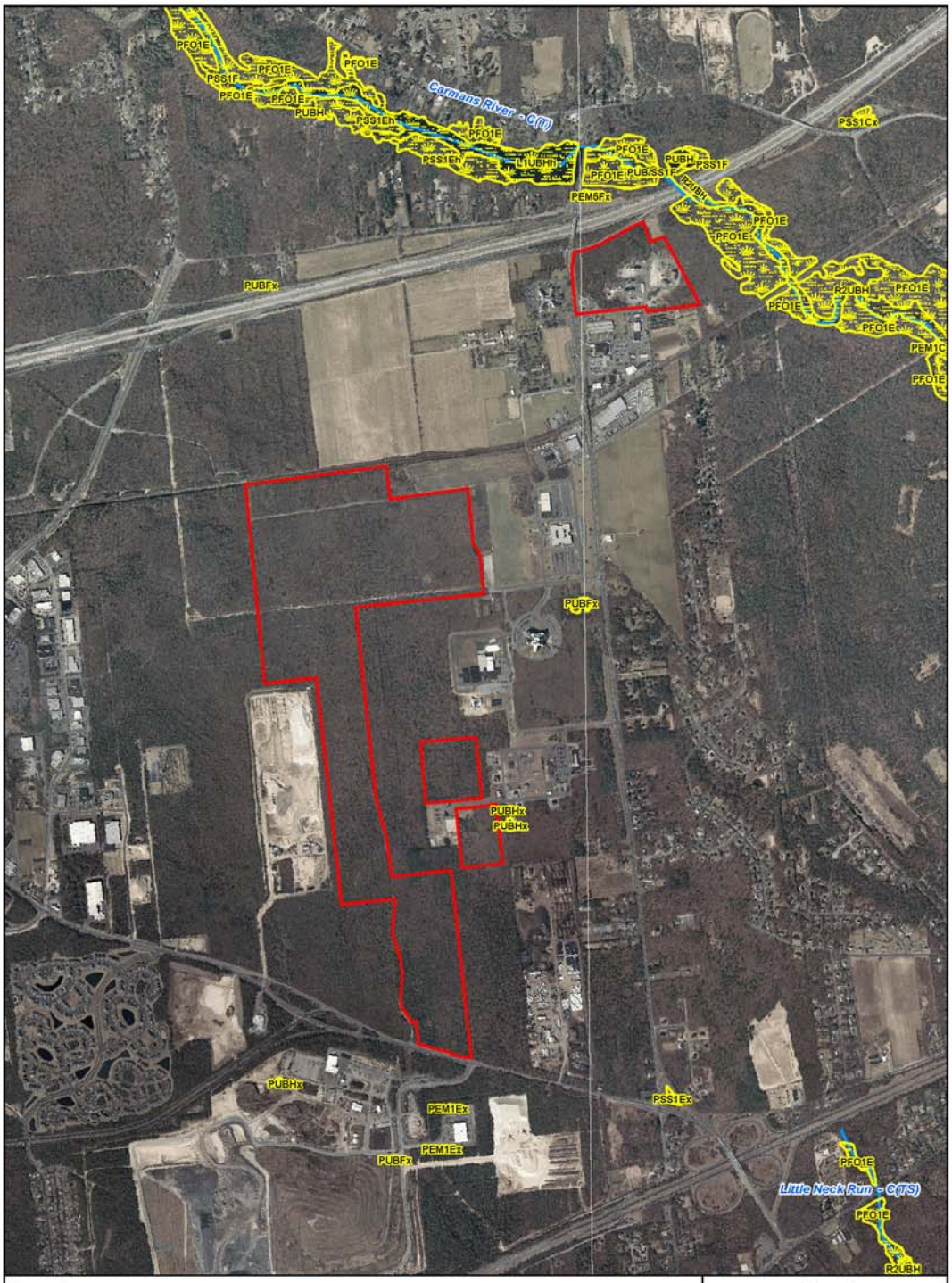
Figure 1
NYSDEC Wetlands Map

Suffolk County Land Sale /
Yaphank Center Development
Town of Brookhaven
Suffolk County, New York

ASGECI Project # 3274

1,250
Feet

AMY S. GREENE ENVIRONMENTAL CONSULTANTS.



Legend

- Project Area
- Stream (with classification)
- NWI Wetlands
- NWI Linear Wetlands

Stream Classifications:
C(T) - The best usage of Class C waters is fishing which shall be suitable for fish propagation and survival. (T) waters are designated as trout waters.
C(TS) - The best usage of Class C waters is fishing which shall be suitable for fish propagation and survival. (TS) waters are designated as trout spawning.

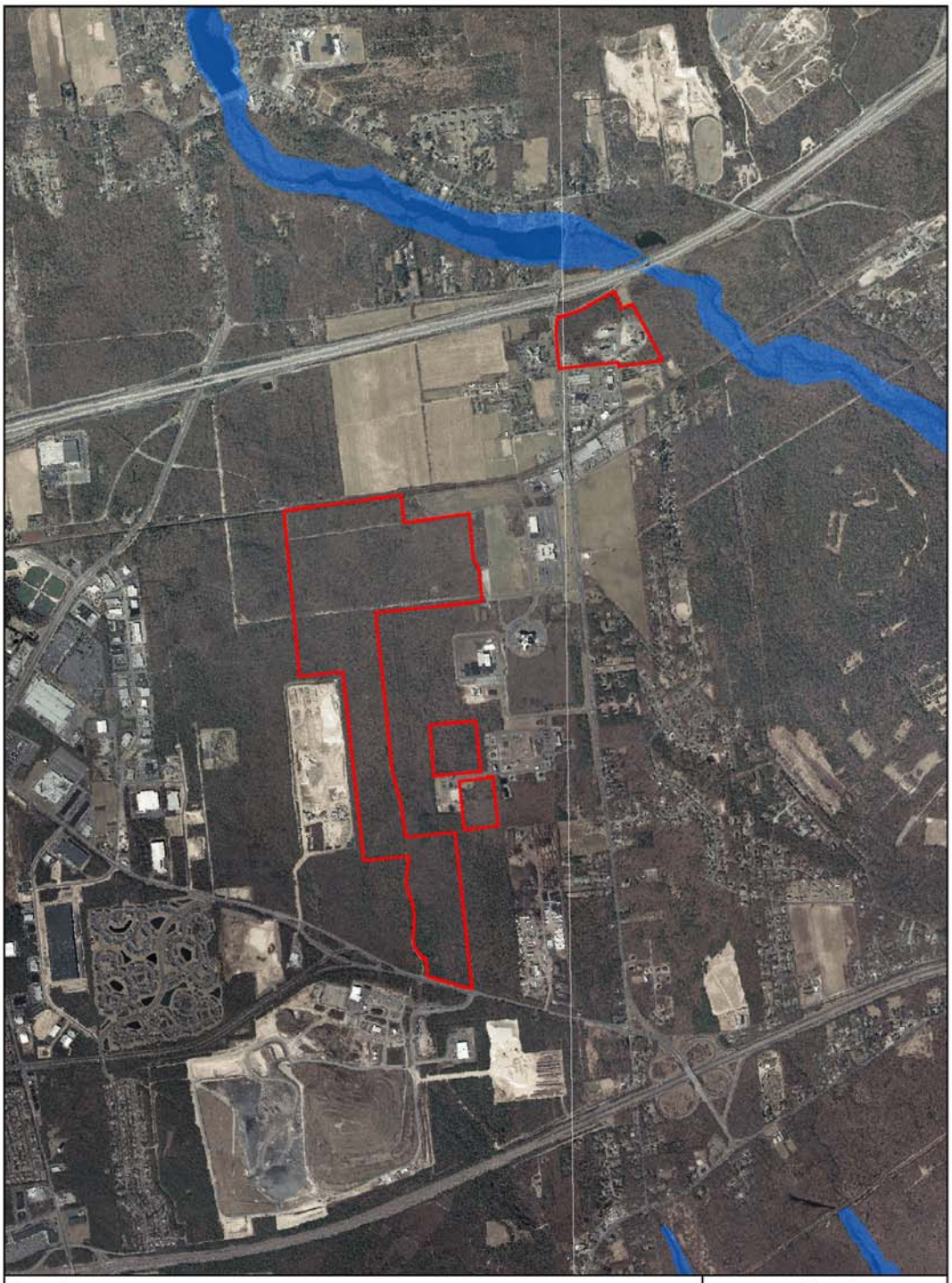
Figure 2
NWI Wetlands Map

Suffolk County Land Sale /
Yaphank Center Development
Town of Brookhaven
Suffolk County, New York

ASGECI Project # 3274

1,250
Feet

AMY S. GREENE ENVIRONMENTAL CONSULTANTS.



Legend

- Project Area
- 100-yaer FEMA Floodplain

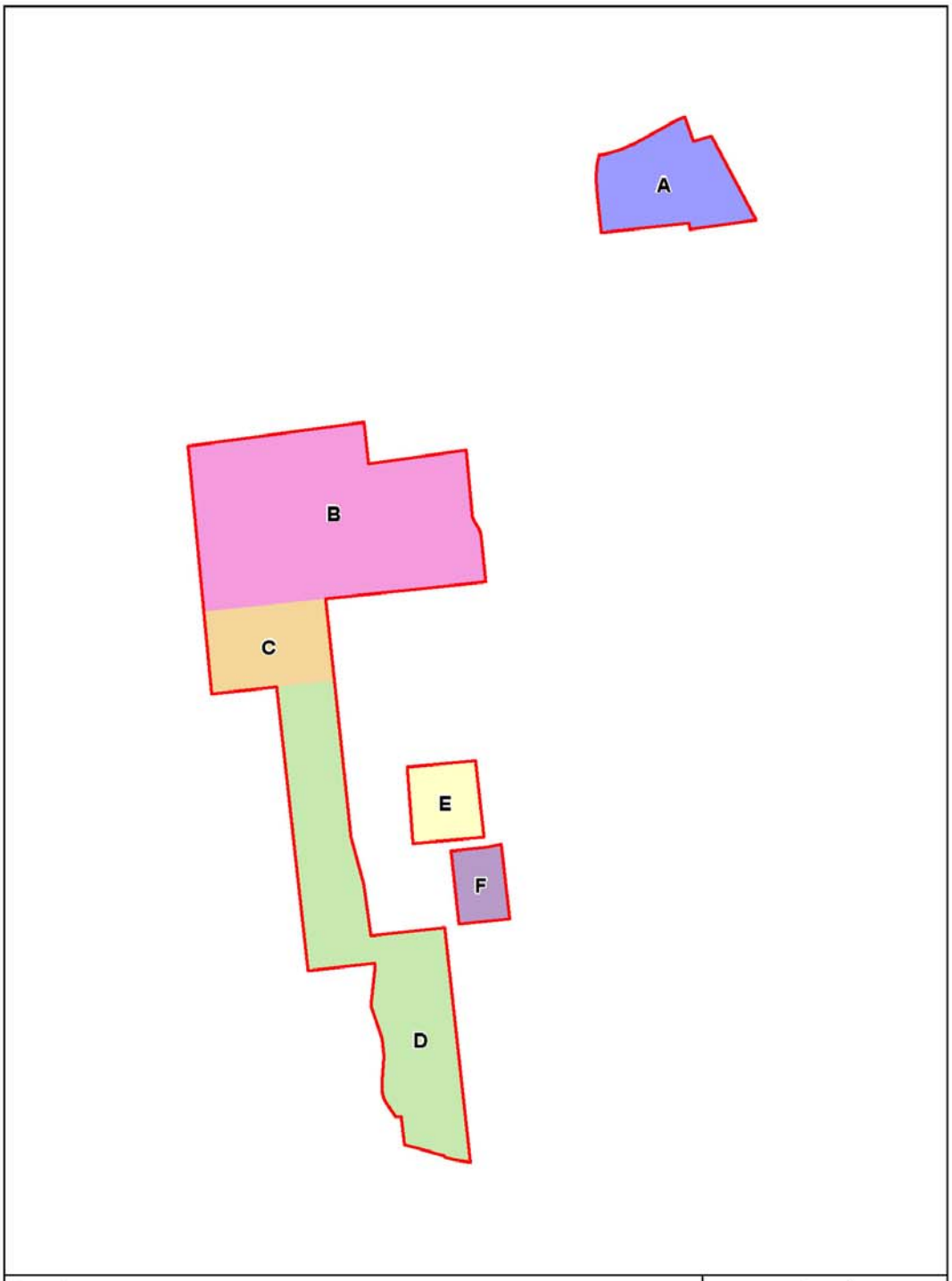
Figure 3
FEMA Floodplain Map

Suffolk County Land Sale /
Yaphank Center Development
Town of Brookhaven
Suffolk County, New York

ASGECI Project # 3274

1,500
Feet

AMY S. GREENE ENVIRONMENTAL CONSULTANTS.



Legend

Project Area

Study Area

- A
- B
- C
- D
- E
- F

Figure 4
Study Area Map

Suffolk County Land Sale /
Yaphank Center Development
Town of Brookhaven
Suffolk County, New York

ASGECI Project # 3274

1,000
Feet

AMY S. GREENE ENVIRONMENTAL CONSULTANTS.