Chapter 6: Natural Resources

A. INTRODUCTION

This chapter examines the potential impacts from the Staten Island Mall Enlargement (proposed project) on natural resources and floodplains near the project site in Staten Island's Heartland Village neighborhood. This chapter describes:

- The regulatory programs that protect wildlife, threatened or endangered species, and other natural resources within the project site;
- The current condition of the floodplain and natural resources within the project site, including groundwater, terrestrial biota, and threatened or endangered species and species of special concern;
- The floodplain and natural resources conditions in the future without the proposed project (the No Action Scenario);
- The potential impacts of the proposed project on the floodplain and natural resources (the With Action Scenario); and
- The measures that would be developed, as necessary, to mitigate and/or reduce any of the proposed project's potential significant adverse effects on natural resources and floodplains.

PRINCIPAL CONCLUSIONS

The proposed project would include enlarging an existing commercial center, construction of a new parking structure, and improvements within existing parking lots that presently contain minimal natural resources other than small areas of manicured lawn with trees, ruderal vegetation, and disturbance-tolerant wildlife species that are ubiquitous in urban areas. With the implementation of stormwater source control best management practices (BMPs) to reduce stormwater runoff volumes and rate at which stormwater is discharged to the city storm sewers, the discharge of stormwater to the city storm sewer with the proposed project would not adversely affect National Wetland Inventory (NWI)-mapped wetlands within Freshkills Park in the vicinity of the stormwater outfalls discharging runoff from the proposed project.

B. METHODOLOGY

STUDY AREA

The project site consists of an 84.95-acre portion of an existing commercial center, bounded by Richmond Hill Road, Marsh Avenue, Platinum Avenue, and Richmond Avenue. The study area for terrestrial natural resources, and floodplains consisted of the project site and the area within 400 feet of the project site. Threatened, endangered, and special concern species were evaluated for a distance of 0.5 miles from the project site.

EXISTING CONDITIONS

Existing conditions for floodplains and natural resources within the study area were summarized from:

- Existing information identified in literature and obtained from governmental and nongovernmental sources (see **Appendix 2**), such as the U.S. Fish and Wildlife Service (USFWS) NWI maps and Information, Planning and Consultation system for federally threatened and endangered species (http://ecos.fws.gov/ipac); New York State Department of Environmental Conservation (NYSDEC) Nature Explorer (http://www.dec.ny.gov/animals/57844.html), New York State Breeding Bird Atlas, 2000-2005; and Federal Emergency Management Agency (FEMA) Best Available Flood Hazard Data (BAFHD), and the Freshkills Park Final Generic Environmental Impact Statement (FGEIS)(NYCDPR 2009, http://www.nycgovparks.org/park-features/freshkills-park/public-review) .
- Observations made during site reconnaissance conducted on June 10, 2014.

FUTURE WITHOUT THE PROPOSED PROJECT

In the No Action Scenario, natural resources in the Build year (2017) are expected to be unchanged from the existing condition. Land cover type and human activity would not differ from the present. The project site would remain a developed commercial center with parking lots and manicured lawns. The portion of the study area outside the project site would also remain unchanged, with no major changes in land use anticipated in by 2017. After 2019 (the build year under the 2019 Full-Build Scenario), modifications to existing habitats may occur within the portion of the study are west of Richmond Avenue within Freshkills Park as park development proceeds within the East Park portion of the park.

FUTURE WITH THE PROPOSED PROJECT

Potential impacts in the With Action Scenario were assessed by considering aspects of project operation, such as stormwater management, disturbances to wildlife from increased human activity, and potential habitat improvements (e.g., improved terrestrial habitat from landscaping). Potential impacts to natural resources from construction of the proposed project are evaluated in Chapter 16, “Construction.”

C. REGULATORY CONTEXT

The following sections identify the federal and state legislation and regulatory programs that would apply to the proposed project.

FEDERAL

CLEAN WATER ACT (33 USC §§ 1251 TO 1387)

The objective of the Clean Water Act, also known as the Federal Water Pollution Control Act, is to restore and maintain the chemical, physical, and biological integrity of the waters of the United States. It regulates point sources of water pollution, such as discharges of municipal sewage, industrial wastewater, and stormwater; the discharge of dredged or fill material into navigable waters and other waters; and non-point source pollution, such as runoff from streets, agricultural fields, construction sites, and mining.

ENDANGERED SPECIES ACT OF 1973 (16 USC §§ 1531 TO 1544)

The Endangered Species Act of 1973 recognizes that endangered species of wildlife and plants are of aesthetic, ecological, educational, historical, recreational, and scientific value to the nation and its people. The Act prohibits the importation, exportation, taking, possession, and other activities involving illegally taken species covered under the Act, and interstate or foreign commercial activities. The Act also provides for the protection of critical habitats on which endangered or threatened species depend for survival.

FISH AND WILDLIFE COORDINATION ACT (PL 85-624; 16 USC 661-667D)

The Fish and Wildlife Coordination Act entrusts the Secretary of the Interior with providing assistance to, and cooperation with, federal, state, and public or private agencies and organizations to ensure that wildlife conservation receives equal consideration and coordination with other water-resource development programs. These programs can include the control (such as a diversion), modification (such as channel deepening), or impoundment (dam) of a body of water.

NEW YORK

STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM (SPDES) (N.Y. ECL ARTICLE 3, TITLE 3; ARTICLE 15; ARTICLE 17, TITLES 3, 5, 7, AND 8; ARTICLE 21; ARTICLE 70, TITLE 1; ARTICLE 71, TITLE 19; IMPLEMENTING REGULATIONS 6 NYCRR ARTICLES 2 AND 3)

Title 8 of Article 17, ECL, Water Pollution Control, authorized the creation of SPDES to regulate discharges to New York State's waters. Activities requiring a SPDES permit include point source discharges of wastewater into surface or groundwater of the state, including the intake and discharge of water for cooling purposes, constructing or operating a disposal system (sewage treatment plant), discharge of stormwater, and construction activities that disturb one or more acres.

ENDANGERED AND THREATENED SPECIES OF FISH AND WILDLIFE; SPECIES OF SPECIAL CONCERN (ECL, SECTIONS 11-0535[1]-[2], 11-0536[2], [4], IMPLEMENTING REGULATIONS 6 NYCRR PART 182)

The Endangered and Threatened Species of Fish and Wildlife, Species of Special Concern Regulations prohibit the taking, import, transport, possession, or selling of any endangered or threatened species of fish or wildlife, or any hide, or other part of these species as listed in 6 NYCRR §182.6.

D. EXISTING CONDITIONS

The 2014 *City Environmental Quality Review (CEQR) Technical Manual* defines natural resources as "(1) the City's biodiversity (plants, wildlife and other organisms); (2) any aquatic or terrestrial areas capable of providing suitable habitat to sustain the life processes of plants, wildlife, and other organisms; and (3) any areas capable of functioning in support of the ecological systems that maintain the City's environmental stability." Under CEQR, a natural resources assessment is to consider the plant, wildlife and other species in the context of the surrounding environment, habitat or ecosystem and examines a project's potential to impact

those resources. Resources such as groundwater, soils and geologic features, natural and human-created habitats, and any areas used by wildlife may be considered in a natural resources analysis. Stormwater runoff may also be considered in a natural resources assessment and evaluated in the context of its impact on local ecosystem functions and on the quality of adjacent waterbodies. This section describes the existing natural resources within the study area.

GROUNDWATER

As discussed in Chapter 7, "Hazardous Materials," groundwater would be expected to occur between 6 and 12 feet below grade. Groundwater in Staten Island is not used as a source of potable water (the municipal water supply uses upstate reservoirs).

FLOODPLAINS

The Preliminary FIRMs show that the project site and study area are not within the 100-Year Floodplain or 500-Year Floodplain (see **Figure 6-1**).

WETLANDS

No NYSDEC mapped freshwater or tidal wetlands occur within the study area. No NWI mapped wetlands (see **Figure 6-2**) occur within the project site. NWI mapped wetlands occur within the portion of the study area within Freshkills Park. These wetlands are identified as estuarine intertidal wetland dominated by emergent vegetation (specifically *Phragmites australis*) which is irregularly flooded (E2EM5P). A small palustrine permanently flooded wetland with an unconsolidated bottom that has been diked/impounded (PUBHh) is mapped as occurring within the northwest boundary of the study area, however, this wetland was not observed during the June 10, 2014 site reconnaissance.

TERRESTRIAL RESOURCES

VEGETATION AND ECOLOGICAL COMMUNITIES

The project site is largely composed of paved parking lots, the Staten Island Mall buildings, and small areas of grass planted with trees (see **Figures 6-~~3~~4 through 6-6**). Following Edinger et al. (2002), these landscapes would be characterized as mowed lawn[1], mowed lawn with trees[2], urban structure exterior[3], and paved road/path[4]. The paved road/path community, which best

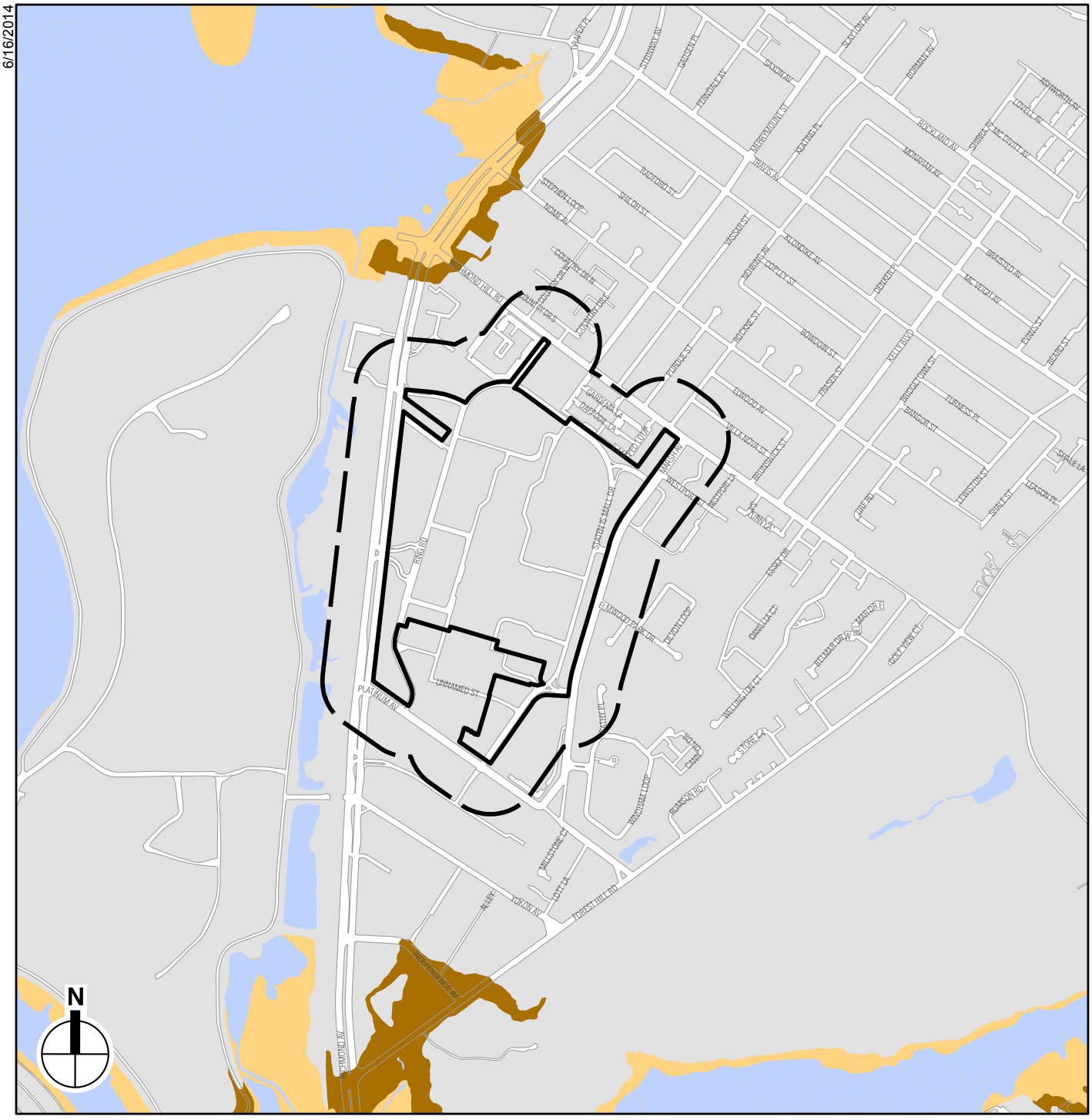
[1] Edinger et al. (2002) defines this community as "residential, recreational, or commercial land, or unpaved airport runways in which the groundcover is dominated by clipped grasses and there is less than 30% cover of trees. Ornamental and/or native shrubs may be present, usually with less than 50% cover. The groundcover is maintained by mowing."

[2] Edinger et al. (2002) defines this community as "residential, recreational, or commercial land in which the groundcover is dominated by clipped grasses and forbs, and it is shaded by at least 30% cover of trees. Ornamental and/or native shrubs may be present, usually with less than 50% cover. The groundcover is maintained by mowing."

[3] Edinger et al. (2002) defines this community as "the exterior surfaces of metal, wood, or concrete structures (such as commercial buildings, apartment buildings, houses, bridges) or any structural surface composed of inorganic materials (glass, plastics, etc.) in an urban or densely populated suburban area. These sites may be sparsely vegetated with lichens, mosses, and terrestrial algae; occasionally vascular plants may grow in cracks. Nooks and crannies may provide nesting habitat for birds and insects, and roosting sites for bats."

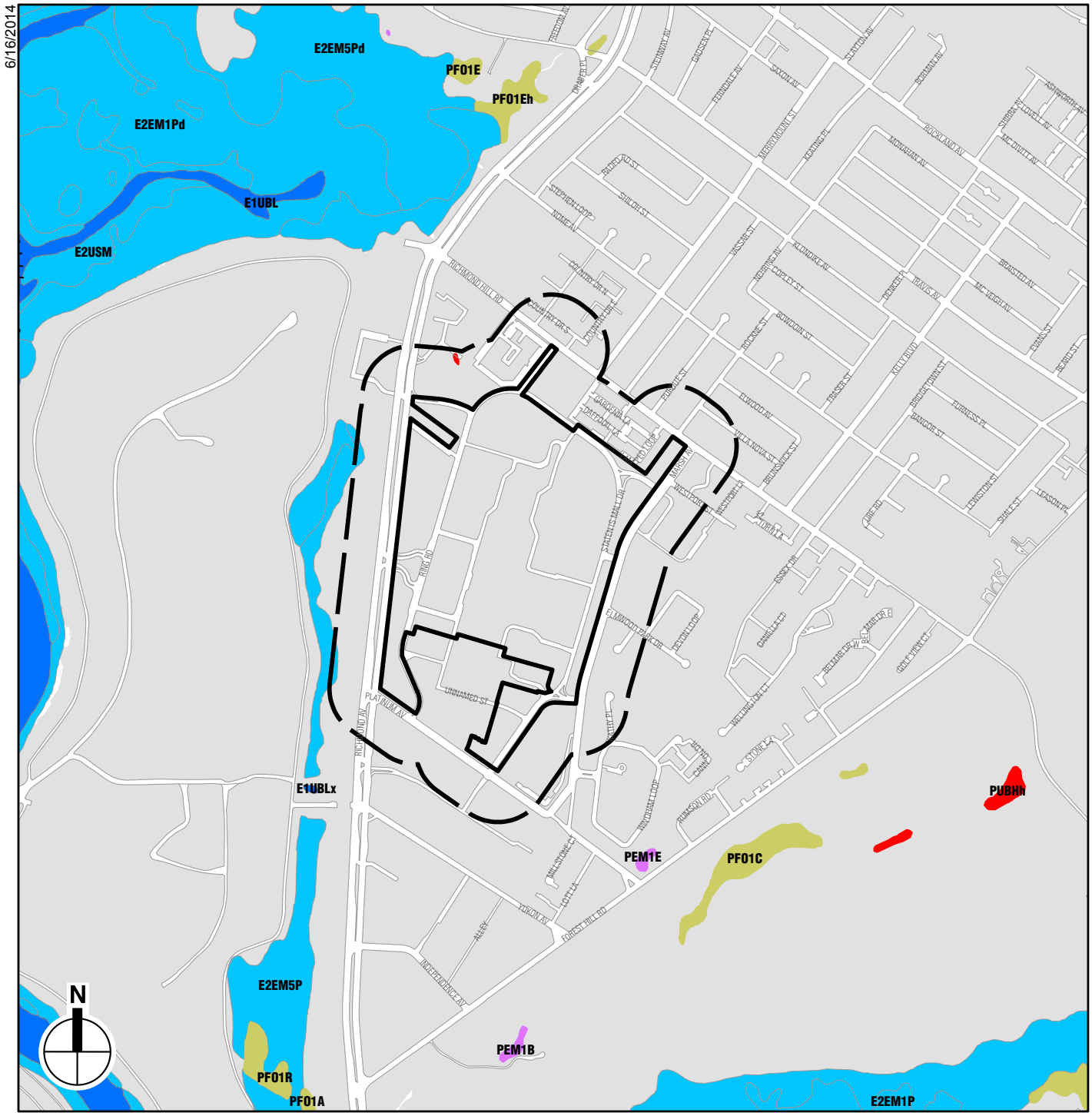
[4] Edinger et al. (2002) defines this community as "a road or pathway that is paved with asphalt, concrete, brick, stone, etc. There may be sparse vegetation rooted in cracks in the paved surface."

6/16/2014



STATEN ISLAND MALL ENLARGEMENT

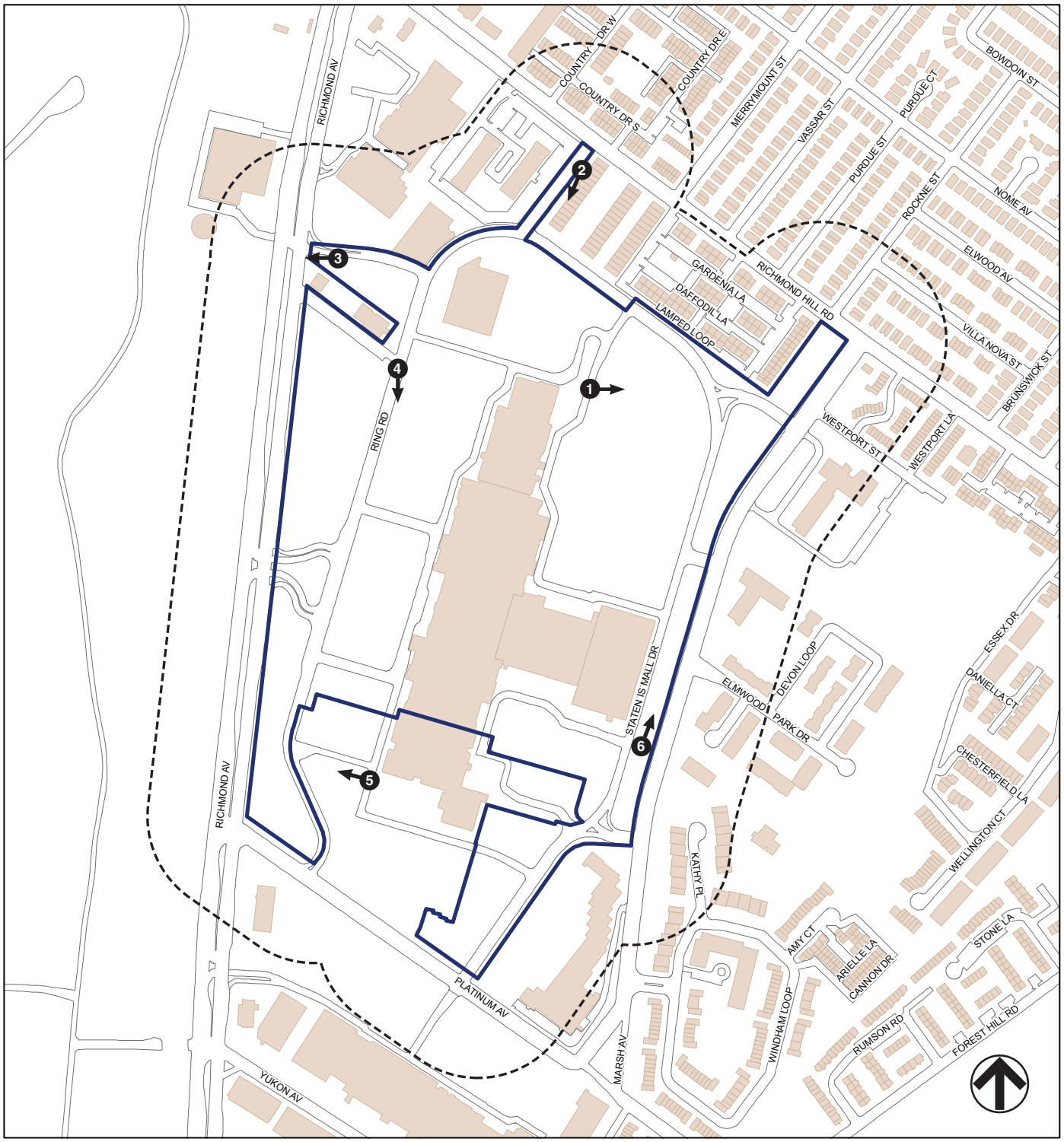
FEMA Preliminary FIRM
Figure 6-1



STATEN ISLAND MALL ENLARGEMENT

NWI Wetlands
Figure 6-2

6.12.14



Project Area

Study Area Boundary (400-Foot Perimeter)

Photograph Reference Number and View Direction

0 400 800 FEET

SCALE

Natural Resources Photograph Key

Figure 6-3

View of the parking and mowed lawn with trees, facing east **1**

View of the parking lot, facing south **2**

Natural Resources
Photographs
Figure 6-4

View of a mowed lawn in the foreground and Freshkills Park in the background, facing west **3**

View of the parking lot and mowed lawn, facing south **4**

Natural Resources
Photographs
Figure 6-5

View of the parking lot, facing west **5**

View of a paved road, facing north **6**

Natural Resources
Photographs
Figure 6-6

describes the parking lots, covers approximately 65 percent of the project site (see **Figure 6-3**). The parking lots are sparsely vegetated, with vegetation occurring primarily at the edges of the lots as mowed lawn or mowed lawn with trees. Most of the vegetation comprises invasive or non-native species. The mowed lawn with trees, and mowed lawn communities make up approximately 10 percent of the project site. Tree species include callery pear (*Pyrus calleryana*), London planetree, honey locust (*Gleditsia triacanthos*) and red maple (*Acer rubrum*), with bluegrass (*Poa* sp) and crabgrass (*Digitaria* sp) dominating the herbaceous layer. **Table 6-1** lists the plant species observed during the June 10, 2014 reconnaissance investigation. These maintained terrestrial ecological communities provide limited habitat to wildlife.

Table 6-1
Vegetation Identified at the Project Site

Common Name	Scientific Name	Stratum
Red maple	*Acer rubrum*	Tree
Wild garlic	*Allium ursinum*	Herbaceous
Porcelainberry	*Ampelopsis brevipedunculata*	Vine
Common mugwort	*Artemisia vulgaris*	Herbaceous
Barberry	*Berberis* sp	Shrub
Hedge bindweed	*Calystegia sepium*	Herbaceous
Sedge	*Carex* sp	Herbaceous
Bitternut hickory	*Carya ovata*	Tree
Chestnut	*Castanea dentata*	Tree
Asiatic bittersweet	*Celastrus orbiculatus*	Vine
Redbud	*Cercis canadensis*	Tree
Lamb's quarters	*Chenopodium album*	Herbaceous
Field thistle	*Cirsium discolor*	Herbaceous
Asiatic dayflower	*Commelina communis*	Herbaceous
Field bindweed	*Convolvulus arvensis*	Herbaceous
Hawthorn	*Crataegus* sp	Tree
Crabgrass	*Digitaria* sp	Herbaceous
Winged euonymus	*Euonymus alatus*	Shrub
Honey locust	*Gleditsia triacanthos*	Tree
Holly	*Ilex* sp	Shrub
Eastern red cedar	*Juniperus virginiana*	Shrub
Privet	*Ligustrum* sp	Shrub
Sweetgum	*Liquidambar styraciflua*	Tree
White mulberry	*Morus alba*	Tree
Black tupelo	*Nyssa sylvatica*	Tree
Common yellow wood sorrel	*Oxalis stricta*	Herbaceous
Virginia creeper	*Parthenocissus quinquefolia*	Vine
Boston ivy	*Parthenocissus tricuspidata*	Vine
Eastern white pine	*Pinus strobus*	Tree
Japanese black pine	*Pinus thunbergii*	Tree
Common plantain	*Plantago major*	Herbaceous
London planetree	*Platanus acerfolia*	Tree
Blue grass	*Poa* sp	Herbaceous

Table 6-1 (cont'd)
Vegetation Identified at the Project Site

Common Name	Scientific Name	Stratum
Japanese knotweed	*Polygonum cuspidatum*	Herbaceous
Common purslane	*Portulaca oleracea*	Herbaceous
Black cherry	*Prunus serotina*	Tree
Cherry	*Prunus* sp	Tree
Callery pear	*Pyrus calleryana*	Tree
White oak	*Quercus alba*	Tree
Pin oak	*Quercus palustris*	Tree
Rose	*Rosa* sp	Shrub
Willow	*Salix* sp	Tree
Stout blue-eyed grass	*Sisyrinchium angustifolium*	Herbaceous
Catbriar	*Smilax glauca*	Herbaceous
Bittersweet nightshade	*Solanum dulcamara*	Herbaceous
Goldenrod	*Solidago* sp	Herbaceous
Saltmash sand spurrey	*Spergularia marina*	Herbaceous
Dandelion	*Taraxacum officinale*	Herbaceous
Yew	*Taxus* sp	Shrub
Basswood	*Tilia americana*	Tree
Poison ivy	*Toxicodendron radicans*	Vine
White clover	*Trifolium repens*	Herbaceous
Slippery elm	*Ulmus rubra*	Tree
Elm	*Ulmus* sp	Tree
Japanese zelkova	*Zelkova serrata*	Tree

Sources: Reconnaissance investigation on June 10, 2014

The portion of the study area west of Richmond Avenue is located within Freshkills Park. This portion of the study area was classified as palustrine forested, palustrine emergent, and open water/stormwater basin ecological communities the Fresh Kills Park Final Generic Environmental Impact Statement (FGEIS) (2009, http://www.nycgovparks.org/park-features/freshkills-park/public-review).

WILDLIFE

Because the majority of the study area is developed, the habitat available to terrestrial wildlife is extremely limited and primarily consists of manicured lawn and rows or clusters of deciduous shade trees that are amongst the residential buildings east of the project site. The portion of the study area west of Richmond Avenue within Freshkills Park consists of palustrine forested, palustrine emergent, and open water/stormwater basin ecological communities. As described above, the project site, which mainly consists of existing parking lots, is almost entirely unvegetated and covered by impervious surface, with small portions of mowed lawn with trees. As such, wildlife communities within the project site and the overall study area are composed of disturbance-tolerant, generalist species that are common to degraded habitats within urban areas.

Birds

The 2000–2005 New York Breeding Bird Atlas documented 65 species as possible, probable, or confirmed breeders in census Block 5649D (see **Table 6-2**). Census blocks span three square miles, however, and Block 5649D includes woodland, forest, freshwater and tidal wetlands, and other habitat types that are not present in the project site. As such, many bird species documented by the Atlas within this census block may not occur in the project site specifically, but may be present in the study area.

Table 6-2
Birds Documented by the 2000–2005 Breeding Bird Atlas in Block 5649D

Common Name	Scientific Name
Red-winged Blackbird	*Agelaius phoeniceus*
Wood Duck	*Aix sponsa*
Mallard	*Anas platyrhynchos*
American Black Duck	*Anas rubripes*
Tufted Titmouse	*Baeolophus bicolor*
Cedar Waxwing	*Bombycilla cedrorum*
Canada Goose	*Branta canadensis*
Great Horned Owl	*Bubo virginianus*
Red-tailed Hawk	*Buteo jamaicensis*
Broad-winged Hawk	*Buteo platypterus*
Green Heron	*Butorides virescens*
Northern Cardinal	*Cardinalis cardinalis*
House Finch	*Carpodacus mexicanus*
Turkey Vulture	*Cathartes aura*
Veery	*Catharus fuscescens*
Chimney Swift	*Chaetura pelagica*
Killdeer	*Charadrius vociferus*
Yellow-billed Cuckoo	*Coccyzus americanus*
Black-billed Cuckoo	*Coccyzus erythropthalmus*
Northern Flicker	*Colaptes auratus*
Rock Pigeon	*Columba livia*
Eastern Wood-Pewee	*Contopus virens*
American Crow	*Corvus brachyrhynchos*
Blue Jay	*Cyanocitta cristata*
Yellow Warbler	*Dendroica petechia*
Gray Catbird	*Dumetella carolinensis*
Willow Flycatcher	*Empidonax traillii*
Acadian Flycatcher	*Empidonax virescens*
Common Yellowthroat	*Geothlypis trichas*
Barn Swallow	*Hirundo rustica*
Wood Thrush	*Hylocichla mustelina*
Baltimore Oriole	*Icterus galbula*
Orchard Oriole	*Icterus spurius*
Eastern Screech-Owl	*Megascops asio*
Red-bellied Woodpecker	*Melanerpes carolinus*
Song Sparrow	*Melospiza melodia*
Northern Mockingbird	*Mimus polyglottos*
Brown-headed Cowbird	*Molothrus ater*
Great Crested Flycatcher	*Myiarchus crinitus*
House Sparrow	*Passer domesticus*

Table 6-2 (cont'd)
Birds Documented by the 2000–2005 Breeding Bird Atlas in Block 5649D

Common Name	Scientific Name
Indigo Bunting	*Passerina cyanea*
Ring-necked Pheasant	*Phasianus colchicus*
Downy Woodpecker	*Picoides pubescens*
Hairy Woodpecker	*Picoides villosus*
Eastern Towhee	*Pipilo erythrophthalmus*
Scarlet Tanager	*Piranga olivacea*
Black-capped Chickadee	*Poecile atricapillus*
Common Grackle	*Quiscalus quiscula*
Eastern Phoebe	*Sayornis phoebe*
American Woodcock	*Scolopax minor*
Ovenbird	*Seiurus aurocapilla*
White-breasted Nuthatch	*Sitta carolinensis*
American Goldfinch	*Spinus tristis*
Field Sparrow	*Spizella pusilla*
European Starling	*Sturnus vulgaris*
Tree Swallow	*Tachycineta bicolor*
Carolina Wren	*Thryothorus ludovicianus*
Brown Thrasher	*Toxostoma rufum*
House Wren	*Troglodytes aedon*
American Robin	*Turdus migratorius*
Eastern Kingbird	*Tyrannus tyrannus*
Warbling Vireo	*Vireo gilvus*
White-eyed Vireo	*Vireo griseus*
Red-eyed Vireo	*Vireo olivaceus*
Mourning Dove	*Zenaida macroura*
Sources: 2000–2005 Breeding Bird Atlas for Block 5649D	

Many of the bird species that are likely to breed in the study area are non-migratory and expected to also occur in the study area during winter. Examples include house sparrow (*Passer domesticus*), European starling (*Sturnus vulgaris*), rock pigeon (*Columba livia*), blue jay (*Cyanocitta cristata*), and mourning dove (*Zenaida macroura*). Other birds with the potential to occur within the terrestrial sections of the study area during winter include black-capped chickadee (*Poecile atricapillus*), red-bellied woodpecker (*Melanerpes carolinus*), tufted titmouse (*Baeolophus bicolor*), American goldfinch (*Spinus tristis*), and white-breasted nuthatch (*Sitta carolinensis*), among others. Waterfowl, such as American black duck (*Anas rubripes*), and mallard (*Anas platyrhynchos*), may occur in Arthur Kill in late fall and throughout the winter.

Although the terrestrial habitats within the study area provide breeding and wintering habitat for only a limited number of bird species, they may be briefly used as stopover sites for additional species that migrate through the area during the spring and fall. Most species are more generalistic in their habitat preferences during migration than during the non-migratory periods, and thus, more species are likely to occur in the study area during spring and fall than at other times of year. Some migratory landbirds that are common to the region and that may briefly stop over in the study area on occasion include common yellowthroat (*Geothlypis trichas*) and red-eyed vireo (*Vireo olivaceus*).

Birds observed during the June 10, 2014 field survey include mourning dove, European starling, and house sparrow.

Mammals

The eastern gray squirrel (*Sciurus carolinensis*) and Norway rat (*Rattus norvegicus*) are the only mammals expected to occur within the project site. Elsewhere in the study area where there are larger clusters of trees, raccoons (*Procyon lotor*) and white-footed mice (*Peromyscus leucopus*) may also occur. The only mammal observed in the study area during the June 10, 2014 field survey was the eastern gray squirrel.

Open water and vegetated wetland habitats within in the study area west of Richmond Avenue formed by stormwater management basins also provide foraging and nesting habitat for muskrats (*Ondatra zibethica*), raccoons, and other mammals. The Fresh Kills Park FGEIS identified the potential for 21 species of mammals to be present within Freshkills Park based on the 1996 DEIS and habitat considerations, eight mammal species were observed during 2007 field observations. Species observed included muskrat, eastern cottontail (*Sylvilagus floridanus*), house cat (*Felis silvestris*), house mouse (*Mus musculus*), and meadow vole (*Microtus pennsylvanicus*). White-tailed deer (*Odocoileus virginianus*) and raccoon tracks were also observed (Fresh Kills Park FGEIS 2009).

Reptiles and Amphibians

The project site lacks surface waters and other features needed to support many of the reptiles and amphibians of the region. The asphalt parking lots, small areas of manicured lawn with shade trees, and Staten Island Mall buildings of the project site are not expected to satisfy the habitat requirements of any reptiles or amphibians, and no such species are expected to occur.

The New York State Herp Atlas Project was a 10-year effort to map the spatial distribution of reptiles and amphibians in New York State. Spotted salamander (*Ambystoma maculatum*), red-spotted newt (*Notophthalmus viridescens*), northern red-back salamander (*Plethodon cinereus*), northern two-lined salamander (*Eurycea bislineata*), Fowler's toad (*Bufo fowleri*), northern spring peeper (*Pseudacris crucifer*), American bullfrog (*Rana catesbeiana*), green frog (*Rana clamitans*), southern leopard frog (*Rana sphenocephala*), pickerel frog (*Rana palustris*), common snapping turtle (*Chelydra serpentina*), musk turtle (*Sternotherus odoratus*), eastern mud turtle (*Kinosternon subrubrum*), spotted turtle (*Clemmys guttata*), eastern box turtle (*Terrapene carolina carolina*), northern diamondback terrapin (*Malaclemys terrapin*), red-eared slider (*Trachemys scripta*), painted turtle (*Chrysemys picta*), northern fence lizard (*Sceloporus undulatus*), northern water snake (*Nerodia sipedon*), northern brown snake (*Storeria dekayi dekayi*), common garter snake (*Thamnophis sirtalis*), northern ring-neck snake (*Diadophis punctatus*), and northern black racer (*Coluber constrictor*) were the species documented in the census block in which study area is located (*Arthur Kill* USGS quadrangle). Among these, the northern red-back salamander, American bullfrog, green frog, Fowler's toad, southern leopard frog, northern spring peeper, painted turtle, common snapping turtle, common garter snake, northern black racer, northern water snake, and northern brown snake are the only species considered to have the potential to occur within the study area west of Richmond Avenue in Fresh Kills Park, on the basis of their habitat associations (Mitchell et al. 2006, Gibbs et al. 2007), and as documented in the Fresh Kills Park FGEIS (2009). None of these species are likely to occur within the project site.

No reptiles or amphibians were observed in the study area during the June 10, 2014 field survey.

THREATENED, ENDANGERED, AND SPECIAL CONCERN SPECIES

Federally listed species noted by the USFWS Information, Planning and Consultation system as occurring in Richmond County include piping plover (*Charadrius melodus*; Threatened), roseate tern (*Sterna dougalli*; Endangered), and northern long-eared bat (*Myotis septentrionalis*; Proposed Endangered). The breeding population of piping plovers in New York City is limited to the Rockaway Peninsula in Queens County (Fowle and Kerlinger 2001, Boretti et al. 2007), and the project site lack wide, open expanses of unvegetated beach that the piping plover uses for habitat. Therefore, piping plovers are not considered to have the potential to occur within the project site. Roseate terns do not nest anywhere in New York City or its neighboring counties (Fowle and Kerlinger 2001, Mitra 2008), and any occurrence of roseate terns in the vicinity of Staten Island would be limited to rare and brief passages of birds offshore that are associated with nesting colonies elsewhere, such as eastern Long Island.

The northern long-eared bat is a temperate, insectivorous bat whose life cycle can be coarsely divided into two primary phases - reproduction and hibernation. Northern long-eared bats hibernate in caves or mines during winter and then emerge in early spring, with males dispersing and remaining solitary until mating season at the end of the summer, and pregnant females forming maternity colonies in which to rear young. Summer habitat of the northern long-eared bat generally includes upland and riparian forest within predominantly forested landscapes (Ford et al. 2005, Henderson et al. 2008). There are no hibernacula reported for this species on Staten Island. Outside of the winter hibernation period, northern long-eared bats generally inhabit mature, closed-canopy, deciduous or mixed forest within heavily forested landscapes (Owen et al. 2003, Carter and Feldhammer 2005, Ford et al. 2005), usually within 60 miles of their hibernaculum (Caceras and Barclay 2000, USFWS 2014). The long-eared bat is considered a forest-dependent species that is sensitive to fragmentation and requires interior forest for both foraging and breeding (Foster and Kurta 1999, Broders et al. 2006, Henderson et al. 2008). Although they may occur in urbanized areas (Whitaker et al. 2004, Johnson et al. 2008) and will occasionally utilize buildings and other artificial structures rather than trees for roosting (Timpone et al. 2010, USFWS 2013), urban northern long-eared bats tend to occur near large, forested parks or other green spaces with abundant tree cover (Johnson et al. 2008). The landscaped portions of the project site do not provide suitable habitat for northern long-eared bat. Therefore, individual northern long-eared bats would not occur on the project site. The upland woodlands and palustrine forest within the portion of the study area in Freshkills Park lack the characteristics (mature, closed-canopy, unfragmented forests, etc.) that describe suitable northern long-eared bat summer habitat. NYNHP and NYSDEC have no records of the northern long-eared bat from any of the five boroughs of New York City (NYNHP 2014, NYSDEC 2014), and no nuisance bats ever collected from New York City and submitted to the New York State Department of Health for rabies testing have included a northern long-eared bat (NYSDEC 2014). Therefore, northern long-eared bats are not considered to have the potential to occur within the project site or the portion of the study area within Freshkills Park.

None of the species documented by the 2000–2005 Breeding Bird Atlas and 1990–1999 Herp Atlas Project in the census blocks in which the project site are located is federally or state-listed. No federally or state listed species were observed during the June 10, 2014 reconnaissance field survey.

Oak-tulip tree forest, a significant natural community, was included in the NYNHP response letter dated August 22, 2014, as having been documented in the vicinity of the project site. The oak-tulip tree forest community is described by Edinger et al. (2002) as “a mesophytic hardwood

forest that occurs on moist, well-drained sites in southeastern New York. The dominant trees include a mixture of five or more of the following: red oak (*Quercus rubra*), tulip tree (*Liriodendron tulipifera*), beech (*Fagus grandifolia*), black birch (*Betula lenta*), red maple (*Acer rubrum*), scarlet oak (*Quercus coccinea*), black oak (*Quercus velutina*), and white oak (*Quercus alba*)." The NYNHP response letter states that this community is found within the Staten Island Greenbelt; however, the oak-tulip tree forest is not present within the project site.

E. FUTURE WITHOUT THE PROPOSED PROJECT

The following assessment of natural resources in the No Action Scenario assumes that by the Build year (2017), land cover type and human activity would not differ from the existing condition. The project site would remain a developed commercial center with parking lots and manicured lawns. There would be no redevelopment within the study area outside the project site. As such, natural resources within the project site would remain unchanged from the existing condition. The vegetation and ecological communities of the project site would remain largely unchanged in the No Action Scenario because of the frequency of mowing and other maintenance activities occurring within the mowed lawn and mowed lawn with trees found within the project site. Because land cover type and the patterns and levels of human activity within the study area are not expected to change in the future without the proposed project, wildlife species using the project site will not change. Because land cover type and the patterns and levels of human activity within the project site are not expected to change in the future without the proposed project, the same species of wildlife currently present are expected to remain. The parking areas and patches of manicured lawn with shade trees within the project site will continue to support the same communities of urban-adapted, generalist wildlife such as rock dove, house sparrow, and Norway rat. Similarly, the project site in the future without the project would not would not support threatened or endangered species.

For the portion of the study area outside the project site, runoff from the project site would continue to be discharged to the stormwater outfalls within Freshkills Park. Natural resources within this portion of the study area in 2017 would be expected to be as described for the existing condition.

F. FUTURE WITH THE PROPOSED PROJECT

The proposed project would consist of enlarging an existing commercial center known as the Staten Island Mall, construction of a new parking structure, and landscape improvements within an existing developed site. All project activities would occur within the footprint of the existing Staten Island Mall and associated parking lots. It is anticipated that the proposed project would be completed by 2017.

GROUNDWATER

Operation of the proposed project would not affect groundwater resources. Because groundwater is not used as a potable water supply on Staten Island, operation of the proposed project would not have the potential to affect drinking water supplies.

FLOODPLAINS

The project site and study area are not within the 100-Year Floodplain or 500-Year Floodplain. Therefore, operation of the proposed project would not result in adverse impacts to the floodplain.

WETLANDS

The operation of the proposed project would not be expected to adversely affect the NWI-mapped wetlands within the study area. As discussed in Chapter 8, "Water and Sewer Infrastructure," in the Future With the Proposed Project there would be a slight increase in runoff due to an increase in roof coverage and small reduction in landscaped area within the project site. However, with the implementation of stormwater source BMPs to reduce runoff volumes and rate at which stormwater is discharged to the city storm sewers, the discharge of stormwater to the city storm sewer with the proposed project would not adversely affect NWI-mapped wetlands within Freshkills Park in the vicinity of the stormwater outfalls discharging runoff from the proposed project.

TERRESTRIAL RESOURCES

VEGETATION AND ECOLOGICAL COMMUNITIES

Plants used in the landscaping plans could benefit some species of wildlife, such as beneficial insects and songbirds, providing them with suitable habitat and forage. The landscaped areas on the project site would slightly decrease from 13.42 acres (existing) to 13.21 acres (proposed). However, the proposed project would include the planting of new trees throughout the project site, resulting in benefits to terrestrial resources. Therefore, the operation of the proposed project would not result in t adverse impacts to vegetation and ecological communities.

WILDLIFE

At present, only highly urban-adapted, synanthropic wildlife species (i.e., those that benefit from an association with humans) occur within the project site. The increased human activity that would result from operation of the proposed project would not adversely affect these disturbance-tolerant species, and for some, numbers would possibly increase. The majority of the year, wildlife that would be expected to occur in these areas would remain limited to non-native, invasive birds such as the house sparrow. During spring and fall, common migratory songbirds would have the potential to occasionally and briefly occur in the trees present within the project site, and would benefit from the landscaping improvements and additional trees that would be planted with the proposed project. Therefore, operation of the proposed project would not result in adverse impacts to wildlife.

THREATENED, ENDANGERED, AND SPECIAL CONCERN SPECIES

As discussed above, under "Existing Conditions," the project site and study area lack suitable habitat for northern long-eared bats, piping plover and roseate terns and does not contain any NYSDEC significant natural communities. Therefore, the proposed project would not result in adverse impacts to these resources.

G. FUTURE WITH 2019 COMPLETION DATE

As detailed in Chapter 1, "Project Description," there is the possibility that Macy's would elect to postpone commencement of construction of its proposed 75,000-gsf enlargement, in which case the Macy's enlargement and a portion of the proposed structured parking garage would be expected to be complete by 2019, rather than by 2017. In this event, the effects of the proposed

project on natural resources and floodplains would be substantially similar to those described above for the 2017 full-build analysis.

There are no additional background development projects that are currently expected to be built in the ½-mile study area between 2017 and 2019. In addition, no work on the portion of Freshkills Park within and adjacent to the study area is expected to be undertaken during this time. The continued implementation of stormwater source control BMPs and erosion and sediment control measures would occur under the 2019 Full-Build Scenario. Therefore, this 2019 Full-Build Scenario would not result in any significant adverse impacts related to natural resources and floodplains. ✷