

**A. INTRODUCTION**

This attachment assesses the potential for the Baldwin Installation to affect groundwater, floodplains, wetlands, vegetation, wildlife, and federal and state-listed species within the vicinity of the Project Site (See Attachment A). The areas covered are as follows:

- The current condition of the groundwater, floodplain, and natural resources within the study area, including terrestrial biota, and threatened or endangered species and species of special concern.
- The potential impacts of the DA Project equipment on groundwater, floodplain, wetlands, and natural resources.

**B. METHODOLOGY****STUDY AREA**

Natural resources and the potential impacts are evaluated herein for an area extending 0.5 miles from the Project Site.

**EXISTING CONDITIONS**

The existing natural resource conditions on the Project Site were identified through field observations, information in published and gray literature, and the following datasets and other sources of information:

- Federal Emergency Management Agency (“FEMA”) effective Flood Insurance Rate Maps (“FIRMs”);
- United States Fish and Wildlife Service (“USFWS”) National Wetland Inventory (“NWI”) maps and Information, Planning, and Conservation (“IPaC”) System list of threatened, endangered, candidate, and proposed species for Nassau County;
- New York State Department of Environmental Conservation (“NYSDEC”) tidal and freshwater wetland maps;
- 2000–2005 Breeding Bird Atlas results for Block 6150C;
- New York Natural Heritage Program (“NYNHP”) review;
- Observations made during reconnaissance investigations of the Project Site and study area in 2016 and 2017.

**C. EXISTING CONDITIONS****GROUNDWATER**

The Project Site is located within the Nassau-Suffolk Aquifer System, which is a designated Sole Source Aquifer (USEPA 1975). It consists of deposits of unconsolidated gravel, sand, silt, and clay from the

## **Baldwin Substation Radio Repeater Installation**

---

Holocene, Pleistocene, and Late Cretaceous age that have a maximum total thickness of about 1,500 ft. Precipitation is the sole source of groundwater recharge. Potable water supply to Baldwin is provided by New York American Waterworks Company, Inc. (“Company”). Water is drawn from the ground from approximately 162 wells (including well fields) located in the aquifer system beneath the land surface, throughout the Company’s territory. The aquifers are water-bearing geologic deposits of sand and clay. The aquifers utilized by the company are the Magothy, Jameco, and the Lloyd. The maximum depth of the Nassau-Suffolk Aquifer System ranges from 600 - 2,000 ft. with a groundwater table depth averaging 50 - 60 ft. below the ground surface. Based on site-specific data, groundwater is located at a depth of approximately 21 ft. below ground surface.

### **FLOODPLAINS**

Based upon a review of the effective FEMA FIRMs, no areas on the Project Site lie within a 100-year floodplain (the area with a one percent (0.01) probability of flooding each year) or a 500-year floodplain (the area with a 20 percent (0.2) probability of flooding each year).

### **WETLANDS**

There are no federally-mapped NWI or NYSDEC-mapped freshwater or tidal wetlands present on or adjacent to the Project Site.

### **TERRESTRIAL ECOLOGICAL COMMUNITIES AND VEGETATION**

The DA Project equipment will be installed at the existing LIPA-owned property located at 2285 Harrison Avenue in Baldwin, Nassau County, New York. Following the ecological community classification system used by Edinger et al. (2014), the Project Site can be characterized as “mowed lawn” where the groundcover is dominated by clipped grasses and there is less than 30 percent cover of trees; ornamental and/or native shrubs may be present, usually with less than 50 percent cover. The adjacent substation site groundcover is gravel, concrete and bluestone, which does not typically support vegetative growth.

The Project Site will be limited to an approximate 1,000 sq. ft. area within the existing LIPA-owned property adjacent to the Baldwin Substation. The Project Site consists of small trees and ground cover.

### **WILDLIFE**

There is limited natural habitat available to support terrestrial wildlife within the Project Site. The adjacent existing Baldwin Substation is actively maintained and operated and provides poor quality vegetated space. The adjacent land area is varied with a mixture of residential and light commercial. The developed nature of the substation prevents it from developing high quality natural habitat for any wildlife species. It is unlikely that wildlife species use the site as permanent habitat. Wildlife use of the study area is limited by its urbanized nature. Wildlife use in these settings is typically restricted to urban-adapted, habitat generalist species that can tolerate degraded environments and high levels of human activity.

#### ***BIRDS***

The New York State Breeding Bird Atlas (“BBA”) projects are comprehensive statewide surveys designed to document the distribution of breeding birds within New York State. Two BBA projects were completed near the Project Site. The first survey was conducted from 1980-1985 and the most recent took place from

2000-2005. BBA mapping is based on a grid that divides the state into discreet atlas blocks measuring 10 kilometers (“km”) by 10 km (or 6.2 miles on each side). The 2000-2005 BBA census documented 28 species as confirmed or probable/possible breeders in the survey block where the Project Site is located (Table C-1). This BBA survey block also covers natural areas where there may be suitable habitat to support many of the identified species. The Project Site and study area contain habitat that is suitable for only a few of the more urban-adapted bird species. These species include European starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), rock pigeon (*Columba livia*), American robin (*Turdus migratorius*), northern cardinal (*Cardinalis cardinalis*), and American crow (*Corvus brachyrhynchos*).

**Table C-1**  
**New York State BBA Results for Block 6150C**

<b>Common Name</b>	<b>Scientific Name</b>
American Crow	<i>Corvus brachyrhynchos</i>
American Goldfinch	<i>Spinus tristis</i>
American Robin	<i>Turdus migratorius</i>
Baltimore Oriole	<i>Icterus galbula</i>
Belted Kingfisher	<i>Megasceryle alcyon</i>
Black-capped Chickadee	<i>Poecile atricapillus</i>
Blue Jay	<i>Cyanocitta cristata</i>
Brown-headed Cowbird	<i>Molothrus ater</i>
Canada Goose	<i>Branta canadensis</i>
Carolina Wren	<i>Thryothorus ludovicianus</i>
Downy Woodpecker	<i>Picoides pubescens</i>
Eastern Kingbird	<i>Tyrannus</i>
European Starling	<i>Sturnus vulgaris</i>
Gray Catbird	<i>Dumetella carolinensis</i>
House Finch	<i>Carpodacus mexicanus</i>
House Sparrow	<i>Passer domesticus</i>
House Wren	<i>Troglodytes aedon</i>
Mallard	<i>Anas platyrhynchos</i>
Mourning Dove	<i>Zenaida macroura</i>
Northern Cardinal	<i>Cardinalis</i>
Northern Flicker	<i>Colaptes auratus</i>
Northern Mockingbird	<i>Mimus polyglottos</i>
Red-bellied Woodpecker	<i>Melanerpes carolinus</i>
Red-winged Blackbird	<i>Agelaius phoeniceus</i>
Rock Pigeon	<i>Columba livia</i>
Song Sparrow	<i>Melospiza melodia</i>
Spotted Sandpiper	<i>Actitis macularius</i>
Tufted Titmouse	<i>Baeolophus bicolor</i>
Source:	NYS Breeding Bird Atlas (2000-2005) Block 6150C

## **Baldwin Substation Radio Repeater Installation**

---

### *MAMMALS*

Habitat for mammals is very limited on the Project Site and is likely to be used by only urban-adapted species. Species that would be expected on the site and in the study area include the raccoon (*Procyon lotor*), house mouse (*Mus musculus*), Norway rat (*Rattus norvegicus*), gray squirrel (*Sciurus carolinensis*), eastern cottontail (*Sylvilagus floridanus*) and domestic cat (*Felis catus*).

### *REPTILES AND AMPHIBIANS*

Suitable habitat for reptiles and amphibians is very limited within the Project Site. Surface water bodies, which are necessary to support certain amphibian life stages, are absent. Reptile species that may possibly be found using the site and in the study area include the northern brown snake (*Storeria dekayi*) and common garter snake (*Thamnophis sirtalis*).

### **THREATENED, ENDANGERED, SPECIAL CONCERN SPECIES AND SIGNIFICANT HABITATS**

A USFWS IPaC Report was generated February 3, 2017 for the Project Site (Attachment G). The report listed piping plover (*Charadrius melodus*), red knot (*Calidris canutus rufa*), roseate tern (*Sterna dougallii dougallii*), and northern long-eared bat (*Myotis septentrionalis*) as occurring in Nassau County, New York. Roseate tern is federally listed as endangered while piping plover, red knot, and Northern long eared bat are listed as threatened. In addition, the flowering plants sandplain gerardia (*Agalinis acuta*) and seabeach amaranth (*Amaranthus pumilus*) were listed as occurring in Nassau County. Sandplain gerardia is listed as federally endangered and seabeach amaranth is listed as threatened.

Since there are no critical habitats for any of the listed species, none of these species would be expected to exist on the Project Site or in the immediate study area.

Consultation with the NYNHP was also initiated. No threatened or endangered species or designated critical habitats were found within the vicinity of the Project Site, and no further coordination was necessary. A copy of the NYNHP response can be found in Attachment G.

A visual inspection of the Project Site did not identify any of the state or federally-listed species.

## **D. POTENTIAL IMPACTS OF THE BALDWIN INSTALLATION**

### **GROUNDWATER**

Groundwater under the Project Site is not and will not be used as a drinking water source, and related excavation activities will not disturb the groundwater levels or groundwater quality at the site or in the study area. Significant adverse impacts to groundwater will therefore not occur because of construction or operation of the Baldwin Installation.

Available site-specific data indicate that groundwater table depth is approximately 21 ft. below the ground surface; the depth of the monopole foundation will be approximately 18 ft. Therefore, subsurface work will remain above the groundwater table and no adverse impacts will result. Should dewatering be needed, the operation will be conducted in accordance with applicable standards.

## **FLOODPLAINS**

As discussed under “Existing Conditions” above, the Project Site and its surrounding area do not lie within a 100-year floodplain or a 500-year floodplain. Therefore, construction and operation of the DA Project equipment will not result in significant adverse impacts to flood levels, flood risk, or the flow of flood waters.

## **WETLANDS**

As discussed under “Existing Conditions” above, there are no NWI or NYSDEC-mapped wetlands on the Project Site. Therefore, construction and operation of the DA Project equipment will not impact wetlands.

## **TERRESTRIAL ECOLOGICAL COMMUNITIES AND VEGETATION**

As discussed under “Existing Conditions” above, ecological communities on the Project Site are limited to a maintained parcel (i.e. mowed lawn). The land use surrounding the site can be classified as varied with a mixture of residential, commercial, industrial and transportation-related uses. These uses provide limited ecological value. As a result, construction and operation of the Baldwin Installation will not result in significant adverse impacts to terrestrial ecological communities and vegetation on the Project Site and in the study area. An approximate 0.023-acre area located immediately northeast of the substation consisting of small trees and maintained lawn will be cleared to accommodate the ground-based equipment installations. However, no sensitive ecological communities or species are present in this area. Therefore, removal of this vegetation will not result in significant adverse impacts to terrestrial ecological communities and vegetation.

## **WILDLIFE**

The Baldwin Installation will not result in significant adverse impacts to wildlife at either the individual or population level. Terrestrial wildlife use of the Project Site is extremely limited due to its current conditions as a maintained, mowed lot. Construction or operation of the DA Project equipment will not eliminate any high quality or valuable wildlife habitat and will not adversely affect the few urban-adapted species that may occur in the study area. As habitat generalists, these species are highly disturbance-tolerant. Individuals of these species may temporarily be displaced from the Project Site during construction; however, to the extent the site is used, they may return once construction is completed.

## **THREATENED, ENDANGERED, AND SPECIAL CONCERN SPECIES AND SIGNIFICANT HABITATS**

Based on the USFWS IPaC Report, as well as the informal consultation with NYNHP, threatened and/or endangered species may be present in the vicinity of the Project Site. However, given the developed nature of the adjacent existing Baldwin Substation, there is no critical habitat on the site. No flowering plants or vegetation of any type exist where the DA Project equipment will be sited. Birds or bats that may fly near the site during construction will not be adversely affected due to the limited and temporary nature of the work (i.e. one day use of a crane, general construction activity / disturbance). Once installed, the new monopole, antenna and related equipment will be in a developed area of Long Island not suitable for habitat specific to the listed threatened and endangered species. In conclusion, construction and operation of the DA Project equipment will not result in any significant adverse impacts to threatened, endangered, and special concern species or their habitats.

## **Baldwin Substation Radio Repeater Installation**

---

In summary, the Baldwin Installation will not have a potential significant adverse impact on natural resources.

## E. REFERENCES

- Edinger, G.J., D.J. Evans, S. Gebauer, T.G. Howard, D.M. Hunt, and A.M. Olivero (editors). 2014. Ecological Communities of New York State. Second Edition. A revised and expanded edition of Carol Reschke's Ecological Communities of New York State. New York Natural Heritage Program, New York State Department of Environmental Conservation, Albany, NY.
- New York American Water home page. <https://amwater.com>
- New York State Department of Environmental Conservation (NYSDEC). Freshwater Wetlands Program. <http://www.dec.ny.gov/lands/4937.html>
- United States Department of Homeland Security (USDHS). Federal Emergency Management Agency (FEMA). <https://msc.fema.gov/portal/advanceSearch>
- United States Department of the Interior (USDOI). United States Fish and Wildlife Service (USFWS). 2017. *National Wetland Inventory Mapper*. Baldwin, NY. <https://www.fws.gov/wetlands/data/mapper.html>
- United States Environmental Protection Agency (USEPA). 1975. Nassau-Suffolk Aquifer System. USEPA Region 2.
- United States Fish and Wildlife Service (USFWS). Information, Planning, and Conservation System (IPaC). <https://www.fws.gov/ipac/>
- United States Geologic Survey (USGS). 2017. *The National Map Viewer*. Baldwin, NY. <https://viewer.nationalmap.gov/viewer/#>