Tab 6

WETLAND INSPECTION

July 11, 2019 **APT Project No.: CT283450**

Prepared For: Homeland Towers
9 Harmony Street
Danbury, CT 06810

HLT Site Name: New Canaan Northeast: CT027

Site Address: 183 Soundview Lane
New Canaan, Connecticut

Date(s) of Investigation: 5/30/2019

Field Conditions: **Weather:** partly cloudy**,** low 60's
Soil Moisture: dry to moist

Wetland/Watercourse Delineation Methodology*:

☒Connecticut Inland Wetlands and Watercourses
☐Connecticut Tidal Wetlands
☐U.S. Army Corps of Engineers

The wetlands inspection was performed by†:

Matthew Gustafson, Registered Soil Scientist

Enclosures: Wetland Delineation Field Form & Wetland Inspection Map

This report is provided as a brief summary of findings from APT's wetland investigation of the referenced study area that consists of proposed development activities and areas generally within 200 feet.‡ If applicable, APT is available to provide a more comprehensive wetland impact analysis upon receipt of site plans depicting the proposed development activities and surveyed location of identified wetland and watercourse resources.

* *Wetlands and watercourses were delineated in accordance with applicable local, state and federal statutes, regulations and guidance.*

† *All established wetlands boundary lines are subject to change until officially adopted by local, state, or federal regulatory agencies.*

‡ *APT has relied upon the accuracy of information provided by Homeland Towers regarding proposed lease area and access road/utility easement locations for identifying wetlands and watercourses within the study area.*

Attachments

- Wetland Delineation Field Form
- Wetland Inspection Map

Wetland Delineation Field Form

Wetland I.D.:	Wetland 1	
Flag #'s:	WF 1-01 to 1-07	
Flag Location Method:	Site Sketch ☒	GPS (sub-meter) located ☒

WETLAND HYDROLOGY:

NONTIDAL ☒

Intermittently Flooded ☐	Artificially Flooded ☐	Permanently Flooded ☐
Semipermanently Flooded ☐	Seasonally Flooded ☒	Temporarily Flooded ☐
Permanently Saturated ☐	Seasonally Saturated – seepage ☒	Seasonally Saturated - perched ☐
Comments: None		

TIDAL ☐

Subtidal ☐	Regularly Flooded ☐	Irregularly Flooded ☐
Irregularly Flooded ☐		
Comments: None		

WETLAND TYPE:

SYSTEM:

Estuarine ☐	Riverine ☐	Palustrine ☒
Lacustrine ☐	Marine ☐	
Comments: None		

CLASS:

Emergent ☐	Scrub-shrub ☐	Forested ☒
Open Water ☐	Disturbed ☐	Wet Meadow ☐
Comments: None		

WATERCOURSE TYPE:

Perennial ☐	Intermittent ☒	Tidal ☐
Watercourse Name: Unnamed		
Comments: Interior intermittent watercourse channel consists of a 2- to 3-foot wide channel with a sandy bottom draining east off site. This watercourse is fed by a naturally occurring spring/seep outbreak focused within a narrow channel by a historically constructed stone confinement.		

Wetland Delineation Field Form (Cont.)

SPECIAL AQUATIC HABITAT:

Vernal Pool Yes ☐ No ☒ Potential ☐	Other ☐
Vernal Pool Habitat Type: None	
Comments: None	

SOILS:

Are field identified soils consistent with NRCS mapped soils?	Yes ☒	No ☐
If no, describe field identified soils		

DOMINANT PLANTS:

Green Ash (Fraxinus pennsylvanica)	American Elm (Ulmus americana)
Red Maple (Acer rubrum)	Skunk Cabbage (Symplocarpus foetidus)
Spicebush (Lindera benzoin)	Japanese Barberry* (Berberis thunbergii)

* denotes Connecticut Invasive Species Council invasive plant species

GENERAL COMMENTS:

All-Points Technology Corp., P.C. ("APT") understands that Homeland Towers is proposing to construct a wireless telecommunications facility that would consist of an 90-foot-tall monopole structure within an 23-foot by 6-inch by 75-foot gravel compound in the northwest corner of the developed residential subject parcel. This compound would host additional ground equipment including a shelter surrounded by a fence. The facility would be directly accessed off Soundview Drive via a proposed short gravel access road. The proposed facility would be located approximately 420 feet west of the nearest wetland resource located along the northeastern subject parcel boundary.

Wetland 1 consists of a closed canopy forest naturally occurring spring seep outbreak that drains east off the subject parcel. An interior intermittent watercourse was identified within the wetland resource. Wetland hydrology consists of seasonal saturation from the hillside seepage.

The proposed facility is not anticipated to result in an adverse impact to wetlands due to the distance separating the proposed work activities from Wetland 1. This preliminary assessment is based on the assumption that erosion and sedimentation controls would be designed, installed and maintained during construction in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sedimentation Control and stormwater would be properly treated in accordance with the 2004 Connecticut Stormwater Quality Manual. This statement is based on APT's current understanding of the proposed development, which did not include a review of final project site plans. Upon receipt of final site plans, APT will review specifics of the facility layout and determine if this preliminary wetland impact analysis statement should be modified and/or if additional wetland protection measures should be implemented.

Wetland Inspection Map
183 Soundview Lane
New Canaan, Connecticut

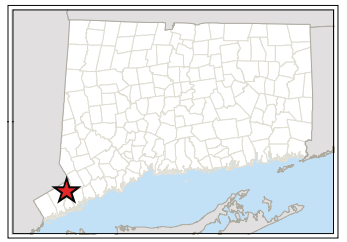
Legend

- Subject Property
- Approximate Parcel Boundary (CTDEEP)
- Proposed Lease Area
- Proposed Monopine
- Proposed Compound Fence
- Wetland Flags
- Delineated Wetland Boundary
- Wetland Area

N
W E
S

100 50 0 100 Feet

1 in = 100 ft



ALL-POINTS TECHNOLOGY CORPORATION

Map Sources:

Ortho Base Map: CT ECO 2016 Aerial Imagery

Delineated Wetland Data: All-Points Tech. Corp. Field data; 05/30/2019

Proposed Design Data: All-Points Tech. Corp.; 06/25/2019

Map Date: June 2019

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AVIAN RESOURCES EVALUATION

January 22, 2020

To: Homeland Towers, LLC
9 Harmony Street
Danbury, CT 06810

Re: Proposed New Canaan NE Facility, 183 Soundview Lane, New Canaan, Connecticut 06840
APT Project No. CT283450

Homeland Towers, LLC ("Homeland") proposes to construct a new wireless telecommunications facility ("Facility") at 183 Soundview Lane in New Canaan, Connecticut (the "Host Property"). The Host Property consists of an approximately 4.05-acre parcel that is currently developed with a two-story colonial residential home, in-ground pool and tennis court. The area proposed for the Facility is located on the north side of the Host Property ("Site"). The Facility would include an 85-foot tall monopine tower designed to resemble a pine tree (or "monopine"). The monopine would include faux branching that would extend to a height of approximately 90 feet above ground level. Associated ground equipment would be installed at the base of the monopole within a 23.5' x 75' compound enclosed by an eight (8)-foot tall, wooden shadowbox fence. A 12-foot wide gravel access drive will lead to the compound area from the east side of Soundview Lane; utilities will be routed underground from Soundview Lane to the Site.

The purpose of this evaluation is to document the proposed Facility's proximity to avian resource areas and its compliance with recommended guidelines of the United States Fish and Wildlife Service ("USFWS") for minimizing the potential for telecommunications towers to impact bird species.

All-Points Technology Corporation, P.C. ("APT") reviewed several publicly-available sources of avian data for the state of Connecticut to provide the following information with respect to potential impacts on migratory birds associated with the proposed development. This desktop analysis and attached graphics identify avian resources and their proximities to the Host Property. Information within an approximate 3-mile radius of the Host Property is graphically depicted on the attached Avian Resources Map. Some of the avian data referenced herein are not located in proximity to the Host Property and are therefore not visible on the referenced map due to its scale. In those cases, the distances separating the Host Property from the resources are identified in the discussions below.

Proximity to Important Bird Areas

The National Audubon Society has identified 27 Important Bird Areas ("IBAs") in the state of Connecticut. IBAs are sites that provide essential habitat for breeding, wintering, and/or migrating birds. To achieve this designation, an IBA must support species of conservation concern, restricted-range species, species vulnerable due to concentration in one general habitat type or biome, or species

vulnerable due to their occurrence at high densities as a result of their congregatory behavior[1]. The closest IBA to the Host Property is the Ward Pound Ridge Reservation, located in Westchester County, NY approximately 3.0 miles to the northwest. This ±17,000-acre site includes Westchester County's largest park, the ±4,700-acre Ward Pound Ridge Reservation. Approximately 80% of the site is forested, and includes Appalachian oak-pine, deciduous wetland, evergreen northern hardwood, oak, and sugar maple mesic forests. This varied habitat supports an exceptional regional bird community, representative of the hardwood forests of southern New England. Due to its distance from the Site, this IBA would not experience an adverse impact resulting from the proposed development of the Facility. The closest IBA to the host Property in Connecticut is The Nature Conservancy's Devil's Den Preserve in Weston and Redding, approximately 7 miles to the northeast. This preserve is The Nature Conservancy's largest contiguous preserve in Connecticut, and is part of the largest tract of protected land in densely developed Fairfield County. Devil's Den supports large populations of all of Connecticut's forest interior nesting bird species. Due to its distance from the Site, this IBA would not experience an adverse impact resulting from the proposed development of the Facility.

Supporting Migratory Bird Data

Beyond Audubon's IBAs, the following analysis and attached graphics identify several additional avian resources and their proximities to the Host Property. Although these data sources may not represent habitat indicative of IBAs, they may indicate possible bird concentrations[2] or migratory pathways.

Critical Habitat

Connecticut Critical Habitats depict the classification and distribution of 25 rare and specialized wildlife habitats in the state. They represent a compilation of ecological information collected over many years by state agencies, conservation organizations and individuals. These habitats range in size from areas less than one acre to areas that are tens of acres in extent. The Connecticut Critical Habitats information can serve to highlight ecologically significant areas and to target areas of species diversity for land conservation and protection but may not necessarily be indicative of habitat for bird species. The nearest Critical Habitat to the proposed Facility is an eustuarine intertidal marsh area associated with Canfield Island Marsh, which is located approximately 8.4 miles to the southeast. Due to its distance from the Site, this Critical Habitat would not experience an adverse impact resulting from the proposed development of the Facility.

Avian Survey Routes and Points

Breeding Bird Survey Route

The North American Breeding Bird Survey is a cooperative effort between various agencies and volunteer groups to monitor the status and trends of North American bird populations. Routes are randomly located to sample habitats that are representative of an entire region and do not

[1] http://web4.audubon.org/bird/iba/iba_intro.html

[2] "bird concentrations" is related to the USFWS *Revised Voluntary Guidelines for communication Tower Design, Siting, Construction, Operation, Retrofitting, and Decommissioning* (September 27, 2013) analysis provided at the end of this document

necessarily represent concentrations of avifauna or identification of critical avian habitats. Each year during the height of the avian breeding season (June for most of the United States), participants skilled in avian identification collect bird population data along roadside survey routes. Each survey route is approximately 24.5 miles long and contains 50 stops located at 0.5-mile intervals. At each stop, a three-minute count is conducted. During each count, every bird seen or heard within a 0.25-mile radius is recorded. The resulting data is used by conservation managers, scientists, and the general public to estimate population trends and relative abundances and to assess bird conservation priorities. The nearest survey route to the Host Property is the Greenwich Breeding Bird Survey Route (Route #18010) located approximately 1.0 mile to the east. This ±23-mile long bird survey route begins on North Street in Greenwich and generally winds its way northeast through Stamford and New Canaan before terminating in Wilton. Since bird survey routes represent randomly selected data collection areas, they do not necessarily represent a potential restriction to development projects. In this case, its distance from the Site would negate any potential adverse impact resulting from development of the Facility.

Hawk Watch Site

The Hawk Migration Association of North America ("HMANA") is a membership-based organization committed to the conservation of raptors through the scientific study, enjoyment and appreciation of raptor migration. HMANA collects hawk count data from almost 200 affiliated raptor monitoring sites throughout the United States, Canada and Mexico, identified as "Hawk Watch Sites." In Connecticut, Hawk Watch Sites are typically situated on prominent hills and mountains that tend to concentrate migrating raptors. The nearest Hawk Watch Site, Flirt Hill, is located in Easton, approximately 9.6 miles to the north of the proposed Facility.

Most hawks migrate during the day (diurnal) to take advantage of two theorized benefits: 1) diurnal migration allows for the use of updrafts or rising columns of air called thermals to gain lift without flapping thereby reducing energy loss; and, 2) day migrants can search for prey and forage as they migrate.

Based on the distance separating this Hawk Watch Site and hawk migration behavior occurring during the daytime under favorable weather conditions when thermals form, no adverse impacts to migrating hawks are anticipated from development of the Facility.

Bald Eagle Survey Route

Bald Eagle Survey Routes consist of locations of midwinter bald eagle counts from 1986 to 2005 with an update provided in 2008. This survey was initiated in 1979 by the National Wildlife Federation. This database includes information on statewide, regional and national trends. Survey routes are included in the database only if they were surveyed consistently in at least four years and where at least four eagles were counted in a single year. The nearest Bald Eagle Survey Route is the Aspetuck and Saugatuck Reservoir Survey Route. The Survey Route is located approximately 8.2 miles northeast of the Site.

Bald eagle migration patterns are complex, dependent on age of the individual, climate (particularly during the winter) and availability of food.[3] Adult birds typically migrate alone and generally as needed when food becomes unavailable, although concentrations of migrants can occur at communal feeding and roost sites. Migration typically occurs during the middle of day (10:30–17:00) as thermals provide opportunities to soar up with limited energetic expense; Bald Eagle migration altitudes are estimated to average 1,500 to 3,050 meters by ground observers.[4] Four adults tracked by fixed-wing aircraft in Montana averaged 98 km/d during spring migration and migrated at 200 to 600 meters above the ground (McClelland et al. 1996).[5]

In addition, the USFWS's *National Bald Eagle Management Guidelines* (May 2007) recommends a 660-foot buffer to bald eagle nests if the activity will be visible from the nest with an additional management practice recommendation of retaining mature trees and old growth stands, particularly within 0.5 mile from water. No known bald eagle nests occur in the vicinity of the Host Property.

Therefore, no adverse impacts to migrating bald eagle are anticipated from development of the Facility. This conclusion is based on the short (90-foot tall) height of the Facility, eagle migration patterns during the daytime under favorable weather conditions when thermals form and compliance with USFWS bald eagle management guidelines.

Flyways

The Host Property is located in Fairfield County, approximately 7.5 miles northeast of Long Island Sound. The Connecticut coast lies within the Atlantic Flyway, one of four generally recognized regional primary migratory bird flyways (Mississippi, Central and Pacific being the others). This regional flyway is used by migratory birds travelling to and from summering and wintering grounds. The Atlantic Flyway is particularly important for many species of migratory waterfowl and shorebirds, and Connecticut's coast serves as vital stopover habitat. Migratory land birds also stop along coastal habitats before making their way inland. Smaller inland migratory flyways ("secondary flyways) are often concentrated along major riparian areas as birds use these valuable stopover habitats to rest and refuel as they make their way further inland to their preferred breeding habitats. The Connecticut Migratory Bird Stopover Habitat Project (Stokowski, 2002)[6] identified potential flyways along the Housatonic, Naugatuck, Thames, and Connecticut Rivers. This study paralleled a similar earlier study conducted by the Silvio O. Conte National Fish & Wildlife Refuge (Neotropical Migrant Bird Stopover Habitat Survey[7]), which consisted of collection of migratory bird data along the Connecticut River and the following major Connecticut River tributaries: Farmington, Hockanum, Scantic, Park, Mattabesset,

[3] Buehler, David A. 2000. Bald Eagle (*Haliaeetus leucocephalus*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/506 [Accessed 09/09/13].

[4] Harmata, A. R. 1984. Bald Eagles of the San Luis valley, Colorado: their winter ecology and spring migration. Ph.D. Thesis. Montana State Univ. Bozeman.

[5] Mcclelland, B. R., P. T. McClelland, R. E. Yates, E. L. Caton, and M. E. McFadden. 1996. Fledging and migration of juvenile Bald Eagles from Glacier National Park, Montana. J. Raptor Res. 30:79-89.

[6] Stokowski, J.T. 2002. Migratory Bird Stopover Habitat Project Finishes First Year. Connecticut Wildlife, November/December 2002. P.4.

[7] The Silvio O. Conte National Fish & Wildlife Refuge Neotropical Migrant Bird Stopover Habitat Survey http://www.science.smith.edu/stopoverbirds/index.html

Salmon, and Eight Mile Rivers. Of these potential flyways, the nearest to the Host Property is the Rippowam River, located approximately 1.5 miles to the west. The Silvermine River riparian corridor, located 0.27 miles east of the Host Property, is not identified as a potential flyway but potentially forms a secondary flyway as birds move northward from the Silvermine River corridor during the spring migration. These major riparian corridors may provide secondary flyways as they likely offer more food and protection than more exposed upland sites, particularly during the spring migration[8].

Siting of tower structures within flyways can be a concern, particularly for tall towers and even more particularly for tall towers with guy wires and lighting. The majority of studies on bird mortality due to towers focuses on very tall towers (greater than 1000 feet), illuminated with non-flashing lights, and guyed. These types of towers, particularly if sited in major migratory pathways, do result in significant bird mortality (Manville, 2005)[9]. The proposed Facility is not this type of tower, being an unlit, unguyed monopine structure only 90 feet in height. More recent studies of short communication towers (<300 feet) reveal that they rarely kill migratory birds[10]. Studies of mean flight altitude of migrating birds reveal flight altitudes of 410 meters (1350 feet), with flight altitudes on nights with bad weather between 200 and 300 meters above ground level (656 to 984 feet)[11].

No adverse impacts to migrating bird species are anticipated from development of the Facility, based on its design (unlit and unguyed) and relatively short (90-foot) height. The design and height of the proposed Facility, combined with its distance from the Site, would also mitigate the potential for migratory bird impacts should the Silvermine River be used as a secondary flyway.

Waterfowl Focus Areas

The Atlantic Coast Joint Venture ("ACJV") is an affiliation of federal, state, regional and local partners working together to address bird conservation planning along the Atlantic Flyway. The ACJV has identified waterfowl focus areas recognizing the most important habitats for waterfowl along the Atlantic Flyway. Connecticut contains several of these waterfowl focus areas. The nearest waterfowl focus area to the Host Property is the Norwalk Islands area, located approximately three (3) miles to the east. Please refer to the attached Connecticut Waterfowl Focus Areas Map. The proposed work is being completed in previously developed areas, beyond areas typically used by migratory waterfowl. Therefore, no direct impacts are anticipated as a result of development of the proposed Facility.

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[8] The Silvio O. Conte National Fish & Wildlife Refuge Neotropical Migrant Bird Stopover Habitat Survey. http://www.science.smith.edu/stopoverbirds/Chapter5_Conclusions&Recommendations.html

[9] Manville, A.M. II. 2005. Bird strikes and electrocutions at power lines, communications towers, and wind turbines: state of the art and state of the science - next steps toward mitigation. Bird Conservation Implementation in the Americas: Proceedings 3rd International Partners in Flight Conference 2002. C.J. Ralph and T.D. Rich, editors. USDA Forest Service General Technical Report PSW-GTR-191. Pacific Southwest Research Station, Albany CA. pp. 1-51-1064.

[10] Kerlinger, P. 2000. Avian Mortality at Communication Towers: A Review of Recent Literature, Research, and Methodology. Prepared for U.S. Fish and Wildlife Service Office of Migratory Bird Management.

[11] Mabee, T.J., B.A. Cooper, J.H. Plissner, D.P. Young. 2006. Nocturnal bird migration over an Appalachian ridge at a proposed wind power project. Wildlife Society Bulletin 34:682-690.

CTDEEP Migratory Waterfowl Data

The Connecticut Department of Energy and Environmental Protection ("CTDEEP") created a Geographic Information System ("GIS") data layer in 1999 identifying concentration areas of migratory waterfowl at specific locations in Connecticut. The intent of this data layer is to assist in the identification of migratory waterfowl resource areas in the event of an oil spill or other condition that might be a threat to waterfowl species. This data layer identifies conditions at a particular point in time and has not been updated since 1999.

The nearest migratory waterfowl area, along Norwalk Harbor in Norwalk, is located approximately 7.5 miles to the southeast of the Host Property. The associated species are identified as American black duck, American brant, bufflehead, and mallard. Based on the distance of this migratory waterfowl area from the Host Property, no impact to migratory waterfowl would result from development of the proposed Facility.

CTDEEP Natural Diversity Data Base

CTDEEP's Natural Diversity Data Base ("NDDB") program performs hundreds of environmental reviews each year to determine the impact of proposed development projects on state listed species and to help landowners conserve the state's biodiversity. State agencies are required to ensure that any activity authorized, funded or performed by a state agency does not threaten the continued existence of endangered or threatened species. Maps have been developed to serve as a pre-screening tool to help applicants determine if there is a potential impact to state listed species.

The NDDB maps represent approximate locations of endangered, threatened and special concern species and significant natural communities in Connecticut. The locations of species and natural communities depicted on the maps are based on data collected over the years by CTDEEP staff, scientists, conservation groups, and landowners. In some cases, an occurrence represents a location derived from literature, museum records and/or specimens. These data are compiled and maintained in the NDDB. The general locations of species and communities are symbolized as shaded areas on the maps. Exact locations have been masked to protect sensitive species from collection and disturbance and to protect landowners' rights whenever species occur on private property.

No known areas of state-listed species are currently depicted on the most recent CTDEEP NDDB Maps (December 2019) at or within a 0.25 mile of the location of the Site. Therefore, in accordance with the CTDEEP's and Connecticut Siting Council's NDDB review policy, consultation with DEEP is not required. As a result, the proposed Homeland development is not anticipated to adversely impact any state threatened, endangered or species of special concern.

USFWS Communications Towers Compliance

In August 2016, the USFWS prepared its *Recommended Best Practices for Communication Tower Design, Siting, Construction, Operation, Maintenance, and Decommissioning*. These suggested best practices were developed to assist tower companies in developing their communication systems in a way that minimizes the risk to migratory birds and threatened and endangered species. The following avoidance and minimization measures, when used comprehensively, are recommended by USFWS to reduce the risk of bird mortality at communication towers. APT offers the following responses to each of the USFWS recommendations which are abridged from the original document.

1. *Collocation of the communications equipment on an existing communication tower or other structure (e.g., billboard, water and transmission tower, distribution pole, or building mount) is strongly recommended. This recommendation is intended to reduce the number of towers across the landscape.*

   Collocation opportunities on existing towers or non-tower structures are not available in the area while achieving the required radio frequency ("RF") coverage objectives.

2. *Contact with USFWS Field Office. Communicate project plans to nearest USFWS Field Office.*

   APT completed consultation protocols in accordance with Federal Communications Commission ("FCC") rules implementing the National Environmental Policy Act ("NEPA") and Section 7 of the Endangered Species Act through the USFWS Information, Planning, and Conservation System ("IPaC"). Based on the results of the IPaC review, one federally-listed threatened species is known to occur in the vicinity of the host property: northern long-eared bat ("NLEB"; *Myotis septentrionalis*). As a result of this preliminary finding, APT performed an evaluation to determine if development of the proposed Facility would result in a likely adverse effect to NLEB.

   Consultation with the CTDEEP Wildlife Division NDDB revealed that the Host Property is not within 150 feet of a known occupied maternity roost tree and is not within 0.25 mile of a known NLEB hibernaculum. The nearest NLEB habitat resource to the proposed activity is located in Greenwich, approximately 9.0 miles to the southwest. Therefore, this project would not adversely affect NLEB.

3. *Placement. All new towers should be sited to minimize environmental impacts to the maximum extent practicable.*

   a. *Place new towers within existing "antenna farms" (i.e., clusters of towers) when possible.*

      There are no existing "antenna farms" in the Site vicinity that would satisfy the RF coverage objectives.

   b. *Select already degraded areas for tower placement.*

      The Site is located at the end of a residential cul-de-sac abutting school property and is currently developed with a residential home, in-ground pool, and tennis court.

c. Towers should not be sited in or near wetlands, other known bird concentration areas (e.g., state or federal refuges, staging areas, rookeries, and Important Bird Areas), or in known migratory bird movement routes, daily movement flyways, areas of breeding concentration, in habitat of threatened or endangered species, or key habitats for Birds of Conservation Concern.

The Site is not within wetlands, a known bird concentration area, migratory or daily movement flyway, or habitat of threatened/endangered species; nor would the development result in fragmentation of a core forest habitat that could potentially provide habitat for Birds of Conservation Concern.

d. Towers should avoid ridgelines, coastal areas, wetlands or other known bird concentration areas.

The Project Site is located in an area locally known as Smith Ridge, an elevated plateau extending generally north to south, which consists of residential development and municipal uses (school, recreational fields). The Site is not located within coastal areas, wetlands or other known bird concentration areas.

e. Towers and associated facilities should be designed, sited, and constructed so as to avoid or minimize habitat loss within and adjacent to the tower "footprint". In addition, several shorter, un-guyed towers may be preferable to one, tall guyed, lit tower.

The proposed Facility will be sited, designed, and constructed to accommodate proposed equipment and to allow for future collocations within the smallest footprint possible, thus minimizing habitat fragmentation or the creation of barriers or excessive disturbance. The proposed Facility would consist of a 90-foot tall monopine structure, which requires neither guy wires nor lighting and is therefore consistent with USFWS' environmentally preferred "gold standard".

4. Construction. During construction, the following considerations can reduce the risk of take of birds:

a. Schedule all vegetation removal and maintenance (e.g., general landscaping activities, trimming, grubbing) activities outside of the peak bird breeding season to reduce the risk of bird take.

The Site location consists of a narrow upland forested area surrounded on three-sides by existing development. If feasible, vegetation removal will be performed outside of the peak bird breeding season.

b. When vegetation removal activities cannot avoid the bird breeding season, conduct nest clearance surveys:

i. Surveys should be conducted no more than five days prior to the scheduled activity to ensure recently constructed nests are identified;

ii. Timing and dimensions of the area to be surveyed vary and will depend on the nature of the project, location, and expected level of vegetation disturbance; and

iii. If active nests are identified within or in the vicinity of the project site, avoid the site until nestlings have fledged or the nest fails. If the activity must occur, establish a buffer zone around the nest and no activities will occur within that zone until nestlings have fledged.

Approximately 20 mature trees require removal as part of the Project. While avoidance of tree removal during peak bird breeding season will be attempted where feasible, due to the duration and ambiguity of this window, it may not be possible.

c. Prevent the introduction of invasive plants during construction to minimize vegetation community degradation by:

i. Use only native and local (when possible) seed stock for all temporary and permanent vegetation establishment; and

ii. Use vehicle wash stations prior to entering sensitive habitat areas to prevent accidental introduction of non-native plants.

Proposed landscaping includes three (3) 8-foot tall Norway Spruce (*Picea Abies*) and seven (7) 8-foot tall Eastern Hemlocks (*Tsuga Canadensis*) for screening of the compound. Neither of these species are invasive. No sensitive habitat areas exist at the Site.

5. Tower Design. Tower design should consider the following attributes:

a. Tower Height. It is recommended that new towers should be not more than 199 ft. above ground level (AGL). This height increases the mean free airspace between the top of the tower and average bird flight height, even in weather conditions with reduced cloud ceiling;

b. Guy Wires. We recommend using free standing towers such as lattice towers or monopole structures.

c. Lighting System. Lights are a primary source of bird aggregation around towers, thus minimizing all light is recommended, including:

i. No tower lighting is the preferred option if Federal Aviation Administration (FAA) regulations and lighting standards (FAA 2015, Patterson 2012) permit.

ii. If taller (> 199 ft. AGL) towers requiring lights for aviation safety must be constructed, the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA should be used.

iii. Security lighting for on-ground facilities, equipment, and infrastructure should be motion or heat-sensitive, down-shielded, and of a minimum intensity to reduce nighttime bird attraction and eliminate constant nighttime illumination while still allowing safe nighttime access to the site.

The proposed Facility would consist of a 90-foot tall monopine structure, which requires neither guy wires nor lighting and is therefore consistent with USFWS' environmentally preferred "gold standard". Security lighting for on-ground facilities would be down-shielded using Dark Sky compliant fixtures set on motion sensor with timer to eliminate constant nighttime illumination.

Summary and Conclusions

Based on the results of this desk-top evaluation, no migratory bird species are anticipated to be impacted by the proposed development. The Site is not proximate to an Important Bird Area and the proposed Facility would comply with the USFWS guidelines for minimizing the potential impacts to bird species.

Figures

Avian Resources Map

Proposed Wireless
Telecommunications Facility
New Canaan Northeast
183 Soundview Lane
New Canaan, Connecticut

Proposed New Canaan Northeast CT Facility
Lat: 41-11-26.43
Long: 73-29-42.16
502.3' AMSL

PURDY
RIDGEFIELD
LEWISBORO
POUND RIDGE
NEW CANAAN
STAMFORD
WILTON
NORWALK
GREENWICH
BEDFORD
WESTON
NY
CT

Legend

- Proposed Facility
- Hawk Watch Site*
- Important Bird Area
- Bald Eagle Survey Route*
- Breeding Bird Survey Route
- Natural Diversity Database (CTDEEP, 12/2019)
- Critical Habitat (CTDEEP, 07/2009)*
- Natural Heritage Community Occurrences (NYSDEC)
- Natural Heritage Community Occurrences (NYSDEC) 1/2-Mile Buffer Zone
- Migratory Waterfowl (CTDEEP, 1999)*
- Protected Open Space (CTDEEP, 2011)
- Federal Open Space (CTDEEP, 2004)*

CT DEP Property (CT DEEP, 12/2010)

- State Forest
- State Park*
- DEP Owned Waterbody*
- State Park Scenic Reserve*
- Historic Preserve*
- Natural Area Preserve*
- Fish Hatchery*
- Flood Control
- State Park Trail*
- Water Access
- Wildlife Area*
- Wildlife Sanctuary*
- Other
- Open Water
- Town Boundary
- State Boundary

*None within mapped extents

Avian Source Information:
Bald Eagle Sites: U.S. Geological Survey, National Biological Information Infrastr, 2008, Midwinter Bald Eagle Counts, 1986-2005 (update 2008).
Hawk Watch Sites: Hawk Migration Association of North America (HMANA), Hawk Count website: http://hawkcount.org/sitesel.php?country=USA&stateprov=Connecticut
Migratory Waterfowl: CTDEEP GIS, 1999
Important Bird Sites/Areas: National Audubon Society, Audubon Connecticut https://www.audubon.org/important-bird-areas/state/connecticut
Breeding Bird Survey Routes: Patuxent Wildlife Research Center of the U.S. Geological Survey and the Canadian Wildlife Service's National Wildlife Research Centre http://www.nationalatlas.gov/mld/bbsrtsl.html

Base Map Source: 2012 aerial photograph (CTECO map service)

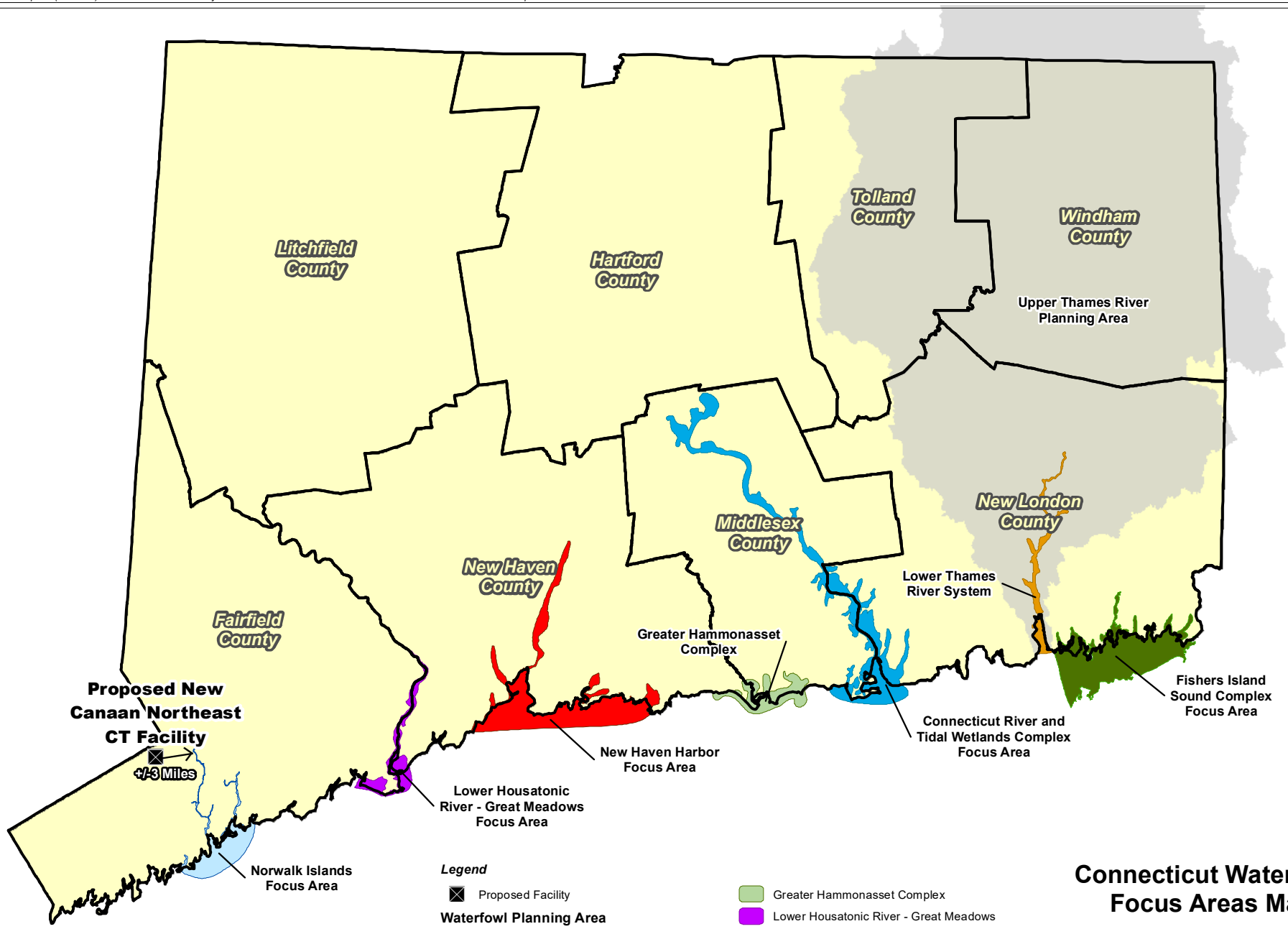
Map Date: January 2020

0.5 0.25 0 0.5 Miles

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS

C:\Users\NicoleCastro\Dropbox (APT GIS)\APT GIS Team Folder\Projects\Homeland Towers\New Canaan NE\mxd\Waterfowl Focus Areas Map.mxd



Legend

- Proposed Facility

Waterfowl Planning Area

- Upper Thames River

Waterfowl Focus Areas

- Connecticut River and Tidal Wetlands Complex
- Fishers Island Sound Complex
- Greater Hammonasset Complex
- Lower Housatonic River - Great Meadows
- Lower Thames River System
- New Haven Harbor
- Norwalk Islands

N W E S

10 5 0 10 Miles

Connecticut Waterfowl Focus Areas Map

Proposed Wireless Telecommunications Facility
New Canaan Northeast
183 Soundview Lane
New Canaan, Connecticut

Waterfowl Data Source: Atlantic Coast Joint Venture Partnership
Map Date: December 2019

ALL-POINTS TECHNOLOGY CORPORATION

HOMELAND TOWERS