

STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL

IN RE:

APPLICATION OF NEW CINGULAR,
WIRELESS PCS, LLC FOR A
CERTIFICATE OF ENVIRONMENTAL
COMPATIBILITY AND PUBLIC NEED
FOR THE CONSTRUCTION,
MAINTENANCE AND OPERATION OF A
TELECOMMUNICATIONS FACILITY AT
95 BALANCE ROCK ROAD, HARTLAND,
CONNECTICUT

DOCKET NO. 408

January 26, 2011

PRE-FILED TESTIMONY OF
LISA A. STANDLEY, Ph.D.

Q.1. Please summarize your professional background and experience.

A. I am a Senior Environmental Scientist and a Principal at Vanasse Hangen Brustlin (VHB). I am a botanist and ecologist with particular expertise in the systematic of sedges (Cyperaceae) and grasses (Poaceae), and in plant population and community ecology. My professional experience emphasizes studies of rare and endangered plant and wildlife species, vegetation analysis, and the preparation of environmental impact reports, ecological analyses, and wetland permit applications for utility, transportation, and private commercial and residential projects. My resume is attached which details my qualifications and experience.

Q.2 What is the purpose of your testimony?

A. The purpose of my testimony is to respond to testimony of George Logan, Intervenor Siman's witness, regarding his assertions relative to the impact of AT&T's proposed facility on migratory birds.

Q.3 Is the Barkhamsted Reservoir a major flyway for migratory songbirds as Mr. Logan claims?

A. No. There is no evidence that the Barkhamsted Reservoir is on a major flyway for migratory songbirds. The Connecticut Migratory Bird Stopover Habitat Project (Stokowski, 2002)¹ has identified potential flyways along the Housatonic, Naugatuck, Thames, and lower Connecticut Rivers. The Barkhamsted Reservoir is not considered a potential flyway. In addition, the US

¹Stokowski, J.T. 2002. Migratory Bird Stopover Habitat Project Finishes First Year. Connecticut Wildlife, November/December 2002. P. 4.

Geological Survey's Migratory Bird website² contains information on bird migratory patterns. The maps included in this website show diffuse migratory patterns of migratory passerine birds across the northeastern states, and do not identify any specific localized flyways in this area.

Q.4 Will AT&T's proposed Facility have a significant impact on migratory birds?

A. No. Scientific literature, in fact, shows that the proposed cell tower would not have a significant impact on migratory birds. The proposed tower is a monopole – a single pole, 190 feet high, that does not have any guy wires or lights. The citations below provide data.

1. Longcore, Rich and Gauthreaux provide a review of the scientific literature on communications towers and bird mortality. They cite studies which show that mortality is significantly lower, or not recorded, at short towers. One study in Norway found bird mortality at only 4% of the towers less than 100 meters (300 feet). Another multi-year study found no bird mortality at a 152-meter tower (500 feet). A one-year study of a 30-meter (100 ft) tower in Kansas found no mortality, and a 4 year study of a 60-meter (197 ft) tower in Tennessee found a mortality rate of 4 birds per year.³

2. Kerlinger, 2000 stated that "The literature is nearly devoid of information about small (less than 400 feet) towerkills and small tower collision studies. This may be explained by: a lack of funding for such studies, a scarcity of observations and reporting from such towers, or fatalities do not occur or occur in very small numbers at short towers."⁴

Q5. Please comment on Mr. Logan's assertion that scientific literature, including the Manville 2005 study, shows that unlit telecommunication towers under 200 feet in height can cause significant bird mortality.

A. The majority of the scientific literature focuses on television towers or radio towers, which are typically very tall (more than 1000 feet), illuminated with non-flashing lights, and guyed with systems of wires. These towers, particularly if sited in major migratory pathways, do result in significant bird mortality (Manville, 2005)⁵. The proposed monopole is not such a tower.

² U.S. Geological Survey, Northern Prairie Wildlife Research Center. Migration of Birds – Routes of Migration. www.npwrc.usgs.gov/resource/birds/migration/routes/htm.

³ Longcore, T., C. Rich, S.A. Gauthreaux, Jr. 2008. Height, guy wires, and steady-burning lights increase hazard of communication towers to nocturnal migrants: a review and meta-analysis. *The Auk* 125:485-492.

⁴ Kerlinger, P. 2000. Avian mortality at communications towers: a review of recent literature, research and methodology. US Fish and Wildlife Service.

⁵ 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.

Q6 Will AT&T's proposed facility have a greater risk to migratory birds because it is sited on a ridge, where migratory birds may fly at low levels in bad weather, as stated in Mr. Logan's testimony?

A. No. The literature shows that this is not a significant risk:

1. Most migratory birds fly at elevations of 200-750 meters (656-2460 ft) above the ground, with only 2-15% flying below 90 meters (295 ft) in clear weather (Longcore et. Al, 2008)

2. Mabee et al (2006) studied patterns of nocturnal autumn migration of passerines over the Allegheny Front ridge in West Virginia. The study found that the mean flight altitude was 410 meters (1350 ft) above ground level, with the mean flight altitude on nights with bad weather was between 200 and 300 meters above ground level (656 to 984 feet). The study also found that migratory birds did not change direction when encountering the ridge and follow the ridge – i.e., migratory passerines were not concentrated over ridges.⁶

The statements above are true and accurate to the best of my knowledge.

26 January 2011
Date

Lisa A Standley
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⁶Mabee, 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.

CERTIFICATE OF SERVICE

I hereby certify that on this day, a copy of the foregoing was submitted electronically and by overnight mail to the Connecticut Siting Council and to:

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Dated: January 27th, 2011


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**Lisa A. Standley,
Ph.D.**

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Senior Environmental Scientist

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Dr. Standley is a botanist and ecologist with particular expertise in the systematics of sedges (Cyperaceae) and grasses (Poaceae), and in plant population and community ecology. Dr. Standley's professional experience at VHB emphasizes studies of rare and endangered plant and wildlife species, vegetation analysis, and the preparation of environmental impact reports, ecological analyses, and wetland permit applications for utility, transportation, and private commercial and residential projects.

Monomoy National Wildlife Refuge, Chatham MA

Responsible for preparing chapters of the Comprehensive Conservation Plan (CCP) for the Monomoy NWR on Cape Cod. VHB has integrated information provided by the Refuge Staff to create a CCP, using standard FWS templates. Critical issues include identifying key issues, such as horseshoe crab harvesting, defining alternatives, and evaluating uses of the refuge for consistency with the overall mission and purpose.

Route 7, Brookfield CT

Conducted surveys to locate populations of several state-listed rare grass species, designed and implemented a habitat enhancement plan and long-term population monitoring program within the ROW of the proposed highway extension. Assisted ConnDOT in obtaining a rare species permit to allow highway construction. Worked with the final design team to develop a construction mitigation plan and construction specifications for protecting and enhancing existing habitat and constructing new suitable habitat areas.

South Weymouth Naval Air Station Redevelopment – South Weymouth, MA

Responsible for rare species surveys and wildlife habitat evaluation and mitigation measures for the redevelopment of a former military base and airfield. Services included surveys to assess state-listed grassland bird habitat usage, vernal pool studies, and developing mitigation measures to protect eastern box turtles. Assessed impacts of a golf course and site roadway on wildlife habitat, wildlife movement corridors, and state-listed bird and turtle populations, and designed mitigation measures for grassland habitat restoration and long-term habitat monitoring. Worked closely with the Massachusetts Natural Heritage Program to successfully obtain a Conservation and Management Permit for the base redevelopment project.

Polpis Bicycle Path, Nantucket, MA

Responsible for wetlands delineation, functional assessments, impact minimization and permit preparation along an 8.7-mile bikepath. Conducted studies, including inventory, mitigation and habitat enhancement measures for two state-listed plant species. Wetland Mitigation for this project consisted of an innovative design for a 2.5-acre wetland system including a coastal plain pondshore community.

Dr. Standley is a Senior Environmental Scientist and a Principal at Vanasse Hangen Brustlin. As Chief Environmental Scientist, her responsibilities include establishing corporate standards for wetland delineation, wetland functional assessments, wildlife habitat and rare species investigations, as well as supervision and coordination of environmental permitting at local, state and federal levels. She serves as project manager for major interdisciplinary projects, coordinating environmental investigations, engineering, traffic studies, and public participation.

Cape Cod National Seashore, Eastham MA

Responsible for overseeing the preparation of an Environmental Assessment (EA) and Finding of No Significant Impact, in compliance with NEPA, for the Salt Pond Visitor Center. Critical issues included impacts to park users, historic resources, cultural landscape, and natural vegetation.

Philadelphia International Airport Capacity Enhancement Program, Philadelphia PA

Task manager for natural resource assessments for preparation of an Environmental Impact Statement for capacity enhancement alternatives at the Philadelphia International Airport. Supervised field investigations and impact assessment for several state-listed wetland bird species, red-bellied turtles, and New Jersey chorus frogs, and developed mitigation measures for the loss of turtle nesting and nursery habitat.

Devens, MA

Designed and conducted grassland bird breeding habitat usage surveys for the potential redevelopment of the former Moore Army Airfield.

New Bedford Regional Airport, New Bedford MA

Project manager for preparation of an Environmental Impact Statement/Environmental Impact Report for safety improvements at the New Bedford Airport. Conducted call-back surveys for state-listed bird species and surveys for state-listed plant species, mapped state-listed turtle habitat, and conducted vernal pool surveys to assess potential project impacts and develop mitigation measures for habitat protection and enhancement.

Cisco Systems Campus, Boxborough MA

Conducted an analysis of nesting and migratory behavior and habitat use by three state-listed rare turtle species on a 300-acre site, and successfully designed a conservation plan that included barriers to exclude turtles from roads and parking areas, underpasses to facilitate movement across roads, and habitat enhancement to preserve and enlarge potential nesting habitat. Successfully obtained a Conservation Permit from the Massachusetts Division of Fisheries and Wildlife.

Pine Hills Community, Plymouth, MA

Conducted a vegetation and wildlife habitat analysis of a 3,000-acre site, including inventory and mapping of vegetation communities, a forest fragmentation analysis, and identification of wildlife communities and critical wildlife corridors. These studies identified plant communities likely to be used by pine barrens lepidoptera and developed strategies to protect and enhance suitable habitat areas.

New Bedford/Fall River Commuter Rail, MA

Environmental task manager responsible for analysis and mapping of environmental constraints, and analysis of environmental impacts, for restoration of over 50 miles of right-of-way through environmentally-sensitive areas, and 8 new commuter rail stations. Developed and supervised a 6-month survey of state-listed plant, reptile, amphibian and invertebrates along the corridor. Responsible for preparation of a comprehensive Environmental Impact Report, design of 10 acres of compensatory wetlands, and design of measures to mitigate for impacts to vernal pools and rare species habitats.

Ecological Management Plan, Broadmoor Wildlife Sanctuary, Natick MA

Responsible for preparing comprehensive ecological management plan for a 600-acre Massachusetts Audubon sanctuary. Conducted habitat assessments and vegetation mapping, identified management concerns (invasive plant species, loss of grassland habitat, wildlife corridors, beavers) and developed a long-term ecological management plan to achieve habitat goals.

Ecological Research/Instruction

Dr. Standley has conducted field research projects and vegetation studies in the northeast, central states, mid-Atlantic coastal states, Pacific northwest, Rocky Mountain states, southern California, and Canada. She has published numerous scientific articles in peer-reviewed journals, contributed to the Flora of North America series for the genus *Carex* and several grass genera, presented seminars at universities and national scientific meetings, and has been the recipient of grants from the National Science Foundation, the Nature Conservancy, and the Massachusetts Natural Heritage Program. She has recently completed a comparative historical survey of changes in the flora of Needham, Massachusetts. Dr. Standley also served as chair of the Needham, MA Trails Committee and oversaw preparation of a comprehensive town-wide trails master plan and management plan.

Dr. Standley has taught courses in botany, ecology, and horticulture at Cornell, University of Washington, and Wellesley College, and currently lectures and teaches about plant identification, wetland ecology, and rare species for several nonprofit organizations and the University of New Hampshire. A member of the Needham, MA Conservation Commission, she serves on the advisory boards of several non-profit conservation organizations, and has served as President of the New England Botanical Club.

Education

Cornell University, B.S. Botany/Ecology
Cornell University, M.S. Botany
University of Washington, Ph.D. Botany

Affiliations

Association of Massachusetts Wetland Scientists
New England Botanical Club
Society for Conservation Biology
Society for Ecological Restoration and Management
Society of Wetland Scientists
Torrey Botanical Society