



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Maine Field Office  
1168 Main Street  
Old Town, ME 04468-2023  
(207) 827-5938



5-350

August 30, 2005

To: Steven Wallace  
TRC  
400 Southborough Drive  
South Portland, Maine 04106

Dear Mr. Wallace:

Thank you for your letter requesting information or recommendations from the U.S. Fish and Wildlife Service concerning the installation of up to 10 meteorological towers in association with your proposed wind power project. A list of federally-listed species in Maine is enclosed for your information. The following rare and endangered species could be located within the Kibby and Skinner project area:

Species	Location	State Status	Federal status
Bald eagle	No known nesting locations, but likely used during migration	T	T
Canada lynx	We have no historic or current records of lynx in Kibby or Skinner Townships, but they could occur. No surveys have been conducted.	SC	T
Gray wolf	No known occurrences, but wolves or wolf-like canids have been taken in Quebec not far from Kibby and Skinner in recent years.	none	E
Peregrine falcon	No nesting records, but nest surveys have not been conducted.	E	FSC
Golden eagles	No known nesting locations, but area likely used during migration. No surveys have been conducted.	E	none
Bicknell's thrush	Contact MDIFW for occurrence data	SC	none

Rock vole	See locations on enclosed map. Contact MDIFW for more details.	SC	none
Northern bog lemming	No know occurrences. Status of surveys unknown.	E	none
Rare and endangered plants	No known occurrences of federal-listed plants. Please contact the Maine Natural Areas Program for state-listed plants.		

E = endangered

T = threatened

SC = special concern

FSC = federal species of concern

D = delisted

#### Comments on listed species:

Meteorological towers of 65 m (~200 feet) and associated guy wires could pose a risk to raptors that may nest in vicinity or migrate through this area. Please refer to the enclosed fact sheet concerning the Service's policies concerning installation of towers. The cliff-nesting species of concern (golden eagles and peregrine falcons) have not been well-surveyed in this remote region of the state, nor are migratory pathways for these species well known. We would highly advise that nest surveys for golden eagles and peregrine falcons be completed prior to installation of the "met" towers to assure that they will not be placed near nesting areas and pose a risk to these rare species.

Canada lynx have a high likelihood of occurring in Kibby or Skinner Townships. We have no historic or recent occurrence records for these townships, although they are known to occur in nearby townships. Ultimately, surveys by snow tracking or remote cameras would be advised to determine the occurrence of this federally threatened species if a wind power project were to be proposed for these townships. Snowtracking or camera surveys would also help detect wolves, if present.

We are unaware of any bald eagle nesting areas in the vicinity of Kibby and Skinner Townships. Our primary concern would be collision of migratory or transient eagles with towers. We understand that bird migration radar studies are planned for this site and may be deployed in conjunction with the "met" towers. We suggest that visual hawk/eagle migration studies be conducted in addition to radar studies to help better understand the importance of these ridges for migratory raptors.

I would highly recommend that you contact the Maine Department of Inland Fisheries and Wildlife for additional information on state-threatened and endangered wildlife and other wildlife species of special concern. The Maine Endangered Species Act may protect some of the species in your project area.

Doug Kane  
Region E

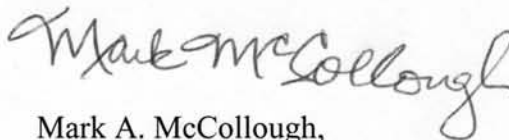
Maine Department of Inland Fisheries and Wildlife  
P. O. Box 551  
Greenville, ME 04441  
Phone: 207 695-3756

There are no known federal threatened or endangered plants in the project area, but there are likely many state-listed plants. You should contact the Maine Natural Areas Program for more information.

Maine Natural Areas Program  
Department of Conservation  
93 State House Station  
Augusta, ME 04333  
Phone: 207 287-8044

A list of federally-listed species in Maine is enclosed for your information. If you have any questions, please call me at (207) 827-5938.

Sincerely,

A handwritten signature in cursive script that reads "Mark A. McCollough". The signature is written in dark ink and is positioned above the printed name and title.

Mark A. McCollough,  
Endangered Species Biologist

Enclosure

T 1 R 6 W B K P  
KIBBY

Kibby

Kibby Stream

Kibby Twp

T 1 R 6 W B K P  
KIBBY

ROCK VOLE  
Last obs: 6/1/1999

ROCK VOLE  
Last obs: 7/25/2000

Jim Pond Twp

Alder Stream Twp  
North Branch Dead River

## Communication Tower Consultation in Maine

The U.S. Fish and Wildlife Service's (Service) Maine Field Office believes that individual project review by this office is not required under certain conditions. The Service submits these comments in accordance with provisions of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), the Migratory Bird Treaty Act (MBTA) of 1940 (40 Stat. 755; 16 U.S.C. 703-712), the Bald and Golden Eagle Protection Act (BGEPA) of 1940 (16 U.S.C. 668-688d), and the National Environmental Policy Act (NEPA) of 1969 (83 Stat. 852; 42 U.S.C. 4321 *et seq.*).

Migratory birds are a Federal trust resource and are protected under the MBTA. Communication towers and antennas may pose a hazard to migratory birds in flight and may pose a threat to nesting birds attracted to the site. Risk assessment factors include tower height, physical design, lighting, and site location relative to migratory corridors and bird concentration areas.

The Service has determined that the following proposed actions are not likely to adversely affect federally listed species in Maine, nor have any significant impacts on migratory birds or other trust resources:

1. Collocation of new equipment and antennae with an existing structure (tower, power substation, smokestack, large building, water tank, etc.) where all ground disturbance occurs within previously disturbed areas and where such activities do not increase the existing height or require the addition of guy wires;
2. Routine maintenance of existing tower sites such as painting, antenna or panel replacement, upgrading existing equipment, etc.;
3. Repair or replacement of existing towers and/or equipment, provided such activities do not increase the existing tower height or require the addition of guy wires.

**For projects that meet the above criteria, there is no need to contact this office for project review.** This letter may be used as an ESA determination of "not likely to adversely affect."

The Service has developed the following guidelines at the national level, which we recommend project proponents follow in the design and location of communication tower facilities.

## **RECOMMENDATIONS TO AVOID ADVERSE IMPACTS TO MIGRATORY BIRDS, FEDERALLY LISTED SPECIES, AND OTHER WILDLIFE FROM COMMUNICATION TOWERS AND ANTENNAE**

Wireless communication towers and antennae have greatly increased in number in recent years. Cumulatively, communication towers have a potentially significant impact on wildlife, especially migratory birds. All communication towers and antennae requiring authorization from the Federal Communications Commission (FCC) are subject to the environmental review procedures required by Section 7 of the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) and by the National Environmental Policy Act (NEPA) of 1969 (83 Stat. 852; 42 U.S.C. 4321 *et seq.*). The U.S. Fish and Wildlife Service (Service) routinely reviews proposed communication projects and provides recommendations to project proponents and the FCC to avoid adverse impacts to federally listed or proposed endangered and threatened species, migratory birds, and other wildlife.

All native migratory birds (e.g., waterfowl, shorebirds, songbirds, hawks, owls, vultures, falcons) are afforded protection under the Migratory Bird Treaty Act (MBTA) of 1918 (40 Stat. 755; 16 U.S.C. 703-712). Migratory birds are a federal trust resource responsibility, and the Service considers migratory bird concentration areas environmentally significant. Bird concentration areas include traditional migratory flight corridors (e.g., ridges, shorelines, river valleys); rookeries and other bird breeding areas; stopover, staging, or resting areas (e.g., land bounding large bodies of water, wetlands, forests, and natural grasslands); wildlife preserves (e.g., National Wildlife Refuges; State Parks, Forests, Wildlife Management Areas, and Natural Areas; private sanctuaries); and seasonal flight paths (e.g., between feeding and nesting or roosting areas).

Communication towers pose a collision hazard to birds in flight, especially some 350 species of night-migrating birds. Cumulatively, communication towers kill an estimated four to five million birds per year nationwide (Manville 2000). The risk of bird collisions is related to tower height, design, lighting, and location relative to migratory bird concentration areas. Most documented bird kills at communication towers involve tall, lighted structures, and birds migrating at night during inclement weather. During these events, birds attracted by the lights congregate and circle around the tower, with mortality resulting from collisions with guy wires, other birds, and the ground, or from exhaustion. However, occurrences of bird collision mortality at communication towers have also been documented during daytime and fair-weather conditions.

The Service recommends the following steps to avoid or minimize adverse impacts to migratory birds, federally listed or proposed endangered and threatened species, and other wildlife from communication towers and antennae:

1. Co-locate communication antennae and other equipment on existing structures whenever possible to avoid new tower construction. Antennae have been mounted on rooftops; flagpoles; bell, cross, and clock towers; road signs; silos; and water and power line towers. Where attachment to an existing non-tower structure is not feasible, co-locate antennae on existing communication towers. Depending on tower load factors, multiple (6-10) providers may collocate on a single communication tower. Although usually a preferred option, collocation on certain structures may be

restricted, such as historic sites, or silos on farms under State or county deed restriction for farm preservation, which may prohibit non-agricultural activities.

2. Construct new towers only if collocation is not feasible. Design new towers to allow for multiple transmitters to be collocated on a single new tower, no more than 199 feet above ground level (AGL), without lights or guy wires. (Towers taller than 199 feet are normally required by the Federal Aviation Administration [FAA] to employ aircraft warning lights.)
3. Consider the impacts of new towers to migratory birds, federally listed species, and other wildlife, cumulatively as well as individually when siting and designing networks of towers and antennae.
4. Site towers away from wetlands; areas with a known high incidence of fog, mist, and low cloud ceilings; and habitats supporting threatened or endangered species.
5. Construct taller (>200 feet AGL) towers only if collocation and shorter towers are not viable options. Use the minimum amount of pilot warning and obstruction avoidance lighting required by the FAA. Use only white (preferable) or red strobe lights at night unless otherwise required by the FAA, and employ the minimum number, minimum intensity, and minimum number of flashes per minute (longest duration between flashes) permitted by the FAA. Avoid solid red or pulsating red warning lights at night. (Current research indicates that solid or pulsating (beacon) red lights attract night-migrating birds at a much higher rate than white strobe lights. Red strobe lights have not yet been studied.)
6. Construct guyed towers only if other tower designs (e.g., monopoles, lattice towers) are not viable options. Locate guyed towers away from known raptor and waterbird concentration areas and daily movement routes, and away from major diurnal migratory bird movement routes and stopover sites. If a guyed tower must be located in or near such an area, employ daytime visual markers on the wires. Do not use artificial lighting to increase visibility of the structure or guy wires; instead use reflective paint or materials, large balls, or other available technology. (For guidance on markers, see Avian Power Line Interaction Committee 1994 and 1996.)
7. Avoid or minimize habitat loss within and adjacent to the "footprint" of new towers and associated facilities. (However, a larger tower footprint is preferable to the use of guy wires.) Minimize road access and fencing to reduce or prevent habitat fragmentation and disturbance, and to reduce above-ground obstacles to birds in flight.
8. Avoid siting towers in or near known bird concentration areas (discussed on page 1); known bird migration or daily movement flyways; and areas known to be used habitually by significant numbers of breeding, feeding, or roosting birds. If such areas cannot be avoided, avoid construction during seasons of high bird activity.
9. Design new towers structurally and electrically to accommodate the applicant's

antennas and comparable antennas for at least two additional providers, for a minimum of three providers for each tower, to reduce the number of towers needed in the future (unless such a design would require the addition of lights or guy wires to an otherwise unlighted and/or unguyed tower).

10. Down-shield security lighting for on-ground facilities and equipment to keep light within the boundaries of the site.
11. Allow Service personnel and affiliated researchers access to proposed and existing tower sites upon request to evaluate bird use; conduct dead-bird searches; place net catchments below the towers but above the ground; and place radar, Global Positioning System, infrared, thermal imagery, and acoustical monitoring equipment as necessary to assess and verify bird movements and to gain information on the impacts of various tower sizes, configurations, and lighting systems.
12. Provide for tower decommissioning, including removal, in any license application submitted to the FCC. Remove towers no longer in use or determined to be obsolete within 12 months of cessation of use.

#### LITERATURE CITED

- Avian Power Line Interaction Committee. 1994. Mitigating bird collisions with power lines: The state of the art in 1994. Edison Electric Institute, Washington, D.C. 78 pp.
- \_\_\_\_\_. 1996. Suggested practices for raptor protection on power lines. Edison Electric Institute/Raptor Research Foundation, Washington, D.C. 128 pp.
- Manville, A.M. II. 2000. The ABCs of avoiding bird collisions at communication towers: the next steps. Proceedings of the Avian Interactions Workshop. Electric Power Research Institute. 15 pp.

#### FURTHER INFORMATION

- Bibliography of bird kills: <http://migratorybirds.fws.gov/issues/towers/review>
- Federal Communications Commission, Wireless Telecommunication Branch - Siting Issues  
<http://www.fcc.gov/wtb/siting>
- Federal Communications Commission Telecommunications Act of 1996  
<http://www.fcc.gov/telecom.html>
- General Information: <http://migratorybirds.fws.gov/issues/towers/abcs.html>
- Ogden, L.J.E. 1996. Collision Course: The hazards of lighted structures and windows to migrating birds. World Wildlife Fund Canada and the Fatal Light Awareness Program. Toronto, Ontario, Canada. 46 pp.
- Towerkill.com. <http://www.towerkill.com>
- U.S. Fish and Wildlife Service Endangered Species Home Page. <http://endangered.fws.gov>
- U.S. Fish and Wildlife Service, Division of Migratory Bird Management, Bird Issues.  
<http://migratorybirds.fws.gov/issues/tblconthtml>
- U.S. Fish and Wildlife Service, Division of Migratory Bird Management, Service Guidelines.  
<http://migratorybirds.fws.gov/issues/towers/comtow.html>





## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Maine Field Office  
1168 Main Street  
Old Town, ME 04468-2023  
(207) 827-5938



In Reply Refer To:  
FWS/Region 5/ES/MEFO

October 7, 2005

Jay Clement  
U. S. Army Corps of Engineers  
Maine Project Office  
675 Western Ave. #3  
Manchester, ME 04351

Dear Mr. Clement:

Thank you for your letter dated September 13, 2005 requesting information or recommendations from the U.S. Fish and Wildlife Service. This letter provides the Service's response pursuant to Section 7 of the Endangered Species Act (ESA), as amended (16 U.S.C. 1531-1543), and the Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661-667d).

Project Name/Location: Meteorological Towers, Kibby and Skinner Townships

Log Number: 06-019

This project occurs within the range of the Canada lynx (*Lynx canadensis*) in Maine, a federally-threatened species under the jurisdiction of the Service. Canada lynx occur throughout northern Maine and could occur within your project area. Canada lynx in Maine prefer to use regenerating spruce-fir habitats having high stem densities. These regenerating stands support high populations of snowshoe hare (*Lepus americanus*), the primary food of the Canada lynx. Highest hare densities are generally present about 12 to 30 years after clearcutting or heavy partial harvesting. Forest practices that diminish habitat quality for snowshoe hares may have an adverse affect on Canada lynx. For example, precommercial thinning of young spruce-fir stands in Maine has been documented to reduce snowshoe densities by about 50 percent. This may reduce hare populations to a level that would no longer support lynx.

We have evaluated your project and based on your project description, size, and location, the Fish and Wildlife Service concurs with your determination that this project is not of a scale that is likely to adversely affect the Canada lynx.

Based on the information currently available to us, other federally-listed species under the jurisdiction of the Service, including transient bald eagles (*Haliaeetus leucocephalus*), and state-listed species are known to occur in the project area. A letter provided to TransCanada Energy Ltd. is attached for your information.

do not believe the meteorological towers will adversely affect rare or listed species. The applicant has demonstrated that they are using USFWS guidance addressing tower installation. We anticipate consultation with the Army Corps of Engineers on final wind power facility proposals and look forward to meeting with the applicant to discuss future pre-construction study needs.

No further action is required under Section 7 of the ESA on the meteorological towers, unless: (1) new information reveals impacts of this identified action that may affect listed species or critical habitat in a manner not previously considered; (2) this action is subsequently modified in a manner that was not considered in this review; or (3) a new species is listed or critical habitat determined that may be affected by the identified action.

A list of federally-listed species in Maine is enclosed for your information. Please contact the Maine Department of Inland Fisheries and Wildlife and Maine Natural Areas Program for an up to date account of state-listed species in the project area.

If you have any questions, please call me at (207) 827-5938.

Sincerely,



Mark A. McCollough,  
Endangered Species Biologist

cc: Larry Miller, USFWS, Maine Field Office