



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Pennsylvania Field Office
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State College, Pennsylvania 16801-4850

August 5, 2015

Jennifer Dixon-Herrity, Branch Chief
Environmental Projects Branch
Division of New Reactor Licensing
Office of New Reactors
11555 Rockville Pike
Mail Stop T-6C32
Rockville, MD 20852

RE: USFWS Project #2009-0501

Dear Ms. Dixon-Herrity:

This letter responds to a U.S. Nuclear Regulatory Commission (NRC) Biological Assessment (BA), and draft Environmental Impact Statement (EIS), that we received April 17, 2015, for the proposed construction and operation of the Bell Bend Nuclear Power Plant (BBNPP) located in Luzerne County, Pennsylvania and its effects on the endangered Indiana bat (*Myotis sodalis*), threatened northern long-eared bat (*Myotis septentrionalis*), and migratory birds. The BA and draft EIS were submitted to the U.S. Fish and Wildlife Service (Service) on behalf of the NRC (Docket No. 52-039) and the U.S. Army Corps of Engineers (Permit Application No. CENAB-OP-RPA-2008-01401-P13). The following comments are provided pursuant to section 7 of the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) to ensure the protection of endangered and threatened species and the Migratory Bird Treaty Act (MBTA, 16 U.S.C. 703-712; Ch. 128; July 13, 1918; 40 Stat. 755, as amended) to ensure the protection of migratory bird species..

The proposed BBNPP development footprint is approximately 663 acres located entirely within the BBNPP project area (2,055 acres). The project site is approximately 115 miles northwest of Philadelphia, Pennsylvania, is adjacent to the west boundary of Susquehanna Steam Electric Station, and near the west bank of the North Branch Susquehanna River.

Federally Listed Species

The BBNPP project site is located within the known swarming radius of three Indiana bat and one northern long-eared bat hibernacula and contains potential summer habitat for both species.

Based on a review of the effects analysis outlined in the BA, the Service does not concur with the NRC's effect determination of "may affect, but are not likely to adversely affect" for the Indiana bat or northern long-eared bat. Although the Service appreciates the proposed

minimization and protection measures outlined in the BA, the loss 315 acres of Indiana and northern long-eared bat swarming and potential summer habitat is significant and not discountable.

While we cannot concur with your effect determination, we also do not feel it is appropriate for us to make an alternative determination if you have the additional information available to support your conclusion. NRC may either provide additional information that supports your determination, or request that the biological assessment serve as an initiation package in accordance with 50 CFR §402.14 and request that we initiate formal consultation pursuant to section 7 of the Endangered Species Act of 1973, as amended (87 Stat. 884; 16 U.S.C. 1531 et seq.) for the BBNPP and adverse effects that construction and operation are likely to have on Indiana bat and northern long-eared bat. Under provisions of section 7(a)(2) of the Act, a federal agency that authorizes, permits, or carries out activities must consult with the Fish and Wildlife Service to ensure that its actions will not jeopardize the continued existence of any listed species. Formal consultation concludes with the Service's issuance of a biological opinion.

Assessment of Risks to Migratory Birds

The Service is the principal Federal agency charged with protecting and enhancing populations and habitat of migratory bird species. The MBTA prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department of the Interior. While the MBTA has no provision for authorizing incidental take, the Service recognizes that some birds may be killed even if all reasonable measures to avoid take are implemented.

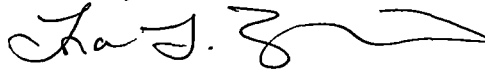
Your project is located adjacent to Important Bird Area (IBA) number 72. IBAs are designated by the Pennsylvania Ornithological Technical Committee. They are the most critical regions in the Commonwealth for conserving bird diversity and abundance, and are the primary focus of Audubon Pennsylvania's conservation efforts. To find out more information about this IBA, including which bird species breed there, visit: <http://netapp.audubon.org/IBA/State/US-PA>

The potential exists for avian mortality from habitat destruction and collision with two 475-foot cooling towers within the project boundaries. Site-specific factors that should be considered in project siting to avoid and minimize the risk to birds include avian abundance; the quality, quantity and type of habitat; geographic location; type and extent of bird use (e.g. breeding, foraging, migrating, etc.); and landscape features. Please review the enclosed information for general recommendations for avoiding and minimizing impacts to migratory birds within and around the project area. Please be aware that since these are general guidelines, some of them may not be applicable to the current project design or they may have already been included in the project design.

To avoid potential delays in reviewing your project, please use the above-referenced USFWS project tracking number in any future correspondence regarding this project.

If you have any questions regarding this matter, please contact Brian Scofield of my staff at 814-234-4090.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lora L. Zimmerman', with a long, sweeping horizontal line extending to the right.

Lora L. Zimmerman
Field Office Supervisor

Enclosures

cc: ACOE – A. Elliott
NRC – T. Tomeka, P. Volkoun

Adaptive Management Practices for Conserving Migratory Birds

The Fish and Wildlife Service is the principal Federal agency charged with protecting and enhancing populations and habitat of migratory bird species. The Migratory Bird Treaty Act (MBTA, 16 U.S.C. 703-712; Ch. 128; July 13, 1918; 40 Stat. 755, as amended) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department of the Interior. While the MBTA has no provision for authorizing incidental take, the Service recognizes that some birds may be killed even if all reasonable measures to avoid take are implemented. Unless the take is authorized, it is not possible to absolve individuals, companies or agencies from liability (even if they implement avian mortality avoidance or similar conservation measures). However, the Office of Law Enforcement focuses on those individuals, companies, or agencies that take migratory birds with disregard for their actions and the law.

In addition to protection under the MBTA, bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (Eagle Act, 54 Stat. 250, as amended; 16 U.S.C. 668-668d), which prohibits killing; selling; or otherwise harming eagles, their nests, or their eggs. The Eagle Act also includes provisions not found in the MBTA, including the protection of unoccupied nests and a definition of take that prohibits disturbing eagles. The Service recommends that applicants carefully evaluate their proposed project in light of the *National Bald Eagle Management Guidelines* to determine whether or not eagles might be disturbed as a direct or indirect result of the project. These guidelines as well as additional eagle information are available at <http://www.fws.gov/northeast/ecologicalservices/eagle.html>. To assist you in making a decision regarding impacts to bald eagles in Pennsylvania, a screening form and map of known bald eagle nests in 2013 can be found at http://www.fws.gov/northeast/pafo/bald_eagle.html

The siting and construction of new towers creates a potentially significant impact on migratory birds, especially some 350 species of night-migrating birds. The primary factors that affect the magnitude of the risk to birds posed by a particular tower are the height of the structure above the surrounding landscape; whether the structure is lighted, and if so, the type of lighting employed; the use of guy wires; the location of the tower; and the weather patterns in the area of the tower site. Communication towers are estimated to kill 4-5 million birds per year. Most massive bird kills occur as the birds become attracted to and confused by clouds that are illuminated by tall lighted structures. To minimize such losses, *and to the extent not already addressed in your project design*, we recommend the following measures be implemented to protect migratory birds from collisions with towers:

1. Any company/licensee proposing to site a new communications tower is strongly encouraged to co-locate the communications equipment on an existing communication tower or related structure (e.g., church steeple, billboard mount, monopole, or building mount). Depending on tower load factors, from 6-10 providers may co-locate on an existing tower.
2. If co-location is not feasible, providers are strongly encouraged to construct towers less than 200 feet above ground level, using construction techniques which do not require guy

wires (*e.g.*, use a monopole). Such towers should be unlighted. If at all possible, new towers should be located within existing “antenna farms,” preferably in areas not used by migratory birds or listed species. Avoid siting towers in or near (within 3-5 miles) of wetlands, other known bird concentration areas (*e.g.*, Important Bird Areas, refuges), or in critical habitat of threatened or endangered species known to be affected by towers. Review local meteorological conditions, and avoid siting towers in areas with an especially high incidence of fog, mist, and low ceilings.

3. If taller (>200 feet above ground level) towers requiring lights for aviation safety must be constructed, the minimum amount of pilot warning and obstruction avoidance lighting required by the Federal Aviation Administration should be used. Wherever possible, non-flashing lights should not be used. (See Gehring J., P. Kerlinger, A.M. Manville II. 2009. Communication towers, lights, and birds: successful methods of reducing the frequency of avian collisions. *Ecological Applications*: Vol. 19, No. 2, pp. 505-514).
4. Towers which must use guy wires for support should have daytime visual markers on the wires to minimize collisions by these diurnally moving species, especially if constructed in known raptor or waterbird concentration areas. (See Avian Power Line Interaction Committee. 2006. Suggested practices for avian protection on power lines: the state of the art in 2006. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, D.C. and Sacramento, CA.)
5. Towers should be constructed so as to limit or minimize habitat loss within the tower “footprint.” Road access and fencing should be minimized to reduce or prevent habitat fragmentation and disturbance, and to reduce above-ground obstacles to birds in flight. However, a larger tower footprint is preferable to the use of guy wires in construction.
6. Where disturbance is necessary, clear natural or semi-natural habitats (*e.g.*, forests, woodlots, reverting fields, shrubby areas) and perform maintenance activities (*e.g.*, mowing) between September 1 and March 31, which is outside the nesting season for most native bird species. Without undertaking specific analysis of breeding species and their respective nesting seasons on the project site, implementation of this seasonal restriction will avoid take of most breeding birds, their nests, and their young (*i.e.*, eggs, hatchlings, fledglings).
7. New towers should be designed structurally and electrically to accommodate the applicant’s antennas and comparable antennas for at least two additional users (minimum of three users required for each tower structure), in order to reduce the number of towers needed in the future, unless this design would require the addition of lights or guy wires to an otherwise unlighted and/or unguyed tower.
8. Security lighting for on-ground facilities and equipment should be down-shielded to keep light within the boundaries of the site.
9. If a tower is constructed, and if requested, Service personnel should be allowed access to the site after construction is complete to conduct both large (*e.g.*, crane, swan, and goose) and small dead-bird searches, to place net catchments below the towers, and to place

radar, Global Positioning System, infrared, thermal imagery, or acoustical monitoring equipment as necessary to assess and verify bird migrations and habitat use.

10. Towers no longer in use or determined to be obsolete should be removed within 12 months of cessation of use.

Additional information on this subject can be obtained by visiting the Service's migratory bird website at <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>.

If you have any questions regarding these measures, please contact Lora Zimmerman of the Pennsylvania Field Office located in State College, PA at 814-234-4090.

Adaptive Management Practices for Conserving Migratory Birds

The Fish and Wildlife Service is the principal Federal agency charged with protecting and enhancing populations and habitat of migratory bird species. The Migratory Bird Treaty Act (MBTA, 16 U.S.C. 703-712; Ch. 128; July 13, 1918; 40 Stat. 755, as amended) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department of the Interior. While the MBTA has no provision for authorizing incidental take, the Service recognizes that some birds may be killed even if all reasonable measures to avoid take are implemented. Unless the take is authorized, it is not possible to absolve individuals, companies or agencies from liability (even if they implement avian mortality avoidance or similar conservation measures). However, the Office of Law Enforcement focuses on those individuals, companies, or agencies that take migratory birds with disregard for their actions and the law.

The potential exists for avian mortality from habitat destruction and alteration within the project boundaries. Site-specific factors that should be considered in project siting to avoid and minimize the risk to birds include avian abundance; the quality, quantity and type of habitat; geographic location; type and extent of bird use (*e.g.* breeding, foraging, migrating, etc.); and landscape features.

We offer the following recommendations to avoid and minimize impacts to migratory birds within and around the project area:

1. Where disturbance is necessary, clear natural or semi-natural habitats (*e.g.*, forests, woodlots, reverting fields, shrubby areas) and perform maintenance activities (*e.g.*, mowing) between September 1 and March 31, which is outside the nesting season for most native bird species. Without undertaking specific analysis of breeding species and their respective nesting seasons on the project site, implementation of this seasonal restriction will avoid take of most breeding birds, their nests, and their young (*i.e.*, eggs, hatchlings, fledglings).
2. Minimize land and vegetation disturbance during project design and construction. To reduce habitat fragmentation, co-locate roads, fences, lay down areas, staging areas, and other infrastructure in or immediately adjacent to already-disturbed areas (*e.g.*, existing roads, pipelines, agricultural fields) and cluster development features (*e.g.*, buildings, roads) as opposed to distributing them throughout land parcels. Where this is not possible, minimize roads, fences, and other infrastructure.
3. Avoid permanent habitat alterations in areas where birds are highly concentrated. Examples of high concentration areas for birds are wetlands, State or Federal refuges, Audubon Important Bird Areas, private duck clubs, staging areas, rookeries, leks, roosts, and riparian areas. Avoid establishing sizable structures along known bird migration pathways or known daily movement flyways (*e.g.*, between roosting and feeding areas).
4. To conserve area-sensitive species, avoid fragmenting large, contiguous tracts of wildlife habitat, especially if habitat cannot be fully restored after construction. Maintain

contiguous habitat corridors to facilitate wildlife dispersal. Where practicable, concentrate construction activities, infrastructure, and man-made structures (*e.g.*, buildings, cell towers, roads, parking lots) on lands already altered or cultivated, and away from areas of intact and healthy native habitats. If not feasible, select fragmented or degraded habitats over relatively intact areas.

5. Develop a habitat restoration plan for the proposed site that avoids or minimizes negative impacts to birds, and that creates functional habitat for a variety of bird species. Use only plant species that are native to the local area for revegetation of the project area.

If you have any questions regarding these measures, please contact Lora Zimmerman of the Pennsylvania Field Office located in State College, PA at 814-234-4090.