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The Wheel in the Sky Keeps on Turnin': The Migratory Bird Treaty Act and its Impact on Wind Development

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Introduction

It is sometimes very difficult to determine how to uphold the rights of animals, including human beings, while at the same time doing what is best for society as a whole. Encouraging the development of wind power while mitigating its effect on the avian population does a great job of illustrating this point. Some people would argue that it is much more important to better the lives of humans rather than to worry about? the lives of birds, and that controversy may never be settled. However, if we can find a way to further both objectives, this should be the approach to follow, and that approach is the aim of this paper.

I must rewrite this.The chief focus of this paper is the Migratory Bird Treaty Act[1] "the "Act"] and its impact on wind development in the United States. As will be discussed, this Act has been the source of intense controversy with it emphasis on protection of avian species and their interaction with wind development. The paper on avian populations as opposed to bats, which are also affected by wind development, because bats are generally not federally protected.[2] I also chose this topic because of the rapidly increasing popularity of renewable energy sources[3] and their development in the United States in order to combat the inevitable shortage of fossil fuels and other non-

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[1] Migratory Bird Treaty Act, 16 U.S.C. § 703 *et seq.*

[2] See U.S. Gov't Accountability Office, GAO-05-906, *Wind Power: Impacts on Wildlife and Government Responsibilities for Regulating Development and Protecting Wildlife*, note 12 at 2 (2005), available at http:// www.gao.gov/new.items/d05906.pdf (last visited Nov. 11, 2012) [hereinafter GAO Wind Power]. Some bats are covered by federal law under the Endangered Species Act.

[3] Renewable energy can be defined as an energy source, such as electricity, heat or combustible fuel, which is consumed at a sustainable pace such that it is replenished by earth's natural processes at a rate that is greater than or equal to its depletion. See John Arnold McKinsey, *Regulating Avian Impacts Under the Migratory Bird Treaty Act and Other Laws: The Wind Industry Collides with One of Its Own, the Environmental Protection Movement*, 28 ENERGY L.J. 71, 75-87 (2007).

renewable resources. As the demand for sources of renewable energy increases, the debate regarding their impact on the environment and ways to mitigate it will continue to heat up.

This paper will address five main topics: the background of the applicable federal laws, the increasing popularity of wind development in the United States, wind development and its effect on avian species, the interaction between federal laws[4] protecting avian species and wind development, and my proposition for policy changes on this issue moving forward. In doing so, this paper will demonstrate that the current regulatory scheme implemented by the United States Federal Wildlife Service is inadequate and ineffective in protecting both migratory birds and wind developers, and must be altered dramatically in order to further those goals.

Background of Applicable Federal Laws

As noted above, the law that generates the most controversy when discussing the dynamic between federal laws protecting avian species and wind development is the Migratory Bird Treaty Act. The Migratory Bird Treaty Act was enacted in 1918 in response to the overharvesting and resulting significant decline in the population of migratory birds in the 1800s.[5] The hunting of migratory bids was rampant in the 1800s, leading to a need for federal legislation.[6] The country's first response to the widespread

[4] This paper will focus on three federal laws that protect avian species: The Migratory Bird Treaty Act, The Endangered Species Act (16 U.S.C. § 1531 et seq.) and Bald and Golden Eagle Protection Act (16 U.S.C. §§ 668-668c).
[5] Meredith Blaydes Lilley & Jeremy Firestone, *Wind Power, Wildlife, and the Migratory Bird Treaty Act: A Way Forward*, 38 Envtl. L. 1167, 1176 (2008).
[6] As immigrants arrived in the 1800s, the nation's population grew, leading to habitat being lost through additional land clearing and game bird species suffering a significant decline from overharvesting. *Id.*

hunting of migratory birds was the Lacey Act,[7] passed in 1900, which made it illegal to ship illegally captured birds across state lines.[8] However, the Lacey Act was largely ineffective in defending migratory birds due to its lack of enforcement capability.[9]

Next up was the Weeks-Mclean Law of 1913,[10] which was struck down as unconstitutional because the federal government could not abrogate states' rights under the Tenth Amendment.[11] In 1916, the United States entered into a treaty with Great Britain to protect migratory birds from "indiscriminate slaughter."[12] The Migratory Bird Treaty Act ratified the treaty between the U.S. and Britain in 1918.[13] The MBTA was also challenged as unconstitutional under the Tenth Amendment, but the United States Supreme Court upheld its constitutionality because the Act served as legislation for a treaty, which in turn invoked the Supremacy Clause.[14]

The MBTA provides in part:

> "It shall be unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, [or] offer for sale…any migratory bird, any part, nest, or egg of any such bird…included in the terms of the conventions between the United States and Great Britain for the protection of migratory birds concluded August

[7] Ch. 553, 31 Stat. 187 (1900) (codified as amended at 16 U.S.C. §§3371-3378 (2006)).
[8] *Id.*
[9] See Robert Anderson, *The Lacey Act: America's Premier Weapon in the Fight Against Unlawful Wildlife Trafficking*, 16 Pub. Land L. Rev. 27, 41-44 (1995).
[10] Ch. 145, 37 Stat. 828, 847 (1913). The Weeks-Mclean Law of 1913 was a rider to an appropriation bill for the Department of Agriculture, and rested on weak constitutional grounds, leading to its replacement by the Migratory Bird Treaty Act in 1918. Lilley & Firestone, *supra* note 5, note 5, at 1178.
[11] *See, e.g.*, *United States v. McCullagh*, 221 F. 288, 290 (D. Kan. 1915); *United States v. Shauver*, 214 F. 154, 155 (E.D. Ark. 1914).
[12] Convention Between the United States and Great Britain for the Protection of Migratory Birds, U.S.-Gr. Brit, Aug. 16, 1916, 39 Stat. 1702.
[13] Migratory Bird Treaty Act, 16 U.S.C. § 703 *et seq.* [hereinafter "MBTA"].
[14] See *Missouri v. Holland*, 252 U.S. 416, 435 (1920); *see also* William S. Boyd, Federal Protection of Endangered Wildlife Species, 22 Stan. L. Rev. 1289, 1293-95, 1309 (1970).

> 16, 1916 (39 Stat. 1702), the United States and the United Mexican States for the protection of migratory birds and game mammals concluded February 7, 1936, the United States and the Government of Japan for the protection of migratory birds and birds in danger of extinction, and their environment concluded March 4, 1972 and the convention between the United States and the Union of Soviet Socialist Republics for the conservation of migratory birds and their environments concluded November 19, 1976."[15]

Furthermore, any "person, association, partnership or corporation" that is found to be in violation of the MBTA, "shall be deemed guilty of a misdemeanor and upon conviction thereof shall be fined not more than $15,000 or be imprisoned not more than six months, or both."[16] In addition, the MBTA is a strict liability statute, meaning that one is subject to criminal punishment whether or not they knowingly or intentionally violated the statute.[17]

Over 1,000 bird species are natural to the United States, and over 800 of those species are covered by the MBTA.[18] The MBTA delegates its authority to the Secretary of the Interior,[19] which in turn delegates its authority to the United States Fish and Wildlife Service, the Act's only enforcement agency.[20] The USFWS and its regulations define "take" broadly, as meaning to "pursue, hunt, shoot, wound, kill, trap, capture, [or] collect" any species protected by the Act.[21] The USFWS also does not allow permits for incidental taking under the MBTA, as opposed to most other avian protective federal laws and treaties.[22]

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[15] Migratory Bird Treaty Act, 16 U.S.C. § 703(a).
[16] 16 U.S.C.A. § 707.
[17] *See* Lilley & Firestone, *supra* note 5, note 5, at 1181.
[18] *See* Migratory Bird Conservation Act, 16 U.S.C §715j (2006); 50 C.F.R. §10.13 (2007).
[19] 16 U.S.C.A. § 704.
[20] Hereinafter "USFWS"
[21] 50 C.F.R. §10.12 (2007).
[22] *See* Lilley & Firestone, *supra* note 5, at 1180.

During the years since its enactment, several different courts were called on to decide the issue of whether or not the MBTA applies to an incidental take.[23] In 1978, the Ninth Federal Circuit determined that the MBTA is a strict liability statute, holding that the defendants' intent was irrelevant in affirming their convictions.[24] The Court also held that the MBTA was not enacted solely to protect against the hunting of migratory birds, and extended to other forms of taking, such as poisoning.[25] However, even after this decision, some courts construed the MBTA narrowly, determining that the MBTA did not apply to the unintended deaths of migratory birds.[26] Three years later though, a Federal District Court located within the 9th Circuit addressed the issue, and dismissed the defendants' claim that they lacked the intent to kill any migratory birds.[27] There, the Court nevertheless stated that there is a proximate cause requirement under section 707(a) of the Act, which requires the government to prove proximate causation beyond a reasonable doubt.[28]

In an attempt to eliminate the confusion in the courts, President Clinton signed into effect Executive Order 13186[29] in 2001, which clarified that the Act covers both intentional and unintentional taking.[30] In addition to its disallowance of incidental taking

[23] *Id.* at 1182.
[24] *United States v. Corbin Farm Service*, 444 F. Supp. 510 (E.D. Cal 1978), aff'd, 578 F.2d 259 (9th Cir. 1978).
[25] *Id.* at 532.
[26] *See, e.g.*, *United States v. Rollins*, 706 F. Supp. 742 (D. Idaho 1989); *Mahler v. United States Forest Service*, 927 F. Supp. 1559 (S.D.Ind. 1996).
[27] *United States v. Moon Lake Electrical Ass'n*, 45 F. Supp. 2d 1070 (D. Colo. 1999).
[28] *Id.* at 1085.
[29] Exec. Order No. 13186, 66 FR 3853 (2001).
[30] The Order defines unintentional taking as take that "that results from, but is not the purpose of, the activity in question." *Id.*

permits, the MBTA also does not allow for private citizen suits.[31] Thus, without enforcement by the USFWS, there will be no enforcement of the Act whatsoever. In addition, the MBTA has also been criticized as being selectively enforced by the USFWS, a notion that was expressly stated in a USFWS memorandum.[32] Thus, the combination of selective enforcement by the Act's only enforcement agency and a lack of a private cause of action means that very few, if any, violators will be prosecuted.

In contrast, the Endangered Species Act,[33] which is also enforced by the USFWS, allows for the authorization of incidental take permits, which permit the take to occur under its specific provisions.[34] In this process, the owner of a potential wind development project submits a proposed Habitat Conservation Plan to the USFWS for approval, along with an application for an incidental take permit.[35] The proposed plan must accurately predict and mitigate the impact on species covered under the Act, as well propose a plan to minimize taking.[36] In order to prevent careless planning, the ESA enacted a "no surprises rule," which states that owners of wind projects will not be

[31] McKinsey, *supra* note 3, at 78.
[32] Memorandum from U.S. Dep't of the Interior, Fish and Wildlife Service on Service Interim Guidance on Avoiding and Mitigating Wildlife Impacts from Wind Turbines (May 13, 2003), http://www.fws.gov/habitatconservation/wind.pdf. (last visited Nov. 9, 2012) [Hereinafter "Dep't of the Interior Memo"].
[33] 16 U.S.C. § 1531-43 (2000) [Hereinafter "ESA"].
[34] 16 U.S.C. § 1539 (2000).
[35] McKinsey, *supra* note 3, at 76.
[36] *See* generally United States Fish And Wildlife Service, *Habitat Conservation Plans: Section 10 of the Endangered Species Act* (Dec. 2006), http://www.fws.gov/Endangered/hcp/HCP_Incidental_Take.pdf. (last visited Nov. 11, 2012).

subject to enforcement of the act if the species taken was part of the Habitat Conservation Plan.[37]

Further differentiating itself from the MBTA, the ESA also allows for private citizen suits alleging violations, whereas the MBTA is solely enforced by the USFWS.[38] In many cases, this is the reason why wind developers seek incidental take permits, as the USFWS is somewhat lax in enforcing the Act themselves.[39] Many wind developers seek consultation from the USFWS as a matter of policy, to protect themselves from potential citizen suits.[40]

Another federal law that protects avian species is the Bald and Golden Eagle Protection Act[41], which specifically targets those two birds. Unlike the ESA, however, the BGEPA does not allow for incidental take permits, and only authorizes the express take of eagles in limited circumstances.[42] Therefore, although it is not as flexible as the ESA, it is certainly less black and white than the MBTA. Additionally, while the BGEPA provides for civil penalties regardless of intent, it only criminalizes "knowingly" causing the death of an eagle with a "wanton disregard" for the consequences.[43] Thus, unlike the MBTA, it is not a strict liability statute in the criminal context.

As noted above, there is much criticism surrounding the MBTA, given its harsh stance on the taking of migratory birds, and the uncertainty in its enforcement. Also, it is

[37] 7 C.F.R. § 222 (1998). Generally speaking, the Habitat Conservation Plan must attempt to minimize impacts and taking of species and provide mitigation for expected takings. McKinsey, *supra* note 3, at 76.
[38] McKinsey, *supra* note 3, at 76.
[39] *Id.*
[40] *Id.*
[41] Bald and Golden Eagle Protection Act, 16 U.S.C. §§ 668-68d (2000) [hereinafter "BGEPA"].
[42] Bald and Golden Eagle Protection Act § 668(a).
[43] *Id.*

much less flexible than other federal statutes geared to the protection of birds and other species. It is these two concerns, its alleged harsh stance and its inflexibility, that pose a great deal of trouble for wind developers in this country.

The Increasing Popularity of Wind Development in the United States

As wind development continues to expand in this country, its increasing impact on avian species cannot be ignored. The popularity of wind development in the United States is increasing every day, and it is currently the most rapidly growing source of energy in the world.[44] This is because of the increasing desire to move away from importing foreign oil, as well as technological advances in wind energy.[45] The increase in popularity is also fueled by incentives such as federal production of tax credits and renewable portfolio standards[46] in about 50% of States in the U.S.[47] For example, electricity providers in New Jersey must obtain a minimum of 22.5% of their power from renewable energy resources by the year 2021.[48] In addition, the Department of Energy has proposed an effort to have 20% of all US electricity provided by wind energy by the year 2030.[49]

[44] Charles J. Smith, *Winds of Change: Issues in Utility Wind Integration*, IEEE Power & Eng'g Magazine, Nov.-Dec. 2005, at 20, 22.
[45] Lilley & Firestone, *supra* note 5, at 1169.
[46] "Renewable Portfolio Standards" are "state policies that require electricity providers to obtain a minimum percentage of their power from renewable energy resources by a certain date." Petition from the American Bird Conservancy, *Rulemaking Petition to the U.S. Fish & Wildlife Service for Regulating the Impacts of Wind Energy Projects on Migratory Birds*, (December 14, 2011), http://www.abcbirds.org/abcprograms/policy/collisions/wind_developments.html (last visited Nov. 11, 2012) [hereinafter "ABC Petition"].
[47] *See* DOE, *20% Wind Energy by 2030: Increasing Wind Energy's Contribution to U.S. Electricity Supply*, 1 (July 2008) [hereinafter "DOE 20% Wind Report"].
[48] ABC Petition, *supra* note 46, at 31.
[49] DOE 20% Wind Report, *supra* note 47, at 1.

As one would expect, the amount of wind projects, and subsequently wind turbines, has been increasing just as rapidly.[50] There were an estimated 30,000 operational wind turbines in the United States in 2009, which was expected to increase to over 70,000 by the end of this past year (2011).[51] In 2010 alone, the cumulative wind power in the United States grew by 15%.[52]

In addition to land-based wind development, offshore wind development should also develop at a rapid pace in the near future.[53] This includes a coordinated plan between the Secretary of the Interior and the Secretary of Energy to install 10 GW[54] of offshore wind capacity by 2020, and 54 GW by 2030.[55] The Director of the U.S. Bureau of Ocean Energy Management has also approved the nation's first commercial offshore wind facility, the Cape Wind project off the coast of Massachusetts.[56] Similar projects are being proposed of the coasts of Delaware, Florida, New Jersey and Georgia.[57]

Another development in wind energy that has a potentially adverse effect on aviation populations is the increase in size of wind turbines, utilized at higher speeds.[58] Most wind turbines operate in the same basic manner for the most part. As wind blows

[50] ABC Petition, *supra* note 46, at 28.
[51] *Id.*
[52] DOE, 2010 Wind Technologies Market Report 1 (June 2011), available at http://eetd.lbl.gov/ea/ems/reports/lbnl-4820e.pdf (last visited Nov. 11, 2012).
[53] *See, e.g.*, DOI Press Release, *Salazar, Chu Announce Major Offshore Wind Initiatives* (Feb. 7, 2011), http://www.doi.gov/news/pressreleases/Salazar-Chu-Announce-Major-Offshore-Wind-Initiatives.cfm (last visited Nov. 9, 2012).
[54] GW stands for gigawatt, which equals one billion watts of power. 1 GW of wind power will supply between 225,00 to 300,000 U.S. homes with power annually. *See* BOEM, *Offshore Renewable Energy: Interim Policy Projects*, http://www.boem.gov/Renewable-Energy-Program/Renewable-Energy-Guide/Offshore-Wind-Energy.aspx (last visited Nov. 8, 2012) [hereinafter "BOEM Offshore"].
[55] DOI Pres Release, *supra* at 1.
[56] BOEM Offshore, *supra* note 54, at 2.
[57] *Id.*
[58] ABC Petition, *supra* note 46, at 40.

over the airfoil-shaped blades of wind turbines, the blades begin to spin.[59] The blades are connected to a drive shaft, which turns an electric generator that produces electricity.[60] Wind turbines have been growing bigger constantly since their inception, largely because larger turbines create more energy.[61] Modern wind turbines range in size from 200 to 400 tons, with blade tip speeds averaging about 180 miles per hour.[62] In 2006, the average turbine was as tall as the Statue of Liberty, with a rotor big enough to sweep a football field.[63] By 2010, turbines had grown even larger, some with diameters longer than 364 feet, which is long enough to fit 24 average sized cars bumper to bumper along the diameter of the rotor.[64] Studies predict that these structures will only continue to grow in the near term, with projections that the average turbine size will exceed 700 feet in height by the year 2015.[65]

In sum, the increase in wind development in the United States will likewise have an increasing impact on avian populations that migrate through their airways. As the demand for renewable energy sources continues to rise, so too should the resources devoted to protecting the wildlife they endanger. It is submitted that Federal laws that protect animal species, specifically avian species, should be thus be updated to keep up with this increasingly popular source of energy. The more prevalent that wind projects become, both on and off our shores, the more important it becomes that federal agencies

[59] BOEM Offshore, *supra* note 54, at 2.
[60] *Id.*
[61] *See* DOE, *Wind Power Today* (May 2007), available at http://www.nrel.gov/docs/fy07osti/41330.pdf (last visited Nov. 11, 2012) [hereinafter "DOE Wind Power"]
[62] AWEA et al., *Winds of Change: A Manufacturing Blueprint for the Wind Industry* (June 2010) at 6, 20.
[63] DOE Wind Power, *supra* note 61, at 2.
[64] *Id.*
[65] *Id.*

work together to further both interests. While this source of energy continues to grow— for justifiable reasons— at an unprecedented rate, its developers are still forced to comply with the MBTA, among other federal laws and treaties. As will be discussed below, the MBTA thus currently poses some serious issues for wind developers in the United States.

Wind Development and its Effect on Avian Species

As the popularity of wind development increases, so too should the level of communication and cooperation between the USFWS and wind developers. The effect that the MBTA has on wind projects and wind developers has the potential to cripple the industry.[66] The fact that so many avian species are affected by wind development makes it paramount that the two parties work together to further both of their interests.

Likewise, the endangered nature of many avian species affected by wind development makes it increasingly important to try to protect them. About 30% of the birds protected by the MBTA are officially recognized by the USFWS as being in need of particular protection, including approximately 75 endangered and threatened species, and more than 240 species that are listed by the USFWS as Birds of Conservation Concern ("BCC").[67] Moreover, the size of a bird population does not always guarantee its continued existence, as even a common bird-- as was the carrier pigeon-- can be driven to

[66] This is my personal opinion, as reflected in my thesis, after doing extensive research on the topic. If the USFWS was to start prosecuting wind developers for incidentally taking migratory birds, it would put a halt to any further development, and probably shut down all projects already in existence.

[67] *See* FWS, *Birds of Conservation Concern* (2008), http://www.fws.gov/migratorybirds/NewReportsPublications/SpecialTopics/BCC2008/BCC2008.pdf (last visited Nov. 8, 2012).

extinction in a relatively short period of time.[68] Every bird on the list of the 20 Common Birds in Decline lost at least half of their population in just four decades.[69] Migratory birds face many threats, including, among others, habitat loss, degradation and fragmentation, resource extraction and energy industry operations. Other human-made threats include disturbance of their environment, intentional illegal killing and collisions with human-created structures.[70] Due to the large number of threats that birds encounter, it is increasingly important to reduce each risk whenever possible.[71]

One group of migratory birds that is particularly at risk from wind development is Hawaiian Birds.[72] Because more bird species are vulnerable to extinction there than any other place on earth, Hawaii has earned itself the title of "bird extinction capital of the world."[73] Basically every potential site for wind development on those islands carries with it a threat to a federally listed and endangered species.[74] In addition, Hawaii has implemented a renewable portfolio standard that requires that 40% of its statewide electricity come from renewable energy by the year 2030,[75] which strongly implicates wind energy due to its increasing popularity. Several species of Hawaiian birds have

[68] With a population in the billions, the carrier pigeon was once the most abundant bird in North America, but was driven to extinction within 100 years as early as 1900. T. D. Rich et al., *Partners in Flight North American Landbird Conservation Plan: Part 1 The Continental Plan 4* (2004), http://www.pwrc.usgs.gov/pif/cont_plan/PIF2_Part1WEB.pdf (last visited Nov. 11, 2012).
[69] Nat'l Audubon Soc'y, *Common Birds in Decline*, http://web4.audubon.org/bird/stateofthebirds/cbid/ (last visited Nov. 11, 2012).
[70] T. D. Rich et al., *Partners in Flight North American Landbird Conservation Plan: Part 2 Conservation Issues*, 39 (2004), http://www.pwrc.usgs.gov/pif/cont_plan/PIF3_Part2WEB.pdf. (last visited Nov. 9, 2012).
[71] ABC Petition, *supra* note 46, at 11.
[72] *Id.* at 12.
[73] *Id.*
[74] *Id.*
[75] *See* Am. Wind Energy Ass'n, *Wind Energy Facts: Hawaii* (Aug. 2011), http://www.awea.org/learnabout/publications/upload/Hawaii.pdf. (last visited Nov. 11, 2012).

already been killed at a Hawaiian wind project, including the Hawaiian Goose, the Hawaiian Petrel, and the Hawaiian Short-eared Owl.[76] Moreover, numerous other federally endangered birds, as well as MBTA protected birds that have yet to be listed as endangered, are located where wind-energy development currently exists or is planned.[77]

Another group of migratory birds that is at risk from wind development are grassland birds, whose numbers are already dwindling.[78] Grassland birds are among the fastest and most consistently declining birds in North America.[79] Four species of grassland birds are already listed as federally endangered, and several other species that are MBTA protected, have shown steep population declines in recent years.[80] Grassland birds, or those birds that rely on grassland habitats for nesting, are particularly susceptible to collision with wind turbines because they conduct aerial displays during courtship.[81] When male grassland birds perform aerial displays, they may not be fully paying attention to their surroundings, leaving them vulnerable to the blades of nearby wind

[76] *See* Kaheawa Wind Power II, LLC, *Kaheawa Wind Power II Draft Habitat Conservation Plan*, 52 (2010), http://www.fws.gov/pacificislands/Publications/DRAFT%20KWP%20II%20HCP.pdf (last visited Nov. 11, 2012).

[77] These federally endangered species include the Newell's Shearwater, Hawaiian Common Moorhen, Hawaiian Coot, Hawaiian Duck, Hawaiian Hawk, Hawaiian Stilt, Band-rumped Storm Petrel, Pacific Golden Plover. Those protected by the MBTA, but not yet federally endangered include frigatebirds, shearwaters, boobies, terns, noddies, and albatrosses. Stephen Brown et al., *United States Shorebird Conservation Plan 5* (2001), http://www.fws.gov/shorebirdplan/USShorebird/downloads/USShorebirdPlan2Ed.pdf (last visited Nov. 6, 2012).

[78] ABC Petition, *supra* note 46, at 14.

[79] N. Am. Bird Conservation Initiative, U.S. Comm., *The State of the Birds, United States of America* (2009) 9, 30, 31, http://www.stateofthebirds.org/2009/pdf_files/State_of_the_Birds_2009.pdf (last visited Nov. 11, 2012).

[80] The MBTA protected species include the Mountain Plover, Sprague's Pipit, Lark Bunting, Baird's Sparrow, Chestnut-collared Longspur and McCown's Longspur. *Id.* at 8.

[81] *See* Wyo. Game and Fish Dep't, *Wildlife Protection Recommendations for Wind Energy Development in Wyoming*, 5 (Apr. 23, 2010), http://gf.state.wy.us/downloads/pdf/April232010CommissionApprovedWindRecommendations.pdf (last visited Nov. 11, 2012).

turbines.[82] Some grassland birds, such as Sprague Pipits, engage in aerial displays that can last as long as three hours at heights of 50 to 100 meters.[83] There also exists the possibility that grassland birds will be displaced from their natural habitats by avoiding wind turbines altogether.[84] Although studies are still in their early stages, some have shown that displacement to lower quality habitats can lead to adverse long-term effects.[85] Similar to grassland birds, sagebrush-dependent songbirds face risks from wind development due to destruction and fragmentation of their habitats by wind turbines.[86]

Raptors are another group of migratory birds that are greatly affected by wind turbines and other wind development structures.[87] Species of raptors that are included on either the USFWS BCC list or the U.S. WatchList include the Swainson's Hawk, American Peregrine Falcon, Ferruginous Hawk, Short-eared Owl, Flammulated Owl, Golden Eagle, and Bald Eagle.[88] The two species that garner the most attention from the federal government are the Golden Eagle and the Bald Eagle, which are protected under both the MBTA and the BGEPA.[89] As recently as last year, the Golden Eagle population in the United States was estimated at only 30,000.[90] This is troubling, considering

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[82] *Id.*
[83] Mark B. Robbins, *Display Behavior of Male Sprague's Pipits*, 110 Wilson Bull. of Ornithology, 435-438, 435 (1998), http://elibrary.unm.edu/sora/Wilson/v110n03/p0435-p0438.pdf. (last visited Nov. 1, 2012).
[84] ABC Petition, *supra* note 46, at 17.
[85] *Id.*
[86] *Id.*
[87] *Id.* at 18.
[88] Swainson's Hawk (BCC, Yellow WatchList), American Peregrine Falcon (BCC), Ferruginous Hawk (BCC), Short-eared Owl (BCC, Yellow WatchList), Flammulated Owl (BCC, Yellow WatchList), Golden Eagle (BCC), and Bald Eagle (BCC). Wind projects that these species are killed at are typically found in California, New Jersey, Washington, and Wyoming. *Id.* at 18.
[89] *Id.* at 20.
[90] *See* FWS, *Golden Eagles Status Fact Sheet* (2011), http://www.fws.gov/habitatconservation/Golden_Eagle_Status_Fact_Sheet.pdf (last visited Nov. 11, 2012).

Golden Eagles are subject to a variety of risks, including habitat loss, electrocution by and collision with energy infrastructure (including power lines and wind turbines), lead poisoning, human disturbance, climate change, disease, stock tank drowning, vehicle collisions, and illegal intentional killing.[91] Among these, death by way of wind energy and its infrastructures is the third highest direct threat to their survival.[92]

One wind project that poses a significant and documented threat to Golden Eagles is located in Altamont Pass in California, where an estimated 70-94 Golden Eagles have been killed since 1998.[93] Altamont Pass turbines kill more Golden Eagles than are produced in the area, leading to a population sink.[94] The wind turbines at this wind project, which is located east of San Francisco, kill more than 1,300 raptors each year, and have since been given the name "bird blenders."[95] Several legal actions have been filed against the owners of Altamont Pass in an effort to stop operation or at the least force detailed environmental studies, though none have prevailed.[96]

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[91] FWS, *Minutes and Notes from the North American Golden Eagle Science Meeting* (Sept. 21, 2010), http://www.dfg.ca.gov/wildlife/nongame/raptors/goldeneagle/docs/NAGoldenEagleScienceMeeting-2010-09- 21.pdf (last visited Nov. 11, 2012).
[92] *Id.* at 22.
[93] K. Shawn Smallwood, *Fatality Rates in the Altamont Pass Wind Resource Area 1998-2009* (2010) at 25, http://altamontsrc.org/alt_doc/p145_smallwood_fatality_monitoring_results_12_31_09.pdf (last visited Nov. 11, 2012).
[94] *See* Grainger Hunt & Teresa Hunt, *The Trend of Golden Eagle Territory Occupancy in the Vicinity of the Altamont Pass Wind Resource Area: 2005 Survey* 2 (2006), http://www.energy.ca.gov/2006publications/CEC-500-2006-056/CEC-500-2006-056.PDF (last visited Nov. 10, 2012); *See also* Jennifer Bogo, *How the Deadliest Wind Farm Can Save the Birds: Green Machines* (2011), http://www.popularmechanics.com/science/environment/green-energy/4222351 (last visited Nov. 28, 2012).
[95] McKinsey, *supra* note 3, at 86.
[96] *Id.*

Another such wind project is located in Flint Hills, situated in a tall, grassy prairie area in Kansas.[97] Flint Hills exhibits similar issues to that of Altamont Pass, resulting in the killing of thousands of migratory birds.[98] Consequently, the Flint Hills Tallgrass Prairie Heritage Foundation brought suit under the MBTA, alleging that the project violated the Act by killing protected migratory birds.[99] Like many other challenges under the MBTA, the Tenth Circuit held that the Court lacked jurisdiction because no private cause of action exists under the Act.[100] Similar to the projects at Flint Hills and Altamont Pass is the Pine Tree wind project in California, where at least 6 Golden Eagles were killed in 2011.[101] Similar issues have also come to light in Wyoming, where in some areas the mortality rate is as high as one Golden Eagle per 13 wind turbines per year.[102] This is becoming even more of a threat, as the USFWS has estimated that 1,000 wind turbines were in operation in Wyoming as of 2010, with another 1,000 to be constructed within the next two years.[103]

While threats posed by wind energy to the iconic Bald Eagle are not as daunting as those to the Golden Eagle, there is concern that these symbols of American will also face a greater threat as wind development becomes more prevalent.[104] Bald Eagle deaths

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[97] *Id.*
[98] *Id.*
[99] *Flint Hills Tallgrass Prairie Heritage Foundation v. Scottish Power*, 147 Fed. App'x 785, 786 (2005).
[100] *Id.* at 786.
[101] ABC Petition, *supra* note 46, at 21.
[102] *See* Sophie Osborn, Wyo. Outdoor Council, *Wind Turbines Killing More Golden Eagles in Wyoming Than Expected* (June 21, 2011), http://wyomingoutdoorcouncil.org/blog/2011/06/21/wind-turbines-killing-more-golden-eagles-in-wyoming-than-expected (last visited Nov. 11, 2012).
[103] *Id.*
[104] Amber Travsky & Gary P. Beauvais, *Species Assessment for Bald Eagle (Haliaeetus Leucocephalus) in Wyoming* (prepared for BLM, 2004) at 25,

have already been reported at wind projects in Wyoming, as well as in Ontario, Canada.[105] If future wind development projects are not carefully sited, there will most likely be even more deaths to this much-loved species that contained only 150,000 as of 2007.[106]

Another group of migratory birds that are at risk due to the expansion and location of wind turbines are Eastern forest and woodland birds.[107] Species that are included in this category of migratory birds include the Bicknell's Thrush, Cerulean Warbler, Bay-breasted Warbler, and Blue-winged Warbler.[108] The largest threats caused by wind development to these species include habitat degradation and loss to habitat quality.[109] Because these species are not as closely monitored as species such as Golden Eagles and Bald Eagles, the extent of mortalities is not known, but certain occurrences have been documented.[110] Similarly, Western forest and woodland birds are at risk to wind development on the other side of the country.[111] As with their Eastern counterparts, studies conducting mortality rates of these Western species are scarce.[112] However,

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http://www.blm.gov/pgdata/etc/medialib/blm/wy/wildlife/animal-assessmnts.Par.41209.File.dat/BaldEagle.pdf (last visited Nov. 9, 2012).
[105] *See* U.S. Dep't of Energy ("DOE"), *South Dakota PrairieWinds Project, Final Environmental Impact Statement* 180 (2010), http://www.rurdev.usda.gov/SupportDocuments/DOE-EIS-0418_Ch8_Use-Productivity.pdf (last visited Nov. 11, 2012).
[106] *See* United States Fish & Wildlife Service, *Bald Eagle Population Size*, (2007), http://www.fws.gov/midwest/eagle/population/index.html (last visited Nov. 28, 2012).
[107] *Id.* at 23.
[108] *Id.*
[109] *Id.* at 23-24.
[110] *Id.*
[111] *Id.* at 25.
[112] *Id.*

mortalities to both the Oak Titmouse[113] and Lewis's Woodpecker[114] have been reported in California and Oregon, respectively.

Lastly, as offshore wind energy continues to develop in the United States, other migratory birds protected under the MBTA will be at greater risk due to wind turbines and the destruction to their habitats in areas where wind projects are constructed.[115] Federally threatened and endangered species that are projected to be negatively affected by these projects are the Piping Plover, Roseate Tern, Whooping Crane, Kirtland's Warbler, Red Knot, Black-Capped Petrel, Wilson's Plover, Gull-billed Tern, Audubon's Shearwater, Bald and Golden Eagles and Peregrine Falcons.[116] It is difficult to project exactly what species will be severely affected by offshore wind development, as it has not yet been implemented. Consequently, more species may be at risk than have been initially designated and estimated as such.[117]

All in all, more than a third of the migratory bird species protected under the MBTA are at risk of experiencing severe population declines due to the variety of threats

[113] Oak Titmouse mortality was reported at the aforementioned Pine Tree wind project in California. BioResource Consultants Inc., *2009/2010 Annual Report Bird and Bat Mortality Monitoring, Pine Tree Wind Farm, Kern County, California* 8 (Oct. 14, 2010).
[114] Fatalities to Lewis's Woodpecker were reported at the Vansycle Wind facility in Oregon. Wallace P. Erickson et al., *Avian and Bat Mortality Associated with the Vansycle Wind Project, Umatilla County, Oregon 1999 Study Year* 9 (Feb. 7, 2000), http://www.west-inc.com/reports/vansyclereportnet.pdf (last visited Nov. 11, 2012).
[115] ABC Petition, *supra* note 46, at 25.
[116] *See, e.g.*, Doug Forsell, FWS, *Waterbirds and Offshore Wind Energy Development, A Biologists Perspective On Regulation* 2 (2010), http://web2.uconn.edu/seagrantnybight/documents/Energy%20Docs/Forsell_NY%20Bight%20Energy%20Oc t%207%202010_Seabirds.pdf (last visited Nov. 10, 2012); *see also* Sarah M. Karpanty, Virginia Tech, *Virginia Coastal Energy Research Consortium: Potential Effects of Virginia Offshore Wind Power on Birds* 4 (2011), http://vasierraclub.org/Karpanty.pdf (last visited Nov. 10, 2012)
[117] ABC Petition, *supra* note 46, at 26.

caused by wind development.[118] These species are in dire need of stronger protection under the MBTA, and preventative measures must be taken to ensure their existence. Many of the issues that face these migratory birds seem to stem from problems with siting and poor planning on the part of wind developers. Other issues are derived from a lack of communication between the USFWS and wind developers, which needs to be remedied if the USFWS wants the wind energy industry to continue to develop without wiping out the populations of hundreds of species of endangered migratory birds.

Interaction Between Federal Laws Protecting Avian Species and Wind Development

The lack of communication and guidance from the federal agencies that enforce laws protecting avian species has led to planning issues and confusion on the part of wind developers.[119] As discussed above, the ESA and BGEPA both provide mechanisms that authorize the taking of protected migratory birds as regulated by the USFWS.[120] However, unlike the ESA and BGEPA, the MBTA does not contain a similar mechanism allowing take permits.[121] Instead, the USFWS has relied on the release of guidelines that are temporary as well as voluntary in nature to protect migratory birds covered under the Act.[122] The USFWS has even released a memo that stated that, "[t]he Interim Guidelines

[118] *Id.*
[119] This applies mainly to the USFWS and their lack of guidance and communication with wind developers in site planning for wind projects.
[120] *See, e.g.*, Memorandum from U.S. Dep't of the Interior, *supra* note 32, at 3; *see also* Bald and Golden Eagle Protection Act § 668(a).
[121] *See* Lilley & Firestone, *supra* note 5, at 1180.
[122] FWS, U.S. Dep't of the Interior, *Interim Guidelines to Avoid and Minimize Wildlife Impacts from Wind Turbines* (2003), http://www.fws.gov/habitatconservation/wind.pdf (last visited Nov. 11, 2012).

are not to be construed as rigid requirements, which are applicable to every situation, nor should they be read literally."[123]

One of the major issues with the voluntary nature of the Guidelines is that they fail to address the problem of poor siting, which is incredibly important in protecting migratory bird species.[124] By not prosecuting wind developers so long as they communicate with the agency and record their reasons for departing from their advice, the USFWS is allowing developers to construct wind projects in high-risk areas.[125]

As wind energy becomes more popular, an increasing amount of developers have not communicated with the USFWS prior to beginning construction.[126] The USFWS has experienced difficulties of obtaining information regarding potential projects and their wildlife impacts, and in some cases, their existence altogether for several months.[127] This problem stems from the absence of mandatory rules requiring developers to obtain permits prior to constructing wind projects.[128] Because developers are not likely to be prosecuted by the USFWS, and nothing requires them to share information, they are simply not doing it.[129]

[123] Memo from Steven Williams, *FWS Director to FWS Regional Directors, Implementation of Service Voluntary Interim Guidelines to Avoid and Minimize Wildlife Impacts from Wind Turbines* (Apr. 26, 2004), http://www.fws.gov/habitatconservation/wind_guidelines.pdf (last visited Nov. 11, 2012) [hereinafter "the Guidelines"].
[124] ABC Petition, *supra* note 46, at 78.
[125] *Id.* (citing Letter from Michael D. George, FWS to Jay Prothro, BP Wind Energy, *Southwest Power Pool Docket #ERII-3833* (Oct. 11, 2011)).
[126] ABC Petition, *supra* note 46, at 80.
[127] *Id.*
[128] *Id.* at 79.
[129] *Id.*

Yet another issue with the voluntary guidelines is that they do not provide standardized pre and post construction avian impact study requirements.[130] These studies can include taking ground surveys to determine how many birds will fly through a given airspace, and what percentage is likely to be killed, nighttime surveys, utilizing radar surveys, and operational studies, such as counting carcasses.[131] However, due to the inconsistency of these reports and the lack of a standardized requirement, wildlife mortality estimates provided by many projects are underestimates of actual mortality levels.[132] Problems with these estimates include the inconsistencies in their methods, not including all of a facility's wind turbines, and not reporting incidental finds.[133]

In addition to these voluntary guidelines, the USFWS is currently only likely to prosecute the owner of a wind project when the killing is reasonably foreseeable, and when they have directed the company to take action to mitigate avian fatalities.[134] Again, this is troubling because the MBTA does not provide for private citizen suits, and if the USFWS does not enforce it, violations will go unenforced entirely.[135] Not only does this provide little incentive for wind developers to prevent or minimize wildlife impacts, but, at the same time, also creates worry amongst wind developers that they could be subject to punishment at any time if the USFWS decides to start enforcing the MBTA.[136]

[130] McKinsey, *supra* note 3, at 83.
[131] *Id.* at 82-83.
[132] ABC Petition, *supra* note 46, at 81.
[133] *Id.*
[134] Lilley & Firestone, *supra* note 5, at 1197.
[135] McKinsey, *supra* note 3, at 78.
[136] Lilley & Firestone, *supra* note 5, at 1209.

This worry stems from the fact that the MBTA is a strict liability statute,[137] coupled with the fact that all wind projects are inherently dangerous to migratory birds; hence the killing of some species appears to be inevitable.[138] Thus, there is always the threat that the USFWS could start enforcing the MBTA on wind developers, causing disruption in further development and a landfall of litigation.[139] Moreover, the uncertainty as to the extent and severity of statutory fines and penalties, derived from the real possibility of selective and uneven enforcement, could prove extremely harmful to an industry most policy-makers want to see grow and thrive.

Undoubtedly, this uncertainty surrounding prosecution under the Act can also create problems for wind developers in the funding and planning of their future projects.[140] For example, wind projects often cost hundreds of millions of dollars,[141] and obtaining loans from banks can be increasingly difficult due to uncertainty surrounding prosecution.[142] Typically, lenders balance risk against rate of return, and risks associated with mitigating avian impacts, such as pre-project permitting uncertainty and post-operation risk of reduced operation, shutdown, or fines, can make banks less willing to make a loan to a wind developer.[143]

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[137] Lilley & Firestone, *supra* note 5, at 1181.
[138] Nat'l Wind Coordinating Collaborative, *Wind Wildlife Research Meeting VIII: Presentation and Poster Abstracts* 45-46 (Oct. 2010), http://www.nationalwind.org/assets/research_meetings/Research_Meeting_VIII_Abstracts.pdf. (last visited Nov. 11, 2012).
[139] Lilley & Firestone, *supra* note 5, at 1198.
[140] McKinsey, *supra* note 3, at 88.
[141] *See* Robert Thresher, *Wind Power Today*, eJournal USA, June 2005, http://usinfo.state.gov/journals/itgic/0605/ijge/thresher.htm. (last visited Nov. 11, 2012).
[142] McKinsey, *supra* note 3, at 88.
[143] *Id.*

In sum, the lack of communication and guidance from the USFWS to wind developers is creating significant problems for both wind developers, as well as the migratory birds the USFWS is in charge of protecting. The lack of a private cause of action and the selective enforcement policy of the USFWS has led to serious problems with accountability. Failing to allow for incidental take permits has led to uncertainty in prosecution, which in turn has led to problems with funding for developers, as well as a lack of communication between the parties. Furthermore, the voluntary nature of the Guidelines has led to poor siting and project planning, which in turn negatively impacts species of migratory birds. All of these issues combined have an incredibly detrimental effect on the dynamic between wind development and migratory birds, which will only continue to grow as the industry continues to expand.

Recommended Policy Changes: Flying Forward

The current regulatory scheme implemented by the USFWS is inadequate and ineffective in protecting both migratory birds and wind developers, and must be altered dramatically in order to do so. Therefore, I propose that the current policy involving the MBTA should be altered in three fundamental ways to alleviate the problems that are currently facing the wind industry: (1), the USFWS should authorize incidental take permits to be issued to wind developers; (2), the USFWS should create and enforce a uniform standard for assessing avian impacts; and (3), the MBTA should be amended to allow for civil sanctions, as well as citizen suits.[144]

[144] These three policy changes are my own modifications of recommendations proposed by the authors of two journal articles and the ABC Petition. The idea of the USFWS authorizing incidental take permits came from the ABC's petition to the Department of the Interior, as well as

The most important policy change that must be carried out is that the USFWS must authorize the issuance of incidental take permits under the MBTA. Because it leads to confusion on the part of wind developers, issues with siting and issues with the funding of wind energy projects, the MBTA's lack of incidental take permits is the most pressing issue in the industry.[145] But, importantly, the USFWS currently possesses the statutory authority to implement such a change.[146] So long as the proposed regulations are compatible with the four migratory bird treaties,[147] the MBTA has authorized the USFWS to allow incidental take permits for wind developers.[148]

Therefore, the USFWS should draft regulations that require wind developers to consult with the agency prior to the planning stage of development, which would thus eliminate many of the issues involved with siting, funding, and transparency.[149] A policy that requires transparency by both parties would be the most effective way to ensure the mitigation of impact to avian species from the proposed wind project.[150] Issues of siting would be drastically reduced, as the USFWS and developers would work together to find

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the Lilley & Firestone journal article. *See* ABC Petition, *supra* note 46, at 145; *See also* Lilley & Firestone, *supra* note 5, at 1210. The idea of developing a uniform standard of assessing avian impacts came from the Energy Law Journal article written by McKinsey, as well as the Lilley & Firestone journal article. *See* McKinsey, *supra* note 3, at 89; *See also* Lilley & Firestone, *supra* note 5, at 1211. The idea of amending the MBTA to allow for civil sanctions as well as private citizen suits was mentioned in the Lilley & Firestone journal article. Lilley & Firestone, *supra* note 5, at 1212.

[145] ABC Petition, *supra* note 46, at 89.

[146] Section 704 of the MBTA provides: "[T]he Secretary of the Interior is authorized and directed, from time to time ... to determine when, to what extent, if at all, and by what means ... to allow hunting, taking, capture, killing ... of any such bird ... and to adopt suitable regulations permitting and governing the same ...." 16 U.S.C. § 704 (emphasis added).

[147] The four treaties are between: (1) the United States and Great Britain, (2) the United States and Mexico, (3) the United States and Japan, and (4) the United States and Russia. 16 U.S.C. § 703(a).

[148] ABC Petition, *supra* note 46, at 89.

[149] *Id.*

[150] Lilley & Firestone, *supra* note 5, at 1210.

a site suitable for high production of energy while mitigating impact on avian species.[151] Requiring developers to obtain MBTA permits also would eliminate the uncertainty surrounding prosecution, which in turn would eliminate major issues of funding.[152]

Another policy change that I propose is to create a uniform standard for assessing avian impacts at wind development projects. The USFWS should enforce both preconstruction and post construction monitoring protocols that are standard to the entire industry in order to mitigate impact on avian species.[153] Mandating that a developer comply with standard preconstruction assessments of avian impact ensures that the USFWS obtains more consistent data, and can make a more accurate determination as to whether or not they decide to grant a permit.[154] Setting industry wide standard post-construction monitoring protocols are also necessary to confirm that preconstruction data was accurate in predicting avian impact.[155] These standards could disclose substantial problems such as inconsistencies in reporting and improper siting, and provide greater transparency.

Lastly, the MBTA should be amended to allow for civil sanctions and private citizen suits in order to address issues with non-enforcement of the Act.[156] The USFWS has endured much criticism by maintaining a policy of selective enforcement of the MBTA, which has led to wind developers not being held accountable for their actions.[157] Allowing for civil sanctions would allow more flexibility in assessing the most

[151] ABC Petition, *supra* note 46, at 89.
[152] *Id.*
[153] Lilley & Firestone, *supra* note 5, at 1211.
[154] ABC Petition, *supra* note 46, at 91.
[155] Lilley & Firestone, *supra* note 5, at 1211.
[156] *Id.*
[157] Dep't of the Interior Memo, *supra* note 32, at 12.

appropriate punishment for violations under the Act, the awarding of fines. A monetary award of damages and, in some cases other corrective actions, would appear to be the proper remedy in a majority of cases.[158] Further, allowing for private citizen suits would provide a check on the USFWS, which given its history, may be reluctant to enforce the MBTA in most situations.[159] However, there must be a limit on who would have standing in these cases in order to mitigate the possibility of opening the floodgates of litigation. Therefore, I would recommend a requirement of alleging a minimum amount of damages, as well as a heightened pleading standard. This would dissuade the casual bird-watcher from filing suit every time they saw a violation of the act.

These three policy changes will go a long way in alleviating the problems that are associated with the interaction between well-meaning and incredibly important federal laws, especially the MBTA, and the necessary expansion of the critical development of wind-provided energy. These changes will specifically address issues with project funding and siting, mitigation of harmful impacts on avian species, and enforcement of the MBTA on potential violators.

Conclusion

The purpose of this paper has been to discuss the issues involving the MBTA and its impact on wind development, and to propose a solution that can benefit the wind energy industry while mitigating its negative effect on avian species. As discussed in detail, in order to accomplish this goal, three policy changes must be made to the MBTA and USFWS regulations. These changes are imperative given the ever-increasing

[158] Lilley & Firestone, *supra* note 5, at 1212.
[159] Dep't of the Interior Memo, *supra* note 32, at 13.

popularity of renewable energy sources and, in particular, wind energy. As the wind industry changes to keep up with the demand for renewable energy, the regulations that attempt to mitigate damages to migratory birds should be altered to keep up with those changes. The improvement and expansion of wind energy development will be very essential to the United States in moving forward, but it must also give proper consideration to the migratory birds in its path.