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to the U.S. House Committee on Natural Resources
Subcommittee on Water, Oceans, and Wildlife
Legislative Hearing on
Migratory Bird Protection Act
H.R. 1446 Multinational Species Conservation Funds Semipostal Stamp
H.R. 2685 Wild Bird Conservation Act

Good morning Chairman Huffman, Ranking Member McClintock, and members of the Committee. Thank you for the opportunity to join you today to discuss the important role that the Migratory Bird Protection Act would play in conservation and supporting a healthy environment, building upon the more than 100-year old Migratory Bird Treaty Act.

My name is Dr. Amanda Rodewald, and I am the Garvin Professor and Senior Director of Conservation Science at the Cornell Lab of Ornithology and Department of Natural Resources at Cornell University. I am an applied ecologist who seeks to understand how species and ecosystems respond to changing land use, land cover, and climate. One of my specialties is developing innovative approaches to conservation that accommodate human activities and, hence, meet both social and ecological needs in working landscapes. This focus aligns well with my position at the Cornell Lab of Ornithology, a world-renowned science institution dedicated to understanding, interpreting, and conserving biological diversity through research, education, and citizen science. At the Lab we conduct scientific research, collaborate with partners to apply science to real-world problems, develop and help implement approaches that support conservation and communities, work with decision-makers and practitioners to shape planning and policy, and build capacity in the next generation of scientists and conservation leaders. My work over the last 20 years includes publishing over 134 scientific articles, 60 popular articles, 10 book chapters, and a new ornithology textbook. I am a fellow of the American Association for the Advancement of Science and the American Ornithological Society and have previously served on the Science Advisory Board of the U.S. Environmental Protection Agency, the Scientific Review Committee of the National Socio-environmental Synthesis Center, and as an *ad-hoc* science advisor to government agencies and non-profit organizations.

The Migratory Bird Treaty Act, which is among the first environmental laws in the U.S., grew out of four bilateral treaties, with Canada, Mexico, Japan, and Russia, to protect over 1,100 species of our shared migratory birds. The Migratory Bird Treaty Act makes it illegal to “take” birds (i.e., pursue, hunt, take, capture, kill or sell live or dead birds, feathers, eggs and nests) except by permit or regulated hunting. Since enacted, and particularly over the past 50 years, the act, as implemented, has consistently included “incidental take” or activities that directly and foreseeably, but not purposefully, harm birds. However, in December 2017, the U.S. Department of the Interior reinterpreted the act to apply only to “affirmative actions that have as the purpose the taking or killing of migratory birds, their nests or their eggs.” This reinterpretation is inconsistent with previous administrations of Republicans and Democrats alike, with the plain language of the Act, and with approaches taken by our international treaty partners. As such, it fundamentally weakens the protection granted to birds and undermines the efforts of U.S. and international partners working to conserve birds.

Today I offer four central points that underscore the important role that the Migratory Bird Treaty Act plays in conserving birds and protecting a healthy environment and explain how the 2017 legal memorandum (M-37050) undermines that role.

- 1) A growing body of evidence indicates that we need to strengthen, not erode, our efforts to protect and conserve migratory birds.
- 2) Migratory birds are subject to numerous threats and sources of mortality, of which the vast majority are unintentional or incidental.
- 3) The Migratory Bird Treaty Act has long provided a powerful incentive for industry and landowners to work with the U.S. Fish and Wildlife Service to reduce harm to birds.
- 4) When we protect birds and their habitats, we derive many co-benefits that support human health and wellbeing, the economy, and healthy environments. What is good for birds is usually good for people, too.

I discuss each point in the subsequent pages.

1. A growing body of evidence indicates that we need to strengthen, not erode, our efforts to protect and conserve migratory birds.

Recent high-profile reports have outlined the global biodiversity crisis that our planet is facing. For example, the World Wildlife Fund's Living Planet Report¹ indicated that 60% of vertebrate populations have declined by >60% since 1970. A United Nations report² released in May detailed how one million species face extinction, with the average abundance of most native species on land declining by 20%. Migratory birds are especially vulnerable, given that only 9% of their ranges are protected – far less than other groups of animals³. The reliance of migratory birds on unprotected land means that their protection requires careful and wise accommodation of human activities. This is especially true for the roughly 350 species of migratory birds that breed in North America and overwinter in Central or South America and the Caribbean, many of which are declining. Because the threats facing migratory birds span jurisdictions and boundaries, international treaties and laws like the Migratory Bird Treaty Act are essential for conserving populations.

Though tempting to assume that the strong conservation tradition in the U.S. insulates us from worrisome population declines, that is not the case. Over one-third of North American bird species are in need of urgent conservation action, according to the 2016 State of the Birds Report⁴. Populations of migratory shorebirds, seabirds, and grassland birds have declined by up to 70%, with significant declines spanning nearly all types of birds and habitats. More worrisome still is that steep declines are evident among common and beloved birds, like the Snowy Owl, Chimney Swift, Eastern Meadowlark, Blackpoll Warbler, Pine Siskin, Varied Thrush, Grasshopper Sparrow, and Bank Swallow. In all, 33 common U.S. bird species have lost more than half of their population since 1970⁵.

Yet hope is not lost, and we still have time to act. History demonstrates that Americans get strong returns when we invest in conservation. The Migratory Bird Treaty Act, in particular, is

¹ World Wildlife Fund. 2018. Living Planet Report - 2018: Aiming Higher. Grooten, M. and Almond, R.E.A.(Eds). WWF, Gland, Switzerland

² IPBES. 2019. Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. E. S. Brondizio, J. Settele, S. Díaz, and H. T. Ngo (editors). IPBES Secretariat, Bonn, Germany.

³ Runge, et al. 2014. Conserving mobile species. *Frontiers in Ecology and the Environment* 12, 395–402.

⁴ North American Bird Conservation Initiative. 2016. The State of North America's Birds 2016. Environment and Climate Change Canada: Ottawa, Ontario. 8 pages.

⁵ North American Bird Conservation Initiative, U.S. Committee. 2014. The State of the Birds 2014 Report. U.S. Department of Interior, Washington, D.C. 16 pages.

credited with saving many iconic species, including Snowy Egret, Sandhill Crane and Wood Duck. The act when paired with other legislative vehicles that emphasize habitat protection and restoration, such as the Farm Bill, helped waterfowl populations to rebound⁶. Such successes illustrate well how careful regulation and habitat management can slow, and ultimately reverse, declines.

Key point: Given the continuing and growing vulnerability of America's bird populations, we must restore and strengthen protections for migratory birds.

2. Migratory birds are subject to numerous threats and sources of mortality, of which the vast majority is unintentional or incidental.

Avian mortality can have direct or indirect causes and can be either intentional or incidental; most mortality is indirect and incidental. For example, the most pervasive threat to birds is loss of suitable habitat due to human activities, such as residential development, agriculture, invasive species, climate change, and pollution. When habitats are lost or degraded, birds may have difficulty surviving and reproducing.

Although we lack large-scale and systematic estimates of indirect mortality sources, scientists now have rigorous evidence-based estimates of direct avian mortality caused by different human activities⁷. The U.S. Fish and Wildlife Service estimates that the annual median mortality count is about 4 billion birds, with industry alone taking 453 million to 1.1 billion birds each year (median = 709 million birds)⁸. Industry-related mortality sources can include poisoning (72 million birds), electrocution or collisions with powerlines (>28 million birds), wind turbines (>573,000 birds), and oil pits (750,000 birds) (Table 1). The Migratory Bird Treaty Act has served as an important tool to reduce impacts to birds by addressing some of these mortality sources, along with unanticipated catastrophic events. For example, an estimated 1 million birds died in the 2010 Deepwater Horizon spill in the Gulf of Mexico⁹.

⁶ North American Bird Conservation Initiative, U.S. Committee. 2017. The State of the Birds 2017: A Farm Bill Special Report. Cornell Lab of Ornithology, Ithaca, N.Y. 4 pages

⁷ Loss et al. 2015 Annual Review of Ecology, Evolution, and Systematics 46:1, 99-120

⁸ U.S. Fish and Wildlife Service; <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>

⁹ Haney et al. 2014. Mar Ecol Prog Ser 513:225-237; Haney et al. 2014. Mar Ecol Prog Ser 513:239-252.

Table 1. Data-driven estimates of bird mortality in the U.S. from direct anthropogenic stressors.

Mortality source	Estimate	Lower 95% CI	Upper 95% CI	Source¹⁰
Cats	2,407,000,000	1,306,000,000	3,992,000,000	Loss et al. 2013b
Buildings (all)	599,000,000	365,000,000	988,000,000	Loss et al. 2014a
Buildings (low-rises)	339,000,000	136,000,000	715,000,000	Loss et al. 2014a
Buildings (residences)	253,000,000	159,000,000	378,000,000	Loss et al. 2014a
Buildings (high-rises)	508,000	104,000	1,600,000	Loss et al. 2014a
Automobiles	199,600,000	88,700,000	339,800,000	Loss et al. 2014b
Power line collisions	22,800,000	7,700,000	57,300,000	Loss et al. 2014c
Communication towers	6,581,945	-	-	Longcore et al. 2012
Oil pits	750,000	500,000	1,000,000	Trail 2006
Power line electrocutions	5,630,000	920,000	11,550,000	Loss et al. 2014c
Poison	72,000,000	-	-	USFWS
Wind turbines (all)	573,093	467,097	679,089	Smallwood 2013
Wind turbines (monopole)	234,000	140,000	328,000	Loss et al. 2013a

Key point: Almost all estimates of avian mortality reflect unintentional or “incidental take”, including the nearly one billion birds killed by industry activities each year. Consequently, the 2017 reinterpretation that excludes incidental take renders the Act impotent on most sources of mortality for migratory birds.

¹⁰ Longcore T, Rich C, Mineau P, MacDonald B, Bert DG, et al. 2012. An estimate of mortality at communication towers in the United States and Canada. *PLOS ONE* 7:e34025

Loss SR, Will T, Marra PP. 2013a. Estimates of bird collision mortality at wind farms in the contiguous United States. *Biol. Cons.* 168:201–9

Loss SR, Will T, Marra PP. 2013b. The impact of free-ranging domestic cats on wildlife of the United States. *Nat. Comm.* 4:1396

Loss SR, Will T, Marra PP. 2014b. Estimation of annual bird mortality from vehicle collisions on roads in the United States. *J. Wildl. Manag.* 78:763–71

Loss SR, Will T, Marra PP. 2014c. Refining estimates of bird collision and electrocution mortality at power lines in the United States. *PLOS ONE* 9:e101565

Smallwood KS. 2013. Comparing bird and bat fatality-rate estimates among North American wind-energy projects. *Wildl. Soc. Bull.* 37:19–33

Trail, P.W. 2006. Avian mortality at oil pits in the United States: a review of the problem and efforts for its solution. *Environ. Manage.* 38:532–44.

3. The Migratory Bird Treaty Act has long provided a powerful incentive for industry and landowners to work with the U.S. Fish and Wildlife Service to minimize bird deaths.

Since enacted, the threat of prosecution under the Migratory Bird Treaty Act has been used effectively by Republican and Democratic administrations to nudge industry and other landowners to reduce potential harm to migratory birds. The following examples showcase how the act can provide a powerful incentive for pro-conservation action:

Powerlines. Over 31 million birds, including Golden and Bald Eagles, are killed annually when they are electrocuted or injured after colliding with powerlines. In the 1970s the Nixon administration used the Migratory Bird Treaty Act to convince power companies to increase the distance between powerlines to reduce deaths and avoid violations. More recently, the U.S. Fish and Wildlife Service worked cooperatively with the Edison Electric Institute, the Electric Power Research Institute, the National Rural Cooperative Electrical Association, the Rural Utilities Service, and over 50 electric utility companies in the U.S. and Canada to develop guidance documents to reduce avian electrocutions and collisions¹¹.

Long-line fishing. Hundreds of thousands of seabirds were regularly drowned when caught on baited hooks attached to long fishing lines. Fortunately, fishing vessels avoided many of these incidental deaths, along with fees for violating the act, by attaching weights to long lines so that seabirds were less likely to encounter them.

Communication towers. More than 6.5 million birds die each year in collisions with communication towers. After years of research, pressure from conservation groups, and affirming intentions to avoid violating the act, the Federal Aviation Administration revised regulations¹² to require new blinking lights and marking standards to reduce the impact of tall communication towers on migratory birds.

Wind turbines. With an estimated >573,000 birds killed annually at wind turbines, the wind industry harms comparatively fewer birds than many other sectors. Nevertheless, the wind industry continues to invest heavily in the development of technological solutions, siting guidelines, and monitoring programs to make wind energy safer for migratory birds and other

¹¹ Avian Power Line Interaction Committee. <https://www.aplic.org>

¹² U.S. Department of Transportation, Federal Aviation Administration, Advisory Circular 70/7460-1L; https://www.faa.gov/documentLibrary/media/Advisory_Circular/AC_70_7460-1L_.pdf

wildlife like bats. The U.S. Fish and Wildlife Service issued a set of guidelines¹³ and training materials¹⁴ for land-based wind energy that details a variety of steps that wind energy companies can take to reduce harm to migratory birds and avoid violating the act. “From a cost-benefit standpoint, it makes sense to invest in the development of technology that may reduce risk,” explained Duke Energy Renewable’s Tim Hayes.¹⁵

Oil pits. According to the American Petroleum Institute, more than 18 billion barrels of waste fluids are generated annually from oil and gas production. Oily wastewater and spills are sequestered in storage ponds called oil pits, which broadly refer to production skim ponds, reserve pits, flare pits, and uncovered tanks or containers. Many animals, including birds, bats, small mammals, big game, and even livestock, can mistake them for wetlands or other water bodies and quickly become entrapped. Raptors can be attracted by trapped and struggling prey in pits. Even birds that escape pits often die later from the toxic effects of the oil. Conservative estimates suggest that mortality of birds at U.S. oil pits ranges from one-half to one million individuals per year of >172 species¹⁶. When initial attempts to deter birds and other species using scare devices failed, the act provided strong leverage to prod the oil industry to cover pits with nets or employ alternative approaches, such as closed containment systems.

In addition to establishing natural incentives for risk reduction, the act has been adapted over the years to ensure that its enforcement justly balances social, economic, and environmental outcomes. For example, the Obama administration extended the duration of take permits to allow incidental take of eagles for 30 years to accommodate wind development activities. The discussion draft of the Migratory Bird Protection Act also provides opportunity for industries and other entities to secure permits for incidental take.

Key point: The Migratory Bird Treaty Act has proven to be an effective incentive for industry and landowners to take proactive and positive steps to reduce impacts to birds, in addition to being a deterrent for harmful actions.

¹³ U.S. Fish and Wildlife Service Land-based Wind Energy Guidelines OMT 108-0148S;
https://www.fws.gov/ecological-services/es-library/pdfs/WEG_final.pdf

¹⁴ <https://www.fws.gov/ecological-services/energy-development/wind-training-materials.html>

¹⁵ American Wind and Wildlife Institute; <https://awwi.org/news-events/success-stories/success-story-technology/>

¹⁶ Trail, P.W. 2006. Environmental Management 38:532-544.

4. When we protect birds and their habitats, we derive many co-benefits that support human health and wellbeing, the economy, and healthy environments. What is good for birds is usually good for people, too.

While birds themselves have intrinsic value for hundreds of millions of nature enthusiasts and birdwatchers, birds also have instrumental value and provide numerous ecosystem services that support human health and well-being, the economy, and productive environments. Birds are the proverbial canaries in the coalmine. If we ensure that the environment is healthy for birds, then we have a healthy environment for us, too.

We also benefit directly from the roles that birds play in the environment¹⁷. Insect-eating birds, of which approximately three-quarters of species are at least some of the time¹⁸, consume pests that damage crops, kill large numbers of trees, and bite us. Several studies have documented the ability of insectivorous birds to help control outbreaks of spruce budworms, cicadas, and Mormon crickets in our forests¹⁹. Likewise, predation of pest eggs increased by 30% when farms provided habitat that supported healthy populations of grassland birds²⁰. In some cases, the economic value of pest control services may exceed hundreds or thousands of dollars per acre²¹. Birds also help disperse seeds and, in that way, support recruitment and regeneration of plants, some of which we use for food, medicine, or other purposes. White-bark Pines, for instance, depend entirely upon Clark's Nutcrackers to disperse their seeds. Birds also can be valuable scavengers that remove waste and support nutrient cycling; vultures, corvids, and seabirds, in particular, frequently play these roles.

Hunting and recreation represent additional avenues through which birds have important economic value. Consider that in 2016, more than 103 million people participated in wildlife-related recreation and spent \$156.9 billion on those activities, with the majority (>72%) focused on birds²². In the Prairie Pothole region alone, waterfowl populations help to generate \$430

¹⁷ Wenny et al. 2011. The need to quantify ecosystem services provided by birds. *Auk* 128:1-14.

¹⁸ Sekercioglu 2006. Increasing awareness of avian ecological function. *Trends in Ecology & Evolution* 21:464-471

¹⁹ Whelan et al. 2008. Ecosystem services provided by birds. *Annals of the New York Academy of Sciences* 1134:25-60.

²⁰ Werling et al. 2014. Perennial grasslands enhance biodiversity and multiple ecosystem services in bioenergy landscapes. *Proceedings of the National Academy of Science* 111:1652-1657.

²¹ Whelan et al. 2008. *Annals of the New York Academy of Sciences* 1134:25-60.

²² U.S. Department of the Interior, U.S. Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau, 2016, National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. https://wsfrprograms.fws.gov/Subpages/NationalSurvey/nat_survey2016.pdf

million annually²³. Locales known as good birdwatching areas also can generate tens of millions of dollars of revenue each year²⁴.

Paradoxically, co-benefits can sometimes flow from penalties or mitigation fees. In certain cases, the fines collected from violators of the Migratory Bird Treaty Act have been leveraged into millions of dollars of benefits for local communities and Americans, as a whole²⁵. Because the Deepwater Horizon oil spill caused one million bird deaths, BP paid \$100 million in fines for violating the Migratory Bird Treaty Act. These funds, along with other criminal penalties, are being used to restore wetlands and natural areas along the damaged coastline, such as by rebuilding barrier islands. Those restored habitats protect coastal communities from storms and flooding; they protect water quality and serve as nurseries for healthy fisheries; they provide habitat to wildlife and plants and stimulate the economy by attracting tourists. The BP settlement also funded the addition of more than 100,000 acres of land to the National Wildlife Refuge System in North Dakota to support breeding populations of migratory birds, including waterfowl. Likewise, fines paid by Exxon-Mobil in 2009 for incidental takes of migratory birds at natural gas well reserve pits and waste water storage facilities provided more than a half million dollars to the North American Wetlands Conservation Fund and local communities. Mitigation fees collected as part of the proposed permitting process also can be deployed in ways that return broad social and environmental benefits to Americans.

Key point: Because many of the same measures that protect birds also support human health and well-being, the Migratory Bird Treaty Act results in meaningful co-benefits for the environment, the U.S. economy, and Americans writ large.

²³ Gascoigne et al. 2013. Dynamics of land-use change and conservation in the Prairie Pothole Region of the United States—Environmental and economic implications with linkages to rural community well-being: U.S. Geological Survey Professional Paper 1800, 65 p., <http://pubs.usgs.gov/pp/1800/>

²⁴ Şekercioğlu, C. (2002). Impacts of birdwatching on human and avian communities. *Environmental Conservation*, 29, 282–289.

²⁵ Brief of *Amici Curiae* former Interior Department officials in support of plaintiffs' opposition to defendants' motion to dismiss. U.S. District Court, Southern District of New York. Document 44-1. Filed 01/17/19. Case No: 1:18-cv-4596(VEC).

Concluding remarks

The U.S. has long been a global leader in conservation, showing by example how healthy environments, economies, human communities, and wildlife populations are mutually reinforcing. Yet in striking contrast to our strong conservation tradition, the reinterpretation of the Migratory Bird Treaty Act fundamentally weakens protections granted to birds and undermines the act's broader environmental and economic benefits to American society and our international treaty partners. Specifically, the exclusion of incidental take renders the act impotent on most sources of mortality for migratory birds and eliminates a powerful incentive for industry, commercial enterprises, and landowners to proactively reduce or mitigate impacts to birds. We can and should do better to protect birds and the healthy and clean environments upon which birds and people, alike, depend. Thank you for the opportunity to share comments on this important conservation issue.