

Response to Environmental Impact Statement Draft

Introduction

The Government of Canada appreciates the opportunity to comment on the Draft Environmental Impact Statement (EIS) on the Regulations Governing Take of Migratory Birds. The Draft EIS identified and analyzed three options concerning the proposed regulatory change to the Migratory Bird Treaty Act (MBTA) that would lift the prohibitions on the incidental take of migratory birds:

- 1) Under the No Action option, the Service would continue to implement the MBTA as recommended by the M-Opinion 37050, excluding incidental take.
- 2) Under Option A, the United States Fish and Wildlife Service (USFWS) would modify the MBTA to specifically include only actions directed at migratory birds (exclude incidental take through regulatory changes). This is the USFWS's preferred option.
- 3) The third option, Option B, would withdraw M-Opinion 37050 and promulgate regulations to include incidental take.

In the text that follows, the Government of Canada provides scientific references and further suggestions for incorporations into the EIS.

In regards to the options put forward in the Draft EIS, the Government of Canada believes the preferred option of the USFWS (Option A) is inconsistent with previous understandings between the Canada and the United States (U.S.), and is inconsistent with the long-standing protections that have been afforded to non-targeted birds under the *Convention for the Protection of Migratory Birds in the United States and Canada* (the "Treaty" or the "Convention") as agreed upon by Canada and the U.S. through Article I. The removal of such protections will result in further unmitigated risks to vulnerable bird populations protected under the *Convention*.

Over a century ago, our two nations recognized the overwhelming need for collaboration to protect migratory bird species, and signed the *Convention*. Under the *Convention*, Canada and the United States have worked together to create conservation success stories for our shared migratory bird populations. Therefore, these comments were developed in an effort to maintain healthy and resilient bird populations for the citizens of our two countries. The Government of Canada looks forward to an opportunity to continue working with the U.S. through the tradition of constructive cooperation we have always shared.

General Comments

Canada's position on Incidental take

The *Migratory Birds Convention* was signed by the United Kingdom, on behalf of Canada, and the U.S. in 1916. The *Convention* is implemented in the U.S. by the *Migratory Bird Treaty Act* and in Canada by the *Migratory Birds Convention Act, 1994* (MBCA), its regulations, and

policies. In 1995, Canada and the U.S. amended the *Convention* to improve the conservation of migratory birds and to ensure conformity with the aboriginal and treaty rights of the Aboriginal peoples of Canada. This amendment is referred to in Canada as the Parksville Protocol. In the preamble of the Parksville Protocol, the Parties expressed their commitment to the:

long-term conservation of shared species of migratory birds for their nutritional, social, cultural, spiritual, ecological, economic, and aesthetic values through a more comprehensive international framework that involves working together to cooperatively manage their populations, regulate their take, protect the lands and waters on which they depend, and share research and survey information.

The Government of Canada looked into developing a regulatory approach to incidental take in 2002. As part of this effort, Canada and the U.S., through an exchange of Diplomatic Notes, reviewed the issue of incidental take of migratory birds, nests or eggs, agreeing that incidental take had increasingly become a concern for the long-term conservation of migratory bird populations. Ultimately the Government of Canada did not proceed with developing an authorization approach but instead worked with stakeholders on the development of beneficial management practices (BMPs) that provide tangible support to compliance with the existing prohibitions. However, the Government of Canada's interpretation of the *Migratory Birds Convention* has not changed.

Content of the Draft Environmental Impact Statement

The Government of Canada has several concerns with the preferred option outlined in the Draft EIS, particularly that removing the prohibition on and any management of incidental take would cause significant ecological harm to migratory bird species. The Government of Canada is also concerned by the lack of evidence-based conservation information that would inform the biological impact of the proposed rule change.

Although it is acknowledged that the U.S. is now focused on directed or intentional take, the vast majority of birds protected by the *Convention*, as listed under Article I and agreed by Canada and the U.S for protection, include species that have never faced substantial hunting pressure. For example, hummingbirds, songbirds, and shearwaters are all protected by the *Convention*, despite not being targeted by hunting, garment makers, or other commercial take activities before or since the *Convention* was signed.

Canada and the U.S., as part of the 1995 amendment to the *Convention* (the Parksville Protocol), included updates to the species protected under Article I. In addition to enhancing conservation efforts and recognizing traditional Aboriginal harvesting rights, the Parksville Protocol led to the protection of additional species. Although the amendment did not explicitly address incidental take, it did indeed broaden the scope to include additional species for protection, despite no commercial harvest or take of such species.

Hunting is well-regulated in both Canada and the U.S., with various conservation programs at the federal and state levels leading to rebounding populations. However, recent publications have

reported important declines in non-game bird populations since 1970. *The State of the Birds 2019: America's Birds in Crisis* details steep declines in non-target species such as forest birds (22% lost since 1970), shorebirds (37% lost) and grassland birds (53% lost). Overall, an estimated 2.9 billion birds have been lost since the 1970s (Rosenberg *et al.*, 2019). The State of Canada's Birds 2019 also documents rapid declines in populations of shorebirds (40% loss), grassland birds (57% loss), and aerial insectivores (59% loss); species groups that migrate to or through the U.S. Furthermore, 95% of seabirds found in Canada nest and feed outside of Canadian borders, including the U.S. continental waters, and are of conservation concern. Excluding management measures for incidental take will likely exacerbate the ongoing population declines of all of those species. Given the protections afforded these non-game birds under the *Convention*, the Government of Canada is concerned that there are few details on the USFWS's approach to mitigate and offset impacts to prevent further declines in these species.

The Government of Canada believes that maintaining healthy migratory bird populations in North America hinges on the development of a coherent co-management strategy between our two countries. Such a management strategy involves population monitoring, protecting habitat throughout the full life cycle of the species, and mitigating mortality due to incidental take. In light of recent work indicating drastic declines of migratory bird populations (Rosenberg *et al.* 2019), the Government of Canada believes that a coordinated effort to identify the drivers of population changes in migratory birds to stem the population declines should be undertaken.

Response to options and alternatives put forward by the U.S. Fish and Wildlife Service in the Environmental Impact Statement

1. The creation of a regulatory regime removing incidental take from MBTA enforcement, effectively implementing M-Opinion 37050 (Option A)

The EIS acknowledges that “under Alternative A...it is likely that fewer entities will implement best practices aimed at reducing incidental take” and “the level of bird mortality reported in Section 3.7 would likely be higher, particularly for those industries previously subject to enforcement actions under the MBTA”. The original goal of the *Convention* was to “sav[e] from indiscriminate slaughter and...insur[e] the preservation of such migratory birds as are either useful to man or are harmless”. Unmitigated activities that will substantially increase migratory bird mortality and threaten populations is, from a Canadian perspective, in contravention of the *Convention*.

2. The transboundary impacts of implementing M-Opinion 37050 (Option A)

The transboundary impacts of implementing Option A were considered only briefly in the Draft EIS. Additional information is required in Section 4.3's analysis of impacts including scientific or technical references to how the proposed regulations will affect migratory birds in Canada. As the life cycle of most migratory birds involves crossing international borders, the effects of the incidental take of migratory birds and their nests and eggs will be felt

outside of the U.S. Of the 460 species of bird regularly found in Canada, only 46 do not migrate, and 386 species are specifically covered by the *MBCA*. Since most of these migratory birds spend at least a portion of their annual lifecycle in the U.S., the Government of Canada anticipates negative impacts on most of those bird species as they migrate through the U.S. should Option A be chosen. As such, it can be inferred that Canada's bird species, and the ecological and socio-economic benefits associated with them, will be negatively impacted under this option. For example, if prohibitions on incidental take are removed from the MBTA, mitigation measures for wind turbines and communication towers may be abandoned, which would lead to an increase in collisions during migration. This could particularly affect Canadian breeding populations of species groups such as aerial insectivores, a guild that has declined by 32% (or 160 million birds) on both sides of the border. This is but one potential outcome that demonstrates that transboundary considerations should be prioritized, as was recognized by the *Convention*.

3. Evidence-based decision making

The Draft EIS acknowledges that two of the three options, including both the No Action option and the preferred option (Option A), will have negative impacts on migratory birds, other biological and cultural resources, and ecosystem services, but the scope of these impacts under the proposed options are not quantified to date.

In both the U.S. and Canada, studies have attempted to quantify the sources and scale of human-induced incidental mortality of migratory birds with varying degrees of success (e.g., Calvert et al. 2013, Loss et al. 2013). These efforts have been hampered by the lack of data and estimates of national incidental take are typically extrapolated from a small number of local studies (Loss et al. 2012). In large part this lack of data is due to the fact that there are no reporting requirements for incidental take.

Even the most conservative estimates indicate the large effect of some industrial sectors on migratory bird populations. Even excluding the three largest causes of incidental mortality (cat predation, window collisions, and vehicle collisions), USFWS's own analysis found that there are still over one hundred million individual migratory birds harmed by industrial activities annually (EIS Table 3.2). To put this number into context, approximately 26 million migratory birds are harvested each year by American hunters (USFWS 2019). Therefore, bird mortality associated with hunting, which is heavily regulated and monitored due to the potential risk associated with overharvesting, is small compared to incidental sources of mortalities presented in this document. Thus, the current level of incidental take has the potential to have a greater impact on bird population dynamics than intentional take (i.e., hunting). Given the high rate of mortalities, both countries need to work together to quantitatively assess the current levels of avian mortality due to incidental take, and other factors, to assess its role in migratory bird population dynamics.

The Draft EIS identified multiple bird guilds experiencing different population trends across their different habitat requirements. As such, negative impacts from Option A, as referenced,

will likely affect these guilds unequally. For example, grassland birds, such as the McCown's Longspur, are highly susceptible to incidental take due to chemical poisoning and agricultural nest destruction (Mineau and Whiteside 2013). Grassland birds have declined 57% since 1970 (NABCI 2019), and agricultural pesticide use has been linked to population declines in the U.S. (Mineau and Whiteside 2013). Seabirds, on the other hand, are highly susceptible to fisheries bycatch, oil spills, and oil extraction (Dias et al. 2019). More than 95% of seabird species in Canada are of conservation concern, so any increase in incidental take mortalities will likely cause even further population-level declines in these species (NABCI 2019). The Draft EIS does not indicate if, or how, the impacts of incidental take will be mitigated for these species groups.

Although absent from the Draft EIS, there is information on species-specific impacts for some sources of incidental take. For example, communications towers are estimated to kill 6.8 million birds annually (Longcore et al. 2012). The likelihood of collision differs widely between species but, in North America, warblers make up 58.4% of all mortalities from colliding with towers (Longcore et al. 2013). Looking at population level impacts, there are ten species for which communications towers kill more than 2% of the population annually, and seven of these species are Species at Risk or Birds of Conservation Concern (Longcore et al. 2013).

Without clearly quantifying the scale and source of incidental take, and its impact on migratory bird population trajectories, it is impossible to make evidence-based decisions on the merits of de-regulating incidental take.

4. Use of voluntary mitigation measures and best practice guidelines

The Draft EIS states that under the preferred option, Option A, use of best management practices would likely decline, except in cases where these practices are required by other regulations or public concern. There are already best practice guidelines to avoid, minimize, and mitigate incidental take of migratory birds published in the U.S, many of which are accessible via the USFWS's website for review and consideration (<https://www.fws.gov/birds/management/project-assessment-tools-and-guidance/guidance-documents.php>). Further review of the scientific literature yields additional guidelines and insight to address incidental take. These BMPs have had dramatic positive impacts for migratory bird conservation. For example, implementing best practices in Alaskan fisheries has reduced seabird bycatch rates by 77-90% between 1995 and 2005 (Melvin et al. 2019). Without the prohibition against incidental take in the MBTA, and the incentive for entities to further develop and implement best practices to mitigate mortalities, bird mortality rates will significantly increase.

Moreover, under the preferred option (Option A) in the Draft EIS, individual states may choose to develop their own requirements for addressing the incidental take of migratory birds, either through legislation or through the development of best management practices. A patchwork of uneven legislation and differing best practices is clearly an undesirable scenario

that will render future assessments of the magnitude of incidental take and best practices to mitigate mortality extremely complicated.

5. *The cost-benefit analysis as applied to each of the options and alternatives*

The Draft EIS includes a cost-benefit analysis of each option. To properly assess the economic impacts of the proposed options, the costs of BMP implementation, along with the benefits to natural resources and the industry, must be considered. The costs associated with implementation of BMPs appear to have been overstated, while the benefits disregarded, in the Draft EIS's cost-benefit analysis.

Hunting and bird watching provide massive economic benefits for the U.S. (\$2.3 billion from hunting and \$4 billion for birdwatchers' birdseed alone in 2016; U.S. Department of the Interior et al., 2016). The Draft EIS describes the importance of migratory birds to indigenous culture and as a source of food, particularly for indigenous and U.S. northern communities, but does not quantify the costs associated with those activities. Likewise, the Draft EIS also describes many of the ecological services provided by birds including pest control, seed distribution, pollination, scavenging and disease control, and nutrient cycling but does give any estimate related to those societal benefits.

The more intangible benefits of migratory birds have also been overlooked. Nature, even in an urban environment, increase our sense of well being and ability to recharge our minds and reflect on our experiences (Fuller et al. 2007). Particularly in cities with limited natural habitat, birds may provide the bulk of our exposure to wildlife, making them of particular importance. Even a small amount of time listening to birds sing can boost mental health and reduce stress (Rattcliffe et al. 2013). More diverse bird communities have also been linked to greater enjoyment of the space. For example, people who maintain bird feeders report greater enjoyment from more diverse and more abundant bird communities (Cox and Gaston 2015) and people listening to bird song report great enjoyment (Hedblom et al. 2014). Given that the degree to which each migratory bird species will be affected by the implementation of Option A is unknown without additional data, it is very difficult to properly estimate the societal and economic value of birds that will be lost. Nevertheless, the Draft EIS, in its current form, underestimates the costs associated with Option A, by assigning no value.

As noted in various studies, mitigation measures may reduce operational costs and financially benefit industries. For example, switching to alternative lighting structures on communication towers can lower maintenance and energy costs, while decreasing bird collisions by 50-70% (Gehring et al., 2009). Mitigating measures to prevent power line collisions minimize damage to the grid infrastructure, which lowers costs to the industry and its customers (Stantec Consulting Ltd, 2018). For industry, another potential economic benefit of implementing BMPs is the opportunity to obtain environmental certification. Certification allows producers to increase their market share, achieve premium price and enhance their reputation.

The Government of Canada believes that the societal costs of not protecting migratory birds are greater than the costs of implementing BMPs to mitigate incidental take. Therefore, it is paramount to understand the net cost or benefit of implementing BMPs in the context of societal and economical costs and benefits. More importantly, the degree to which BMPs will be abandoned if the proposed rule is finalized, and the resulting impacts on migratory birds, needs to be assessed (either qualitatively or quantitatively).

6. *The sources and scale of incidental bird mortality*

In both the U.S. and Canada, studies have quantified the sources and scale of human-induced incidental mortality of migratory birds. For some sectors, lack of data results in large variance in the estimates of the number of birds or nests affected by human activities. However, even the most conservative estimates indicate the large effect of some industrial sectors on migratory bird populations. Even excluding the two largest sources of incidental mortality (cat predation and window collisions), USFWS's own analysis found that there are still hundreds of millions of individual migratory birds harmed by industrial activities. As the life cycle of most migratory birds in Canada involves crossing international borders, Canadian bird populations will be affected by increased incidental take of migratory birds, their nests, and eggs in the U.S.

It is also important to note that the list of incidental mortality sources included in the consultation document, particularly EIS Table 3.2 is incomplete. Neither incidental take caused by fisheries bycatch nor nest destruction from forestry or agriculture has been included in this list (EIS Table 3.2). Species such as seabirds that are long-lived, with delayed recruitment and slow population growth, are particularly sensitive to adult mortality events. As noted, an estimated 95% of seabirds species found in Canada are of conservation concern, and seabirds in general have become threatened at a faster rate globally than other groups of birds (NABCI 2019). Globally, at least 720,000 seabirds are taken annually as bycatch by long lining and gillnet fisheries (Anderson et al. 2011; Żydelis et al. 2013). In the U.S., long-line fisheries kill at least 10,000 seabirds annually (Anderson et al. 2011), but there are no national estimates of gillnet bycatch. Estimates of fisheries bycatch are conservative because there is no mandatory reporting, which has also hindered the development of best management practices to reduce seabird bycatch (Christensen-Dalsgaard et al. 2019). However, reducing the leader length in pelagic longline branch lines (Jiménez et al. 2019) and modifying fishing gear to reduce wastewater release during fishing operations (Bull et al. 2007) both effectively reduce incidental take of seabirds caused by fishing operations. Although the National Oceanographic and Atmospheric Administration (NOAA) leads on seabird conservation, the USFWS has primary responsibility for migratory birds in the U.S., as understood in the 2012 Memorandum of Understanding between NOAA and the USFWS. Given that seabirds' life cycle traits make them particularly sensitive to adult mortality, implementing mitigation measures to decrease incidental take, including seabird bycatch, is crucial to conserving healthy seabird populations.

As in the case of fisheries bycatch, there is very limited information available about the degree of nest destruction caused by forestry and agricultural practices in the U.S. Harvesting trees where forest birds have nested will both destroy the nest and kill any nestling or incubating birds in the nest. Likewise, agricultural activities, like mowing, tilling, and harvesting, destroy grassland birds' nests. Though there is no information about the levels of industrial nest destruction in the U.S., it is likely to be substantial, given Canadian domestic estimates. In Canada, forestry is estimated to destroy between 616 thousand to 2.09 million nests annually (Hobson et al. 2013) and mechanized agricultural practices kill approximately 2 million nestlings from 5 species of grassland bird alone (Tews et al. 2013), even under existing regulations prohibiting incidental take. Other industries that manage or cut vegetation during the breeding season are likely also responsible for some level of incidental take, although their impacts are largely unquantified. Examples of such industries include construction, oil and gas exploration (but see Van Wigenburg et al. 2013), water-level management, and transportation. Given the scale of the issue in Canada, nest destruction by these industries is likely substantial in the U.S. and so should be considered in the Draft EIS. By curtailing these activities during the breeding season, the risk of incidental take may be effectively eliminated (USFWS Nationwide Standard Conservation Measures; <https://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures/nationwide-standard-conservation-measures.php>). However, the preferred Option A would allow these industries to conduct their operations year-round, which will exacerbate the negative impacts on migratory bird populations.

7. *Quantitative ecosystem services provided by migratory birds.*

The costs of the preferred option, Option A, in terms of loss of ecosystem services are not quantified in the Draft EIS. Multiple studies have established that birds provide ecological services such as pollination, carcass and waste disposal, and seed dispersal (Sekercioglu, 2006, Whelan et al., 2015, Wenny et al., 2011). Many migratory birds eat insects and some eat small mammals, which provides an effective pest control for forestry and agriculture. For example, birds consume 19-35% of Spruce Budworm, a major source of economic damage for the forestry industry, and as such likely reduce the severity of outbreaks (Venier and Holmes, 2010). Birds' flight allows them to respond quickly to pest outbreaks by flocking to areas to eat this ready food source, ultimately lessening the economic and ecological damage caused by pest outbreaks (Venier and Holmes, 2010). Individual birds could be worth \$2-7 USD/year due to reduced insecticide expenses in tree plantations (Takekawa and Garton 1984). In Jamaica, birds reduce infestation of fruits by up to 14%, increasing production value by \$44 to \$105 USD/ha (Kellermann et al., 2008). Just as some birds provide pest control, birds that forage on seeds or vegetation assist in controlling weeds. In an agricultural landscape, seed-eating birds consume ~7% of seeds that would grow into weeds, and even more in areas with crops (Holmes and Froud-Williams, 2005).

Many plants rely on birds to disperse their seeds, including plants that humans use for lumber, medicine, and food. Approximately one third of all bird species disperse seeds (Whelan et al., 2015). For example, Clark's nutcracker provide seeds dispersal for

Whitebark Pine, an ecological service that would cost the U.S. Forest Service a minimum of \$2,190/ha to replace (Wenny et al., 2011). Birds such as hummingbirds also provide important pollination services for approximately 5% of all cultivated plant species (Wenny et al., 2011). Many of these plants do not have alternative pollinators, so losing these bird pollinators could be devastating.

Though scavenging is often considered primarily the domain of insects and microbes, birds may scavenge up to 90% of dead carcasses in some ecosystems (DeVault et al., 2003). Scavenging birds include vultures and raptors, as well as birds specifically protected under the *Convention* such as seabirds, gulls, and passerines. By quickly scavenging carcasses, including roadkill, birds prevent the spread of diseases and return nutrients to the ecosystem (Wenny et al., 2011). In addition to scavengers cycling nutrients, other birds cycle nutrients. A classic example is when seabirds transport nutrients from the ocean to their colonies on land, ultimately creating impressive deposits of phosphate-rich guano that humans have historically used as fertilizer (Wenny et al., 2011). Other birds also move nutrients across the landscape on a less dramatic scale.

Conclusions and Recommended Actions

Given that the impact of the proposed regulation is not sufficiently quantified and, moreover, that the impacts on our shared migratory species will likely be significant, the Government of Canada favours Option B to maintain protections for migratory birds. Of the three options carried forward, Option B is the only option that has positive impacts for migratory birds, and as such, is the only option that is consistent with the objectives of the *Convention*. This option also avoids the inevitable creation of a patchwork of legislation that will be created at the state level to protect migratory birds, which would greatly complicate the management and conservation of migratory bird populations. Promulgating federal regulations to codify the management of incidental take would be easier to implement, monitor and improve, while providing the greater legal certainty that entities and stakeholders are seeking. It could also help many industries define the national and international certification goals that they strive to achieve.

With anticipated negative impacts of Option A on migratory bird populations, continued population declines of both rare and common birds are expected, as well as associated decreases in the economic benefits and ecosystem services provided by migratory birds (pollination, pest control in agriculture and forestry, etc.). Healthy and functioning ecosystems also extend benefits to other wildlife species and provide human benefits. The protection of migratory bird species will be particularly important in light of the predicted effects of climate changes. A recent report published by the Audubon Society predicted that two-thirds of bird species in North America are at risk of extinction if global temperatures continue to rise (<https://www.audubon.org/climate/survivalbydegrees>).

The Government of Canada requests that the U.S. demonstrate clearly the impacts of moving forward with the proposed changes on the populations of migratory bird species listed under

Article I and how the USFWS and the Department of the Interior plan to mitigate or offset those impacts.

As always, the Government of Canada considers the U.S. a partner in the conservation of migratory birds and hopes to continue our long history of cooperation, building on this partnership to develop monitoring programs to quantitatively assess the current levels of avian mortality due to incidental take. Improving our knowledge of incidental take mortalities on migratory bird population dynamics will help both countries strengthen their management strategies. Combined with strong monitoring programs, and effective conservation actions and habitat protection measures on the breeding and wintering grounds as well as on the migratory stopovers, the mitigation of incidental take mortality should help both countries achieve the conservation of the migratory bird populations that is at the core of the *Convention*.

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