3 December 2015

Cora Sheppard, Program Support Coordinator
Ministry of the Environment and Climate Change
Operations Division
Environmental Approvals Access and Service Integration Branch
135 St. Clair Avenue West, Floor 1
Toronto, ON
M4V1P5

RE: Exemption from EPA Requirements for Reflected Light that Kills or Injures Birds - EBR 012-3605

Dear Ms. Sheppard,

We are grateful for the opportunity to comment on Ontario's Ministry of the Environment and Climate Change (MOECC) proposed draft regulatory amendment to exempt radiation (reflected light) emitted from commercial buildings from requiring an Environmental Compliance Approval. We are scientists with Wildlife Conservation Society (WCS) Canada specializing in fish and wildlife ecology in the boreal region of Ontario's Far North and the Yukon (Appendix 1). We conduct field and applied research on fish and wildlife, including boreal birds, to support decision-making that leads to positive conservation outcomes in the boreal region of Canada. We are writing to express our concern about the current proposal and we respectfully request MOECC to regulate reflected light as a contaminant given its impact on migratory birds traveling through our cities and urban spaces. We think this regulation could help reduce the number of dead and injured migratory birds moving between their wintering grounds and boreal regions in Canada.

Conserving migratory boreal birds in Canada's boreal region

Every year, an estimated one to three billion birds migrate and breed in Canada's boreal region, which stretches from Alaska to Newfoundland and Labrador. Every year, about 93% leave the boreal accompanied by an estimated 2 billion young birds to return to their southern wintering grounds. Canada's boreal holds in excess of 50% of the global population for 40 species of landbirds during the breeding season. Many of these species are in decline. For example, the Rusty Blackbird, a songbird that breeds exclusively in boreal wetlands, has undergone one of the steepest declines among North American songbirds, according to the Breeding Bird Survey. In addition to being important in their own right, birds play significant roles as pollinators, seed dispersers, predators, prey, and controllers of pests. They are also have high cultural, recreational and aesthetic values for people living in urban, rural, and wilderness settings.

Two areas of boreal significance where WCS Canada works to address conservation, including boreal birds, are Ontario's Far North and the Yukon. Ontario's Far North is a region of global importance for migratory birds. Ontario's Far North is the core of North America's boreal breeding nursery for numerous boreal passerine birds and Ontario holds global responsibility for a number of species including Nelson's sharp-tailed sparrow, Connecticut warbler and Smith's longspur. A number of species

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that breed in Ontario's Far North are also designated as species at risk in Ontario, including the Canada warbler.

Ontario's Far North is also significant for many migrating shorebirds and waterfowl who rely on the shores and associated mudflats of James Bay and Hudson Bay, which comprise the largest wetlands in North America. These wetlands provide the only tidal saltwater habitats between the Arctic to the north and the Gulf of St. Lawrence, Atlantic Ocean and Gulf of Mexico in the south. This migratory corridor is of global significance for waterfowl and shorebird breeding and migration.

Despite legislation for endangered species in Ontario, planning to conserve migratory birds through Ontario's regulatory and planning processes remains a challenge. In Ontario's Far North, land use planning and environmental assessment of new developments such as mining and infrastructure is currently proceeding in a piecemeal way. There is limited attention to regional scale issues such as migratory birds and the habitat they require. And it remains unclear how the value of migratory boreal birds and protection of their habitats is being addressed through community-based land use planning being led by Ontario's Ministry of Natural Resources and Forestry (MNRF) and interested First Nations under the *Far North Act, 2010*.

Making sure migratory boreal birds get to and from the boreal forest in the Far North

Despite the lack of protected area planning by Ontario to conserve habitat for migratory birds (including shorebirds and waterfowl) in Ontario's Far North, significant numbers of these birds don't make it to these habitats or they die during the return trip to their wintering grounds in the fall. Researchers have found various causes of mortality in migratory birds due to humans including predation by domestic cats, industrial activity, and collisions with buildings and other structures such as power transmission lines (Calvert et al. 2013). Bird deaths caused by strikes with buildings have been correlated with glass extent, reflectivity, and landscape features such as surrounding vegetation and bird feeders (Machtans et al. 2013). Research suggests that birds strike buildings in the daytime while attempting to reach habitat and/or sky reflected in the glass. At night, birds relying on the moon and stars for navigation may be attracted to, or confused by, lights emitted from buildings creating a "beacon effect". This is particularly problematic during migration when birds are active at night.

While the causes of bird mortality due to building strikes have received some attention, understanding how many birds die as a result remains poorly documented in Canada. Knowing these numbers is important because it provides a way to understand why declines, particularly of songbirds, are occurring and how to target conservation efforts more strategically. In 2013, it was estimated that 25 million birds are killed by colliding with windows in various structures in Canada annually (Machtans et al. 2013). Of these, 64,000 are collisions with tall buildings. In Ontario, data on bird deaths associated with tall buildings in Toronto have been collected by the Fatal Light Awareness Program (FLAP, www.flap.org) since 1993. While this program was not designed to collect data in a scientifically rigorous way (i.e., random sampling, buildings of all classes), they have documented that "significant numbers of migratory birds" were injured or killed by tall building collisions in Toronto, including at least 20 species that are considered endangered, threatened, and at-risk species by the Government of Ontario (ECO 2015: 61).

Mitigating bird strikes in cities and urban centres

Land use planning in the Far North to conserve boreal habitat may take decades before the value of boreal birds and protection of their habitats is realized. In addition, the City of Toronto and the emphasis on tall buildings may not be representative of other Canadian cities when it comes to determining what are the appropriate conservation actions for addressing migratory birds killed by

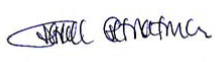
colliding with buildings. But there are mitigation measures and regulatory tools that can address the problem of reflected light on tall city buildings.

- Building owners and property managers can make their buildings safer for migratory birds by: turning off indoor lighting, particularly at night; shielding outdoor lighting; applying markers and decals to glass as well as using other structures such as awnings and curtains; avoiding highly reflective or transparent glass; and, reducing the amount of indoor greenery near windows or glass. A number of federal and municipal guidelines[1] and best practices offer development strategies for building and property owners to make new and existing buildings less dangerous to migratory birds.
- MOECC can regulate reflected light as a contaminant and require compliance by building owners under the *Environmental Protection Act* (EPA) to reduce the number of injured and dead birds. This is based on a 2013 Ontario Court ruling in *Podolsky v. Cadillac Fairview*, during which the court found that reflected light from building windows is a 'contaminant' under Ontario's EPA. This ruling also found that reflected light and bird strikes with buildings were a significant threat to conservation of migratory birds.

While we commend MOECC for expressing interest in developing guidance and best practises with stakeholders, this cannot address Ontario's responsibility for protecting migratory birds, including bird species at risk. Requiring compliance by building owners on mitigation measures remains one of the only ways in which Ontario could address conservation of boreal birds traveling through cities and urban centres, particularly during migration. A legal requirement would also increase the demand for bird-friendly window treatments and other proven mitigation measures as well as spur further innovation and falling prices.

In conclusion, every year Canada's boreal forests are transformed by migratory boreal birds and Ontario holds both provincial and global responsibility for many of them. WCS Canada is working to ensure boreal birds and their habitats are considered and valued in key areas of Canada's boreal, including Ontario's Far North, through research as well as through planning and policy processes. We expect MOECC to also do its part in ensuring boreal birds continue to make it safely through our cities during the day and night.

We look forward to your response. Please contact Cheryl Chetkiewicz (cchetkiewicz@wcs.org or 807-472-1440) if you require further clarification of our comments.



Cheryl Chetkiewicz, PhD

Hilary Cooke, PhD

[1]http://www1.toronto.ca/city_of_toronto/city_planning/zoning__environment/files/pdf/development_guidelines.pdf

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Appendix 1. Information about WCS Canada

WCS Canada (www.wcscanada.org) was established in May 2004 as a Canadian non-government organization with a mission to conserve wildlife and wildlands by improving our understanding of and seeking solutions to critical problems that threaten key species and large wild ecosystems throughout Canada. WCS Canada generates knowledge through research and tools for conservation of northern boreal fish and wildlife species and ecosystems and the services they support. WCS Canada provides this information to Government and First Nations decision-makers to create policies and governance systems that support conservation, sustainable use of biological resources, and best practices for industrial development.

Dr. Cheryl Chetkiewicz is an Associate Conservation Scientist hired to support broad scale and community based conservation planning in the Far North, specifically wildlife research and monitoring and developing cumulative effects landscape models for northern Ontario.

Dr. Hilary Cooke is an Associate Conservation Scientist working in Yukon's Boreal Mountains to identify priority areas for conservation and to fill information gaps for species and ecosystems of conservation concern, particularly migratory birds and valley-bottom habitats, with the goal of bringing science-based conservation solutions to resource management and land-use planning.