Wildlife Section
Public Input Coordinator
Ministry of Natural Resources and Forestry
Policy Division, Species Conservation Policy Branch

December 31, 2018

Re: ERO 013-4124: Proposal to establish a hunting season for Double-crested Cormorants in Ontario

The North Pigeon Lake Association (NPLA) represents members in the Municipality of Trent Lakes and the City of Kawartha Lakes. NPLA supports actions that preserve and promote the welfare of the shoreline and the waters of north Pigeon Lake, its catchment area, and more broadly across Ontario. We also promote good government, including sound environmental stewardship.

NPLA strongly opposes the proposal to establish a hunting season for Double-crested Cormorants in Ontario. NPLA is not opposed to hunting per se; however, we oppose this proposal as it stands because it lacks any supporting scientific evidence, lacks any clear objectives, poses a risk to co-nesting species, and potentially places water-based recreationalists at risk.

The following is a summary of why NPLA opposes this proposal:

1. Lack of science-based evidence

In 2013, after public consultation (EBR 011-7540), the then Ministry of Natural Resources (MNR) published the policy document: *Modernizing natural resource management: A policy framework for modernizing Ontario's approach to natural resource management.* That policy reaffirmed that:

> *"Evidence-based policy, informed by sound science and information, is a cornerstone of MNR's natural resource management philosophy. This standard will continue to be applied when managing over broader landscapes."* (OMNR 2013).

Among the many flaws in this proposal, the most obvious is a lack of any science-based evidence to support the policy. This is disappointing given the abundance of scientific literature available, much of it from MNRF scientists. Although by no means an exhaustive list, we reference some of the pertinent science below.

2. Double-crested Cormorant population status and trends

The proposal states: *"…numbers began to increase rapidly from the 1970s to the early 2000s, with the latest information indicating Great Lakes populations have since stabilized or declined slightly."*

While this statement is essentially accurate, no data on current population status or trends are presented to support the proposal. The statement ignores the fact that Double-crested Cormorants are

native to Ontario and that the low population levels of the 1970s were a result of environmental contaminants. The recovery of Double-crested Cormorant populations in Ontario has been hailed as an environmental success story (Wesloh and Collier 1995).

Populations that have "*stabilized or declined slightly"* would indicate that instituting a "*hunt*" as a "*population management tool*" is unnecessary. Neither a target population size objective is presented in the proposal, nor how the proposed open season (*March 15 to December 31*), nor how the daily bag limit (*50/day*) are intended to meet the (unstated) objective.

3. Impacts of Double-crested Cormorants on fish populations, island forest habitat, other species and aesthetics.

The proposal states: *"There continues to be concerns expressed by some groups (commercial fishing industry, property owners) and individuals that cormorants have been detrimental to fish populations, island forest habitats, other species and aesthetics."*

No evidence is presented to support this statement.

3a. Impacts of Double-crested Cormorants on Fish Populations

Ontario's *Provincial Fish Strategy* (OMNRF 2015), presented the results of an environmental scan to understand the key trends and emerging issues affecting Ontario's fisheries resources. Double-crested Cormorants were not identified as a stressor to fish populations in that scan. If more recent information refutes that, the evidence should have been presented in the proposal.

Province-wide commercial fish harvest statistics indicate that, after declines in the late 1990s and early 2000s, landed weight has stabilized and landed value has increased to its highest level since 1994 (OCFA 2018). Most of the commercial fish harvest comes from the Great Lakes where Rainbow Smelt, Yellow Perch, Walleye, and Lake Whitefish make up approximately 80% of the harvest by weight (OMNRF 2015). Commercial harvest levels are influenced by many factors and the commercial fishing industry has expressed no concerns about (nor presents evidence for) cormorant impacts on fish populations (http://www.ocfa.ca/).

In the Great Lakes, a number of recent studies have shown that cormorants are feeding primarily on invasive species rather than the commercially important species listed above. A study comparing Lake Ontario (Hamilton Harbour) and Lake Erie cormorant diets estimated that Lake Ontario diets consisted almost entirely of Alewife (51–56%) and Round Goby (25–42%), while Lake Erie cormorant diets were dominated by Round Goby (70%) (King et al. 2017). Another study concluded that declines in cormorant density in Lake Huron (North Channel and Georgian Bay) was likely due to the loss of Alewife that preceded the drop in cormorant numbers by about a year (Ridgway 2010).

In southern Lake Michigan, Alewife, Round Goby, and White Perch, collectively contributed over 80% and 90% of the diet of cormorants by biomass and number, respectively (Madura and Jones 2016). In Saginaw Bay, Lake Michigan, the three most common prey species observed by number (%) and biomass (%) were Round Goby (56.6%, 42.1%), Emerald Shiner (25.2%, 12.5%), and Yellow Perch (8.0%, 14.1%) (DeBruyne et al. 2017). In the Niagara River, Round Goby can make up to 85% of the biomass in cormorant diets during the breeding season (Coleman et al. 2012).

The evidence about whether cormorant predation impacts sportfish populations is mixed. There is some evidence that cormorants can impact sportfish populations on a local level and will respond to local cormorant population management (Fielder 2008, Fielder 2010); however other studies, in the same area, imply little impact of cormorant predation (Diana et al. 2006).

There are few studies on cormorant predation on inland lakes in Ontario. One study examining the relative demand for fish production by Double-crested Cormorants and anglers from Manitoulin Island lakes, found that, on Lake Kagawong, the three most common prey species consumed by cormorants by number (%) and biomass (%) were Rock Bass (31.5%, 38.3%), Yellow Perch (25.0%, 30.3%), and Smallmouth Bass (7.4%, 8.4%). Yellow Perch and Smallmouth Bass were the only species harvested by anglers and there was little overlap in size with those consumed by cormorants. For all lakes in the study, anglers generally harvested a greater percentage of fish production in the large size segments they targeted than cormorants consumed in the medium size segments (Ridgway et al. 2012).

Fish community changes are a result of the interactions of many environmental, biotic, anthropogenic, and other factors operating at multiple geographic and time scales (Jackson et al. 2001, Strecker et al. 2011, Chu et al. 2016).

Establishing a province-wide "hunt" on Double-crested Cormorants in order to address (presumably local) "*detrimental effects*" on fish populations is unlikely to achieve whatever unstated objectives have been established.

3b. Impacts of Double-crested Cormorants on island forest habitats.

Because Double-crested Cormorants nest in large colonies, it is true that they can impact island forest habitats (Herbert et al. 2014). It is also true, however, that they occupy a very small percentage of island habitats (Wires and Cuthbert 2010). Damage to those habitats tends to be localized and should be addressed by local actions supported by good evidence (for example, the actions taken at Presqu'ile Provincial Park). In addition, non-lethal techniques have been effective in deterring tree-nesting by cormorants (McDonald et al. 2018) and should be considered where island forest habitats are impacted.

A province-wide "hunt" will not effectively address any local forest habitat objectives.

For private citizens who are concerned about damage to their trees or other property, Section 31 (1) of the Fish and Wildlife Conservation Act (Protection of Property), already gives property owners the legal right to harass, capture, or kill cormorants if they are causing property damage. There is, therefore, no need for this additional "management tool" to protect property.

4. Impacts of hunting during breeding season for cormorants and co-nesting species.

The proposal would: *"Create an open hunting season for double-crested cormorant from March 15 to December 31 each year across the province."*

The proposed open hunting season includes the breeding season for Double-crested Cormorants. Shooting cormorants on nesting colonies will cause mortality of nesting adults and nest abandonment resulting in starvation of chicks.

Shooting cormorants on nesting colonies could also cause disruption or mortality of protected co-nesting colonial water-bird species such as Great Egrets, Black-crowned Night Herons, and Great Blue Herons as well as terns and gulls.

5. Public safety and conflicts with other lake users.

The proposal would: *"Create an open hunting season for double-crested cormorant from March 15 to December 31 each year across the province"*; and *"Allow hunting from a stationary motorboat."*

A province-wide spring and summer waterfowl hunting season would be unprecedented in Ontario. Shooting cormorants will occur when recreational water use is at its peak. This poses a safety risk to cottagers, anglers, boaters, and others involved in outdoor recreation activities.

NPLA is especially concerned about this aspect of the proposal. Putting non-hunting outdoor recreationalists in conflict with hunters, and in potential danger, is unacceptable.

6. Regulatory Changes

The proposal states: *"Establish a bag limit of 50 cormorants/day"; "…amend the Fish and Wildlife Conservation Act to add provisions so hunters could allow cormorant to spoil"; "…would be subject to conditions that require the person to retrieve and dispose of the carcass."*

These changes describe a province-wide cull, not a hunt. NPLA believes the bag limit and retrieval provisions would likely be unenforceable.

7. Monitoring Program

The proposal states: *"To accompany the proposed hunting seasons, the Ministry will implement a cormorant monitoring program to assess population status and trends. Monitoring of cormorants will allow the Ministry to assess the impacts of the hunting season and to adjust cormorant hunting regulations if necessary to address any concerns about population sustainability."*

In order to determine if the hunt is impacting "*population sustainability*" a monitoring program needs to be in place prior to initiating the hunt in order to determine current population status. Benchmarks and indicators need to be established based on clear, measurable target population objectives. If the proposed "hunt" is intended to "improve" fish population status, then the same conditions apply to a fish community monitoring program. This proposal has no stated objectives for the hunt (neither for cormorant nor fish population targets), therefore it is unclear what will be measured.

NPLA urges the Ministry of Natural Resources and Forestry to withdraw this proposal. The proposed province-wide "hunt" ignores scientific evidence and represents poor resource management.

Yours,

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NPLA President
On behalf of the NPLA Board of Directors

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