

**Authority Meeting #3/18 was held at TRCA Head Office, on Friday, April 20, 2018. The Chair Maria Augimeri, called the meeting to order at 9:40 a.m.**

**PRESENT**

Maria Augimeri	Chair
Paul Ainslie	Member
Jack Ballinger	Member
Ronald Chopowick	Member
Vincent Crisanti	Member
Jennifer Drake	Member
Chris Fonseca	Member
Michael Ford	Member
Brenda Hogg	Member
Jennifer Innis	Member
Colleen Jordan	Member
Maria Kelleher	Member
Matt Mahoney	Member
Glenn Mason	Member
Mike Mattos	Member
Jennifer McKelvie	Member
Linda Pabst	Member
Michael Palleschi	Member
Anthony Perruzza	Member
Gino Rosati	Member
John Sprovieri	Member

**ABSENT**

Kevin Ashe	Member
David Barrow	Member
Glenn De Baeremaeker	Member
Paula Fletcher	Member
Jack Heath	Member
Jim Karygiannis	Member
Giorgio Mammoliti	Member

The Chair recited the Aboriginal Territorial Acknowledgement.

**RES.#A36/18 - MINUTES**

Moved by: Colleen Jordan  
Seconded by: Mike Mattos

**THAT the Minutes of Meeting #2/18, held on March 23, 2018, be approved.**

**CARRIED**

## **PRESENTATIONS**

- 5.1** A presentation by Karen McDonald, Manager, Restoration Projects, TRCA, in regard to item 7.1 - [Double-crested Cormorants](#).
- 5.2** A presentation by Mr. Steve Holysh, Senior Hydrogeologist/ORMGP Project Manager, in regard to item 8.1 - [Oak Ridges Moraine Groundwater Program](#).

### **RES.#A37/18 - PRESENTATIONS**

Moved by: John Sprovieri  
Seconded by: Ronald Chopowick

**THAT above-noted presentation 5.1 be received.**

**CARRIED**

### **RES.#A38/18 - PRESENTATIONS**

Moved by: Jack Ballinger  
Seconded by: Linda Pabst

**THAT above-noted presentation 5.2 be received.**

**CARRIED**

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## **CORRESPONDENCE**

- 6.1** A letter dated March 23, 2018 from Liz White, Animal Protection Party of Canada & Animal Alliance of Canada, Barry MacKay, Cdn. Representative, Born Free USA, & Ainslie Willock, Canadians for Snow Geese, in regard to item 7.1 - Double-crested Cormorants.

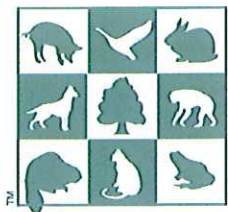
### **RES.#A39/18 - CORRESPONDENCE**

Moved by: Jack Ballinger  
Seconded by: John Sprovieri

**THAT above-noted correspondence 6.1 be received.**

**CARRIED**

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**ANIMAL  
ALLIANCE  
OF CANADA**



**Animal Protection  
Party of Canada**



**TO:** Chair and Members,  
Toronto and Region Conservation  
Authority

**FROM:** Liz White, Animal  
Animal Protection Party of Canada  
Animal Alliance of Canada

Barry MacKay, Canadian  
Representative, Born Free USA

Ainslie Willock, Representation  
Canadians for Snow Geese

**SUBJECT:** 7.6 DOUBLE-CRESTED CORMORANTS:  
2016 and 2017 Management Summary  
and 2018 and 2019 Management Strategy

**DATE:** March 23, 2018

Chairperson and Members of the Toronto and Region Conservation  
Authority,

Thank you for the opportunity to comment on the 2016/2017  
Management Summary and the 2018/2019 Management Summary  
for Double-crested Cormorants.

**Recommendation:**

We ask the Authority to adopt all five recommendations contained in  
Item AUTH7.6 which are listed as follows:

THAT Toronto and Region Conservation Authority (TRCA) staff be  
directed to continue to work with the Cormorant Advisory Group to  
assist TRCA in addressing management concerns regarding colonial  
waterbirds at Tommy Thompson Park (TTP);

THAT staff be directed to work with the Ontario Ministry of Natural  
Resources and Forestry, the Canadian Wildlife Service and any other  
required regulatory agency to seek approval for the 2018 and 2019  
management strategy for colonial waterbirds at TTP;

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THAT staff be directed to implement the proposed management strategy for 2018 and 2019 for colonial waterbirds at TTP;

THAT staff be directed to continue to actively participate in local, regional and binational committees/working groups addressing the management and protection of colonial waterbirds;

AND FURTHER THAT staff report back to the Authority bi-annually regarding the management of Double-crested Cormorants at Tommy Thompson Park or more frequently should the management strategy be significantly changed.

### **Background:**

#### **Cormorants – A Historical Perspective:**

According to an article published in The Waterbird Society publication, titled *Historic Populations of the Double-crested Cormorant (Phalacrocorax auritus): Implications for Conservation and Management in the 21st Century* authors Linda Wires and Francesca Cuthbert write, "Early records suggest Double-crested Cormorants were present in large numbers throughout much of their current range; colonies and flocks much larger than any known in the 1990s are well documented. However, numbers sharply declined through the late 1800s as cormorants were greatly reduced and/or extirpated in many areas. The population partially recovered through at least the mid-1900s, but experienced a second major decline during the 1950s-1970s...Comparison of historic and current records challenges the opinion that cormorants are currently overabundant, and suggests that perception of overabundance rests on socio-political rather than biological or ecological factors." (<http://www.bioone.org/doi/abs/10.1675/1524-4695%282006%2929%5B9%3AHPOTDC%5D2.0.CO%3B2>)

#### **Cormorants – Persecution:**

In her book, *The Double-Crested Cormorant, Plight of a Feathered Pariah*, author Linda Wires writes, "The double-crested cormorant, found only in North America, is an iridescent black waterbird superbly adapted to catch fish. It belongs to a family of birds vilified since biblical times and persecuted around the world...European settlers in North America quickly deemed the double-crested cormorant a competitor for fishing stock and undertook a relentless drive to destroy the birds. A late-twentieth-century initiative to recover population recovery, aided by protection policies and environment conservation, but also the subsequent U.S. federal policies under which hundreds of thousands of the birds have been killed." In her critique of the science, management, and ethics underlying the double-crested cormorant's treatment today, she showed that the term management is being used as a euphemism for persecution and shows that the current strategies of aggressive cormorant control are outdated and unsupported by science.



### **Lethal Management – Middle Island, Point Pelee National Park:**

The TRCA management programme stands in sharp contrast to other management approaches that resort to yearly culling as a way of attempting to get rid of or significantly reduce cormorant populations.

The cull on High Bluff Island in Lake Ontario which was conducted from 2004 to 2006 killed over 10,000 cormorants. The cull on Middle Island in Lake Erie which started in 2008 and has been conducted every year since, has resulted in over 20,000 being killed so far. Six percent of the bird shot were wounded and ultimately killed by the cull contractor. Some escaped wounded only to suffer extremely cruel death. This cormorant was found adjacent to Middle Island with shattered beak and jaw just after a cull day.



<https://www.animalalliance.ca/wp-content/uploads/2017/07/SHARKvideo2017.jp>

### **Progressive approach by the TRCA:**

The work done by TRCA staff regarding the protection and management of colonial waterbirds and specifically cormorants at Tommy Thompson Park is outstanding.

The transformation of a largely tree nesting colony to a majority of ground nesters speaks to a progressive management programme that attempts to maintain the colony while protecting parts of the tree canopy. In 2005, 15% of the cormorant colony nested on the ground. In 2017, the number increased to 60%.

The TRCA staff recognize that an incredible natural event is unfolding at TTP – a very large waterbird colony which includes the largest cormorant colony on the Great Lakes flourishing is downtown Toronto.

Instead of culling and using other invasive methods, staff have designed a progressive

management strategy which involves public education, cormorant conservation zones, an enhanced ground nesting strategy, monitoring and research and some pre-nesting and post-breeding deterrents.

To the staff and the Authority, thank you for your progressive and forward thinking approach to the cormorant colony at TTP.

Sincerely,



Liz White



Julie Woodyer



Barry MacKay



Ainslie Willock

## **Section I – Items for Authority Action**

### **RES.#A40/18 -**

### **DOUBLE-CRESTED CORMORANTS**

2016 and 2017 Management Summary and 2018 and 2019 Management Strategy. Review of management strategy results from 2016 and 2017, and review and approval of 2018 and 2019 management strategy for Double-crested Cormorants at Tommy Thompson Park.

Moved by: Colleen Jordan  
Seconded by: Brenda Hogg

**THAT staff report and present to the Authority on a biennial basis regarding the management of Double-crested Cormorants at Tommy Thompson Park or more frequently should the management strategy be significantly changed.**

**CARRIED**

### **BACKGROUND**

Tommy Thompson Park is an urban wilderness park located at the foot of Leslie Street in the City of Toronto. It supports the largest nesting colony of Double-crested Cormorants in the world on Peninsulas A, B and C, plus diverse communities of bird, fish, reptile, amphibian, mammal and vegetation species throughout the park. It has been formally designated as a globally significant Important Bird Area and an Environmentally Significant Area. The Tommy Thompson Park Master Plan includes the goal of conserving and managing the natural resources and environmentally significant areas of the park. While the cormorant colony adds to the diversity of the park and is environmentally significant, cormorants negatively affect tree health through their nesting behaviours and have destroyed approximately 25 per cent of the forest communities at TTP, thereby reducing forest habitat and impacting biodiversity at the park.

TRCA began a process in 2007 to ensure the TTP Master Plan goals and objectives were upheld and the concerns about cormorants addressed. TRCA initiated the involvement of stakeholders and the public to create a management strategy for cormorants at TTP. The process started in November 2007 with the establishment of the Cormorant Advisory Group, and led to the development of the 2008 Cormorant Management Strategy, which was approved by the Authority as per Resolution #A110/08. Until 2014, TRCA reported to the Authority annually on the management strategy:

- In 2009 as per Resolution #A22/09,
- In 2010 as per Resolution #A23/10,
- In 2011 as per Resolution #A49/11, and
- In 2012 as per Resolution #A19/12.

At Authority Meeting #11/13, held on January 31, 2014, Resolution #A226/13 was approved, in part, as follows:

*...THAT staff report back to the Authority bi-annually regarding the management of Double-crested Cormorants at Tommy Thompson Park or more frequently should the Strategic Approach be significantly changed;...*

And TRCA most recently reported to the Authority in 2016 as per Resolution #A15/16.

The overall goal of the Double-crested Cormorant Management Strategy, as established by the Cormorant Advisory Group in 2008, is to achieve a balance between the continued existence of a healthy, thriving cormorant colony and the other ecological, educational, scientific and recreational values of TTP. The objectives of the strategy are to increase public knowledge, awareness and appreciation of colonial waterbirds; deter cormorant expansion to Peninsula D; limit further loss of tree canopy on Peninsulas A, B and C; and continue research on colonial waterbirds in an urban wilderness context.

To achieve the goals and objectives of the Management Strategy, TRCA employs a suite of management techniques including inactive nest removals, pre-nesting deterrents, active nest removals and ground nest enhancements (Attachment 1 – Table 1). Cormorants are encouraged to nest in 'Cormorant Conservation Zones', identified by ground nesting or previously damaged/occupied trees, located primarily on Peninsulas A and B (Attachment 2 – Figure 1). Nesting is discouraged via deterrent activities in 'Cormorant Deterrent Areas', identified by healthy, previously un-occupied trees, located at the base of Peninsulas B and C, and the entirety of Peninsula D (Attachment 2 – Figure 1).

To encourage nesting in Cormorant Conservation Zones, specifically in the ground nesting colonies, human presence is prohibited during breeding season. Habitat enhancements, in the form of unbound straw bales are provided in early spring in the Conservation Zones. Ground nesting is a desirable behaviour since cormorants that nest on the ground have less impact on trees, and this is the primary method to achieve the goal of the continued existence of a healthy, thriving cormorant colony.

Targeted management is undertaken in the Cormorant Deterrent Areas to prevent cormorant expansion into previously unoccupied trees, limiting the loss of forest canopy. Management activities include:

- Inactive nest removal – tree nests are removed from Deterrent Areas before April;
- Pre-nesting deterrents – cormorants are discouraged from tree nesting in Deterrent Areas through an escalating scale of measures in April and May; and
- Active nest removal – newly placed nest material is removed from trees in Deterrent Areas in May and June. This conservative technique follows the protocol for estimating embryo development prepared by the Humane Society of the United States to ensure nests with developed embryos are not removed.

While post-breeding deterrents are identified as a management technique, it has not been undertaken as cormorants have not roosted in trees in the Deterrent Areas during the post-breeding period.

Increasing public knowledge, awareness and appreciation of colonial waterbirds continues to be an important objective of the Management Strategy. Highlights in 2016 and 2017 included a viewing blind on Peninsula C with excellent views of cormorants; staff interpretation of the colony at various public events, including colonial waterbird walks at the TTP Spring Bird Festival; presentations; and park tours.

The non-traditional management strategy, including the process to develop it as well as the suite of techniques employed has been recognized as ground-breaking among colonial waterbird researchers and managers. The strategy has also influenced the management of cormorants at other nesting colonies.



While the 2016 results were consistent with previous years, the high Lake Ontario water levels in 2017 caused significant flooding on Peninsulas B and C, affecting the success of the strategy. The results for both seasons are outlined below; detailed annual 'Management Summary Reports' describing management actions are available upon request.

### 2016 Management Results

The overall cormorant population increased by 11.5 per cent to 13,275 nests, with the growth exclusively supported by ground nesting which represented 70 per cent of the population. Tree nesting declined on Peninsulas B and C by a combined 15 per cent, and cormorants were effectively deterred from expanding their nesting range into the Deterrent Areas.

	# nests	% change from 2015
Ground nesting	10,080	24
Tree nesting	3,195	-15
<b>Total</b>	<b>13,275</b>	<b>11.5</b>

### 2017 Management Results

High Lake Ontario water levels flooded significant areas on Peninsulas B and C, reducing the area available for ground nesting in spring 2017 (Attachment 2 – Figure 2). Displaced cormorants persistently attempted to nest in the Deterrent Areas. Flooding complicated the execution of deterrence activities, as the water was approximately 3.5 feet deep in the Deterrent Areas, necessitating the use of chest waders and decreasing the ability of staff to move within the Deterrent Areas due to under water trip hazards. Staff undertook ongoing deterrence activities throughout the nest initiation period, which extended well into June, beyond the typical period seen in years with normal water levels.

Ultimately, the overall population declined by 3.8 per cent to 12,841 nests in 2017, with 60 per cent of the population nesting on the ground – the first decline in ground nest population since management was initiated. Tree nesting increased by 62 per cent from 2016 on Peninsulas B and C, with a significant expansion into Deterrent Areas, regardless of a record high number of nest removals as part of deterrent activities.

	# nests	% change from 2016
Ground nesting	7,657	-24
Tree nesting	5,184	62
<b>Total</b>	<b>12,841</b>	<b>-3.8</b>

Although 2017 presented challenges, implementation of the Cormorant Management Strategy has ultimately been successful and continues to achieve the goal of a balance between the continued existence of a healthy, thriving cormorant colony and the other ecological, educational, scientific and recreational values of TTP.

## **RATIONALE**

A high level of concern has been expressed regarding cormorant populations and their management. Concerns have been raised from both sides, on the one hand calling for management and the preservation of forest canopy, and on the other hand for protection of the birds and their nesting colonies. TRCA has an obligation to manage Tommy Thompson Park as directed by the Master Plan for Tommy Thompson Park as approved under the *Environmental Assessment Act*. To meet the intent of the Master Plan, staff believes that there is a strong rationale for undertaking the management of cormorants at Tommy Thompson Park.

Since November 2007, TRCA has involved stakeholders and the public in assessing the need for management and developing a strategy for cormorants at TTP. Generally, throughout the process there has been agreement that some form of management is appropriate, providing that the methods are humane to cormorants and do not affect other wildlife.

Assuming the 2017 flooding was an anomaly, the 2008-2016 population monitoring results show that undertaking management only to prevent nesting expansion into new areas of forest is sufficient to meet the goal and objectives of the Double-crested Cormorant Management Plan at Tommy Thompson Park. As such, TRCA will continue to implement the management strategy as in previous years (Attachment 1 – Table 2).

## **FINANCIAL DETAILS**

Funds are available in the Tommy Thompson Park Joint Management account 210-19 in the approved 2018 budget. These municipal funds are being leveraged to secure additional funding in 2018. The high Lake Ontario water levels and flooding in 2017 resulted in the need for additional resources to manage tree nesting attempts. Should high spring water levels become a continuing trend, extra funds may be required to continue preventing cormorant nest expansion into Deterrent Areas.

## **DETAILS OF WORK TO BE DONE**

A suite of techniques will be utilized in an integrated and adaptive approach to help achieve the original goal and objectives of the Double-crested Cormorant Management Strategy from 2008. Attachment 1 – Table 2 provides an overview of the strategy.

### **Increase Public Knowledge, Awareness and Appreciation**

- Maintain the TRCA cormorant webpage, including compelling images of cormorants;
- Conduct interpretive tours for school and interest groups, and at TTP special events;
- Maintain opportunities to view colonial waterbirds with viewing blinds and platforms;
- Present information at conferences and forums; and
- Participate in working groups on colonial waterbirds.

### **Inactive Nest Removal**

- Remove nests from target trees within Cormorant Deterrent Areas on Peninsulas B and C during the winter, prior to the breeding season.

### **Enhanced Ground Nesting**

- Avoid daytime disturbance to the ground nesting areas so that cormorants are not deterred from nesting on the ground; and
- Deploy straw bales to the ground nesting areas at the beginning of the nesting season to encourage nesting.

#### Pre-nesting Deterrents

- Utilize the suite of deterrence techniques previously identified on an increasing scale of activity to prevent expansion of tree nesting within the Deterrent Areas on Peninsulas B and C;
- Prevent cormorant nesting on Peninsula D via the operation of the TTP Bird Research Station and public access; and
- Monitor the effects of deterrent activities on the cormorants to ensure they are effective, and monitor the effects on non-target species to ensure they do not have an adverse impact.

#### Post-breeding Deterrents

- Utilize the suite of deterrence techniques previously identified on an increasing scale of activity to prevent cormorant tree roosting in the Deterrent Areas on Peninsulas B and C, as well as Peninsula D.

#### Monitoring, Research and Reporting

- Undertake annual nest census for colonial waterbirds;
- Conduct annual tree health surveys on Peninsulas C and D;
- Continue to collaborate with York University and other interested researchers on colonial waterbird research;
- Complete annual management summary reports; and
- Meet with Cormorant Advisory Group to review data and discuss whether changes are required.

**Report prepared by: Andrea Chreston, extension 5362**

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**Date: February 16, 2018**

**Attachments: 2**

## Attachment 1

**Table 1:** 2016-2017 Management Matrix

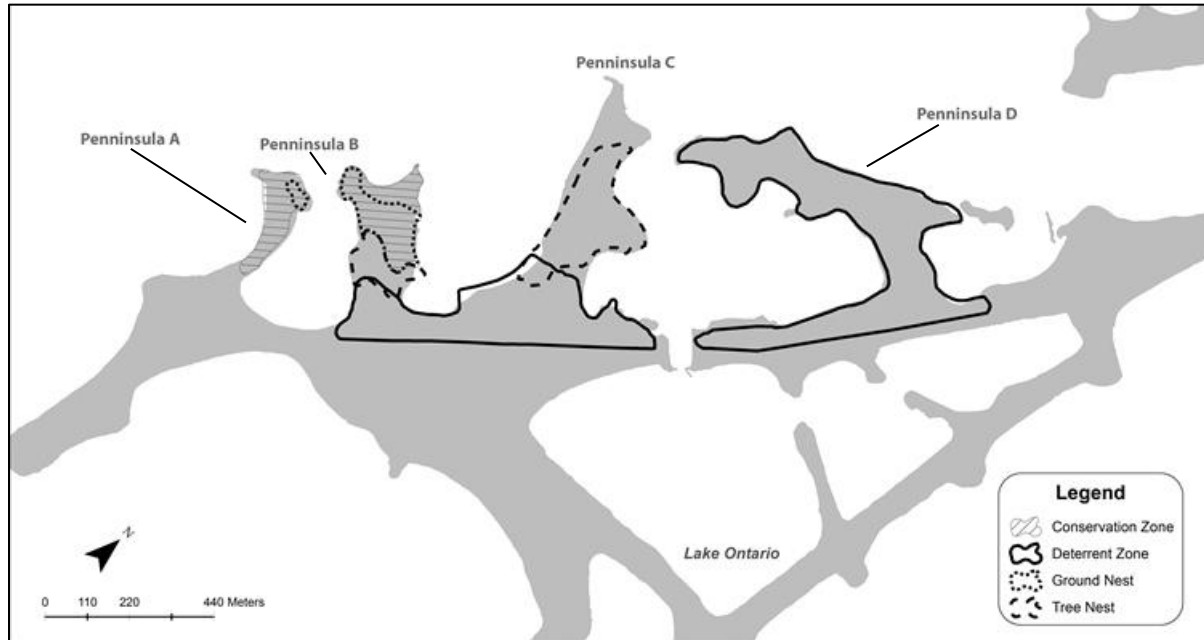
	Peninsula A	Peninsula B	Peninsula C	Peninsula D
Inactive Nest Removal (prior to the breeding season)		*	*	
Enhanced Ground Nesting	*	*		
Pre-nesting Deterrents		*	*	*
Post-breeding Deterrents (as required)			*	*

**Table 2:** 2018-2019 Proposed Management Matrix

	Peninsula A	Peninsula B	Peninsula C	Peninsula D
Inactive Nest Removal (prior to the breeding season)		*	*	
Enhanced Ground Nesting	*	*		
Pre-nesting Deterrents		*	*	*
Post-breeding Deterrents (as required)			*	*

## Attachment 2

**Figure 1:** Map illustrates the Cormorant Management Areas at Tommy Thompson Park as well as the tree- and ground-nest areas



**Figure 2:** June 2017 aerial photograph of Peninsula B shows flooding impacts to the ground nest colony

