

RES.#A15/16 -

DOUBLE-CRESTED CORMORANTS

2014 and 2015 Management Summary and 2016 and 2017 Management Strategy. Review of management strategy results from 2014 and 2015 and review and approval of 2016 and 2017 management strategy for double-crested cormorants at Tommy Thompson Park.

Moved by: Chris Fonseca
Seconded by: David Barrow

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 2016 and 2017 management strategy for colonial waterbirds at TTP;

THAT staff be directed to implement the proposed management strategy for 2016 and 2017 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.

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 colony of double-crested cormorants in the world, plus diverse communities of bird, fish, reptile, amphibian, mammal and vegetation species. It has been formally designated as a globally significant Important Bird Area (IBA) and an Environmentally Significant Area (ESA #120). The Master Plan that guides the development of TTP 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, there are concerns about the impacts of cormorants on tree health and biodiversity at TTP. Cormorants negatively affect tree health through their nesting behaviours and have impacted approximately 25 per cent of the forest communities at TTP.

In 2007 TRCA began a process 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 in 2008. 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;...

The overall goal of the Double-crested Cormorant Management Strategy, as established by the Cormorant Advisory Group in 2007, 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 employed a suite of management techniques in 2014 and 2015 that included inactive nest removals, pre-nesting deterrents, active nest removals and ground nest enhancements. Results from the annual population monitoring surveys show an increase in the ground nesting colony and a decrease in the tree nesting colonies. These data suggest that the management strategy has been successful in changing the nesting behaviour of cormorants. The “2014 Management Summary Report” and the “2015 Management Summary Report” provides details on management actions and is available upon request.

The 2014 and 2015 Management Strategy did not significantly change from previous years. The areas identified as “Cormorant Conservation Zones” on Peninsulas B and C received enhancements to improve the area for ground-nesting cormorants. Ground nesting is a desirable behaviour since cormorants that nest on the ground have far less impact on trees and helps achieve the goal of the continued existence of a healthy, thriving cormorant colony. The areas identified as “Cormorant Deterrent Areas” on Peninsulas B and C received targeted management measures to prevent cormorant expansion into new trees and limit the further loss of forest canopy. Management activities included inactive nest removal where tree nests are removed from strategic areas during the winter months; pre-nesting deterrents where cormorants are discouraged from tree nesting in strategic areas through an escalating scale of measures; and active nest removal that followed the conservative protocol for estimating embryo development prepared by the Humane Society of the United States. Although identified as a management technique in the 2014 and 2015 Management Strategy for Peninsulas B, C and D, post-breeding deterrents were not undertaken as cormorants did not roost in trees in these areas.

Public knowledge, awareness and appreciation for colonial waterbirds at TTP continued in 2014 and 2015. Highlights included a viewing blind on Peninsula C with excellent views of cormorants; staff interpretation of the colony at various public events, including Colonial Waterbird Hikes at the TTP Spring Bird Festival; presentations; and park tours. The 2014 Spring Bird Festival also featured the book launch of “The Double-crested Cormorant: Flight of the Feathered Pariah” by renowned cormorant expert Linda Wires who attended the festival. Staff also presented various aspects of TTP cormorant management at the 2015 International Association of Great Lakes Research conference and the 2015 Waterbird Society Annual General Meeting.

Overall, the 2014 and 2015 Management Strategy was successful in meeting the objectives of the Management Strategy.

- cormorants were effectively deterred from expanding their nesting areas beyond the existing colonies, including onto Peninsula D;
- ground nesting continued to increase and now represents 68 per cent of the entire TTP cormorant population (ground nesting represented only 15 per cent of the colony prior to management);
- tree nesting decreased on all three Peninsulas;
- colonial waterbird research continued through the work of York University; and
- public knowledge, awareness and appreciation of colonial waterbirds continued through various methods including the website, presentations, tours and hikes.

Cormorants nest on three of the park's four peninsulas. In 2014 and 2015 the overall cormorant population remained stable numbering 12,409 and 11,908 nests respectively. 2014 represented a population increase of 3.5 per cent, while 2015 represented a population decrease of 4 per cent.

Most of the cormorant colony now nests on the ground, predominately on Peninsula B with 7,799 nests in 2014 and 7,608 nests in 2015. However, ground nesting on Peninsula A significantly increased in 2015 to 541 nests, up from 10 nests in 2014. Overall, ground nesting has increased a remarkable 708 per cent since management efforts began in 2008. This is a positive trend showing that the management strategy is working to help achieve the goal of the continued existence of a healthy, thriving cormorant colony.

Tree nesting populations of cormorants decreased by 8 per cent in 2014 and by 18 per cent in 2015. Due to the decline of the health of forest communities within the tree nesting areas, as well as the movement of tree nesting black-crowned night-heron into new area, cormorants significantly increased pressure to expand into new areas in both 2014 and 2015. Staff successfully limited these expansion attempts, preventing new colonization of forested areas.

RATIONALE

An extremely 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 feels 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.

Based on the 2014 and 2015 results from population monitoring that showed a continued increase in the ground nesting colony and a decline in the tree nesting colonies, it appears that the adaptive management strategy where management is only carried out 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 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 2016 and 2017 budgets.

DETAILS OF WORK TO BE DONE

A suite of techniques as shown below 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 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 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;
- Deploy straw materials 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 targeted deterrent areas on Peninsulas B and C;
- Prevent cormorant nesting on Peninsula D via the operation of the TTP Bird Research Station;
- 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 B, 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.

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Attachments: 1

Attachment 1

Table 1: 2014-2015 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			*	*

Table 2: 2016-2017 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			*	*