

**Management of Colonial Waterbirds at Tommy Thompson Park  
Summary of the 2010 Double-crested Cormorant Strategic Approach**

**Toronto and Region Conservation  
Restoration and Environmental Monitoring Projects  
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The overall goal of the Double-crested Cormorant Strategic Approach, 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 Tommy Thompson Park (TTP). The objectives of the Strategic Approach 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 these goals and objectives the six main management actions were identified for 2010 (Table 1). This report summarizes the actions taken to achieve these goals and objectives.

**Table 1. 2010 Strategic Approach Matrix**

	<b>Peninsula A</b>	<b>Peninsula B</b>	<b>Peninsula C</b>	<b>Peninsula D</b>
<b>Inactive Nest Removal (prior to 2010 breeding season)</b>			*	
<b>Pre-Nesting Deterrents</b>		*	*	*
<b>Post-Breeding Deterrents</b>			*	*
<b>Enhanced Ground Nesting</b>	*	*		
<b>Habitat Restoration</b>	*	*	*	*

*Inactive Nest Removal*

Prior to the return of cormorants to TTP inactive nest removal was undertaken in the Primary Deterrent Area at the tip of Peninsula C (Figure 1). A total of 32 inactive nests were removed from the target area.

*Enhanced Ground Nesting*

Cormorant Conservation Zones have been established at the tip of Peninsula A and the existing ground nest area and adjacent area on Peninsula B. Ground nest enhancements occurred prior to the return of cormorants and in three strategic areas (Figure 1). The ground nest enhancement area on Peninsula A

received no alteration to the size or structure of the previous enhancement work undertaken in 2008-09. A portion of this enhancement area is included in the York University conspecific attraction study. The study involves 2 types of structural enhancements, tires and wood stakes, with straw for nest material. Cormorant decoys and attraction calls are also applied to the study area and human disturbance was limited. Enhancements to the east side of Peninsula B included the addition of fallen trees to add structure and simulate a fallen forest, placement of downed cormorant tree nests to simulate a ground nesting colony, the addition of cormorant decoys to attract live birds, and limiting human disturbance. The existing ground nesting colony on Peninsula B was not altered, however human disturbance to this sub-colony by researchers and staff were limited and the nest count conducted at night to reduce nest depredation.



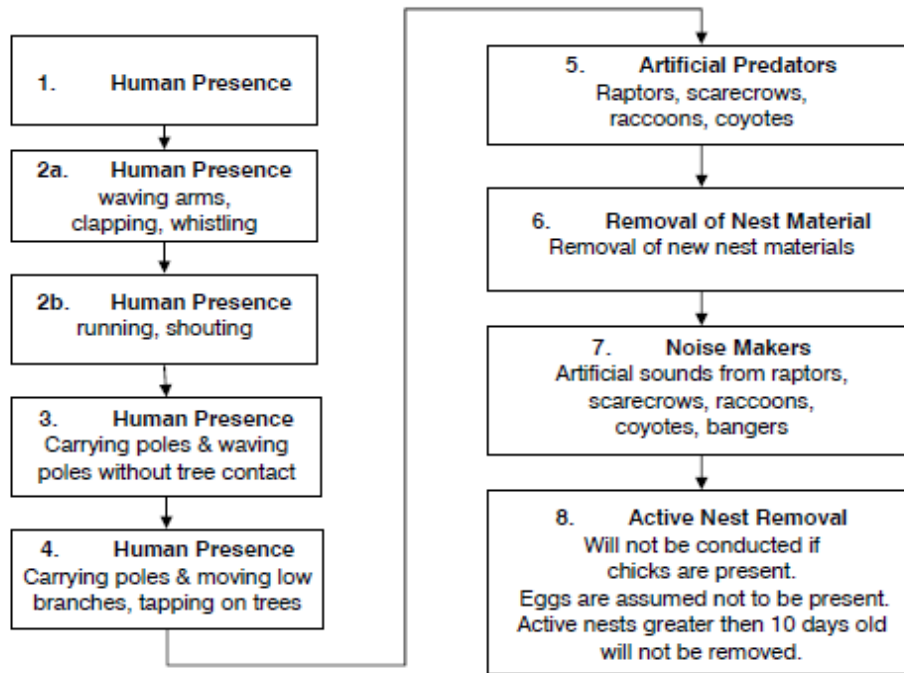
**Figure 1. 2010 Cormorant Management Areas**

*Pre-Nesting Deterrents*

Pre-nesting deterrents were only implemented as necessary in response to cormorant nesting attempts and followed an escalating scale (Figure 2). Deterrents were only undertaken on Peninsula C, and not undertaken on Peninsula B due to the presence of Black-crowned Night-Herons in the small deterrent area.

Deterrents started on April 8, 2010 with human presence. Cormorants habituate quickly, so deterrents were escalated on April 12, 2010. Various “scarecrow” deterrents were used in the primary and

secondary areas and as well as shouting, running and later the same day poles were used to tap on trees. On April 14, it was necessary for staff to use noise makers to deter cormorants from nesting in the Primary Deterrent Area. This deterrent has the greatest deterring affect on the colonies by successfully flushing the greatest number of cormorants from the deterrent areas. Staff also undertook three night deterrent sessions to try to keep cormorants away from the trees for a longer period of time. On April 19 staff began active nest removal in the Primary and Secondary Deterrent Areas. Removal techniques included metal and composite poles to knock known age nests out of the trees and ropes attached to trees to shake newly placed nest material out of the trees. Intact nests were collected for and placed in the ground nest enhancement area on Peninsula B. A total of 72 full and partial nests containing 94 eggs were removed from the Primary and Secondary Deterrent areas from April 19 to June 21.



**Figure 2. Deterrent Escalation Scale**

*Post Breeding Deterrents*

Cormorants did not roost in large numbers in the Primary or Secondary Deterrent Areas, therefore post breeding deterrents were not undertaken.

*Habitat Restoration*

Habitat restoration efforts continued in attempts to re-vegetate former colonial waterbird nesting areas and delineate current areas from active park use. Recent plantings on Peninsula A are thriving and additional plantings occurred in relation to the Embayment A Shoreline Enhancement Project.

Willow cuttings and bare root plantings of Eastern cottonwood and trembling aspen occurred at and near the tip of Peninsula B, however cormorants were observed breaking off the cuttings for use as nest material. The tree and shrub survival was low, likely due to the nesting pressures of Ring-billed Gulls in the area. Additional plantings of staghorn sumac, American elm, sand cherry and red-osier dogwood

occurred at the base of Peninsula B to better delineate and buffer the colony from active use. The plantings fared moderately well.

Plantings on Peninsula C included conifer nodes to buffer the colony and improve habitat for other wildlife species, as well as bareroot plantings of Eastern cottonwood, trembling aspen and staghorn sumac. These plantings responded well.

### *Population*

The cormorant population at TTP continues to rise. In 2010 the population numbered 9434 nests on three of four peninsulas. The increase in nest numbers was mainly due to ground nesting on Peninsula B increasing from 1,957 nests to 3,310 nests in 2010, a 69 per cent increase from 2009. This is a positive trend showing that ground nest enhancements are working to help achieve the goal of the continued existence of a healthy, thriving DCCO colony. The significant increase in the number of ground nests means that 35 per cent of the TTP DCCO colony now nests on the ground, so their nests are not affecting the tree canopy. Tree nests on Peninsula A and B decreased by 119 nests and tree nests on Peninsula C increased by 636 nests; however, the number of trees containing nests in this area increased by just 25. This increase in tree nesting on Peninsula C was sustained with denser nests (more nests per tree); the nesting area did not expand into any new areas.