CORMORANT ADVISORY GROUP MEETING #9
Thursday February 3 2011
6:30 p.m. to 9:00 p.m.
Metro Hall, Room 302, 55 John Street, Toronto

FINAL MEETING NOTES

Attendees:
Karen McDonald, TRCA
Andrea Chreston, TRCA
Matt Brady, TRCA
Gail Fraser, York University
Ilona Feldmann, York University
Jim Quinn, McMaster University
Janette Harvey, City of Toronto
Paul Scott, Aquatic Park Sailing Club
Cathryn MacFarlane, Aquatic Park Sailing Club
Liz White, Animal Alliance of Canada*
Ainslie Willock, Canadians for Snow Geese*
John Carley, Friends of the Spit
Lynne Freeman, Toronto Ornithological Club
(*Denotes member of Cormorant Defenders International)

These notes reflect the general nature of the meeting discussion. If there are errors or omissions, please contact A. Chreston at achreston@trca.on.ca or 416-661-6600 ext. 5772.

Comments contained herein reflect the opinion of the individual and do not necessarily reflect the position of the organization they represent.

1. Welcome and Introduction
K. McDonald opened the meeting, welcomed the group and everyone introduced themselves. Changes to draft Meeting Notes #8 were reviewed and additional changes were discussed. TRCA intends to take the 2011 Strategic Approach to the Authority Board meeting on March 25, so comments to be considered in the approach must be received by K. McDonald, R. Toninger or A. Chreston no later than Thursday March 3 to meet the submission deadline.

2. Proposed Strategic Approach for 2011
The goal and objectives of the DCCO management plan will remain the same in 2011 as agreed upon by the Advisory Group in 2007. The goal 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. The objectives are to a) increase public knowledge, awareness, and appreciation of colonial waterbirds; b) deter cormorant expansion to Peninsula D; c) limit further loss of tree canopy on Peninsulas A, B and

C; and d) continue research on colonial waterbirds in an urban wilderness context. Beyond the advisory group meetings and the Authority Board meeting, public consultation will include colonial waterbird colony tours at the Tommy Thompson Park Spring Bird Festival on Saturday, May 14 and continued interpretation and presentations to interest and academic groups.

The 2011 Strategic Approach will be the same as the approved 2010 approach with some refinement to the deterrent techniques and areas.

Table 1. Proposed 2011 Strategic Approach Matrix

	Peninsula A	**Peninsula B**	**Peninsula C**	**Peninsula D**
Inactive Nest Removal (prior to 2011 breeding season)			*	
Pre-Nesting Deterrents		*	*	*
Post-Breeding Deterrents			*	*
Enhanced Ground Nesting	*	*		
Habitat Restoration	*	*	*	*

Ground Nest Enhancements

The conservation zones will remain the same and disturbance to these areas will continue to be limited as it appears to be a significant factor in the expansion of the ground nest colony on Peninsula B. Ground nesting enhancements on Peninsula A will include nesting materials, decoy audio (advertising calls that G. Fraser has ordered from The Cornell Lab of Ornithology) and decoys. As well, TRCA plans to install a wireless camera system that will take photos that can be downloaded regularly and posted on the website. A live webcam is desired; however the camera's expense, lack of onsite power and the high potential for vandalism make this unfeasible at the present time. I. Feldmann suggested that she could also take video from the blind, which could also be included on the web site.

A concern regarding decoys is that they may become a deterrent when covered in guano, so to address this issue the decoys could be rotated several times throughout the season to be cleaned and replaced. However, the issue with rotating the decoys is disturbance by human presence. L. White asked if any studies have shown that keeping the decoys clean is required because in the colony on Middle Island DCCO do nest with dead DCCO, and there are so many dead DCCO in the colony at TTP. G. Fraser replied that she does not know of any such studies. I. Feldmann added that even if it isn't that they look dead, the guano masks the colours on the decoys potentially making them less effective, however, the tree nesting DCCO get covered in guano and other DCCO do not appear deterred by this. During the 2010

season she observed that decoys located under the tree on Peninsula A were the most covered in guano and the adjacent plot had the most visitation. L. White suggested either leaving the decoys alone during the season or not having them at all if the disturbance will have a greater impact on the colony. M. Brady suggested decreasing the decoy density if it isn't a limiting factor. G. Fraser suggested changing the decoys once during the season. I. Feldmann added that vegetation removal is required mid-season (probably June) and that the decoys could be changed at that time. Additionally, I. Feldmann will be continuing to make observations from her blind on Peninsula A, so she will be able to gauge any impacts that disturbance may have. L. White suggested staying away from the ground nest enhancement area so that there is no disturbance. G. Fraser replied that she is uncertain about the timing of nest prospecting, but if there is nesting by June the colony should be left alone. K. McDonald noted that the priority in the conservation zones is to minimize disturbance to encourage ground nesting. L. White asked if RBGU nest on Peninsula A and if DCCO are attracted to large numbers of nesting birds. G. Fraser replied that the natural ground nest colony on Peninsula B is surrounded by RBGU, which act as a buffer to the colony. RBGU also nest on Peninsula A.

The ground nest enhancement area on Peninsula B is on the east side, away from the natural colony. The enhancements proposed for this area include increasing structure, adding nesting material and using decoys. G. Fraser suggested shifting the location of the ground nest enhancement area further down the peninsula, closer to the loafing area. As on Peninsula A, decoys could be rotated to clean them and a wireless trail camera can be installed adjacent to the existing ground nest colony that will help increase the awareness and appreciation of the species and the colony. DCCO chicks will be banded in the natural ground nest colony just prior to fledging and hopefully adult DCCO will be banded as well. Adult banding will potentially take place with G. Fraser who has applied for bands with a unique colour scheme for TTP. Adults would be trapped on Peninsula B in a location where they go to collect nesting material, well away from the ground nesting colony. G. Fraser plans on hiding in a blind and banding adult DCCO as soon as they are captured. Banding chicks and band re-sighting observations will help quantify site philopatry. We hope to confirm that chicks hatched on the ground will return to the site to nest on the ground. Banding adults and band re-sighting observations will help quantify nest site fidelity.

<u>Habitat Restoration and Enhancement</u>

Habitat restoration and enhancement activities will continue and will target the some of the same areas as in 2010. They will aim to improve the buffer to delineate the colony and provide future nesting areas for other species. Soil remediation will not occur while DCCO continue to nest in the colonies. Once they leave an area, remediation and planting can take place.

Tree health in the nesting areas continues to decline, but there are some healthier stands on both Peninsulas B and C, and it is these locations that should be the focus of deterrent activities in 2011. As G. Fraser's research has shown, DCCO prefer to nest in trees with existing nests, so inactive nest removal will take place during the winter of 2011 to remove nests from healthy trees in the target areas. G. Fraser commented that the beaver is very active on Peninsula B. K. McDonald replied that many of the mature trees are wrapped to protect against beaver damage, but that non-native species are not. Beaver damage is recorded during tree health surveys, so there is a record of downed trees due to beavers in the colony.

Inactive Nest Removal

32 inactive nests were removed prior to the 2010 breeding season from the Primary Deterrent Area. Inactive nest removal will continue prior to the 2011 breeding season and will focus on healthier trees. The goal is to reduce the number of existing nests to make it less attractive to DCCO and improve pre-nesting deterrent success rates.

Pre-Nesting Deterrents

The biggest change to the Strategic Approach 2011 is the deterrent areas. This year, pre-nesting deterrents will be focused on targeting discrete healthy/declining health trees, not a large area as in previous years. The proposed deterrent locations include all of Peninsula C, with a specific focus on healthier trees near the tip and on the east side; and potentially the base of Peninsula B depending on BCNH nesting; last year just 3 BCNH nests were counted on Peninsula B. BCNH typically limit the deterrent techniques that can be used. If BCNH are present, only DCCO specific deterrent techniques will be used. Nest predation mimicry is a feasible technique that can be used to target specific nests to reinforce cues to DCCO that trees are not a good place to nest. G. Fraser suggested attaching a raccoon skin to the end of the pole so that DCCO see a predator. L. White asked why a fur would work and whether DCCO need other cues like smell, behavior and sound. G. Fraser replied that the pattern on the fur is recognizable and is biologically relevant and that an iPod could be attached to the fur to play raccoon sounds and DCCO distress calls. L. White commented that the ground nest on Peninsula B is very close to the location where the deterrents activities are proposed and wondered how DCCO communicate. She added that there is perpetual disturbance at Presqu'Ile and the former ground nest colony has been abandoned, so caution should be taken. K. McDonald replied that TRCA will perfect the raccoon predation mimicry on Peninsula C in 2011 before moving to Peninsula B in future years. I. Feldmann added that the reproductive success of DCCO on Peninsula B in 2010 was very low and she predicts that it is likely that DCCO will move to the ground. Several Advisory Group members recommended caution with the use of deterrents on Peninsula B, as it could result in a disturbance to the ground nesting area. K. McDonald replied that deterrents will be carefully considered on Peninsula B, so the ground nest area is not adversely affected.

Deterrent activities on Peninsula C will be targeted toward keeping healthy trees nest free, but this will be challenging because DCCO often nest very high in the canopy. Data collected by G. Fraser last summer also showed that DCCO nest higher in trees adjacent to deterrent areas.

Deterrent escalation remains the same as in 2010 and is expected to progress rapidly through techniques 1 to 4 then to 5, artificial predators, as the DCCO become habituated very quickly. Hopefully success will be greater with raccoon predation mimicry, but DCCO are very driven to nest during the breeding season. Night deterrents will be applied on nights with low visibility.

Active nest removal will be carried out again in 2011. During the 2010 season 72 full or partial active nests were removed on Peninsula C; if the age of the nest was unknown it was not removed. It is anticipated that the inactive nest removal completed during the winter will be successful, leading to a reduction in the number of active nests. L. White asked about the results of active nest removal and the rate of success. K. McDonald replied that DCCO left all areas that could be reached with poles, but they moved higher in the trees and increased nest density in adjacent areas. The rate of success was 100 per cent on the tip of Peninsula C, that is, no DCCO nested there. Other sections within the Primary Deterrent Areas were not as successful, although an overall decrease in nest density with these areas was observed. G.

Fraser commented that portions of the east side of the peninsula are quite close to the base and asked how deterrent will be used given the proximity to BCNH. K. McDonald replied that the decision will be made based on monitoring results and that tree specific deterrents (e.g. raccoon predation mimicry) will be used rather than noise bangers. L. White commented that when flushing birds the disturbance is quite extreme and also disturbs other, non-target birds like BCNH. K. McDonald replied that BCNH are monitored during deterrent activities and that disturbance has not been observed, but that the deterrents occurred away from the BCNH nest area. Proximity to non-target species needs to be an adaptive decision based on immediate monitoring observations. L. White asked if there is an understanding of BCNH nest behaviour. K. McDonald replied that BCNH seem to be much less flighty than other species, but disturbance is still a concern. G. Fraser added that nest success in the previous year will attract a bird back to a nest site in the following year, and wondered what constitutes a disturbance and what the threshold is. K. McDonald replied that no disturbance to any BCNH is preferred. G. Fraser confirmed that not using bangers is key to reducing disturbance. M. Brady added that non-target species are always monitored during deterrent activities by finding the closest non-target nest to the disturbance. L. White commented that active nest removal seems crazy because not all of the birds are eliminated from the target trees due to very high nest locations and the others are being sent to other trees. K. McDonald replied that the hope is that birds pushed out of the target trees are moving to the ground nest colony; evidence for this is the ground nest population increase while there are still un-nested trees available. The population at TTP has increased and it is unknown whether the population increase is due to new birds arriving from other colonies or if it is offspring from TTP DCCO. With productivity around 2-3 chicks per nest, is it possible that the population increase could be entirely due to a new generation of TTP hatched adults. J. Carley asked about the survivorship of DCCO and how many survive migration and return to TTP, then shifted the conversation to the trees. Survivorship of fledged and adult DCCO is not well understood in the context of a heavily managed population.

C. MacFarlane strongly contended that the trees at TTP are fighting a losing battle and that she hears many complaints from public park users who say that TRCA is not doing anything to solve this problem. She is very concerned that the declining forest canopy at TTP is reducing the habitat available for other species, notably migrating songbirds that use TTP has a stopover location. K. McDonald replied that tree health in the nesting areas continues to decline, but there has been no expansion into new canopy since 2007. She also noted that TRCA is open to other management techniques that are not already being applied. G. Fraser commented that TRCA has identified DCCO conservation zones where the nesting is to be left undisturbed, but are willing to work in other areas. K. McDonald added that DCCO management is a delicate undertaking due to BCNH on Peninsula C and for that reason large scale disturbance of the entire peninsula cannot occur. C. MacFarlane replied that soon there will not be any trees left on Peninsula C, leaving the other species without anywhere to nest. DCCO are already loafing around the Aquatic Park Sailing Club clubhouse and they become habituated to disturbance very quickly. J. Carley inquired about the state of trees elsewhere on the Spit that may be impacted by DCCO activities such as branch breaking and suggested setting up new control areas on the Baselands and Peninsula D. K. McDonald replied that it is interesting idea, but additional data are not required to show that trees are dying in the colony. C. MacFarlane asked if the ELC data can be updated. K. McDonald replied it is typically updated every 5 years and was last updated in 2006, so should be scheduled for 2011. J. Carley asked how forest canopy is tracked in other city parks such as High Park and Colonel Sam Smith. J. Harvey replied that ELC surveys are completed by TRCA. G. Fraser thinks it is important to

have a control plot because currently all decline is attributed to DCCO. J. Quinn agreed that control trees in the DCCO nesting area is a good idea because the conditions are the same. L. White commented that it is important to recognize that there will be tree health decline in areas where DCCO nest, it is a natural occurrence. The key is to limit the area in which nesting occurs and the question is can the canopy where nesting doesn't happen be retained.

Tree health images help to refine where to focus deterrent efforts. K. McDonald explained that the points on the image do not indicate every tree present within the colony, but rather only trees that have been nested in. There is confusion about what the image conveys and comments were made that the tree health images are misleading because only nested trees are illustrated. The group agreed that all trees in the colony, including trees that have never been nested in, should be shown on the map.

The installation of temporary viewing blinds for the public on Peninsulas B and C is also being considered. The blind would be placed at the edge of the colonies, on the existing trails, to allow for observation of DCCO in the trees. This blind would also provide opportunity for staff and researchers to observe tree nesting DCCO. The "Do Not Enter Sensitive Bird Area" signs would be moved to the same location as the blind, and it is hoped that the presence of the blind may keep people from venturing further into the colony and encourage appreciation of the waterbird colonies. An additional research blind will also be placed inconspicuously on Peninsula C to allow for observations with minimal disturbance.

Post-breeding Deterrents

Post-breeding deterrents proposed for 2011 are the same as previous years and will only be undertaken if DCCO are loafing in the tree canopy.

BCNH

BCNH management will continue to try to refine the use of predator guards. G. Fraser's study showed that double predator guards did not work as effectively as hoped, and efforts will be made to find a better guard. G. Fraser commented that the double predator guards mostly did deter, but that nest success was not significantly different. There are many variables that affect BCNH nest success, and all failures may not be caused by raccoons. Trail cameras also captured images of two opossums, which may also be implicated in nest predation.

3. Wrap-up

K. McDonald asked that Advisory Group members share any ideas for management techniques and concluded the meeting. The next meeting is the Authority Board on March 25 followed by the field season and the annual season review Advisory Group meeting in December 2011.