



MANAGEMENT OF COLONIAL WATERBIRDS AT TOMMY THOMPSON PARK

CORMORANT ADVISORY GROUP
MEETING #13

Thursday February 26, 2015

6:30 to 9:00 p.m.

Metro Hall, Room 303, 55 John Street, Toronto





AGENDA

6:30pm	Welcome	Karen McDonald
6:35pm	Review of 2014 colonial waterbird data and cormorant management strategy	Karen McDonald/ Nikita Moores
7:30pm	Update on York University studies	Gail Fraser
7:50pm	Proposed Strategic Approach for 2015 <ul style="list-style-type: none">• Work plan for 2014 season• Discussion• Timeline	Karen McDonald/ Nikita Moores
8:30pm	Billy Bishop Airport Expansion EA –colonial waterbirds	Nancy Gaffney
8:45pm	Wrap-up and next meeting	Karen McDonald



GOAL & OBJECTIVES

GOAL

- 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.

OBJECTIVES

- 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
- Continue research on colonial waterbirds in an urban wilderness context



PUBLIC CONSULTATION SUMMARY

Advisory Group Meeting #12

January 14,
2014

- Review the 2013 population data and monitoring program
- Review 2013 strategy and research results
- Develop the 2014 Strategy

TRCA Board

January 31,
2014

- Present the 2014 Strategy for TRCA Board action

Colonial Waterbird Interpretation and Presentations

March –
November,
2014

- Winter Waterfowl event
- Spring Bird Festival
- Butterfly Festival
- Various universities and colleges
- Winged Migration classes
- Agencies and Partners (Environment Canada, TD Canada Trust, Coca-Cola Canada, etc.)
- Various media

Advisory Group Meeting #13

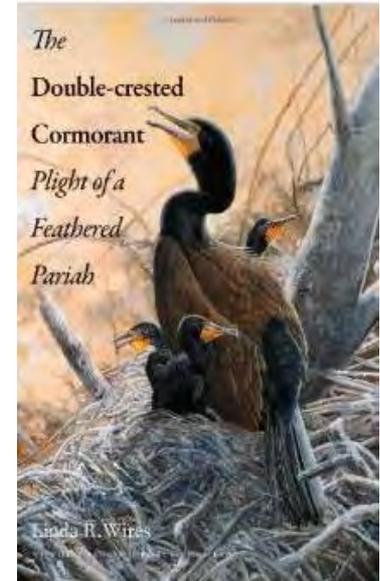
February 26,
2015

- Review the 2014 population data and monitoring program
 - Review 2014 strategy and research results
 - Develop the 2015 Strategy
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PUBLIC OUTREACH - HIGHLIGHTS

- Linda Wires book launch at TTP Spring Bird Festival
 - *The Double-Crested Cormorant: Plight of a Feathered Pariah*
- Great Lakes Wild Series on Love Nature TV (formerly Oasis)
 - “Bad Reputations” Episode features TTP DCCO Colony
- Wild Toronto YouTube Videos
 - 2 videos featuring the TTP colonies
 - “Canopy of Cormorants” and “Haunt of the Herons”



COLONIAL WATERBIRDS OF TTP, 2014



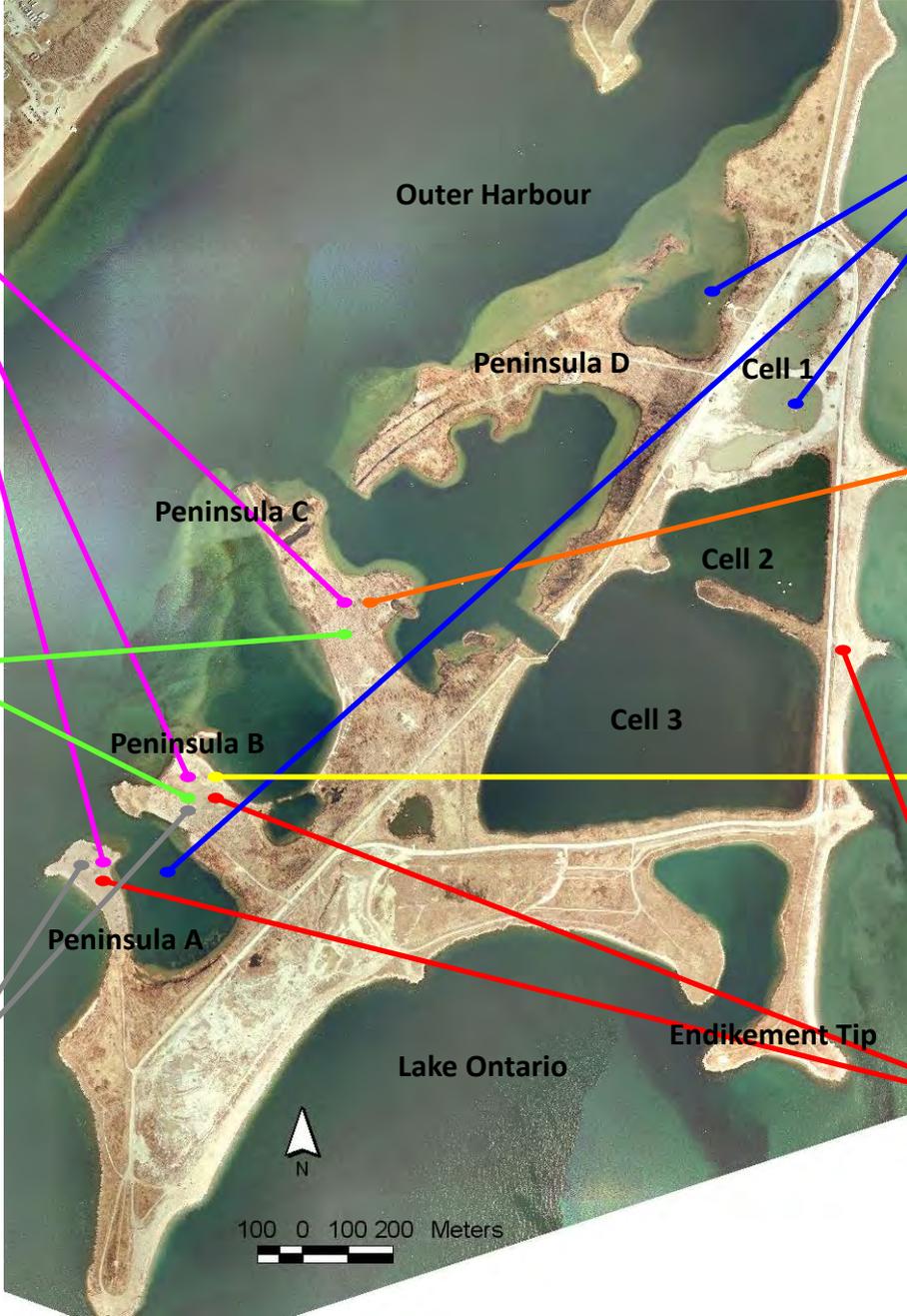
DCCO - 12,409



BCNH - 397



HEGU - NC



COTE - 179



GREG - 6



CATE - 263



RBGU - 35,000



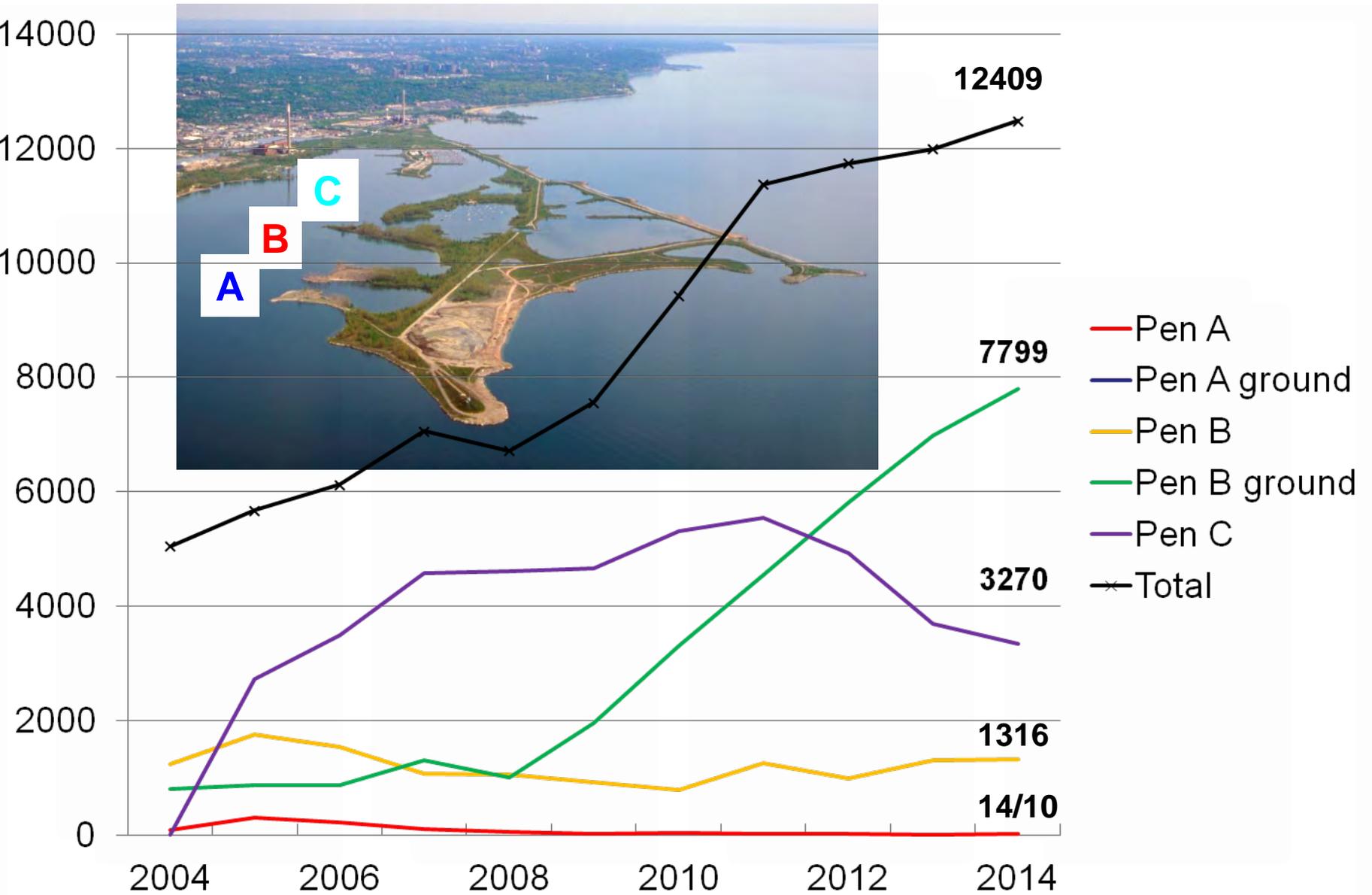
DCCO NESTS BY PENINSULA



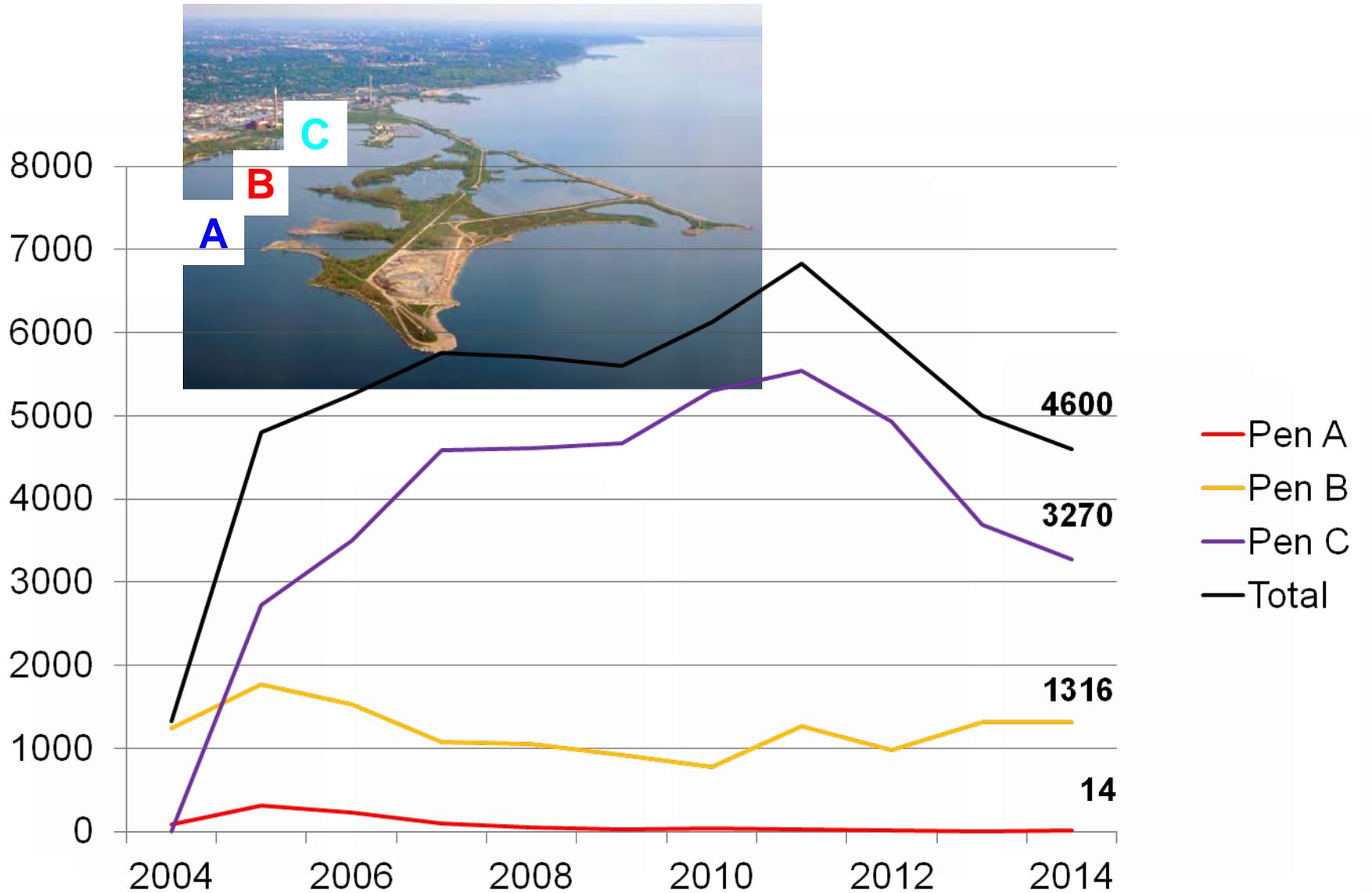
DCCO NEST DENSITY (# Nests/Tree)					
	2010	2011	2012	2013	2014
Peninsula A	19.5	19	13	5	14
Peninsula B	4.82	6.64	5.99	7.66	7.15
Peninsula C	6.01	6.3	6.2	6.25	6.31

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Pen A	81	311	228	101	49	22	39	19	13	5	14
Pen A ground	-	-	-	-	-	-	-	-	-	-	10
Pen B	1241	1763	1535	1072	1050	917	781	1262	982	1310	1316
Pen B ground	809	872	868	1302	1009	1957	3310	4547	5812	6986	7799
Pen C	0	2728	3494	4584	4609	4668	5304	5546	4934	3689	3270
Total	5046	5674	6125	7059	6717	7564	9434	11374	11741	11990	12409

TTP DCCO – ALL NESTS BY PENINSULA



TTP DCCO – TREE NESTS BY PENINSULA



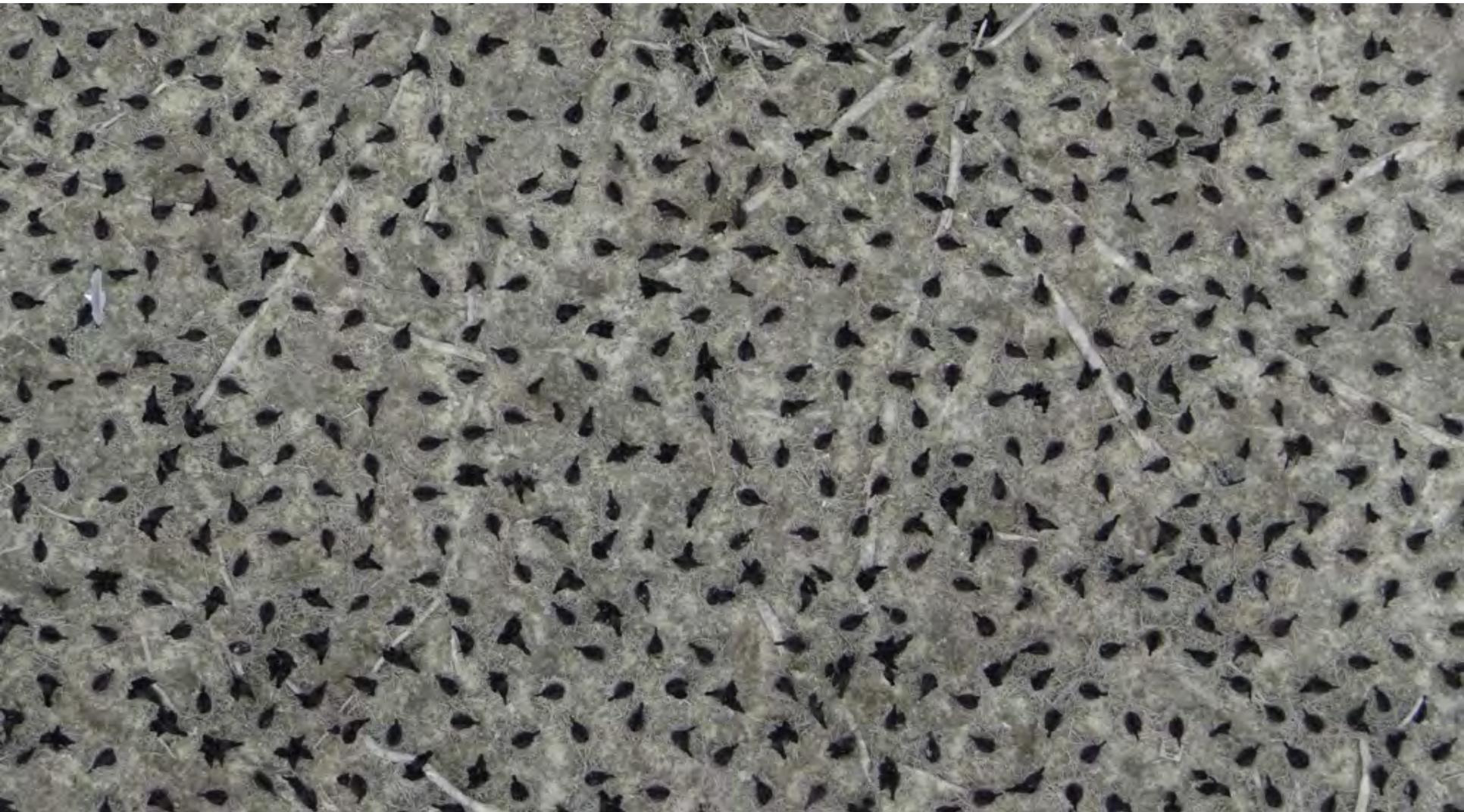
GROUND NESTING ON PENINSULA B



GROUND NESTING ON PENINSULA B



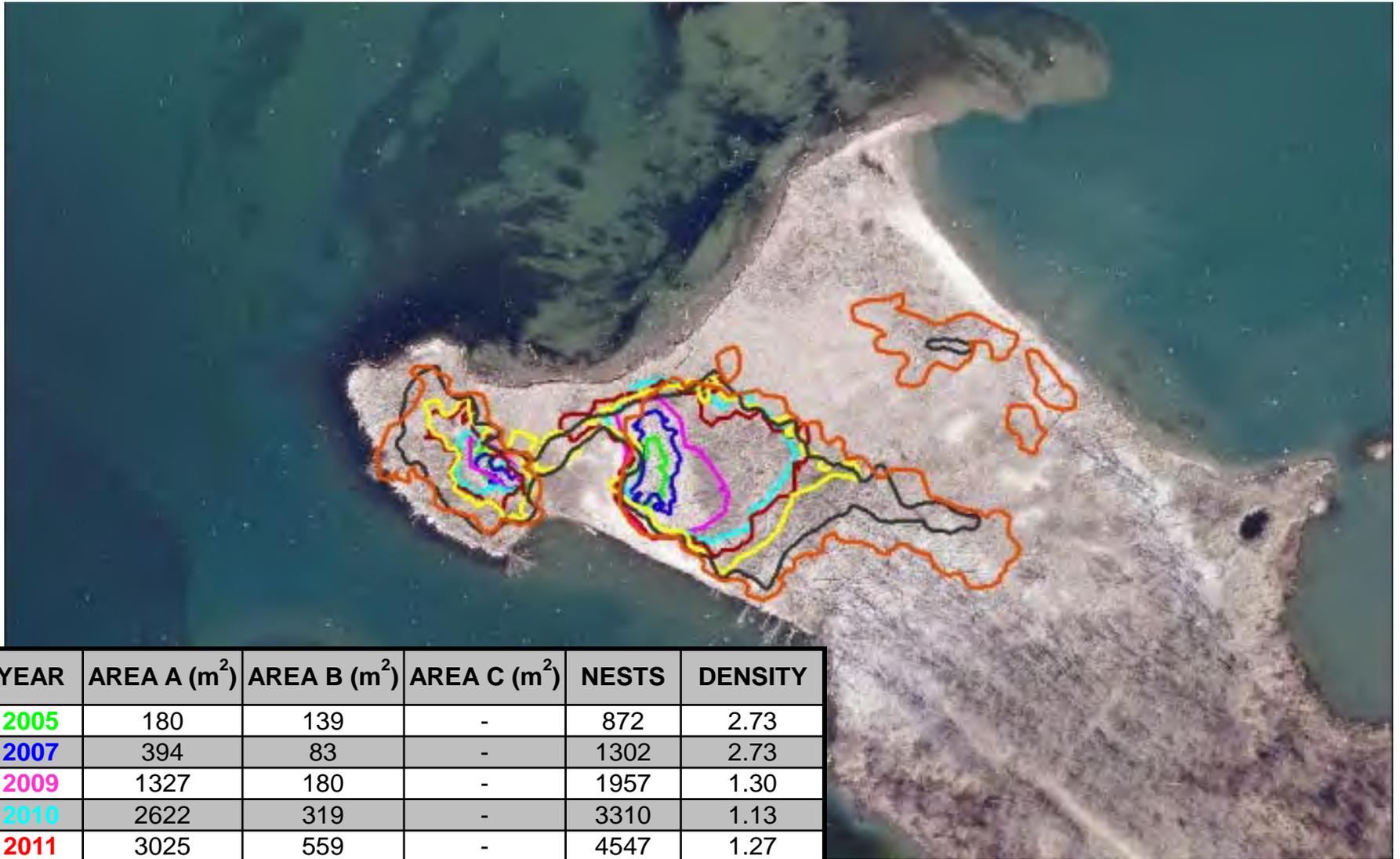
AERIAL GROUND NEST COUNTS



AERIAL GROUND NEST COUNTS – DCCO & CATE



TTP DCCO – GROUND NEST COLONY (PEN B)



YEAR	AREA A (m ²)	AREA B (m ²)	AREA C (m ²)	NESTS	DENSITY
2005	180	139	-	872	2.73
2007	394	83	-	1302	2.73
2009	1327	180	-	1957	1.30
2010	2622	319	-	3310	1.13
2011	3025	559	-	4547	1.27
2012	3491	828	-	5812	1.35
2013	6193		52	6986	1.12
2014	9265			7799	0.84

GROUND NESTING ON PENINSULA A!





ANNUAL DCCO POPULATION CHANGE (PERCENTAGE)

	2008	2009	2010	2011	2012	2013	2014
Overall	-4.84	12.61	24.72	20.56	3.23	2.12	3.49
Peninsula A	-51.49	-55.10	77.27	-51.28	-31.58	-61.54	180
Peninsula B	-2.05	-12.67	-14.83	61.59	-22.19	33.40	0.46
Pen B Ground	-22.50	93.95	69.14	37.37	27.82	20.20	11.64
Peninsula C	0.55	1.28	13.62	4.56	-11.03	-25.23	-11.36



DCCO NEST TREE OCCUPATION

TREES OCCUPIED WITH DCCO						
	2009	2010	2011	2012	2013	2014
Peninsula A	1	2	1	1	1	1
Peninsula B	179	162	190	164	171	184
Peninsula C	865	883	885	796	590	518
TOTAL	1045	1047	1076	961	762	703

CHANGE IN TREE OCCUPANCY					
	2010	2011	2012	2013	2014
Peninsula B	-10%	+17%	-14%	+4%	+8%
Peninsula C	+2%	+0.2%	-11%	-26%	-12%
Overall	+0.2%	+3%	-11%	-21%	-8%

Peninsula C



Peninsula B



Peninsula A





BCNH NESTS BY PENINSULA



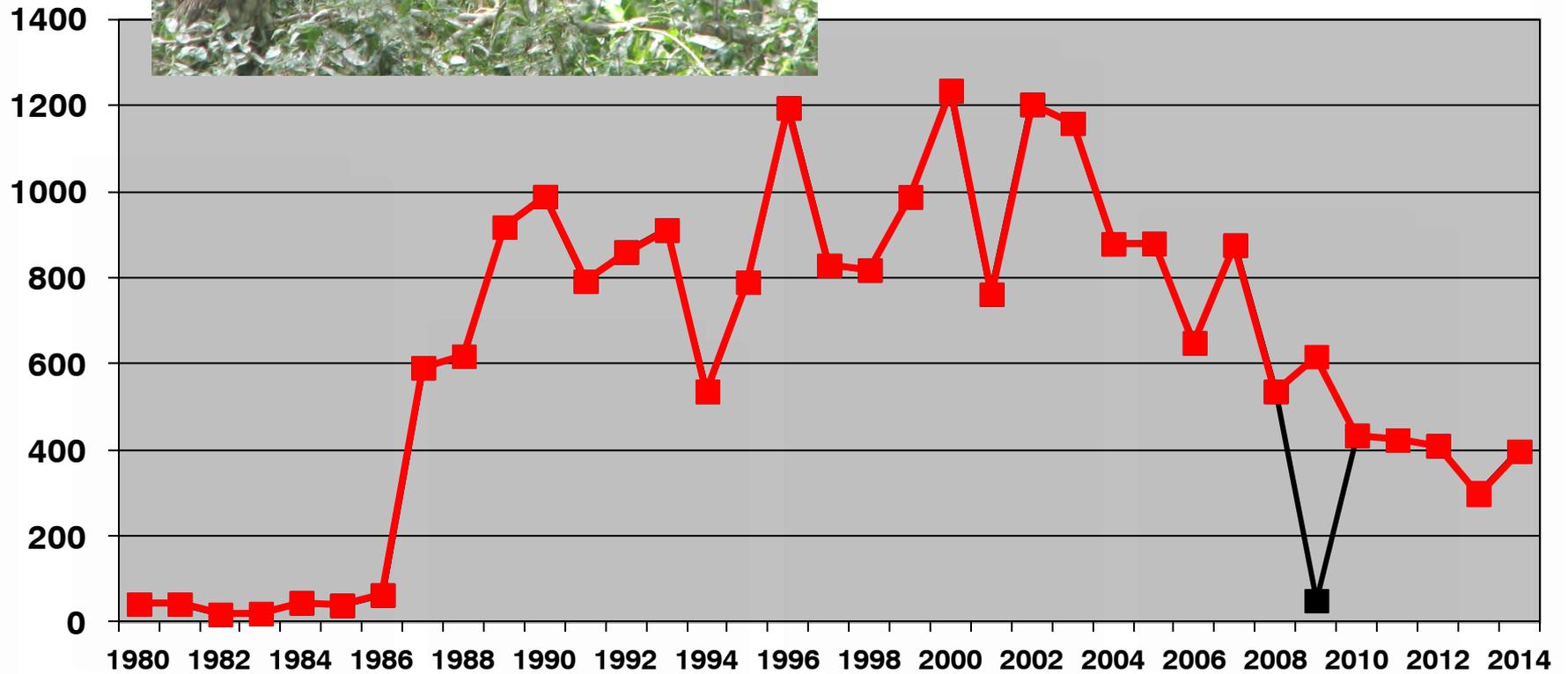
In 2014 most of the BCNH colony moved to western base of Peninsula C into healthy trees away from DCCO.

	2004	2005	2006	2007	2008	2009*	2010	2011	2012	2013	2014
Pen A	0	0	0	0	0	0	0	0	0	0	0
Pen B	278	270	145	146	81	38	3	100	10	14	181
Pen C	601	610	504	730	455	546	431	323	400	283	216
Total	879	880	649	876	536	584	434	423	410	297	397

BCNH PEAK NEST NUMBERS 1980 TO 2013



- Peak nest count numbers
- Mid-season nest numbers



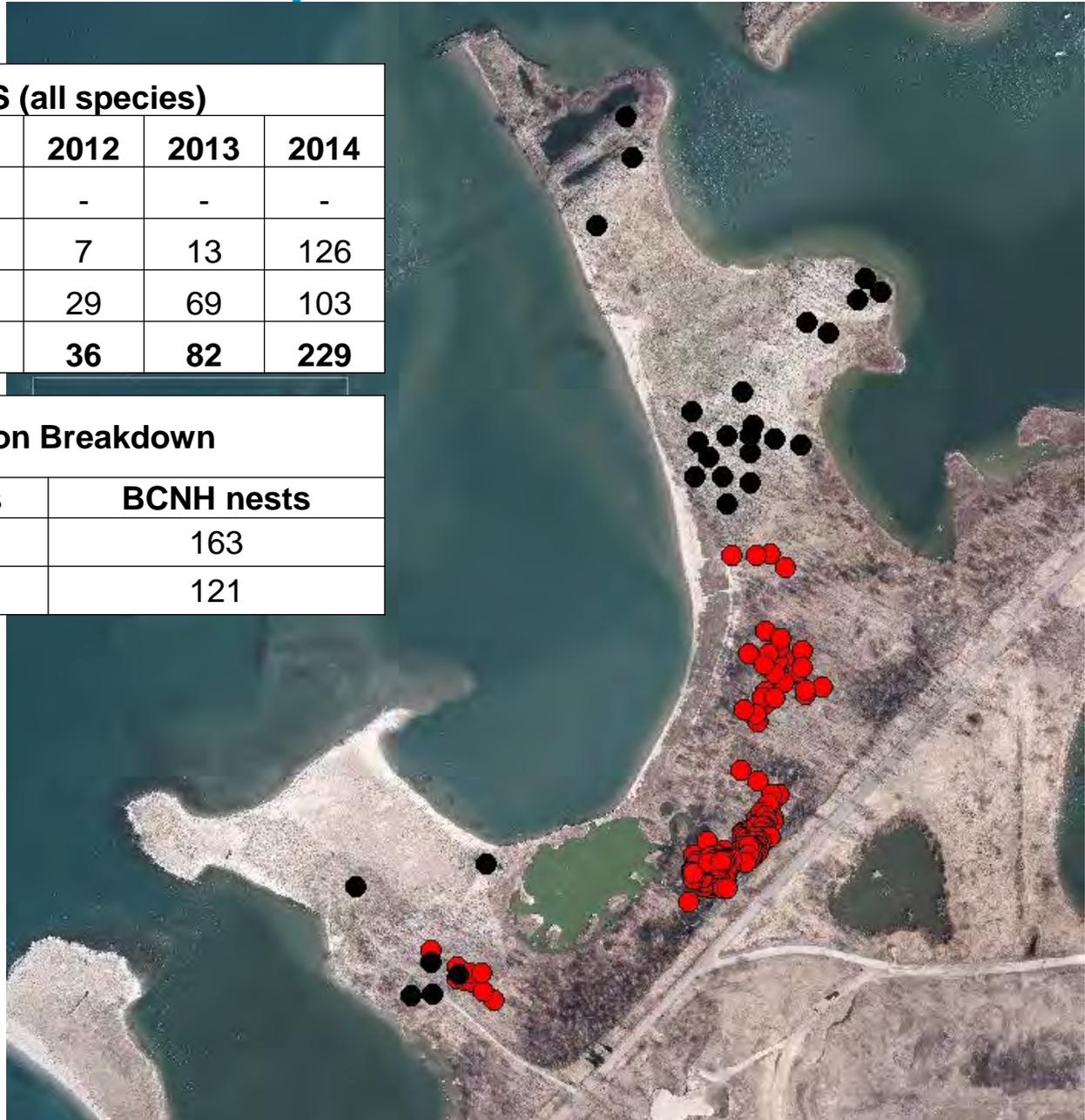
New Tree Nest Expansion in 2014

2014 NEW NEST TREES (all species)

	2010	2011	2012	2013	2014
Peninsula A	-	-	-	-	-
Peninsula B	7	25	7	13	126
Peninsula C	37	23	29	69	103
TOTAL	44	48	36	82	229

2014 Tree Nest Expansion Breakdown

	DCCO nests	BCNH nests
Peninsula B	34	163
Peninsula C	54	121





STRATEGIC APPROACH 2014

	Peninsula A	Peninsula B	Peninsula C	Peninsula D
Inactive Nest Removal (prior to 2014 breeding season)		*	*	
Enhanced Ground Nesting	*	*		
Pre-Nesting Deterrents		*	*	*
Post-Breeding Deterrents			*	*

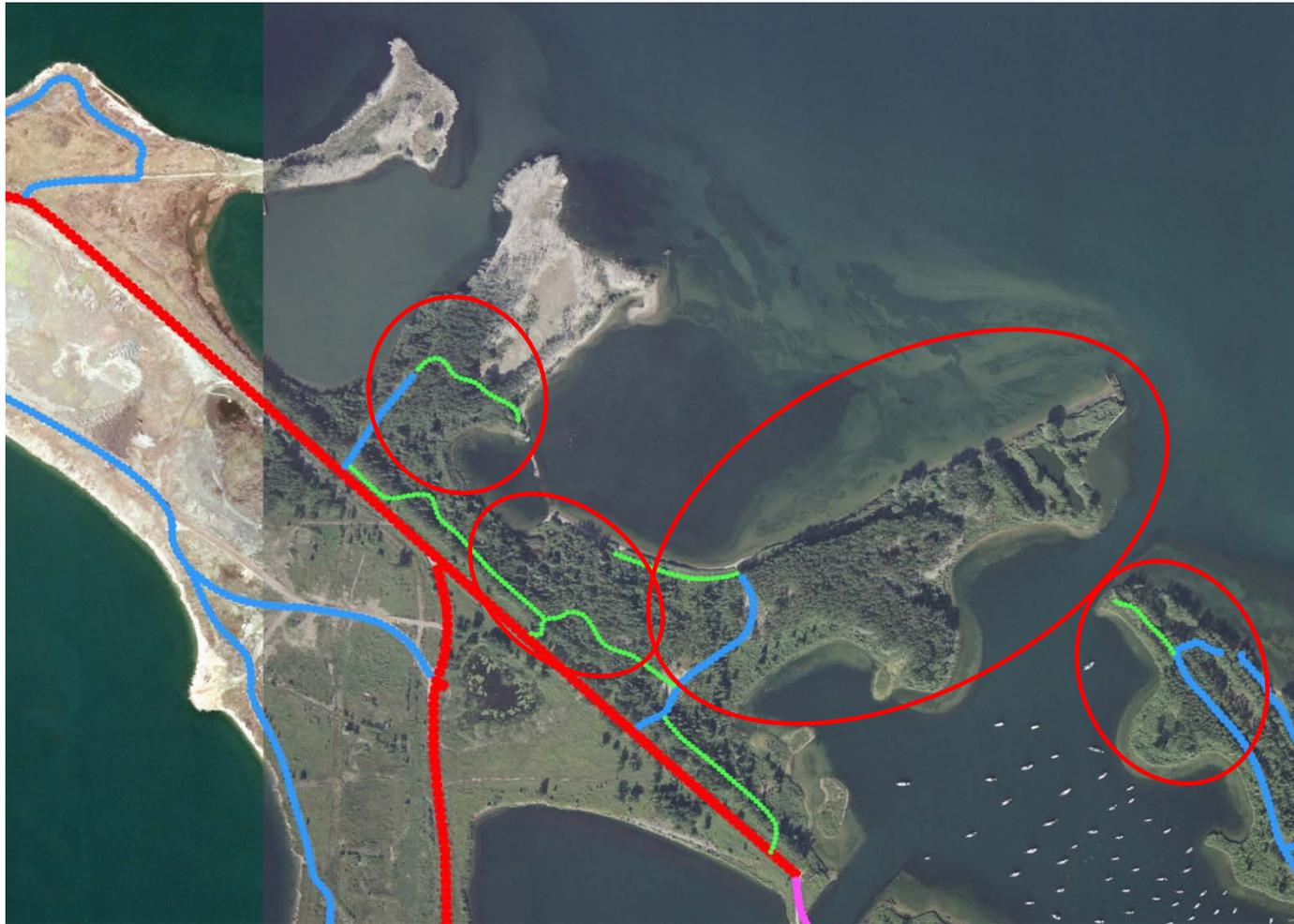


DCCO CONSERVATION ZONES





DCCO DETERRENT AREAS





INACTIVE NEST REMOVAL

- 2014 nest removal was done with forestry poles
- Removed nests were not relocated due to frozen ground conditions

Year	Nests Removed
2001	31
2002	281
2003	647
2004	~400
2010	32
2011	236
2012	183
2013	115
2014	101





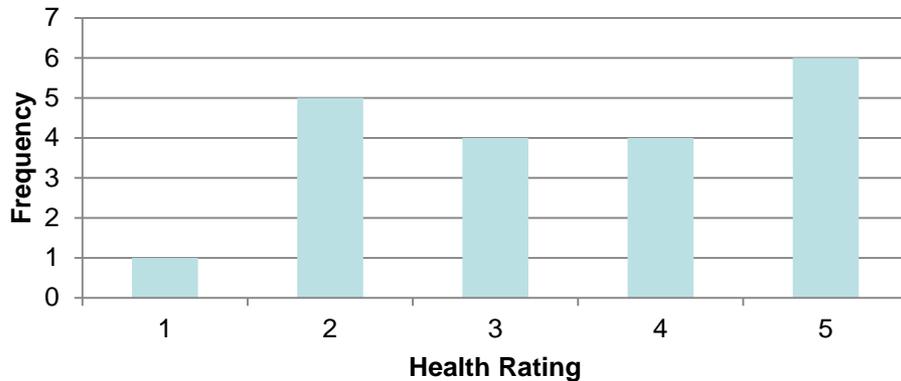
2014 PRE-NESTING & ACTIVE DETERRENTS

- Pre-nesting deterrents were utilized on Peninsula C prior to BCNH arrivals. DCCO were quickly desensitized to the progressing level of deterrents.
- 2014 saw significantly more DCCO nest expansion pressure
- Active nest removal took place in strategic locations on Peninsulas B and C to prevent DCCO expansion into new trees
 - April 28 to June 10
 - 565 nests removed
 - 335 nests on Peninsula C
 - 230 nests on Peninsula B
 - Prior to removal, nests were closely monitored ensure eggs were no greater than 10 days old

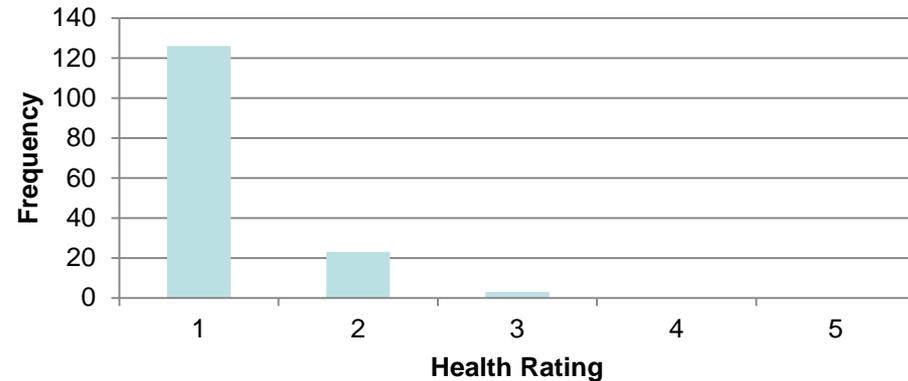


2014 TREE HEALTH

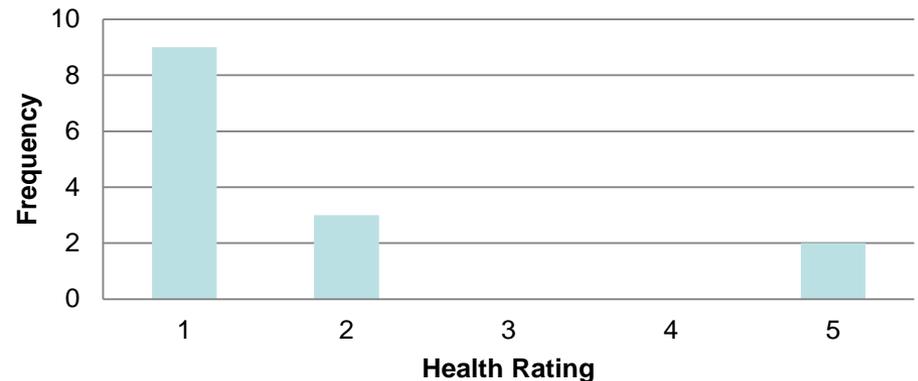
**Random Trees on C:
Frequency of Health Rating
(sample size 20)**



**New BCNH Colony on C:
Frequency of Health Rating
(sample size 152)**



**Control Trees on D:
Frequency of Health Rating
(sample size 14)**



Site	Average	Mode
Pen C DCCO area	3.45	5
Pen C BCNH area	1.2	1
Pen D control	1.8	1



2014 DCCO MANAGEMENT SUMMARY

Peninsula A

- Ground nest enhancements = straw
- 10 ground nests!!!

Peninsula B

- Active nest removals in strategic locations
- Tree nesting increased by 0.46% (6 nests and 34 new nest trees)
- Ground nesting increased by 11% (813 nests)

Peninsula C

- Significant increase in nest expansion pressure
- Active nest removals in strategic locations
- Tree nesting decreased by 11% (419 fewer nests and 72 fewer nest trees, however 54 new nest trees were added)



2014 SEASON SUMMARY

- Prevented expansion onto Peninsula D
- Ground nesting has increased 673% from 2008 from 15% of the total colony in 2008 to 63% in 2014
- Tree nests decreased on Peninsula C, and remained the same as 2013 on Peninsula B
- Overall population increase of 3.5%, supported by the expansion in the ground nest colony
- Viewing blind on Peninsula C with views of DCCO
- BCNH population increased by 100 nests – some moved to new, healthy trees away from DCCO



UPDATE ON YORK U RESEARCH



2014 PROPOSED STRATEGIC APPROACH

	Peninsula A	Peninsula B	Peninsula C	Peninsula D
Inactive Nest Removal (prior to 2014 breeding season)		*	*	
Enhanced Ground Nesting	*	*		
Pre-Nesting Deterrents		*	*	*
Post-Breeding Deterrents			*	*



DCCO CONSERVATION ZONES





DCCO DETERRENT AREAS





AUTHORITY BOARD

As directed in 2014, the strategy will be presented to the TRCA Board every second year (2016)





SPRING BIRD FESTIVAL

Saturday May 9, 2015

8 a.m. to 4 p.m.

- Early bird hikes
- Family walks, guided bird hikes
- **Colonial waterbird hikes**
- Baillie Birdathon
- Bird banding demonstrations
- Children's activities
- Educational displays

