

MANAGEMENT OF COLONIAL WATERBIRDS AT TOMMY THOMPSON PARK



CORMORANT ADVISORY GROUP
MEETING #8

www.trca.on.ca/cormorants

Thursday, December 9, 2010
6:30 p.m. to 9:00 p.m.
Metro Hall, Room 304
55 John Street, Toronto



Member of Conservation Ontario

Toronto and Region Conservation  for The Living City



TommyThompsonPark

Toronto's Urban Wilderness

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AGENDA

| | | |
|--------|---|--------------------------------|
| 6:35pm | Welcome and Introductions | Ralph Toninger |
| 6:45pm | Review of Previous Meetings | Ralph Toninger |
| 7:00pm | Review 2010 colonial waterbird data and 2010 cormorant management strategy | Ralph Toninger |
| 7:40pm | Update on York University studies | Gail Fraser and Ilona Feldmann |
| 8:10pm | Next Steps <ul style="list-style-type: none">• Completion of the 2010 Cormorant Management Strategy• Moving into 2011 | Ralph Toninger |
| 8:55pm | Wrap-up and next meeting | Ralph Toninger |



PROCESS – DOUBLE-CRESTED CORMORANTS AT TOMMY THOMPSON PARK

- **November 2007:** TRCA embarked on a process to involve stakeholders and public in assessing need for management of cormorant populations
- **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



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

ADVISORY GROUP

MANDATE

- Provide input and advice
- Ensure that all perspectives are considered
- Provide linkages with other stakeholders

TRCA

Restoration Services

Federal/Provincial

Canadian Wildlife Service

Ontario Ministry of Natural Resources

Toronto Port Authority

Transport Canada

City of Toronto

Parks, Forestry and Recreation

Academia

University of Toronto

York University

McMaster University

Interest Groups

Aquatic Park Sailing Club

Cormorant Defenders International:

Animal Alliance of Canada

Canadians for Snow Geese

Earthroots

Zoocheck Canada Inc.

Friends of the Spit

Ontario Nature

Toronto Island Residents

Toronto Ornithological Club

Local Experts

Public Consultation Summary 2010

| | | |
|--|------------------|---|
| Advisory Group Meeting #7 | February 11 | <ul style="list-style-type: none">•Develop the 2010 Strategy |
| TRCA Authority Meeting | March 27 | <ul style="list-style-type: none">•Present the 2010 Strategy for TRCA Authority action |
| TTP Spring Bird Festival | May 8 | <ul style="list-style-type: none">•Guided tours of cormorant colony |
| Advisory Group Meeting #8 | December 9 | <ul style="list-style-type: none">•Review the 2010 population data and monitoring program•Review 2010 strategy and preliminary research results•Begin discussions on a strategic approach for 2011 |
| Colonial Waterbird Interpretation and Presentations | April - November | <ul style="list-style-type: none">•York University•Centennial College•University of Toronto•International Association of Great Lakes Research•City of Toronto Parks, Forestry and Recreation•Society of Conservation Biology speaker series (Toronto Chapter)•Institutes of Journalism and Natural Resources•Toronto Field Naturalists walks•LEAF Tree Tour•Humber Valley Heritage Trail Association•Citizens Coalition for the Future of the Etobicoke Waterfront•Toronto Ornithological Club |

Colonial Waterbirds of Tommy Thompson Park, 2010



Double-crested
Cormorant
9434 nests



Common Tern
231+ nests



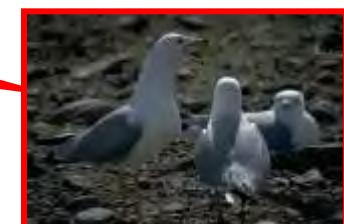
Great Egret
5 nests



Black-crowned
Night-Heron
434 nests



Herring Gull
<20 nests



Ring-billed Gull
30,000 nests

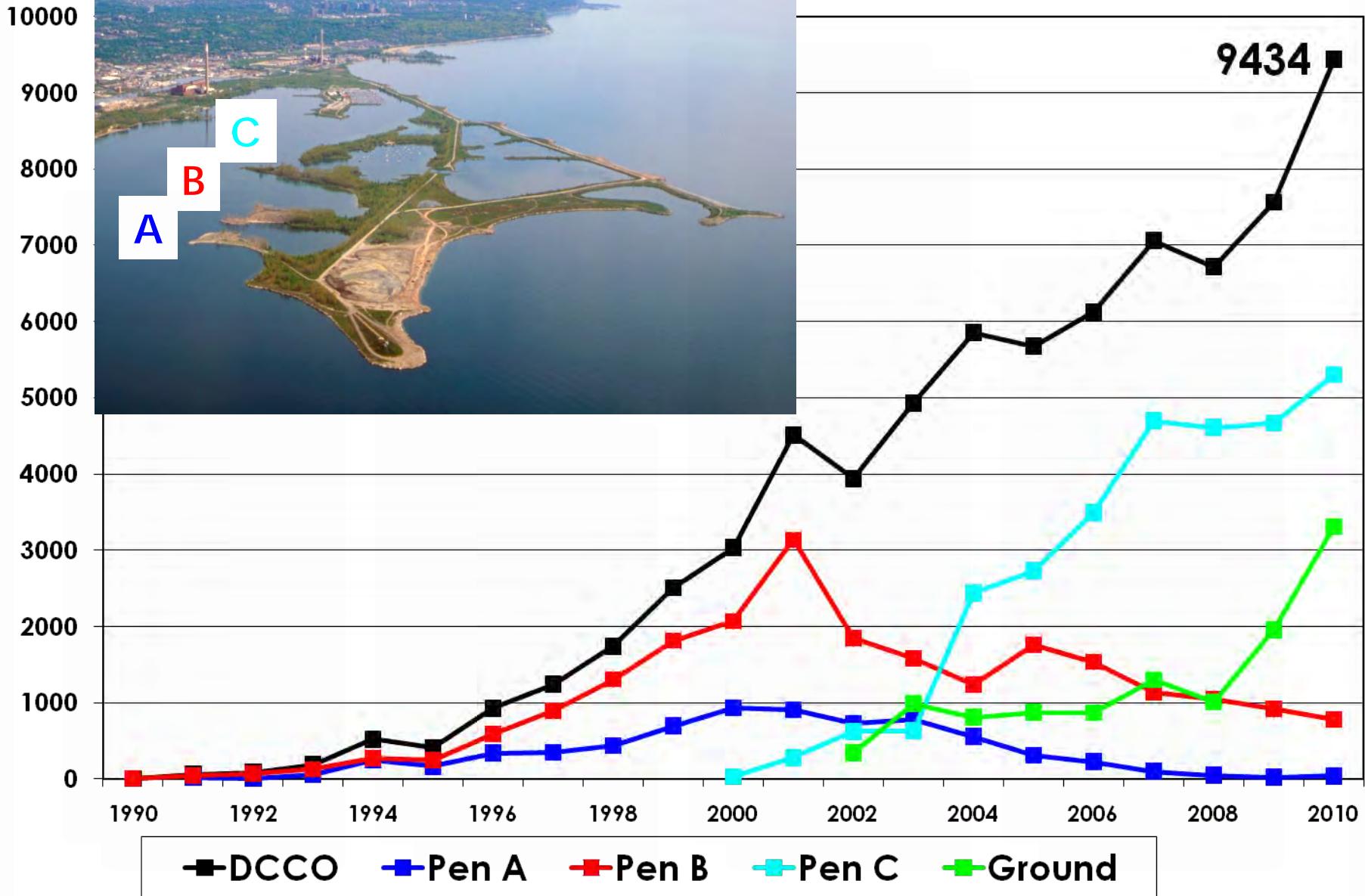
DCCO Nests by Peninsula



Peak nest count data collected during the last week of May, first week of June annually

| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| A | 933 | 909 | 730 | 779 | 557 | 311 | 228 | 101 | 49 | 22 | 39 |
| B | 2071 | 3048 | 1844 | 1582 | 1241 | 1763 | 1535 | 1072 | 1050 | 917 | 781 |
| B ground | | | 344 | 948 | 809 | 872 | 868 | 1302 | 1009 | 1957 | 3310 |
| C | 30 | 282 | 625 | 633 | 2439 | 2728 | 3494 | 4584 | 4609 | 4668 | 5304 |
| Total | 3034 | 4237 | 3543 | 3942 | 5046 | 5674 | 6125 | 7059 | 6717 | 7564 | 9434 |

TTP DCCO Nests by Peninsula



BCNH Nests by Peninsula



Peak nest count data collected during the last week of May, first week of June annually

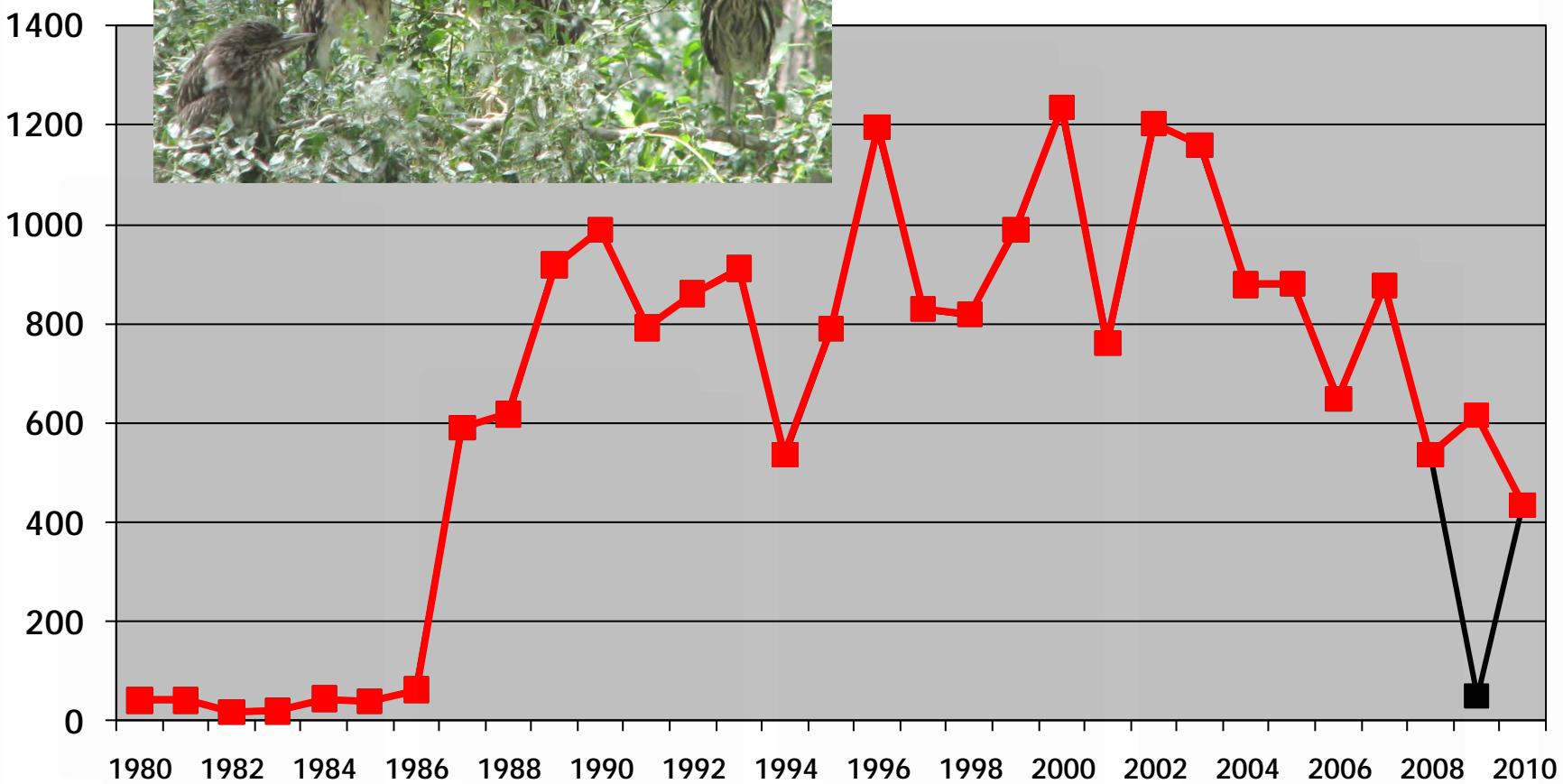
| | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 |
|--------------|-------------|------------|-------------|-------------|------------|------------|------------|------------|------------|-------------|------------|
| A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 |
| B | 0 | 0 | 163 | 255 | 278 | 270 | 145 | 146 | 81 | 38 | 3 |
| C | 1235 | 762 | 1040 | 904 | 601 | 610 | 504 | 730 | 455 | 546 | 431 |
| Total | 1235 | 762 | 1203 | 1159 | 879 | 880 | 649 | 876 | 536 | 584* | 434 |

* Almost all nests abandoned mid-season

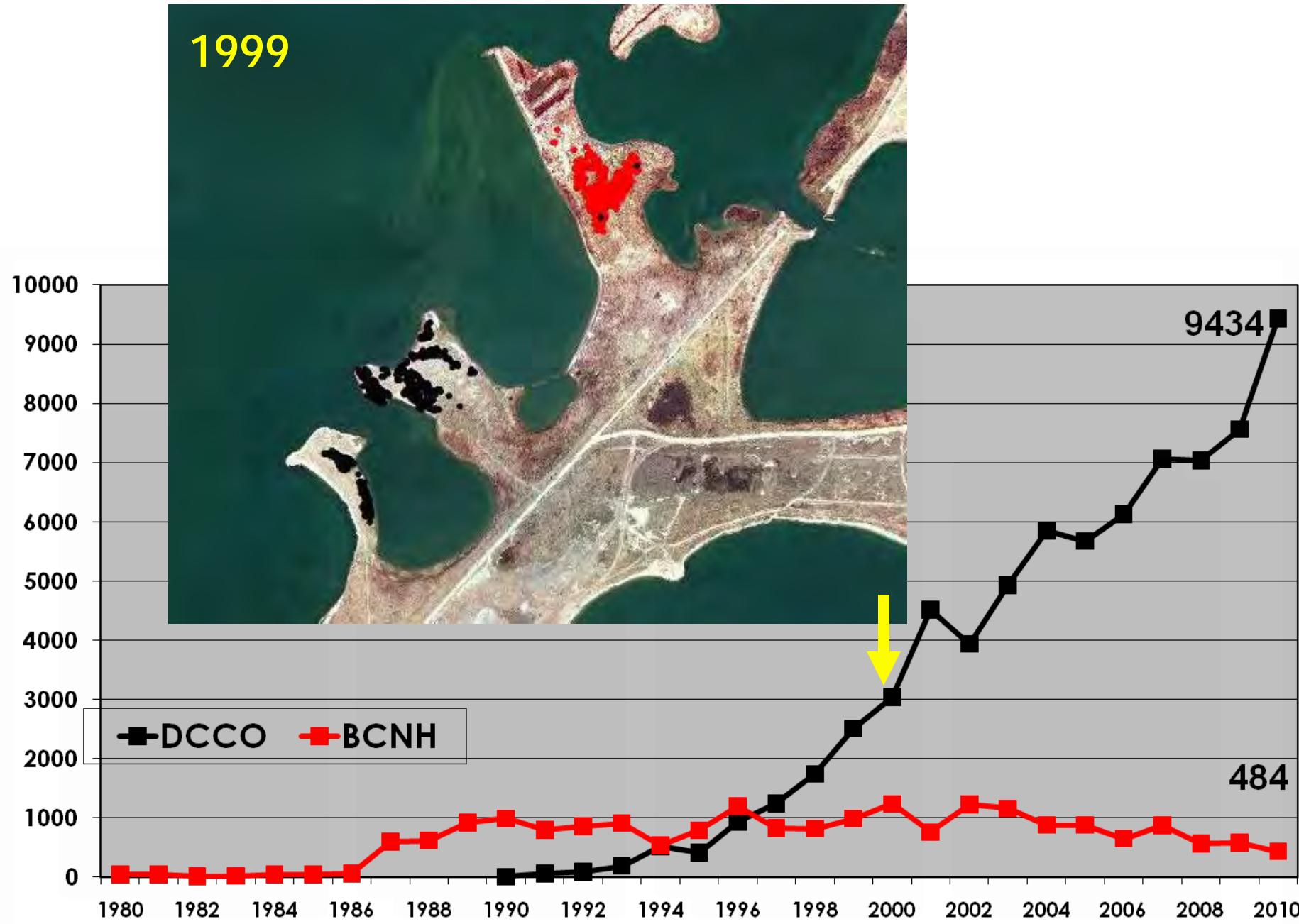
BCNH Peak Nest Numbers 1980 to 2010



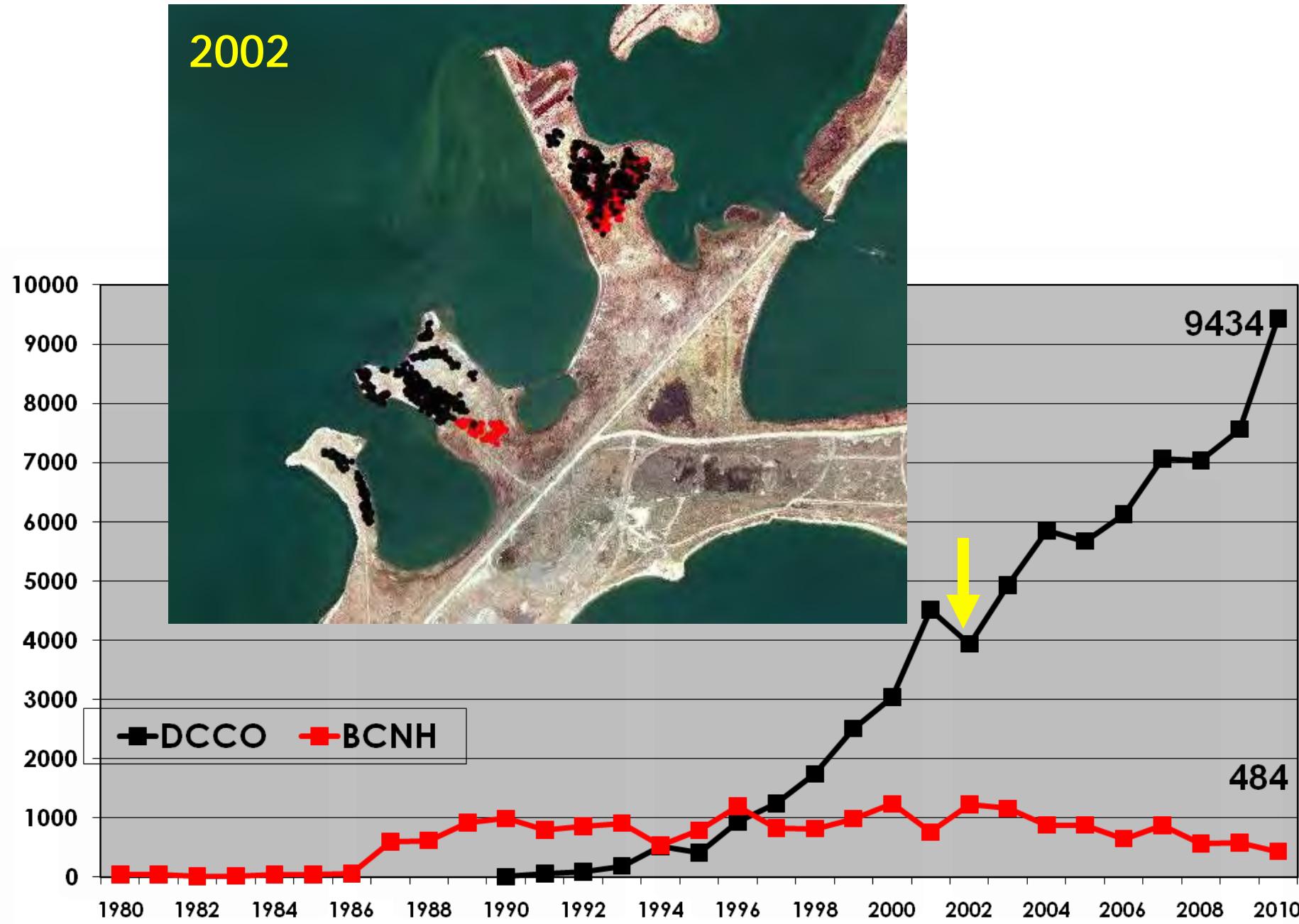
— Peak nest count numbers
— Mid-season nest numbers



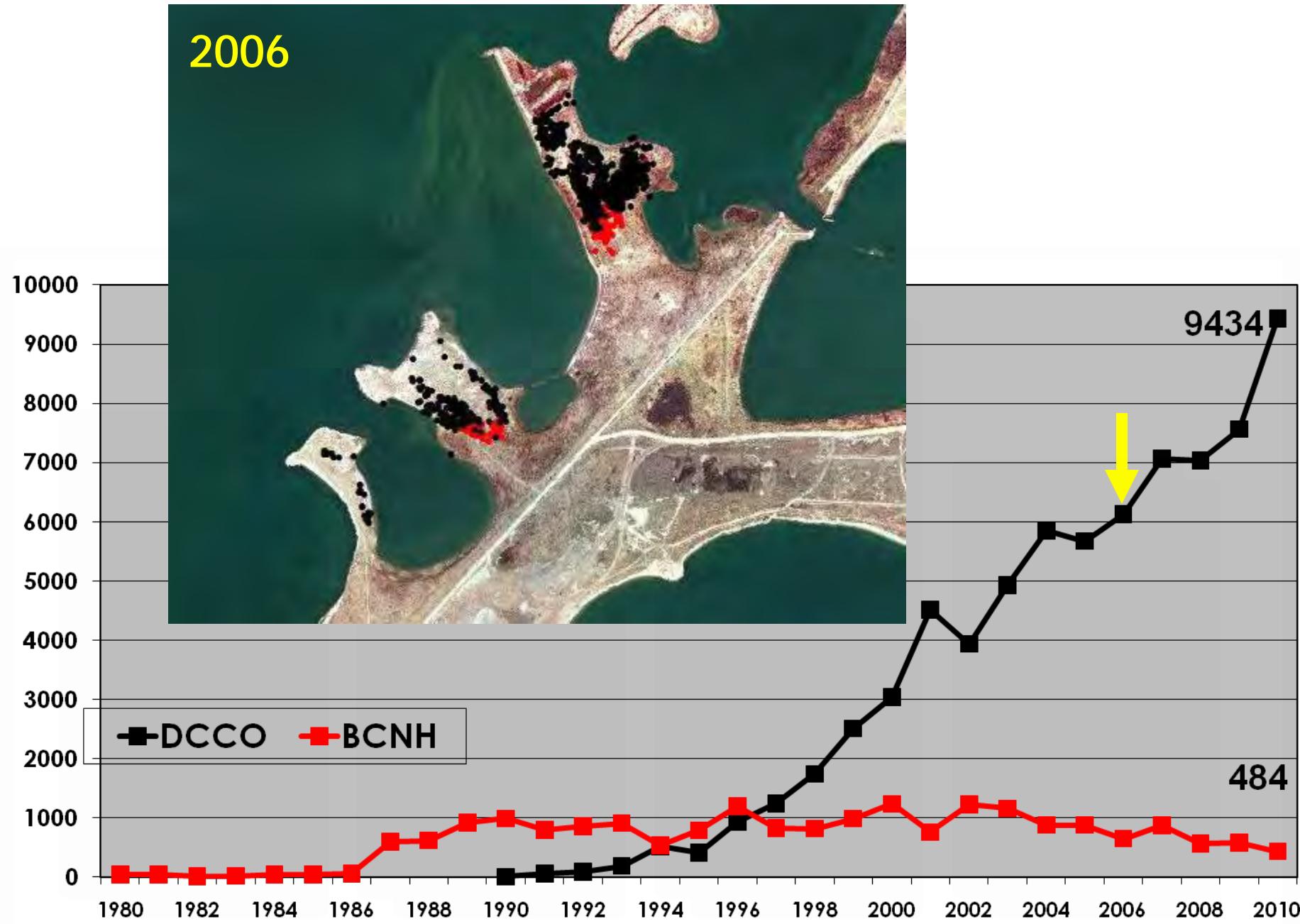
Nest Numbers of DCCO and BCNH at Tommy Thompson



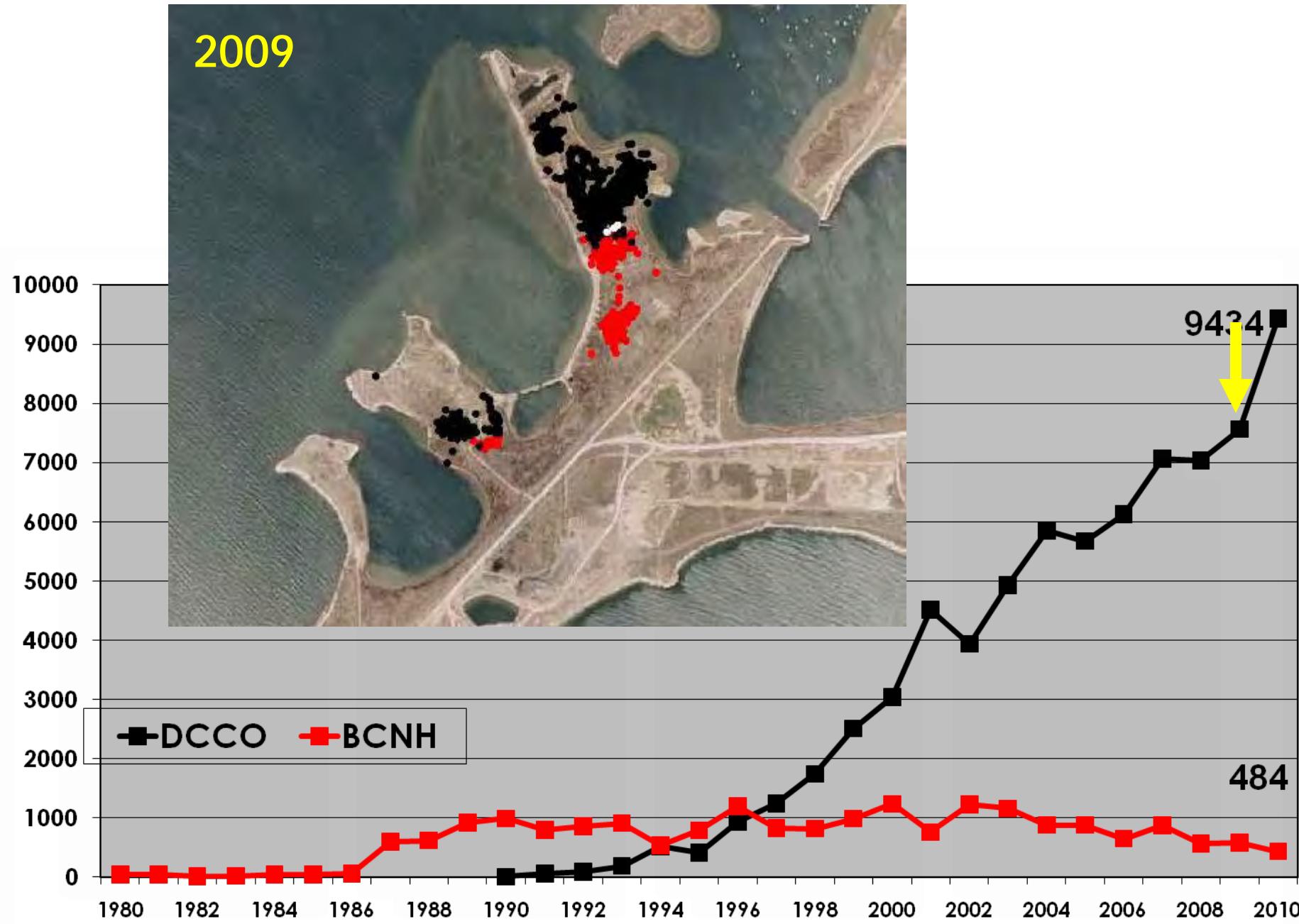
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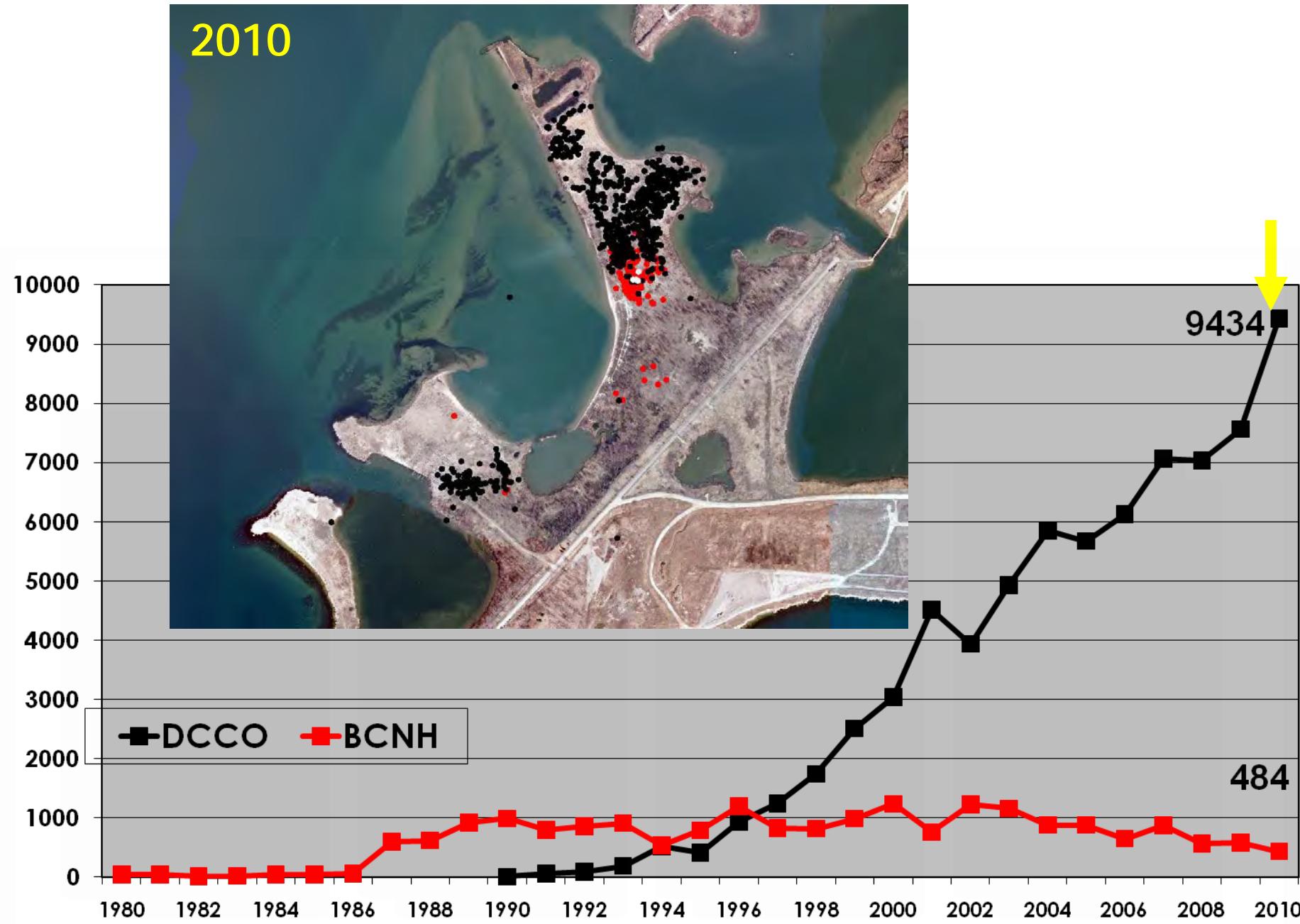
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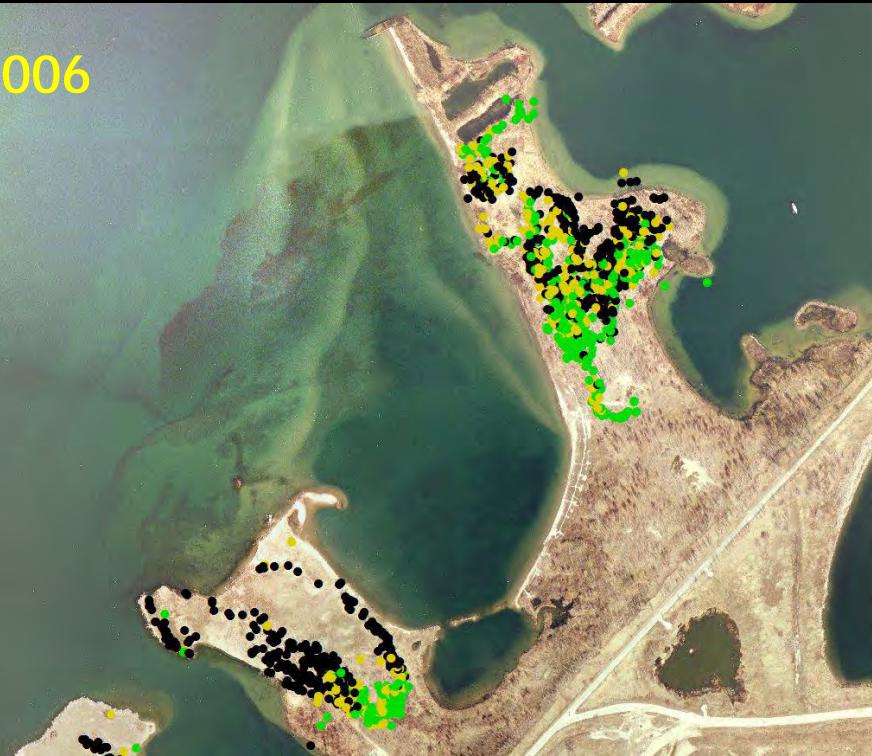


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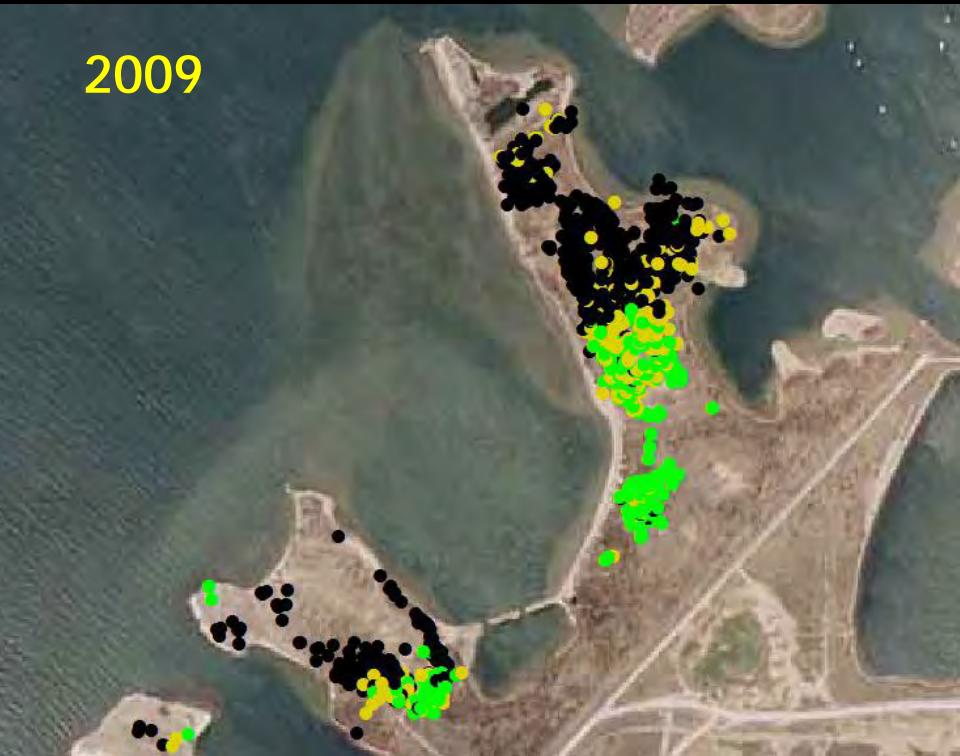


The Change in Tree Health between 2006 and 2009

2006

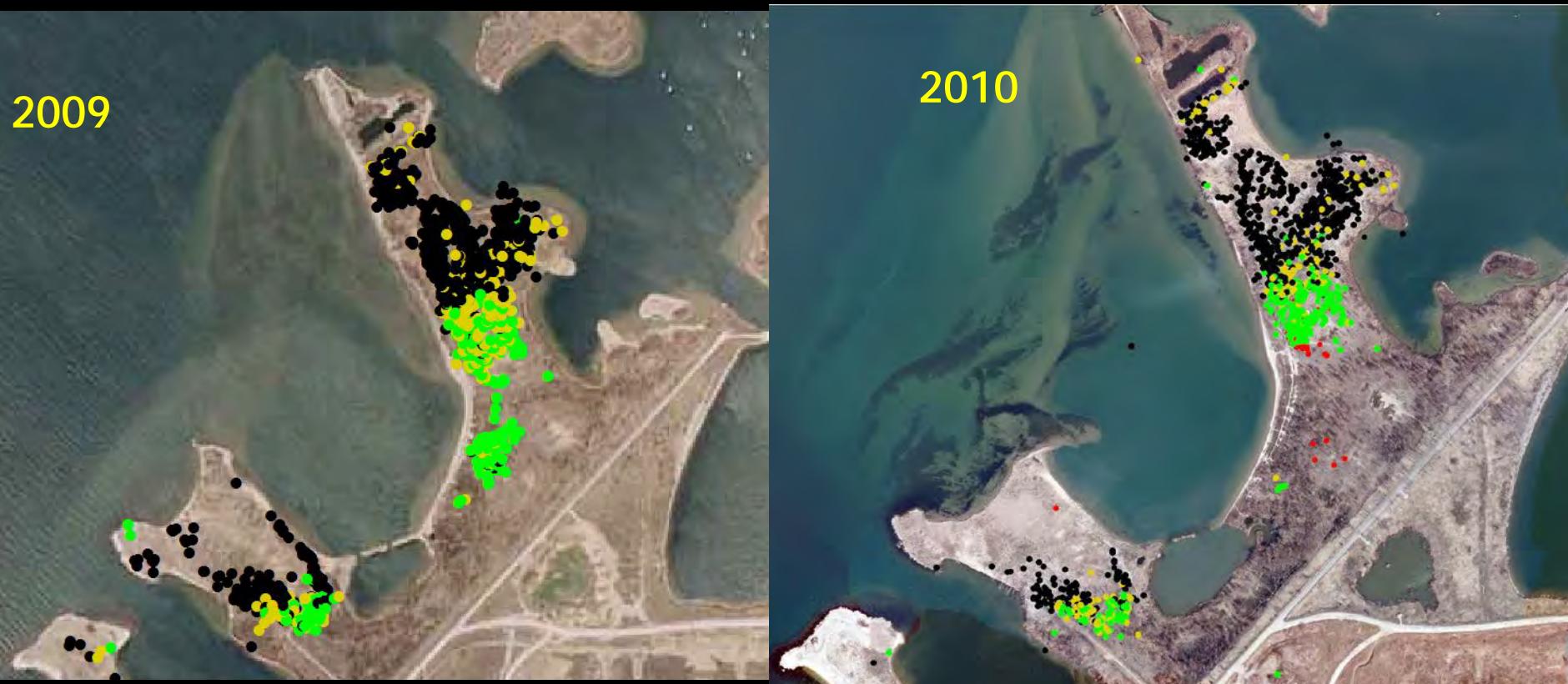


2009



- Live Trees
- Tree in Decline
- Dead or Dying Trees

The Change in Tree Health between 2009 and 2010



- Live Trees
- Tree in Decline
- Dead or Dying Trees

Strategic Approach 2010

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

Cormorant Conservation Zones



Inactive Nest Removal

Nests removed prior to breeding season

- 2001-2003 - Professional tree climbers removed inactive nests from Peninsula C
- 2004 and 2010 nest removal was done with forestry poles

| Year | Nests Removed |
|------|---------------|
| 2001 | 31 |
| 2002 | 281 |
| 2003 | 647 |
| 2004 | ~400 |
| 2010 | 32 |



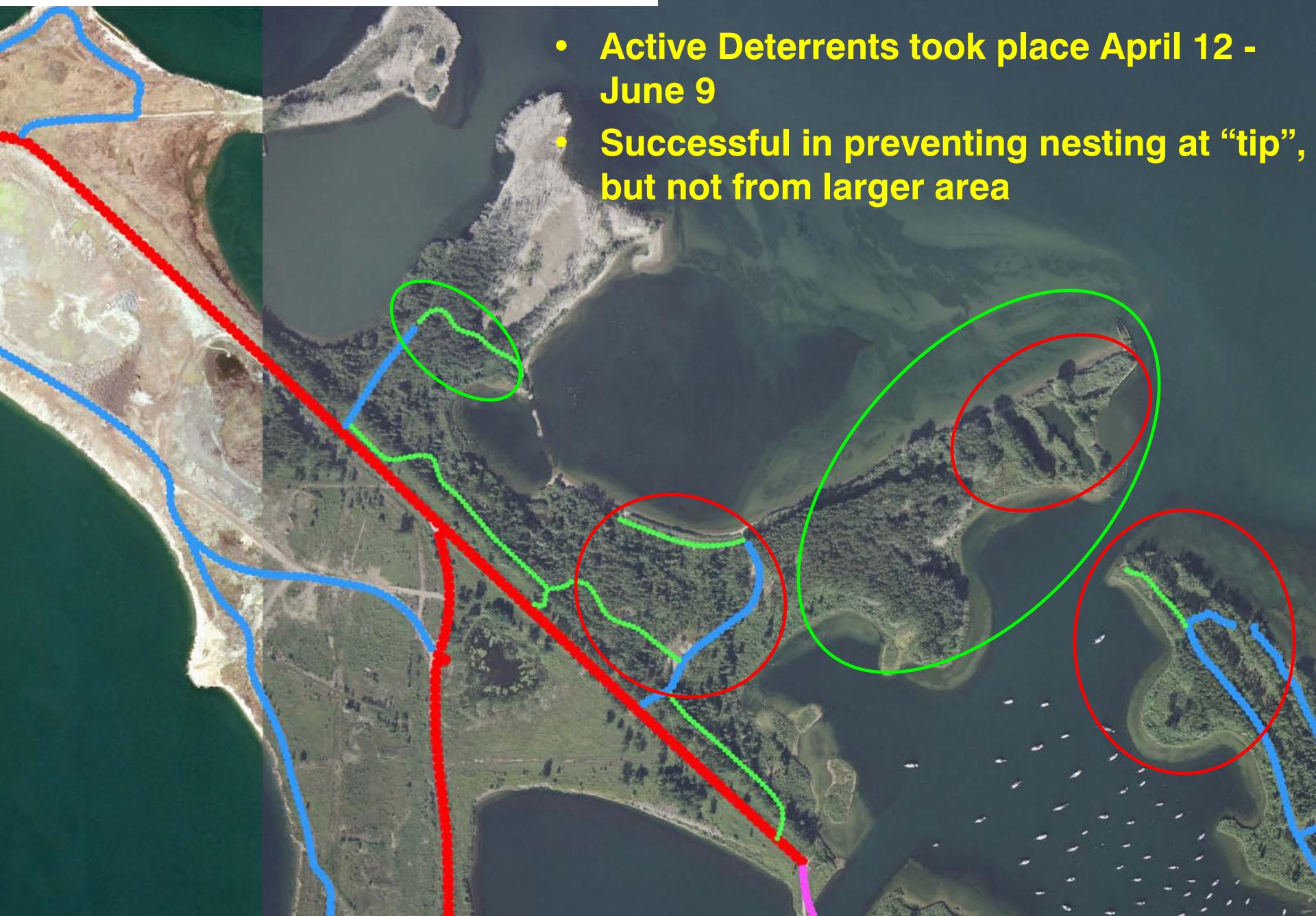
Pre-Nesting Deterrents

- Least intrusive methods favoured
- Techniques will escalate if necessary
- Caution around other nesting species



- **Human Presence**
 - Public use
 - Staff activities
- **Artificial Predators**
- **Noisemakers**
 - Staff controlled
 - Automatic devices
- **Active Nest Removal**

Pre-Nesting Deterrents - 2010



- Active Deterrents took place April 12 - June 9
- Successful in preventing nesting at “tip”, but not from larger area

Monitoring Locations

- 40 person hours spring 2010
- 9 minute average session
 - pre-deterrant
 - active-deterrant

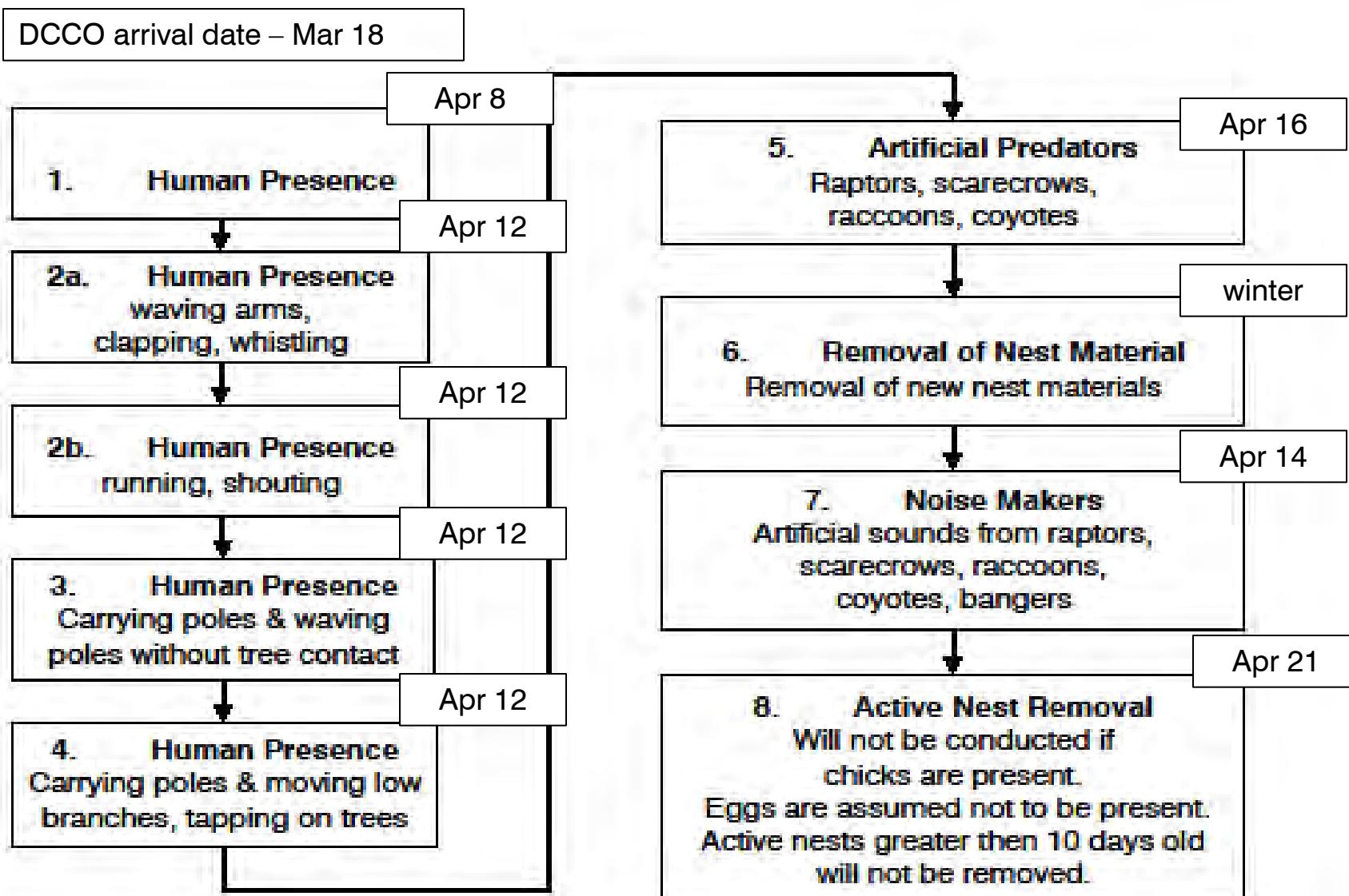


Peninsula C

- Day and night deterrents
- Scarecrow
- Mimic nest predation
- Inactive nest removal
- Active nest removal



2010 Deterrent Escalation

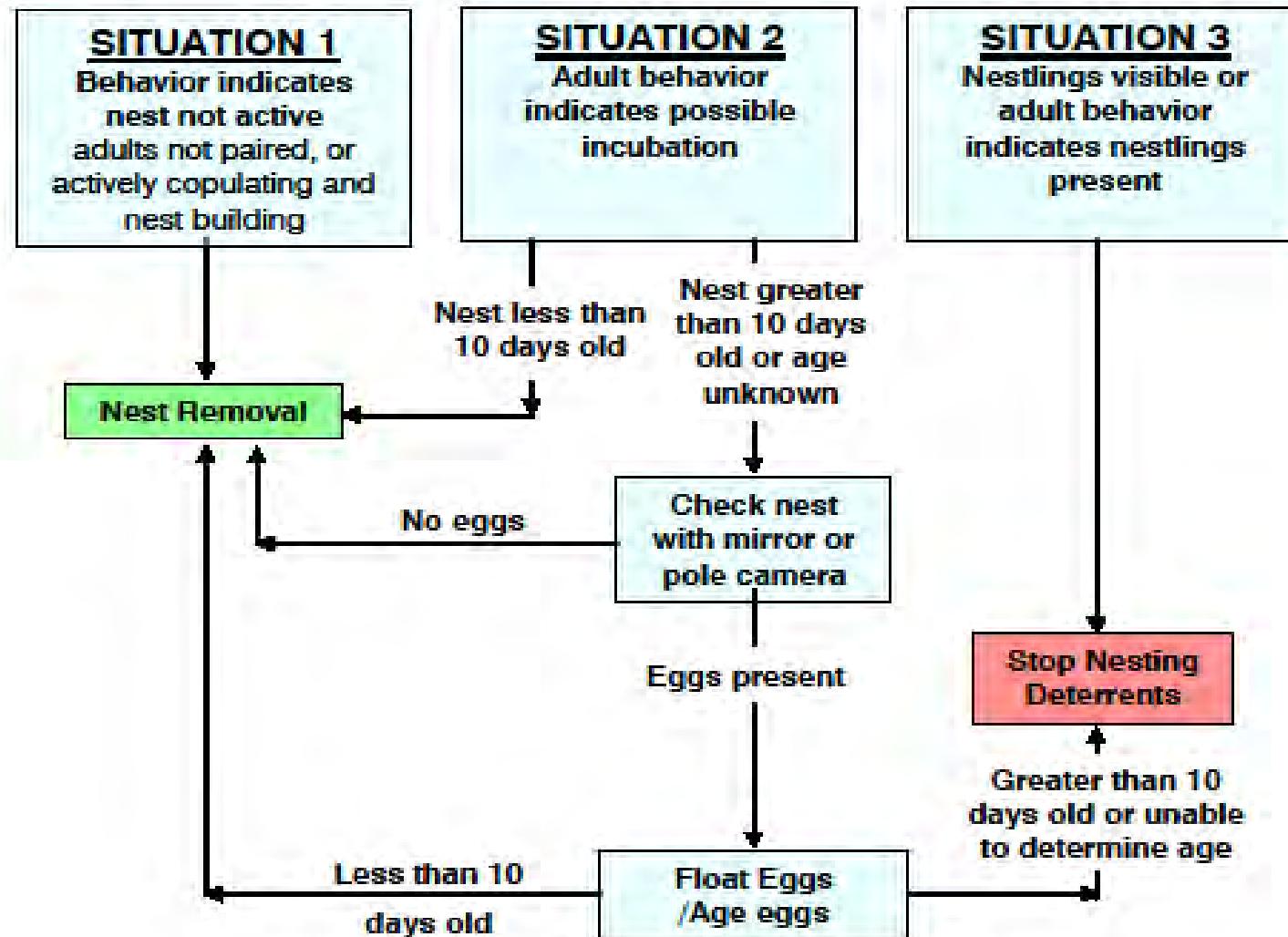


Active Nest Removal

- 83 trees tracked in Primary Deterrent Area
- 72 full and partial nests removed



2010 Active Nest Removal Flow Chart



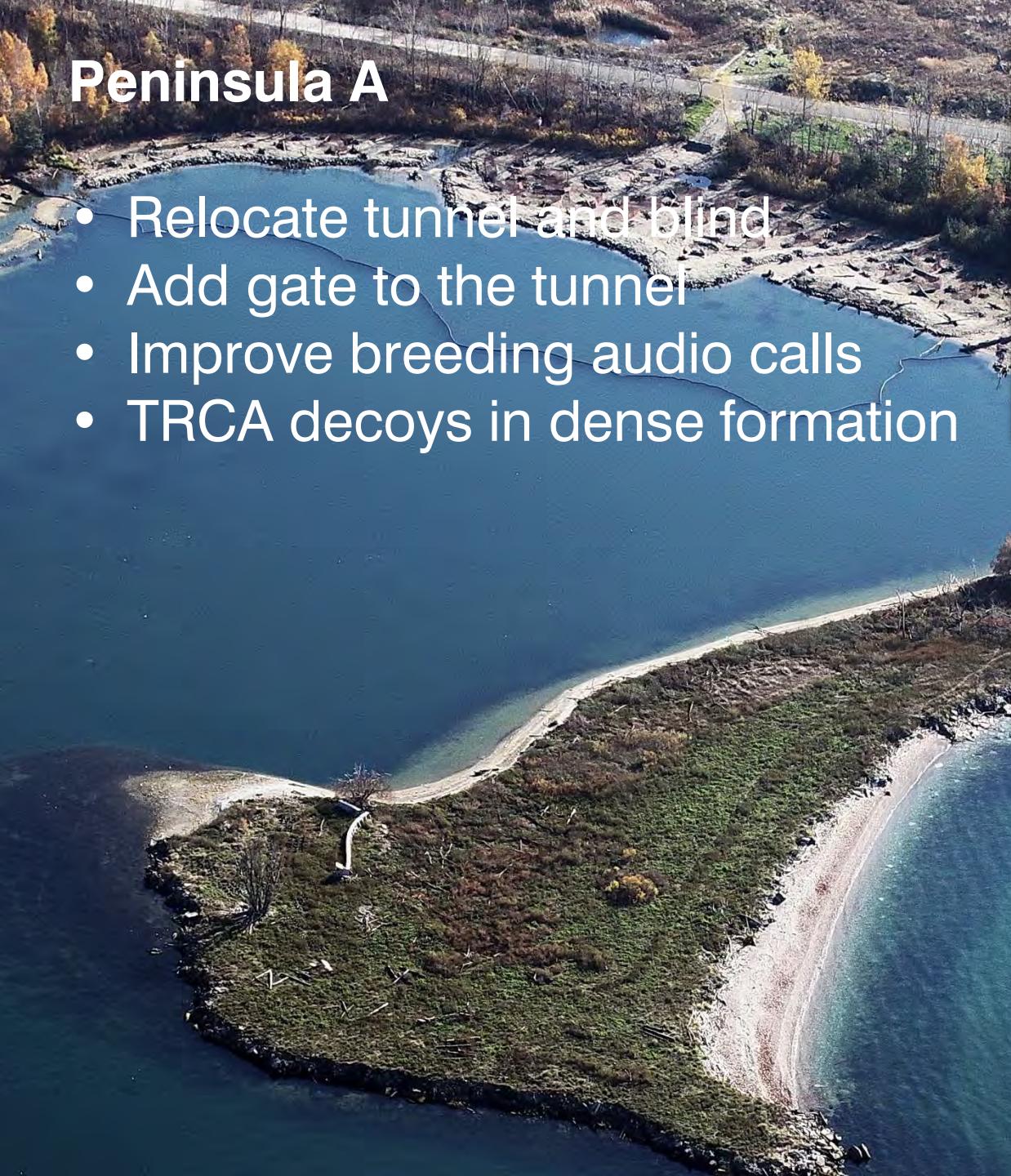
Enhanced Ground Nesting

- Add structure
- Provide nest building materials
- Decoys
- Minimize disturbance

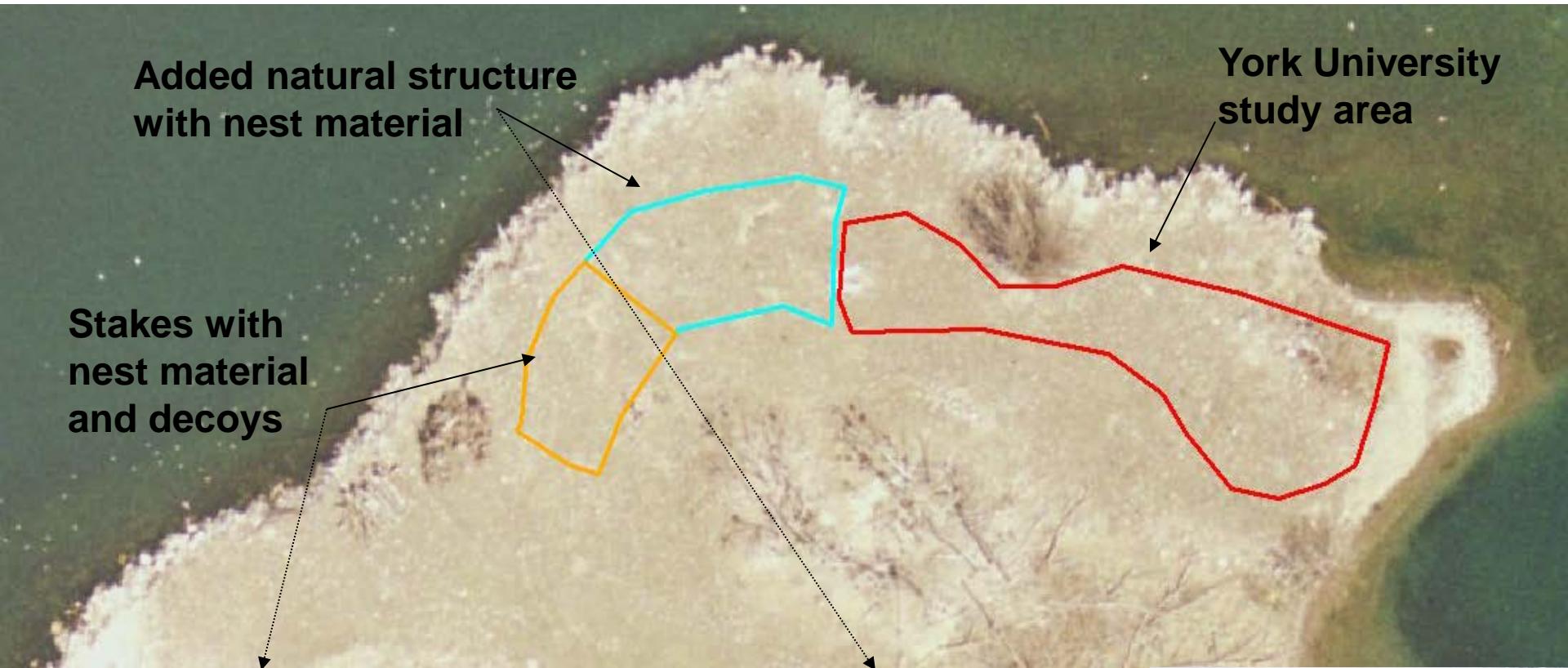


Peninsula A

- Relocate tunnel and blind
- Add gate to the tunnel
- Improve breeding audio calls
- TRCA decoys in dense formation



PENINSULA A - 2010 GROUND NEST ENHANCEMENTS





Peninsula B

- Add downed tree nests and nest material to existing ground nest plot to expand area
- Add structure to east side of Peninsula
- Add TRCA decoy plot on east side of Peninsula



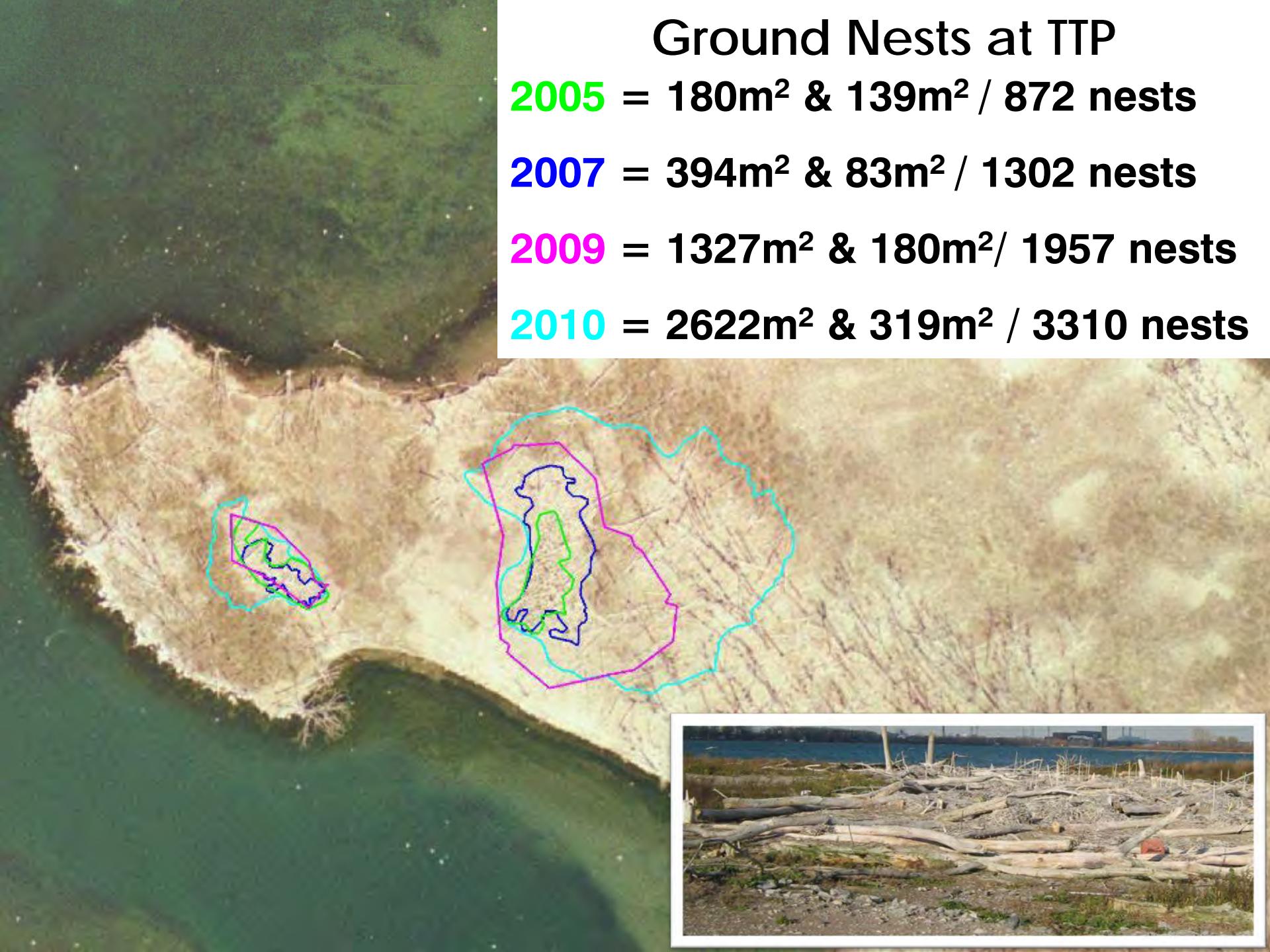
Ground Nests at TTP

2005 = 180m² & 139m² / 872 nests

2007 = 394m² & 83m² / 1302 nests

2009 = 1327m² & 180m² / 1957 nests

2010 = 2622m² & 319m² / 3310 nests



Restoration



- Soil amendments
- Tree & shrub planting
- Herbaceous planting/seeding
- Plant tending until established
- Protection from herbivory, loafing

Peninsula A Restoration

Soil augmentation & nodal plantings of site appropriate species:

- Willow species
- Red-osier dogwood
- Speckled alder
- Poplar species
- White elm
- Herbaceous species



Peninsula B Restoration



Soil augmentation & nodal plantings of site appropriate species:

- Willow species
- Red-osier dogwood
- Speckled alder
- Staghorn sumac
- Herbaceous species



Peninsula C Restoration

Nodal plantings of site appropriate species:

- Willow species
- Red-osier dogwood
- Hackberry
- Poplar species
- White spruce
- Herbaceous species



2010 Season Summary

- Prevented expansion onto Peninsula D
- Ground nests increased by 228% from 2008 (from 15% of the total colony in 2008 to 35% of the total colony in 2010)
 - Two cormorants “acting nesty”
 - Prospecting
- Number of trees used decreased however tree nests increased
- BCNH population rebounded after abandonment in 2009



Photo by: G. Fraser



Photo by: G. Fraser

Where are We Going?

- Focus inactive nest removal on class 1 to 3 trees?
- Continue with enhanced ground nesting activities and attraction
- Continue tree nesting deterrents
- Start deterring earlier?
- Re-target deterrent area?



Photo by: G. Fraser





Thank you!

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