MANAGEMENT OF COLONIAL WATERBIRDS AT TOMMY THOMPSON PARK

CORMORANT ADVISORY GROUP MEETING #5

www.trca.on.ca/cormorants

Wednesday, February 4, 2009
6:30 p.m. to 8:30 p.m.
Mennonite New Life Centre,
1774 Queen Street East, Toronto

TORONTO AND REGION Conservation for The Living City

Tommy Thompson Park
Toronto's Urban Wilderness

CORMORANT ADVISORY GROUP
MEETING #5
Wednesday February 4, 2009
6:30 p.m. to 8:30 p.m.

AGENDA

6:35pm	**Welcome and Introductions** **Review of Draft Meeting # 4 Notes**	Suzanne Barrett
6:45pm	**Review Additional 2008 Data**	Ralph Toninger
7:00pm	**Proposed Strategic Approach for 2009** • Discussion	Ralph Toninger All
8:30pm	**Wrap-up and next steps**	Suzanne Barrett

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

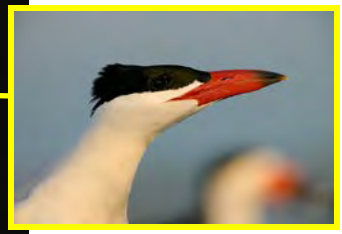
Nesting Pairs of Colonial Waterbirds at TTP 2008

Double-crested Cormorant
7,038

Common Tern
~310

Great Egret
6

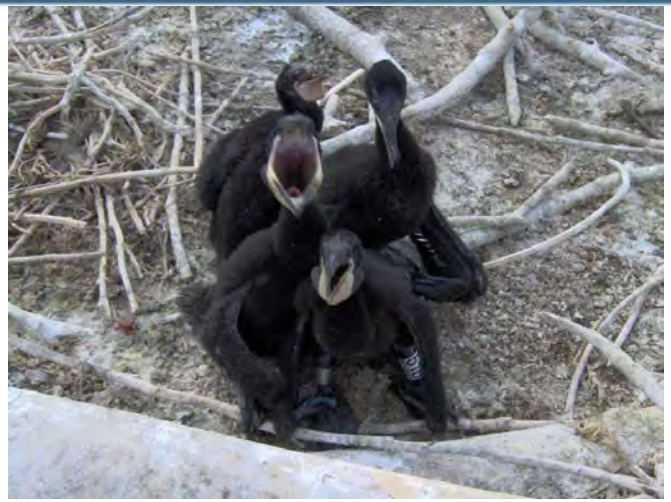
Black-crowned Night-Heron
566



Caspian Tern
0

Herring Gulls
30

Ring-billed Gulls
30,000

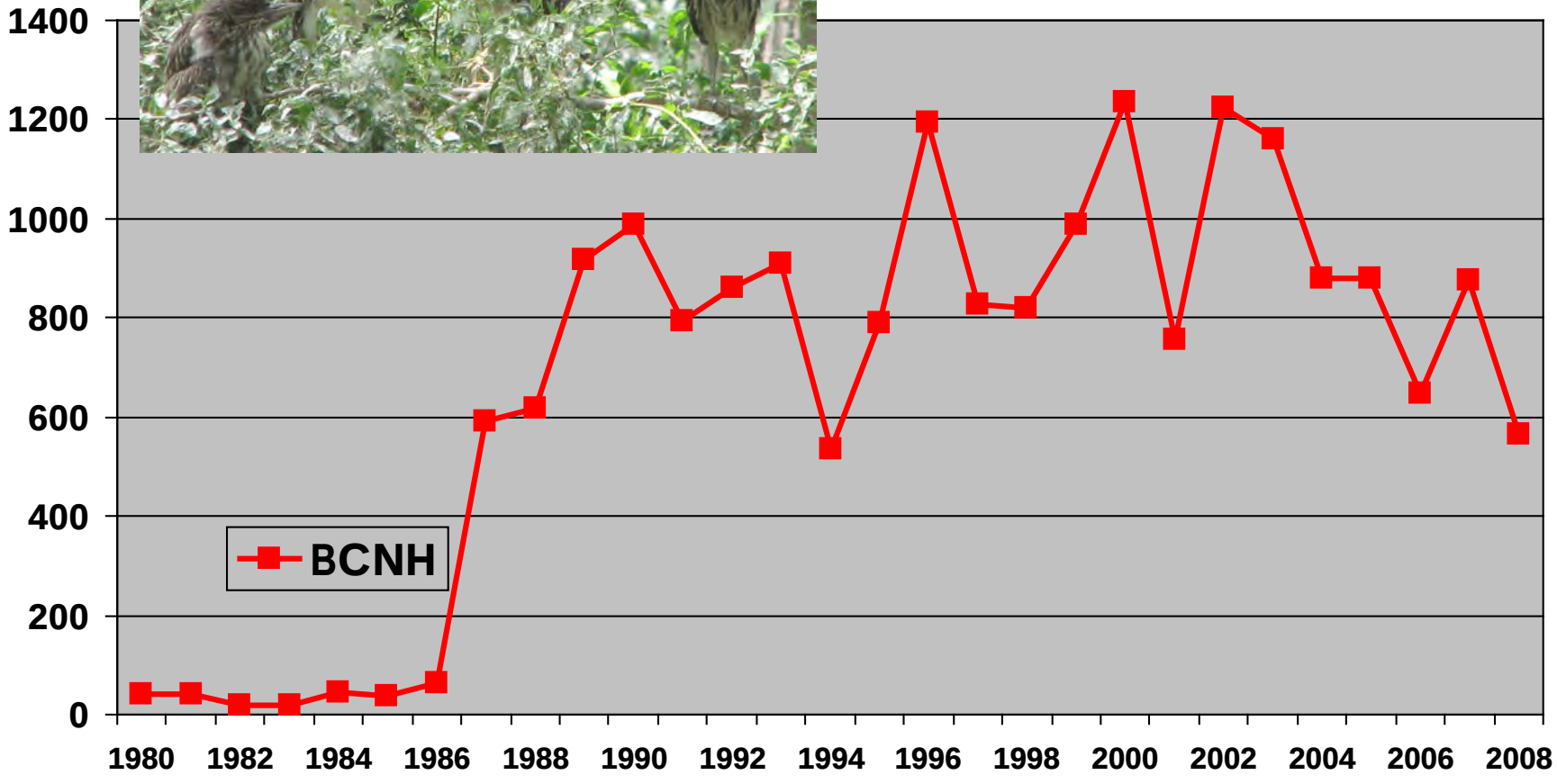


DCCO Nest Numbers 1998 to 2008

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
A	436	695	933	907	730	779	557	311	228	101	49
B	1307	1814	2071	3138	1844	1582	1241	1763	1535	1139	1074
B ground					344	990*	809	872	868	1302	1009
C	0	0	30	281	625	633	2439	2728	3494	4699	4906
Total	1743	2509	3034	4510	3543	3942	5855	5674	6125	7241	7038

- Peninsula A =42, and Peninsula B =948

BCNH Nest Numbers 1980 to 2008



BCNH numbers by Peninsula

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
A	0	0	0	0	0	0	0	0	0	0	0
B	15	0	0	0	163	255	278	270	145	147	86
C	803	988	1235	758	1040	904	601	610	504	769	480
Total	818	988	1235	758	1223	1159	879	880	649	916	566

TTP Nests Numbers by Peninsula

8000
7000
6000
5000
4000
3000
2000
1000
0

1990 1992 1994 1996 1998 2000 2002 2004 2006 2008

DCCO Pen A Pen B Pen C Ground

Nests Numbers of DCCO and BCNH at Tommy Thompson

8000
7000
6000
5000
4000
3000
2000
1000
0

DCCO
BCNH

1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008

Nests Numbers of DCCO and BCNH at Tommy Thompson

8000
7000
6000
5000
4000
3000
2000
1000
0

DCCO
BCNH

1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008

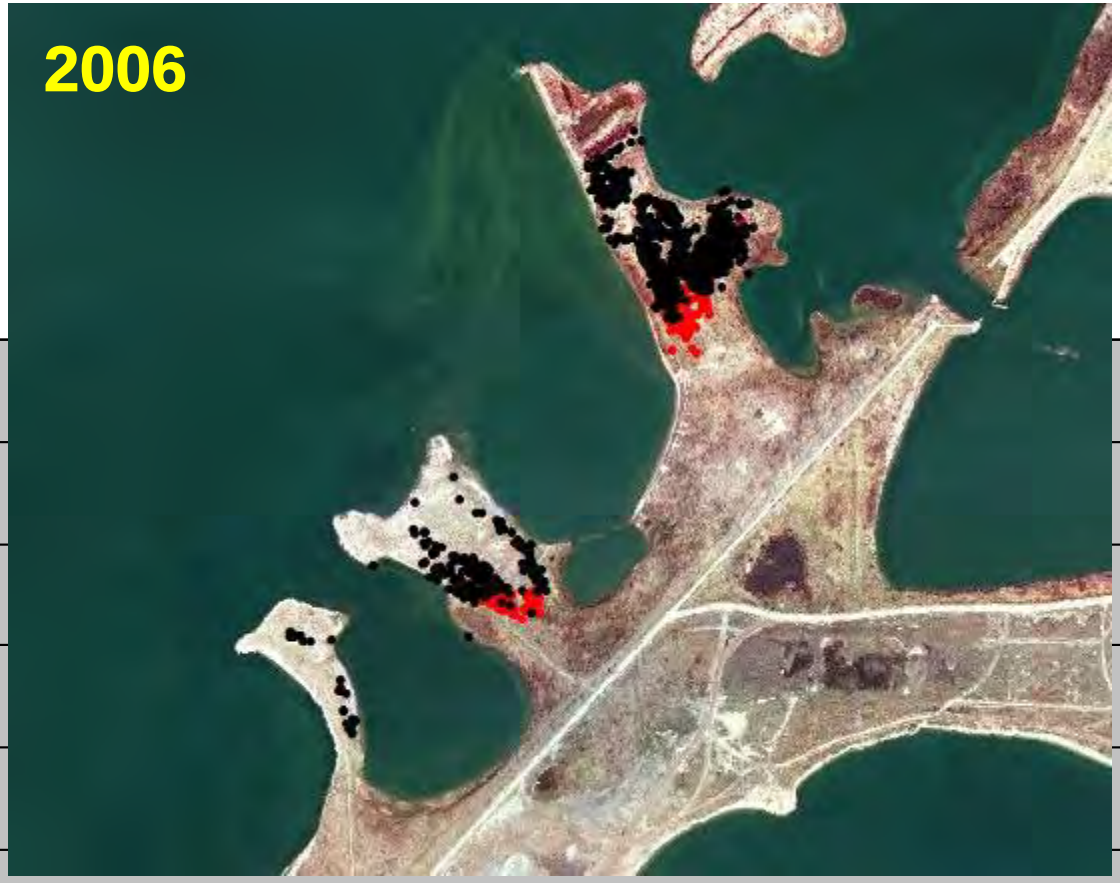
Nests Numbers of DCCO and BCNH at Tommy Thompson

8000
7000
6000
5000
4000
3000
2000
1000
0

DCCO
BCNH

1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008

Nests Numbers of DCCO and BCNH at Tommy Thompson



8000
7000
6000
5000
4000
3000
2000
1000
0

DCCO
BCNH

1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008

Nests Numbers of DCCO and BCNH at Tommy Thompson

8000
7000
6000
5000
4000
3000
2000
1000
0

DCCO
BCNH

1980 1982 1984 1986 1988 1990 1992 1994 1996 1998 2000 2002 2004 2006 2008

Number of trees with nests

	A	B	C	Grand Total
DCCO	4	178	847	1029
BCNH	0	50	203	253
BOTH	0	12	73	85
TOTAL	4	240	1123	1367

The Change in Tree Health between 1996 and 2006

- Live Trees
- Dead or Dying Trees

The Change in Tree Health between 2006 and 2008

Strategic Approach 2008

	Peninsula A	Peninsula B	Peninsula C	Peninsula D
Pre-Nesting Deterrents				*
Post-Breeding Deterrents			*	*
Enhanced Ground Nesting	*	*		
Restoration	*	*	*	*
Experimental Egg Oiling		*		

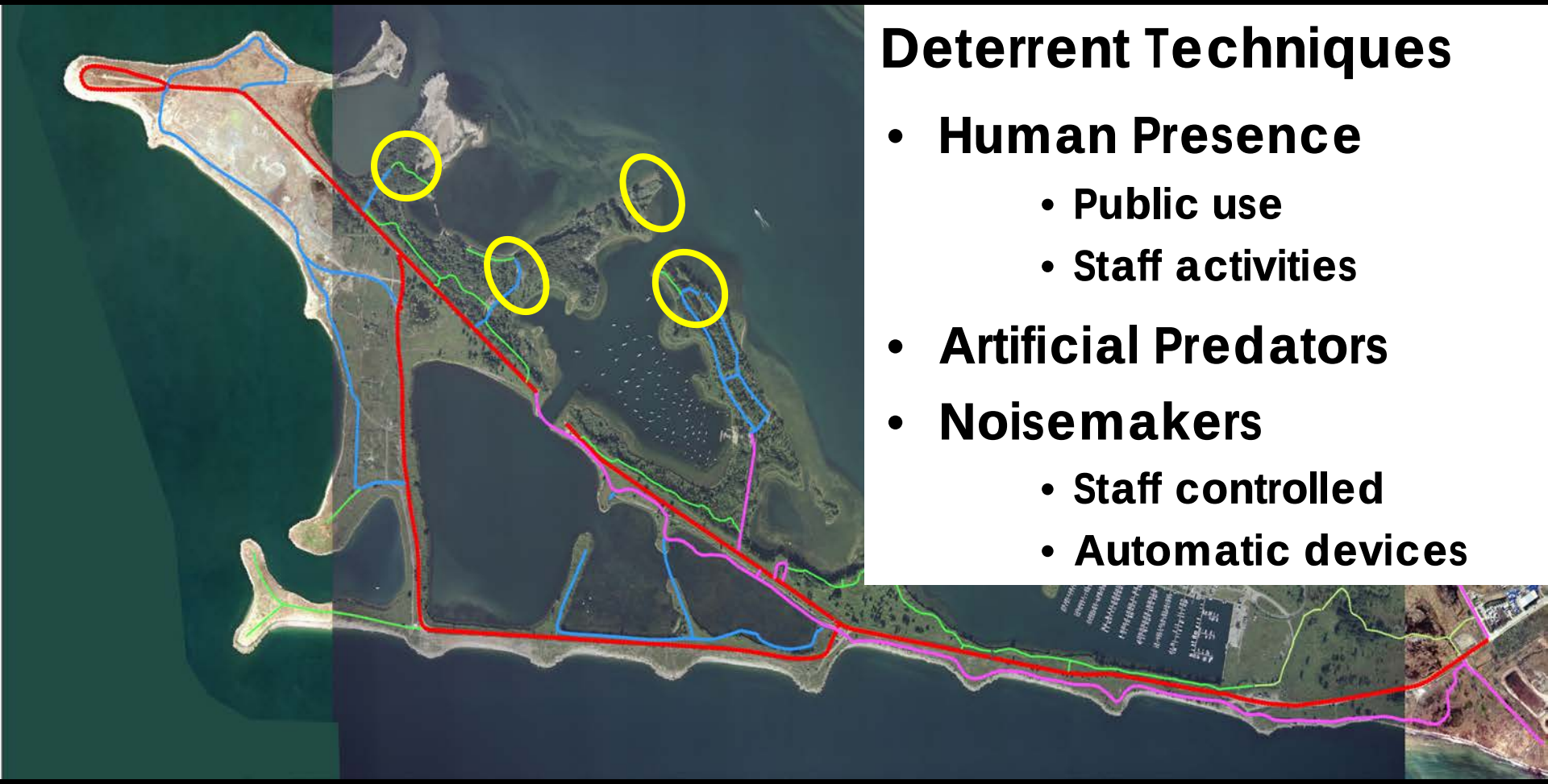
Proposed Strategic Approach 2009

	Peninsula A	Peninsula B	Peninsula C	Peninsula D
Pre-Nesting Deterrents		*	*	*
Post-Breeding Deterrents			*	*
Enhanced Ground Nesting	*	*		
Restoration	*	*	*	*
Experimental Egg Oiling (follow-up on nest attendance only)		*		

Cormorant Conservation Zones

Pre-Nesting Deterrents

- Least intrusive methods favoured
- Techniques will escalate if necessary
- Caution around BCNHs and GREGs



Deterrent Techniques

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

Pre-Nesting Deterrents

Rationale

- Deter cormorants from nesting in trees at the base of Peninsula B and on Peninsulas C and D using the least intrusive methods

Constraints

- Non-target species disturbance (BCNH, GREG)

Methods

- Human presence at irregular intervals throughout the day
- Other methods to be used only if necessary
  - artificial predators
  - noise makers
- Use of deterrents to be reduced or stopped if non-target disturbance is observed

Post-Breeding Deterrents

- Least intrusive methods favoured
- Techniques will escalate if necessary

Deterrent Techniques

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

Post-Breeding Deterrents

Rationale

- Deter cormorants from roosting in trees on Peninsulas C and D using the least intrusive methods

Constraints

- Non-target species disturbance

Methods

- Human presence at irregular intervals throughout the day
- Other methods to be used only if necessary
  - artificial predators
  - noise makers
- Use of deterrents to be reduced or stopped if non-target disturbance is observed

Deterrent Escalation

Human Presence

Human Presence
waving arms,
clapping, whistling

Human Presence
running, shouting

Human Presence
Carrying poles & waving
poles without tree contact

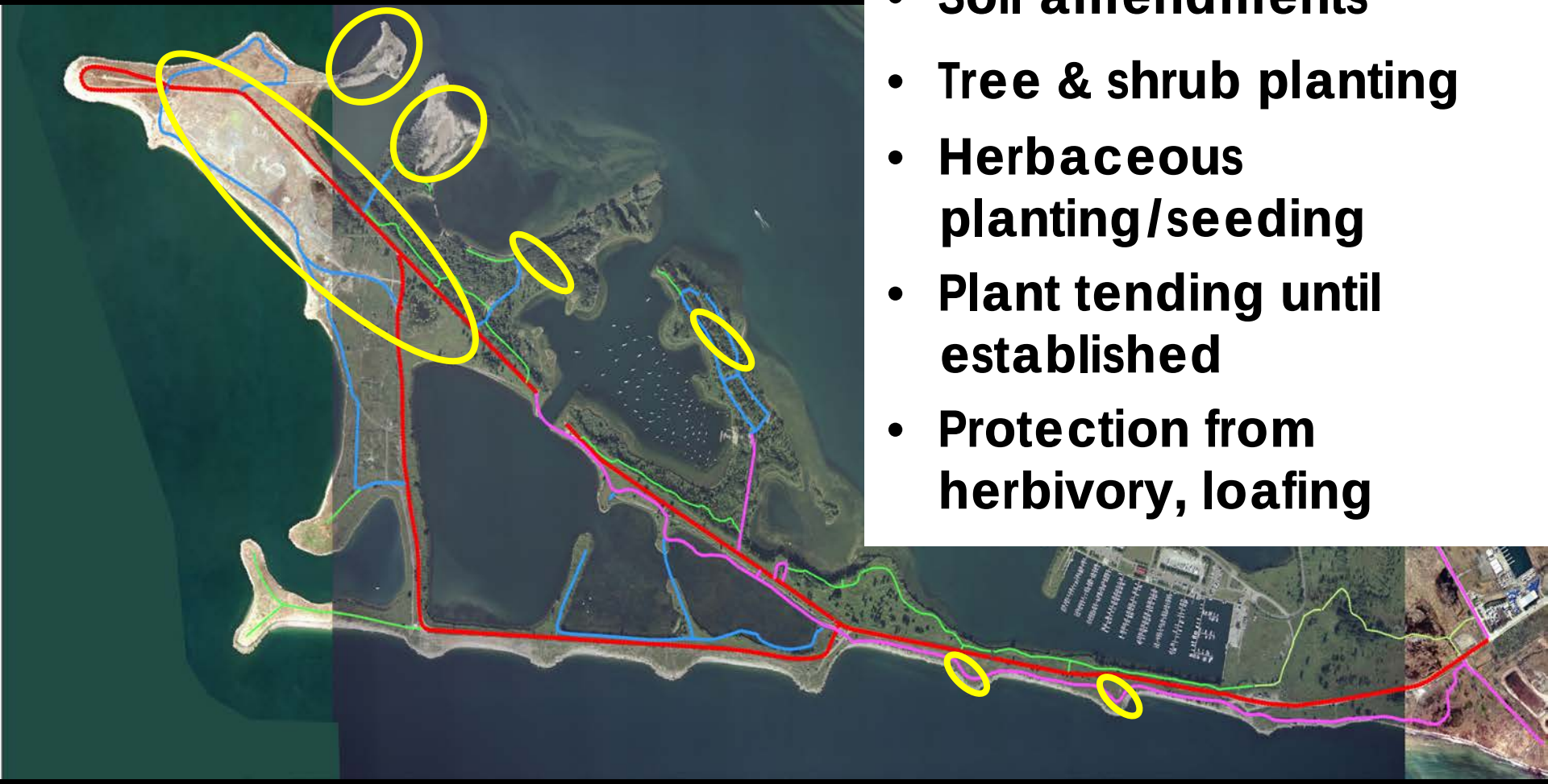
Human Presence
Carrying poles & moving low
branches, tapping on trees

Artificial Predators
Raptors, scarecrows,
raccoons, coyotes

Nest Removal
Removal of new nest materials
*Will not to be done if eggs are present
or cormorants do not leave the nest

Noise Makers
Raptors, scarecrows,
raccoons, coyotes

Restoration



Restoration Techniques

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

Restoration

Rationale

- Re-vegetate former nesting locations to improve overall habitat and provide future colonial waterbird habitat
- Enhance existing forest communities to provide habitat for BCNH and other wildlife
- Improve forest understory as a more significant barrier to colonial waterbird nesting sites

Constraints

- Soil quality and quantity
- Loafing waterbirds, herbivory

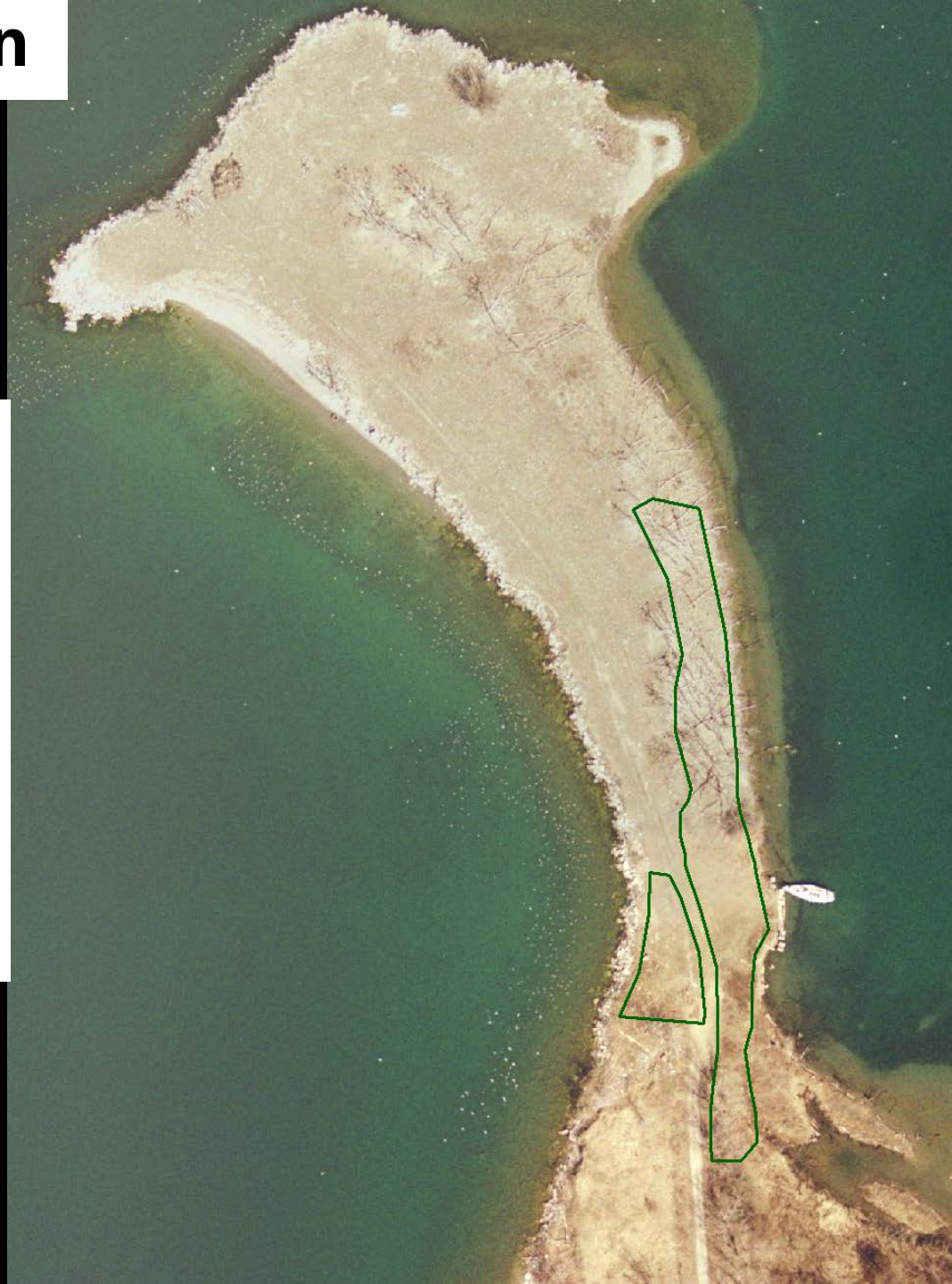
Methods

- Soil amendments
- Tree and shrub planting
- Herbaceous planting or seeding

Peninsula A Restoration

Soil augmentation & nodal plantings of site appropriate species:

-Willow species
-Red-osier dogwood
-Speckled alder
-Poplar species
-Herbaceous species
-Others?



Peninsula B Restoration

Soil augmentation & nodal plantings of site appropriate species:

- **Willow species**
- **Red-osier dogwood**
- **Speckled alder**
- **Herbaceous species**
- **Others?**

Peninsula C Restoration

Nodal plantings of site appropriate species:
-Willow species
-Red-osier dogwood
-Hackberry
-Poplar species
-Herbaceous species
-Others?

Enhanced Ground Nesting

Enhancement Techniques

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

Enhanced Ground Nesting

Enhancement Techniques

- Placement of structure
  - Wood stakes
  - Low lying fallen logs
  - Tires
- Placement of nest materials
  - Fallen tree nests
  - Straw
  - Small woody material
- Decoys
- Minimize disturbances
- Protection from predators? (raccoons)

Ground Nests at TTP 2008

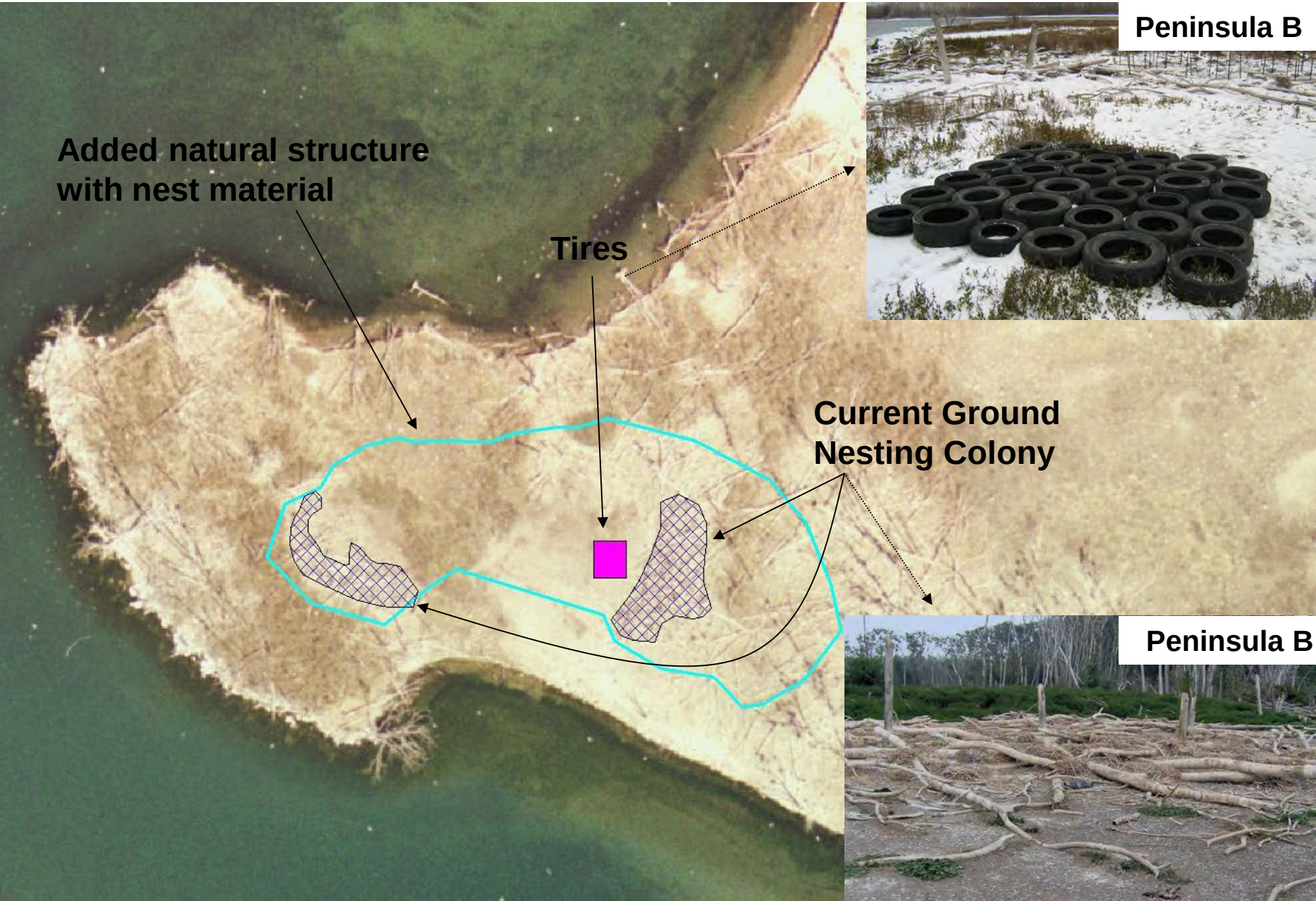
PENINSULA A - 2009 GROUND NEST ENHANCEMENTS

Added natural structure with nest material

York University study area

Stakes with nest material and decoys

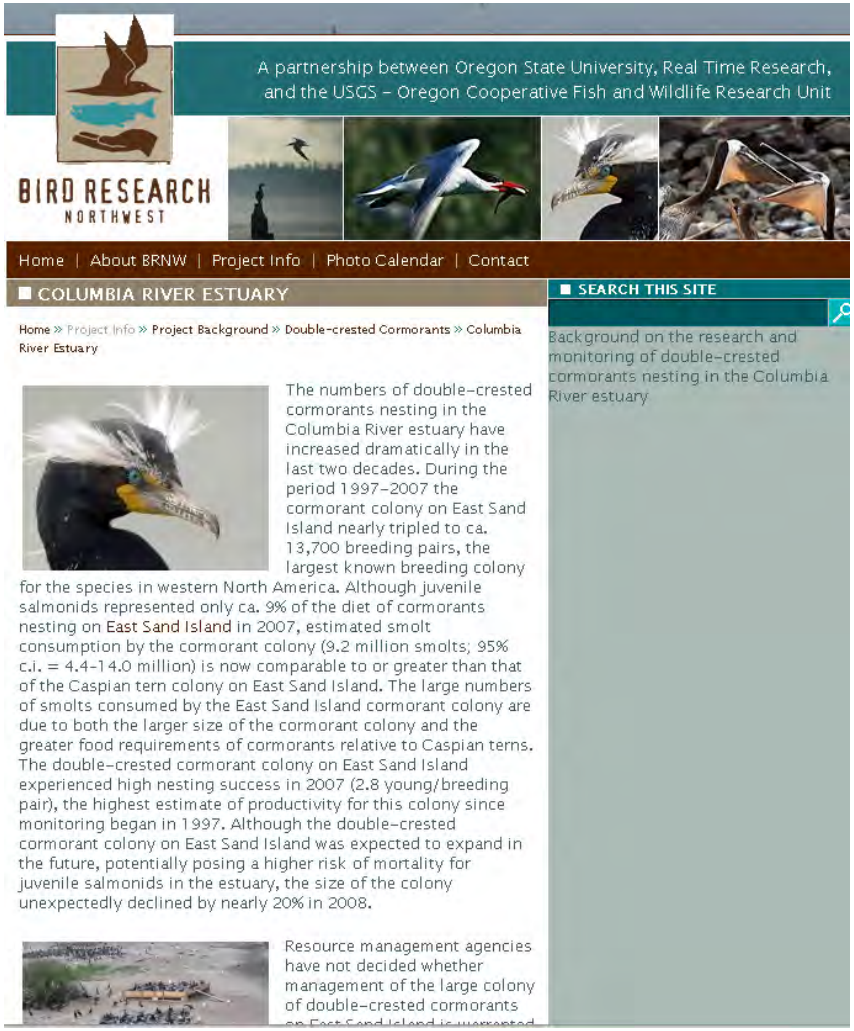
PENINSULA B - 2009 GROUND NEST ENHANCEMENTS



Ground Nest Enhancements at TTP

BIRD RESEARCH NORTHWEST

www.birdresearchnw.org



Research, Monitoring, and Evaluation of Avian Predation on Salmonid Smolts in the Lower and Mid-Columbia River

DRAFT 2007 Season Summary

This Draft 2007 Season Summary has been prepared for the Bonneville Power Administration and the U.S. Army Corps of Engineers for the purpose of assessing project accomplishments. This report is not for citation without permission of the authors.

Daniel D. Roby, Principal Investigator
USGS - Oregon Cooperative Fish and Wildlife Research Unit
Department of Fisheries and Wildlife
Oregon State University
Corvallis, Oregon 97331-3803
Internet: daniel.roby@oregonstate.edu
Telephone: 541-737-1955

Ken Collis, Co-Principal Investigator
Real Time Research, Inc.
52 S.W. Roosevelt Ave.
Bend, Oregon 97702
Internet: kcollis@realtimeresearch.org
Telephone: 541-382-3836

Donald E. Lyons, Yasuko Suzuki, Jessica Y. Adkins, Lauren Reinalda, Nathan Hostetter, and Lindsay Adrean
USGS - Oregon Cooperative Fish and Wildlife Research Unit
Department of Fisheries and Wildlife
Oregon State University
Corvallis, Oregon 97331-3803

Successful Ground Nest Enhancements

Next Steps

- Authority Meeting March 27, 2009
- Future Advisory Group consultation (twice yearly: fall & winter)

TORONTO AND REGION
Conservation
for The Living City

Tommy Thompson Park
Toronto's Urban Wilderness