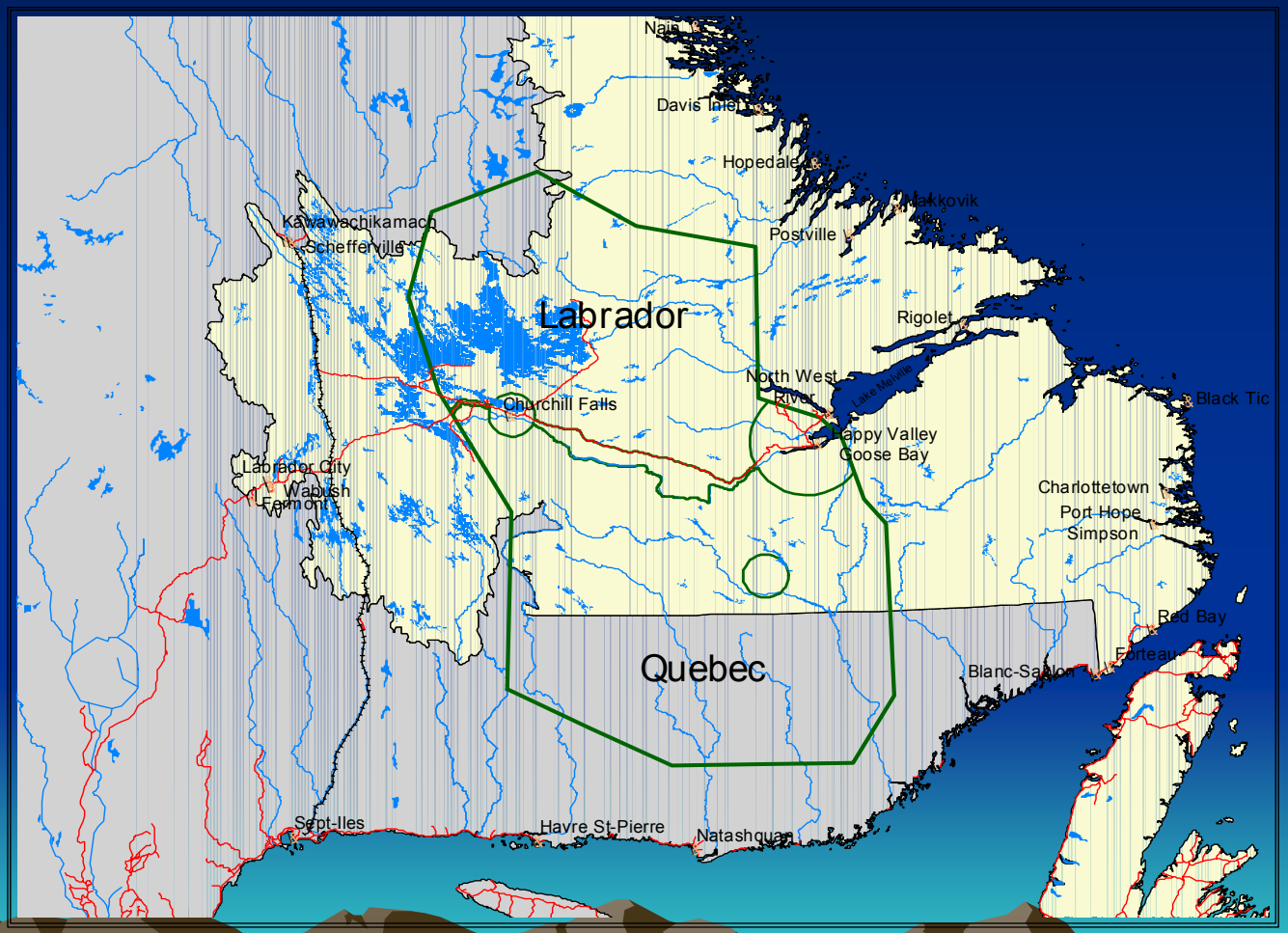
IEMR
Goose Bay, Labrador

Monitoring and Research

Louis LaPierre Ph.D.
Institute Chair

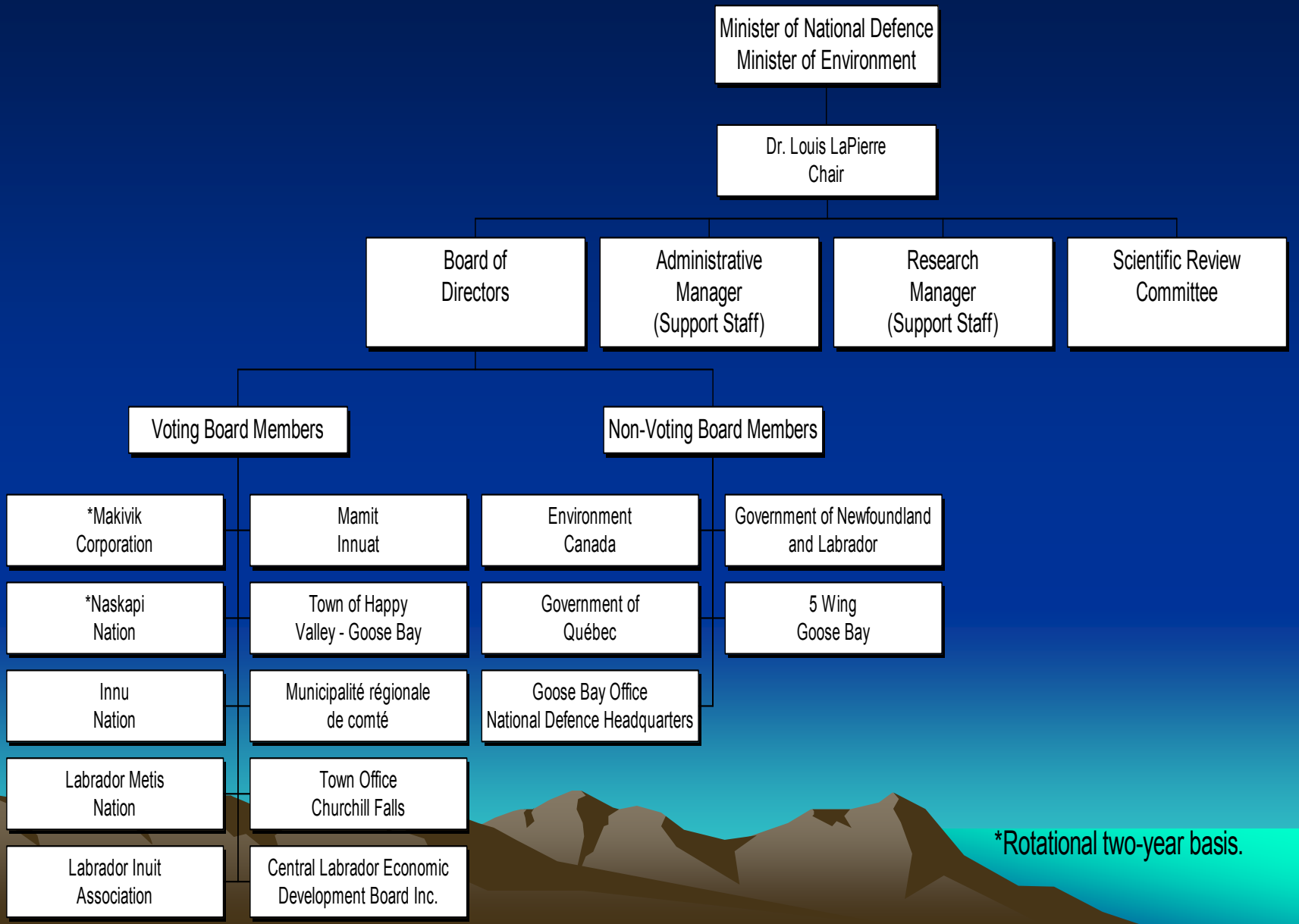
Low-level Training Area



IEMR

- Oversees the environmental effects of Allied flight training conducted from the Canadian Forces Base at 5 Wing Goose Bay.
- Is governed by a Board of Directors representing aboriginal and municipal groups in the region.
- Has developed policies, memoranda of understanding, solidified partnerships, collated existing data, identified research priorities, and initiated effects research.

Organization Chart



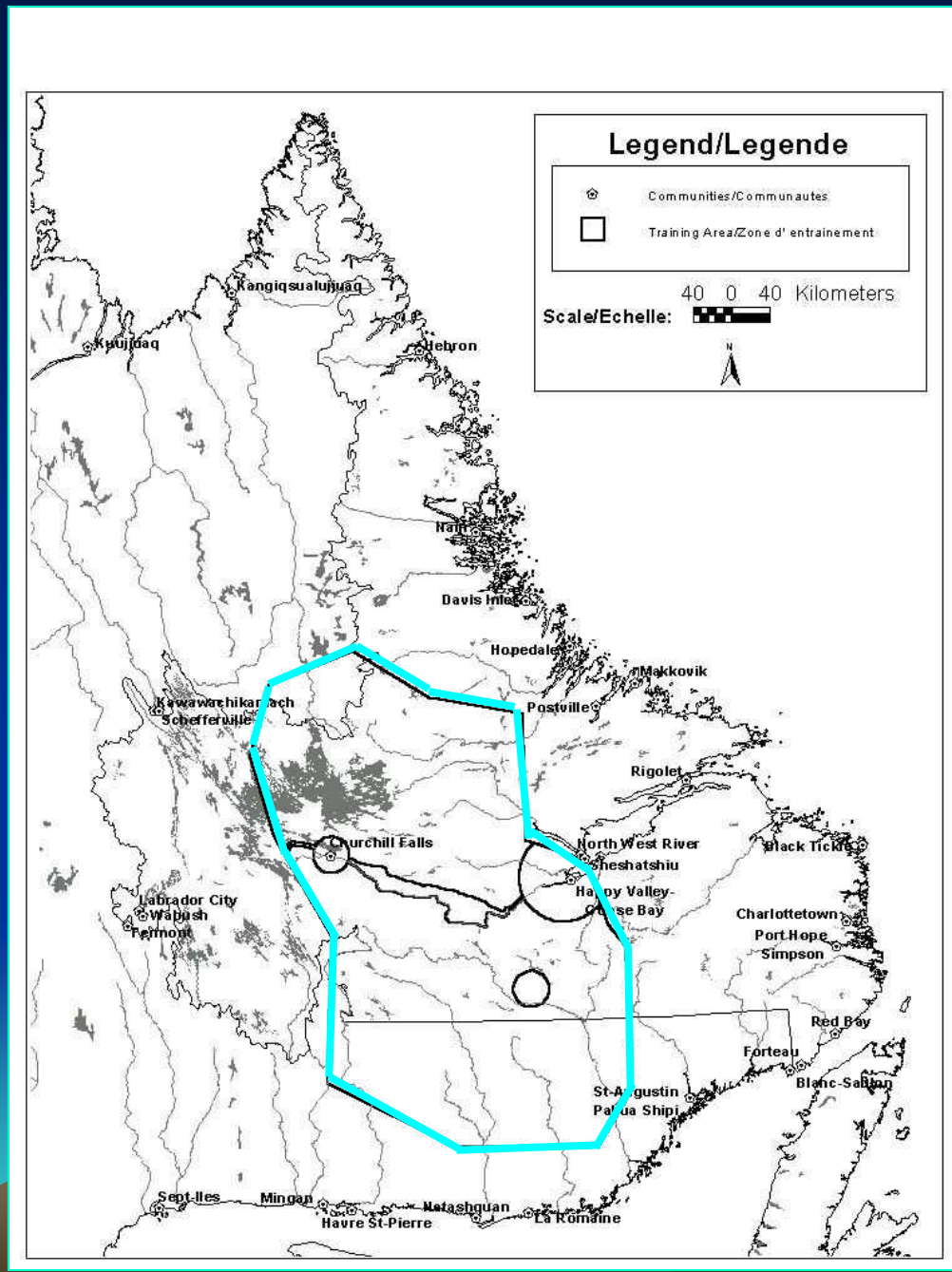
*Rotational two-year basis.

Mandate of IEMR

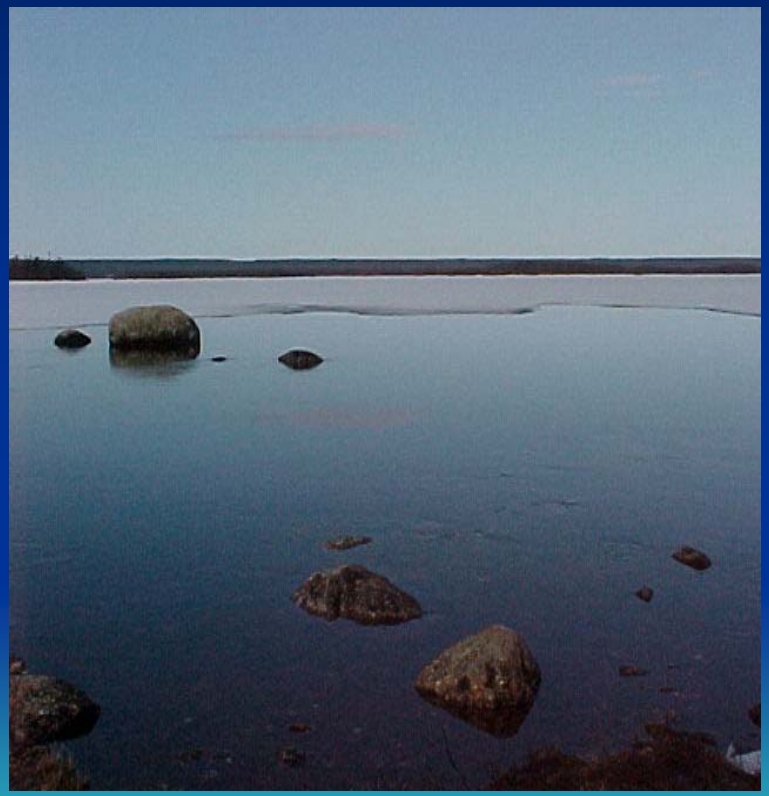
- Co-ordinate, support and conduct environmental effects research.
- Monitor effects and propose mitigation measures associated with the activities of military training over Labrador .
- Incorporate aboriginal environmental knowledge and co-operation in research and monitoring activities.
- Inform the public on the work of the Institute.

First Nations Communications and Support Strategy

- Promotes the integration of aboriginal environmental knowledge into the research sponsored by the Institute and to further the understanding of western science within the aboriginal communities.



The Quebec and Labrador Communities and the Low-level Training Area.

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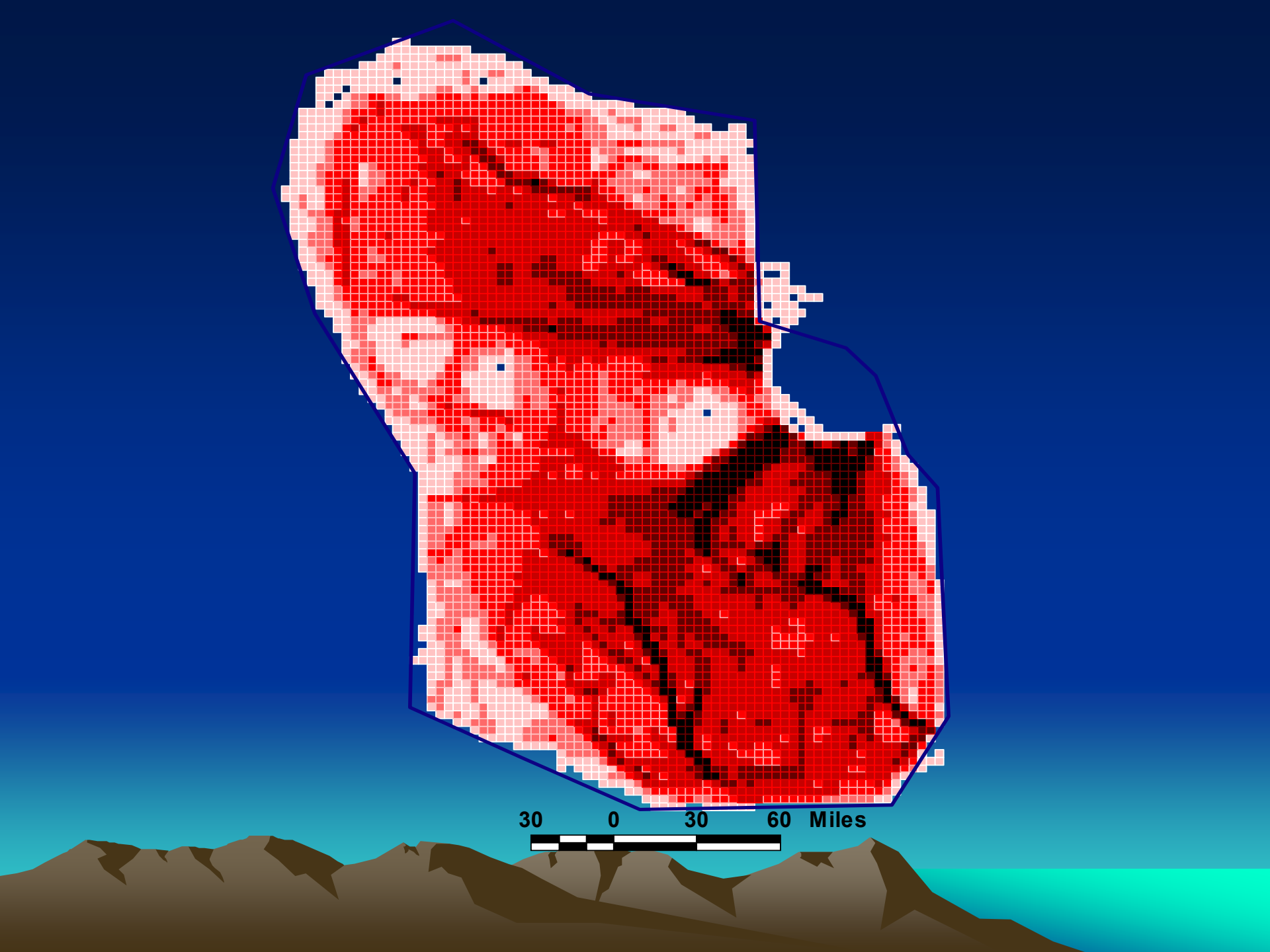
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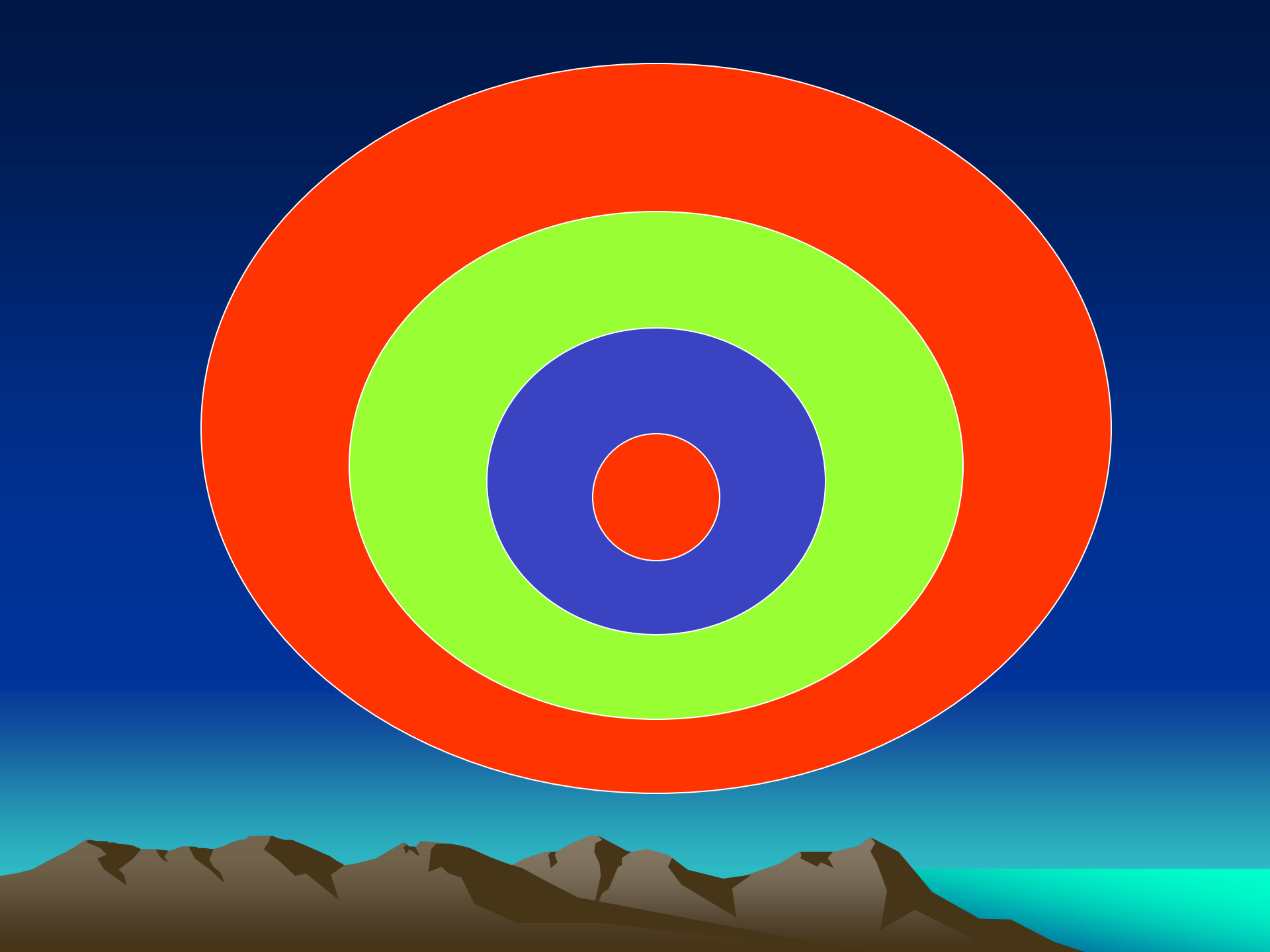









Osprey Study
(*Pandion haliaetus*)

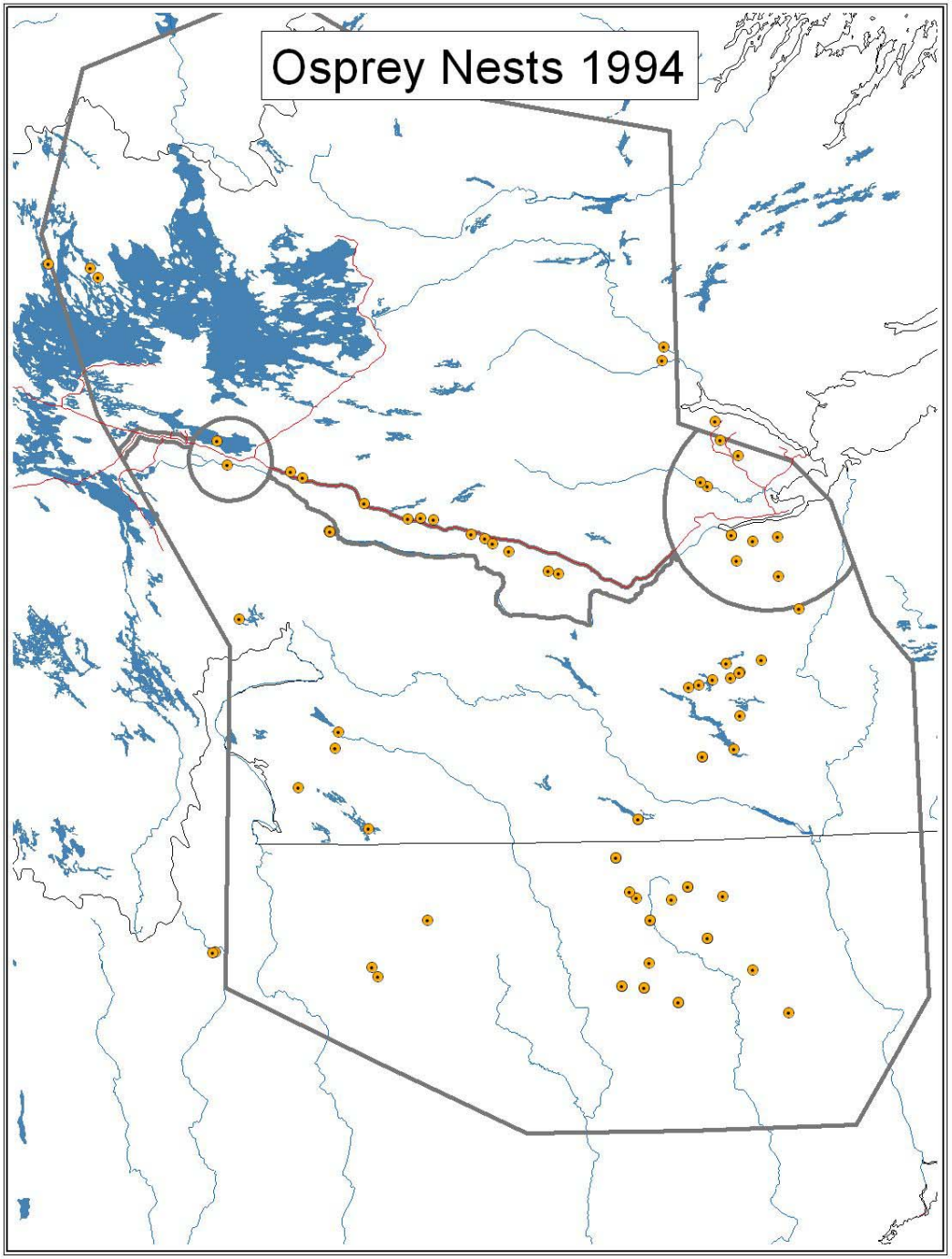
Background

- A monitoring and mitigation program for Osprey has been conducted LLTA since 1991.
- Active nest were identified and a 2.5 nautical buffer was placed around all nests
- With the expanding population the closures became a problem for the training program

Typical Osprey Nest

Osprey Nest Hydro Poles

- Osprey have used the hydro poles extensively in Labrador.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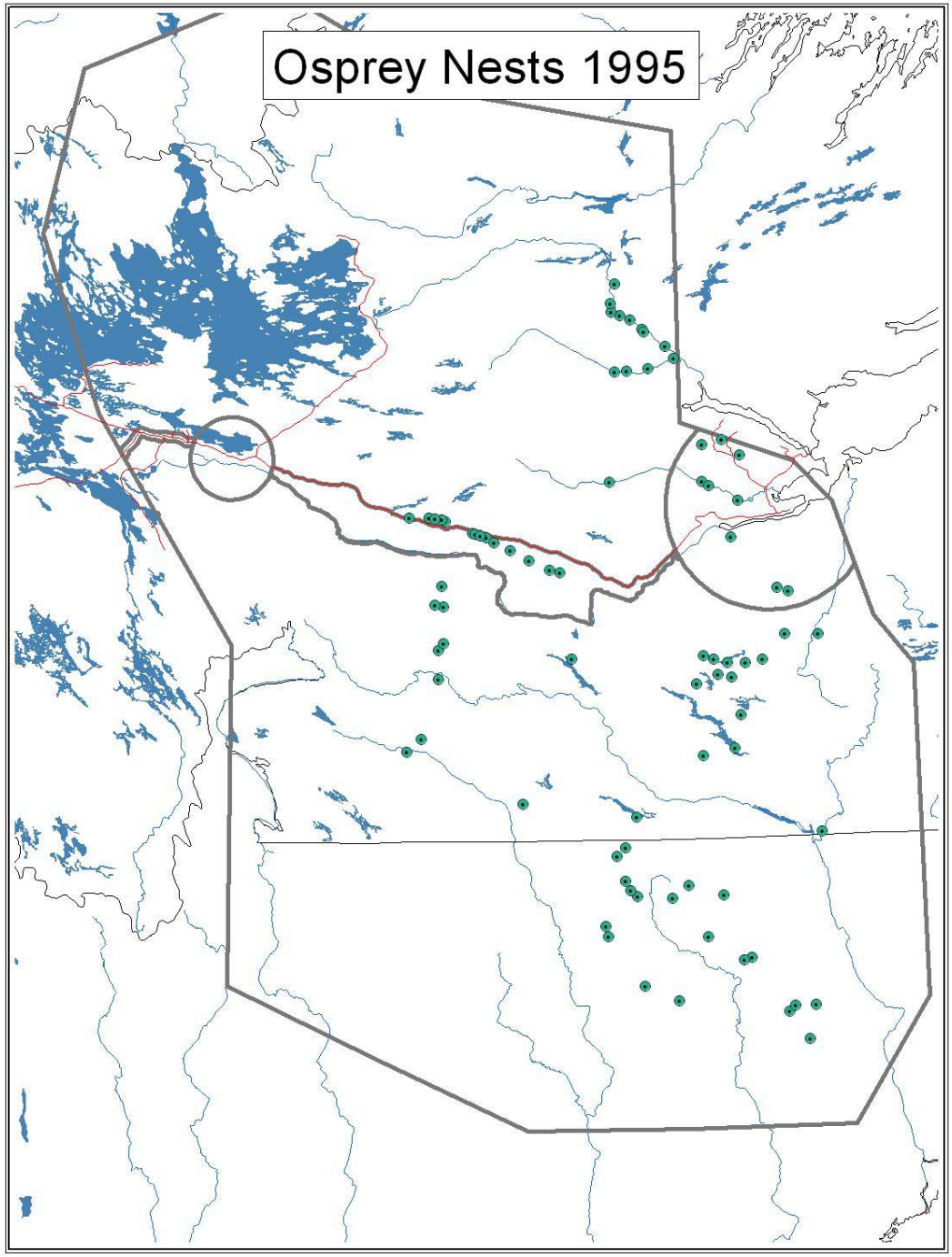
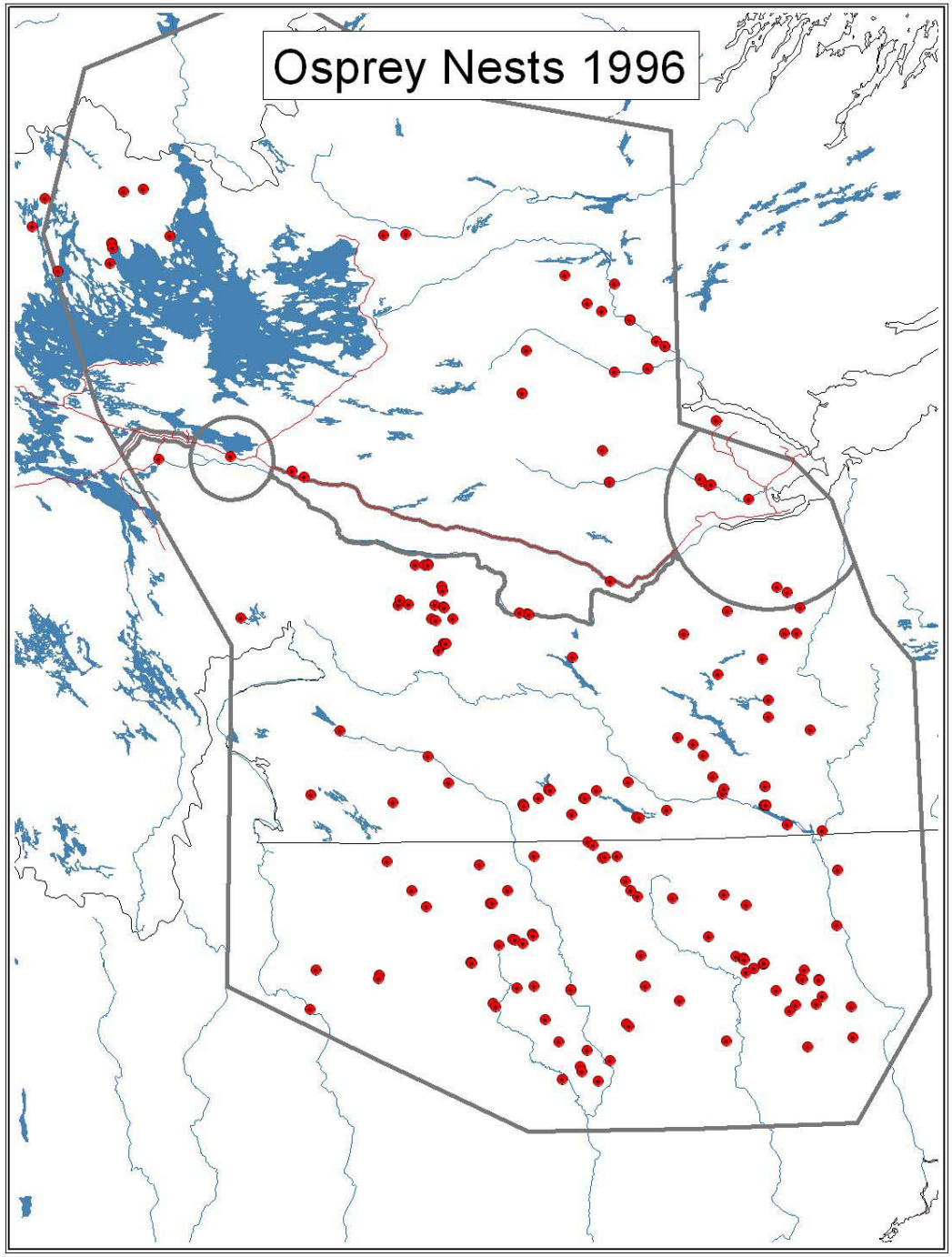
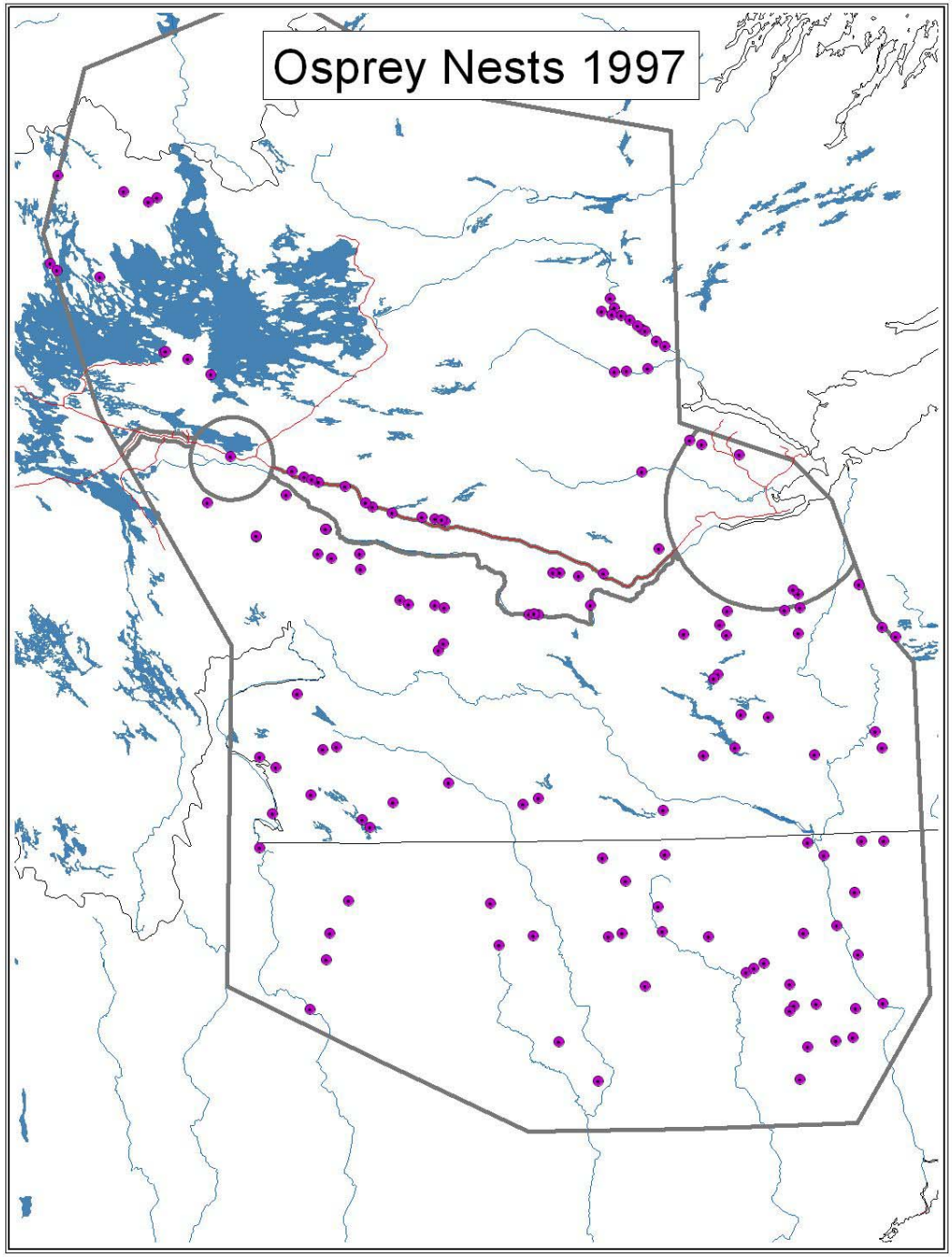
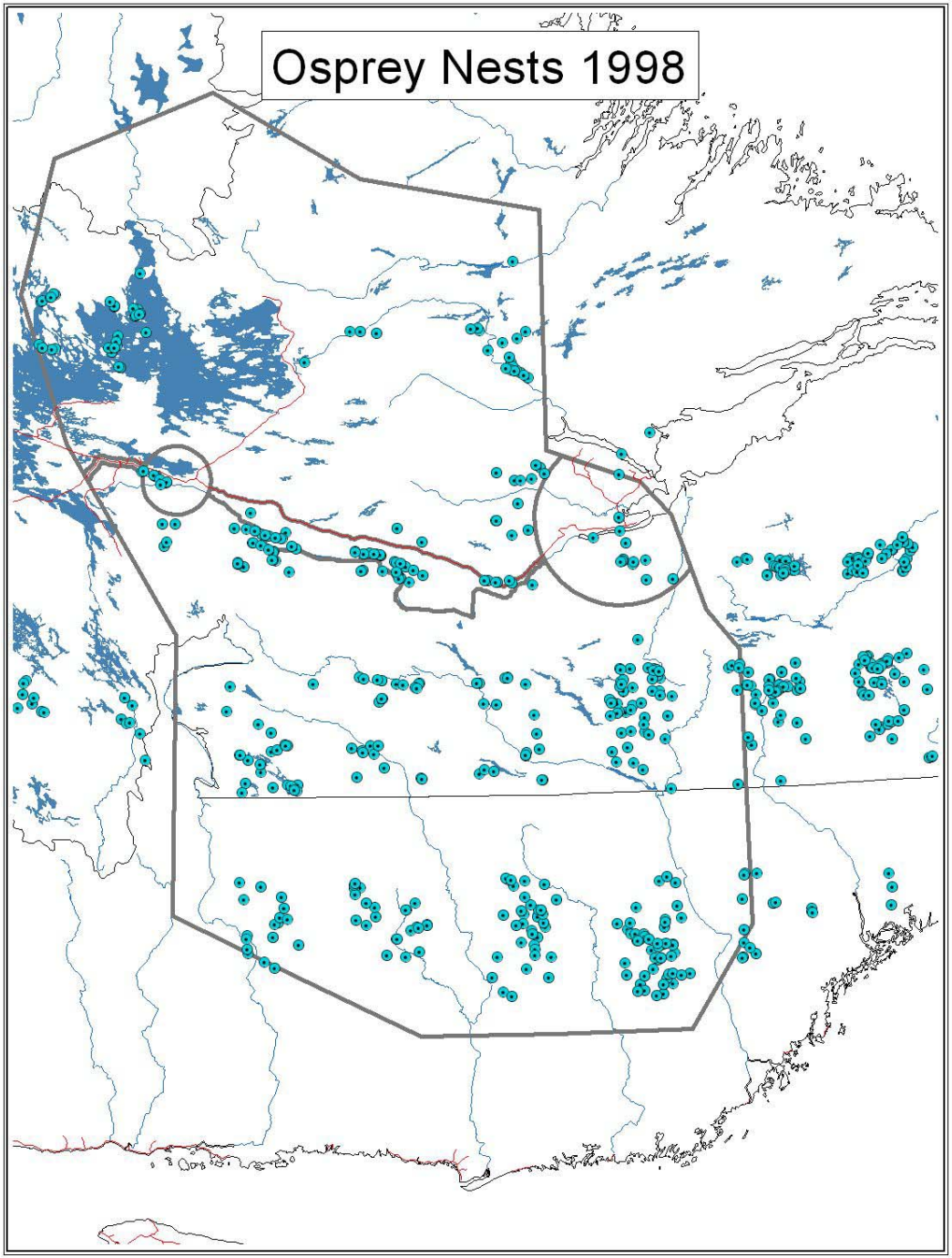

Osprey Nests 1995


Osprey Nests 1996


Osprey Nests 1997


Osprey Nests 1998

Behavioral Study 1995

Research Partners

- DND
- IEMR
- Province of Newfoundland and Labrador
- Canadian Wildlife Service
- Jacques Whitford Environmental Limited

Objective

The study was designed to determine if a threshold of LLF existed with measurable effects on Osprey behavior that would lead to decrease reproductive success.

Specific Objectives

- Examine behavioral activities of both adults and young in the nest.
- Determine the if birds left the nest
- Identify the time frame nest were left unattended.
- Identify changes in the feeding regimes.
- Identify.
- Identify changes of both birds being at the nests

Experimental Protocol

- Controlled low-level CF-18
- Distances of 2.5 to directly overhead
- Noise level monitored varied from 52-101db
- Behavior monitored for nest attendance, exposure of young or eggs, feeding activity.
- Control site with no overflights

Overflights Protocol

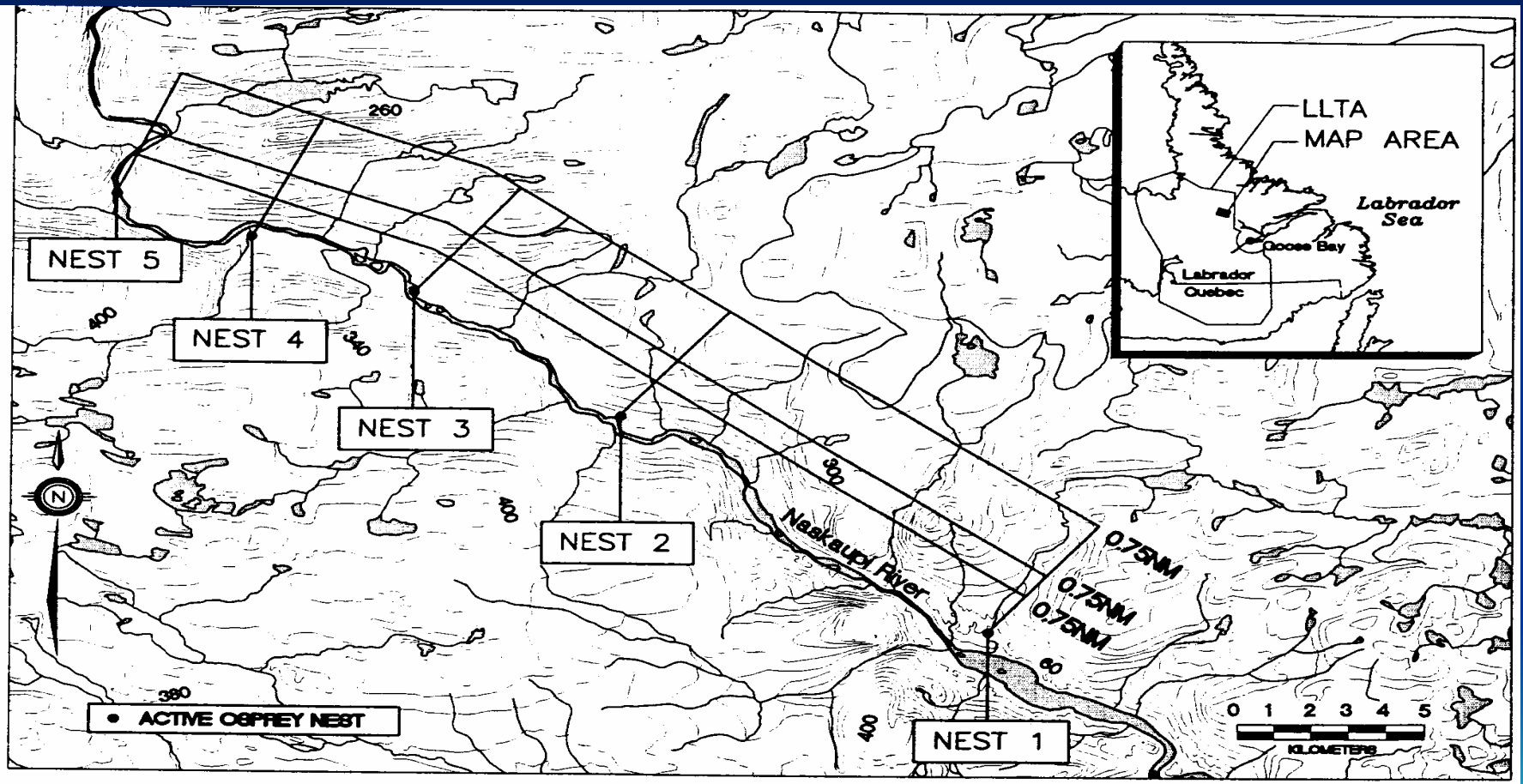
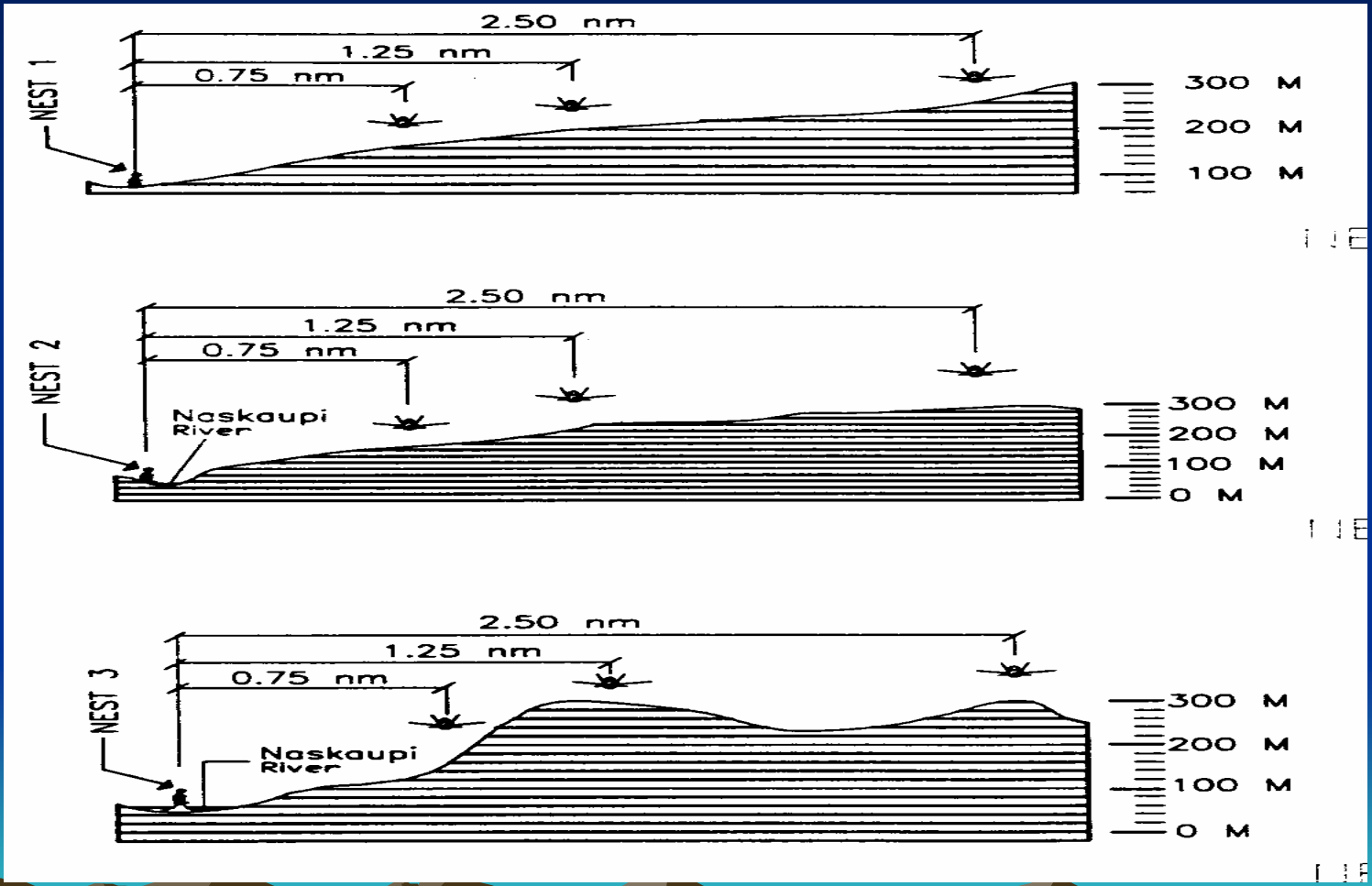
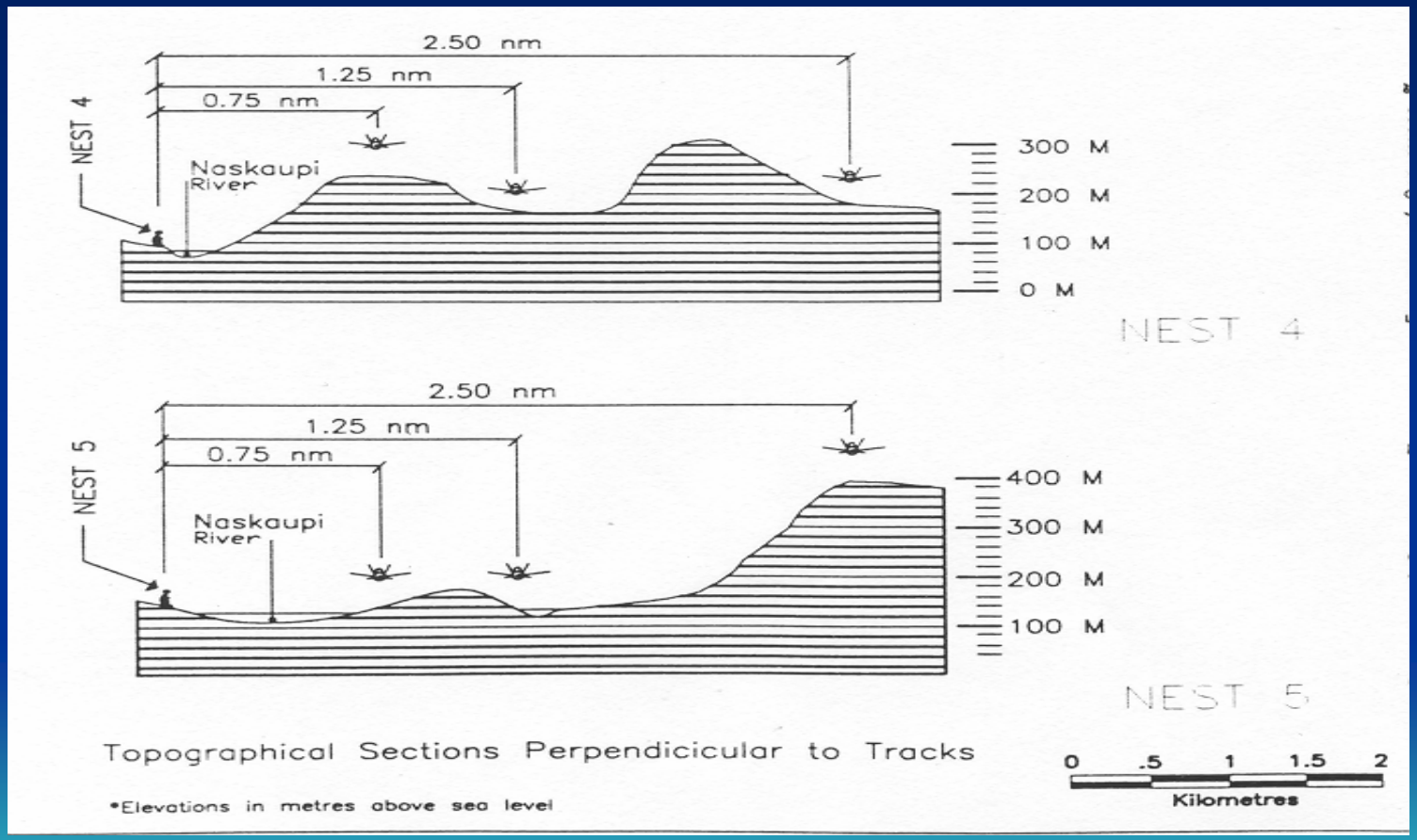


Figure 1. Study area

Flights Paths



Flight Path Nest 4 & 5



Conclusions

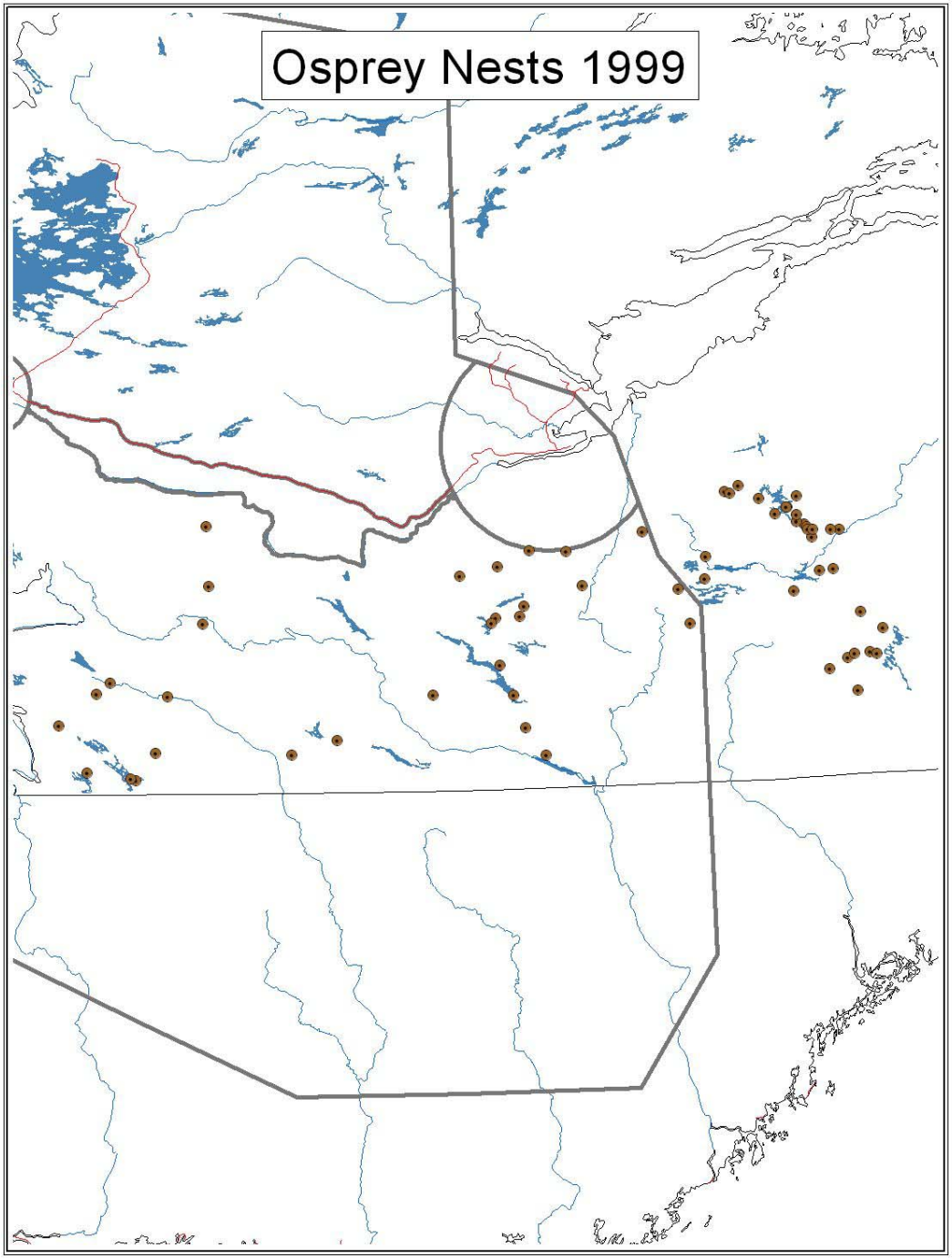
- No differences in behavior
- No overt reactions as a results of the over flights.
- Adults behavior varied from alertness to adjustments in incubation position.
- Young nestling crouched following noise disturbances
- Incubation did not differ significantly

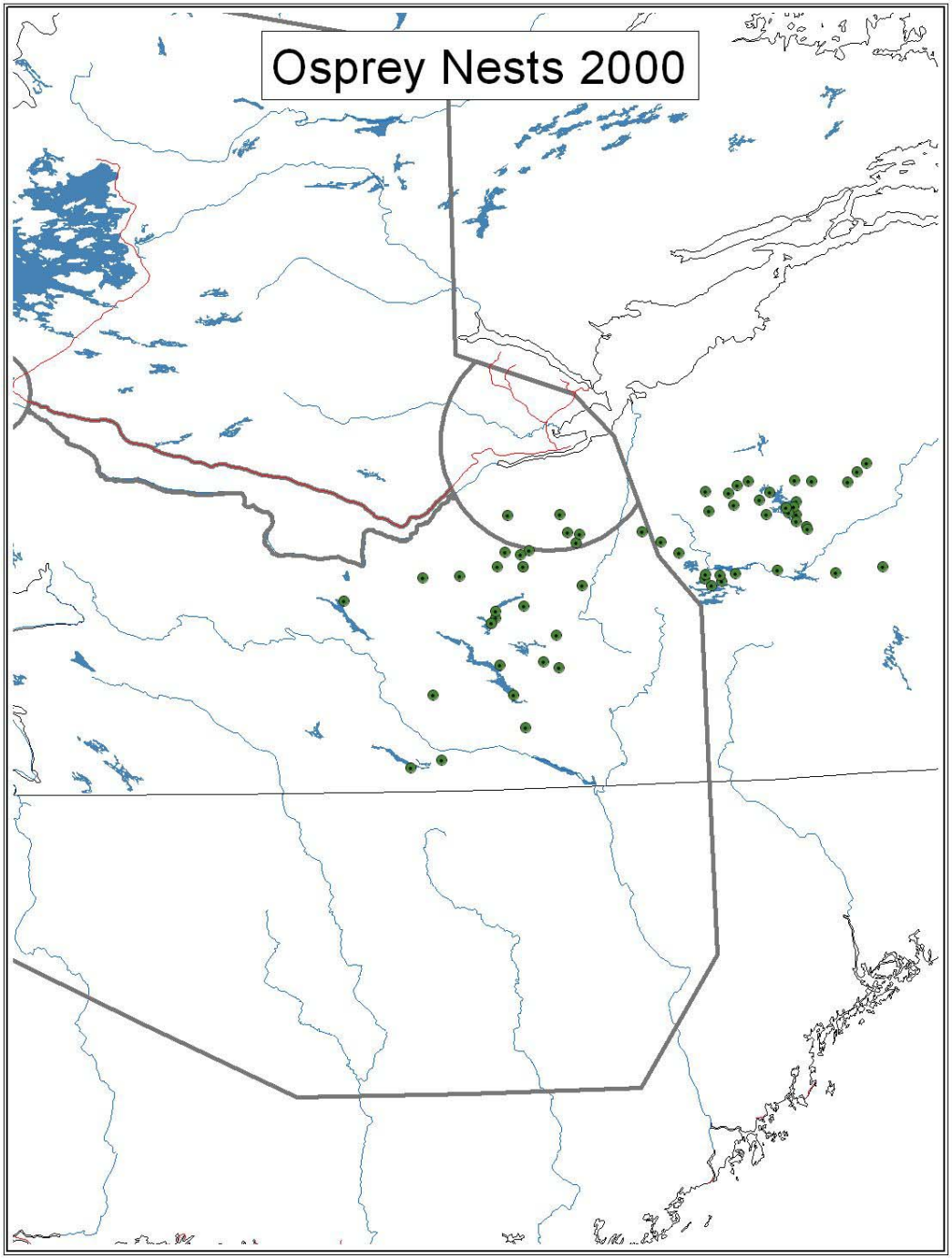
Assessment and Recommendations

- IEMR held a series of technical sessions to review the results of the monitoring program data and the behavioral study.

- Recommended the termination of the 2.5 nm closures.

- Initiated a long term monitoring program focused on a number of active nests both within and outside the training area.


Osprey Nests 1999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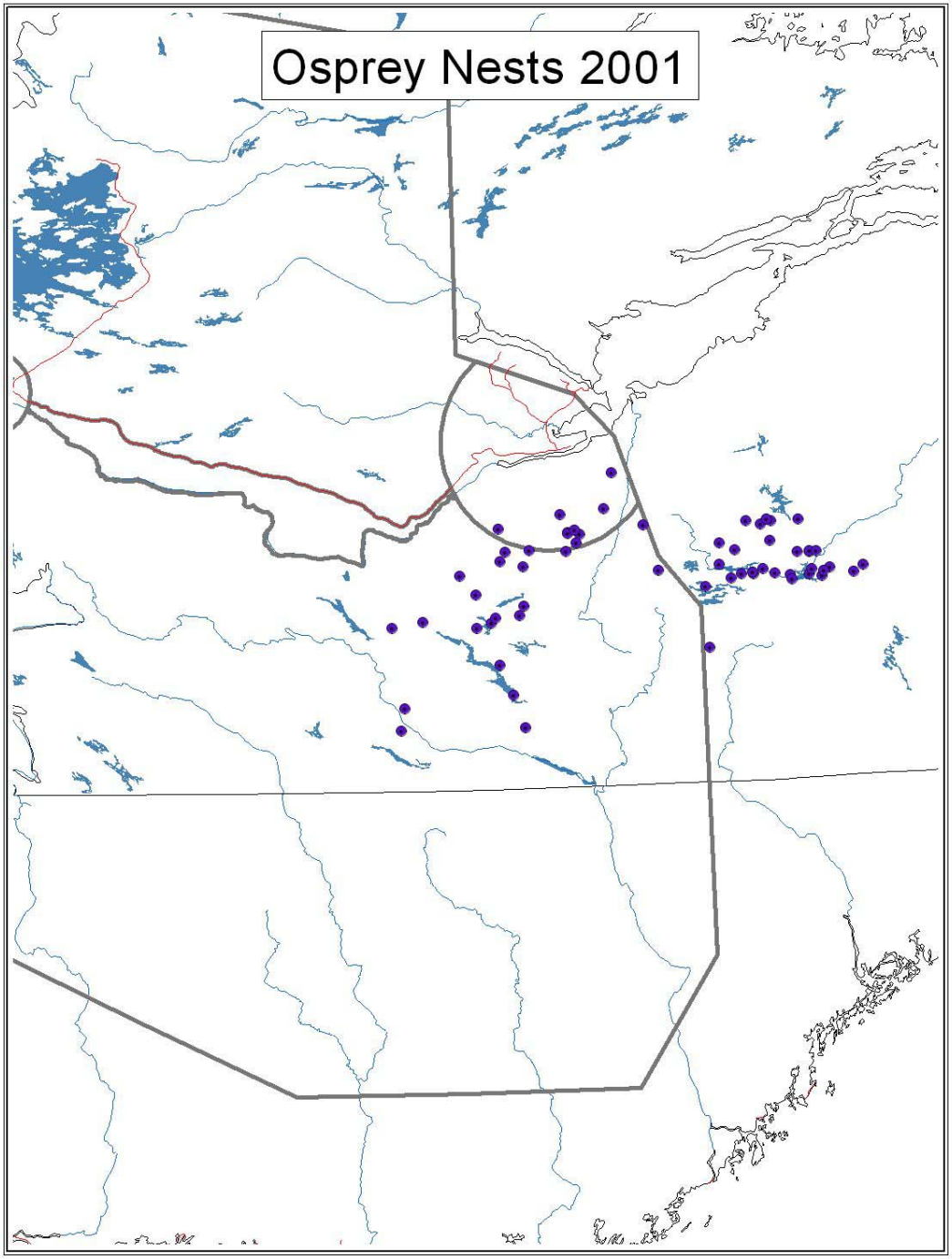
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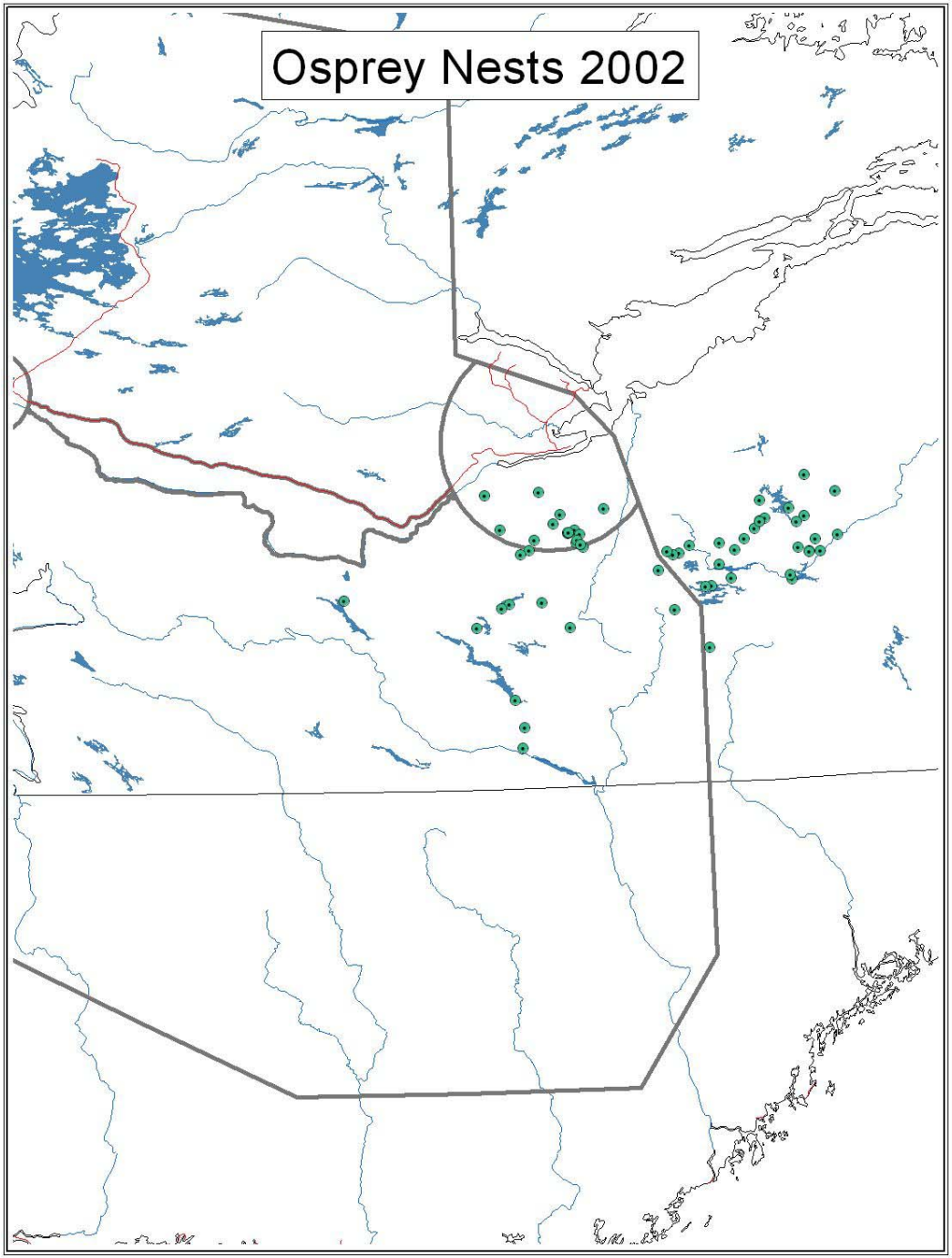
Osprey Nests 2002


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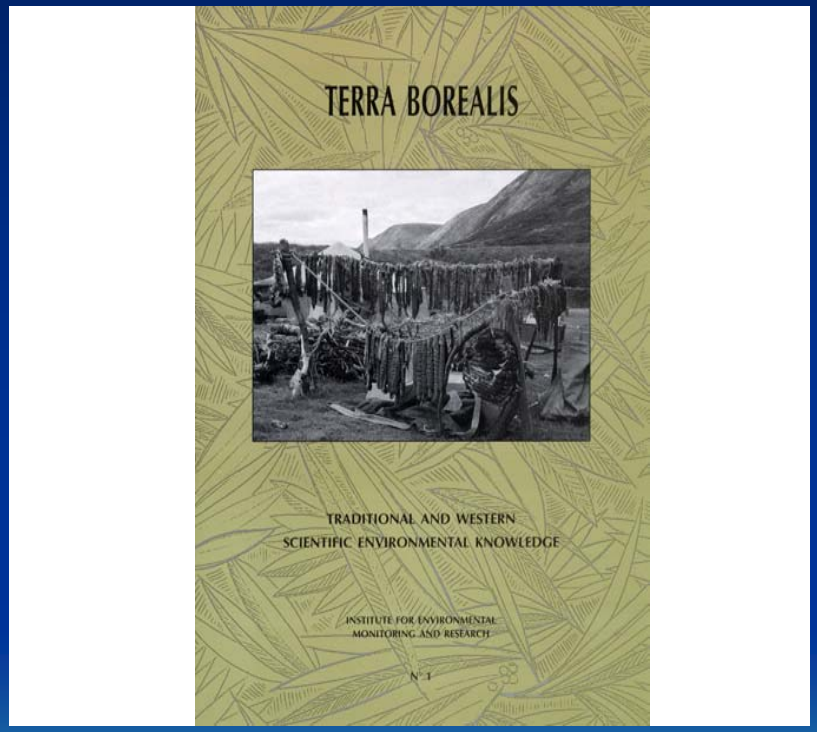
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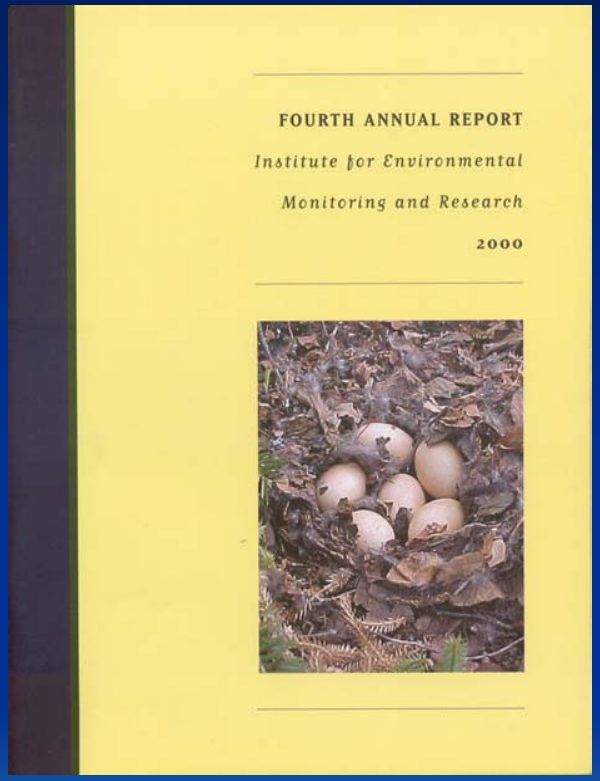
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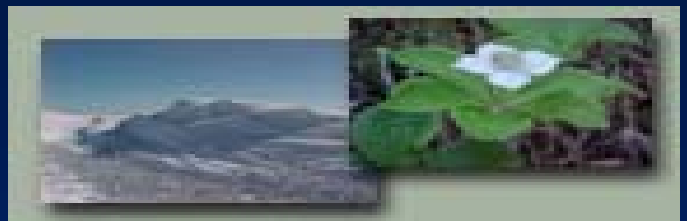

Institute for
Environmental
Monitoring and
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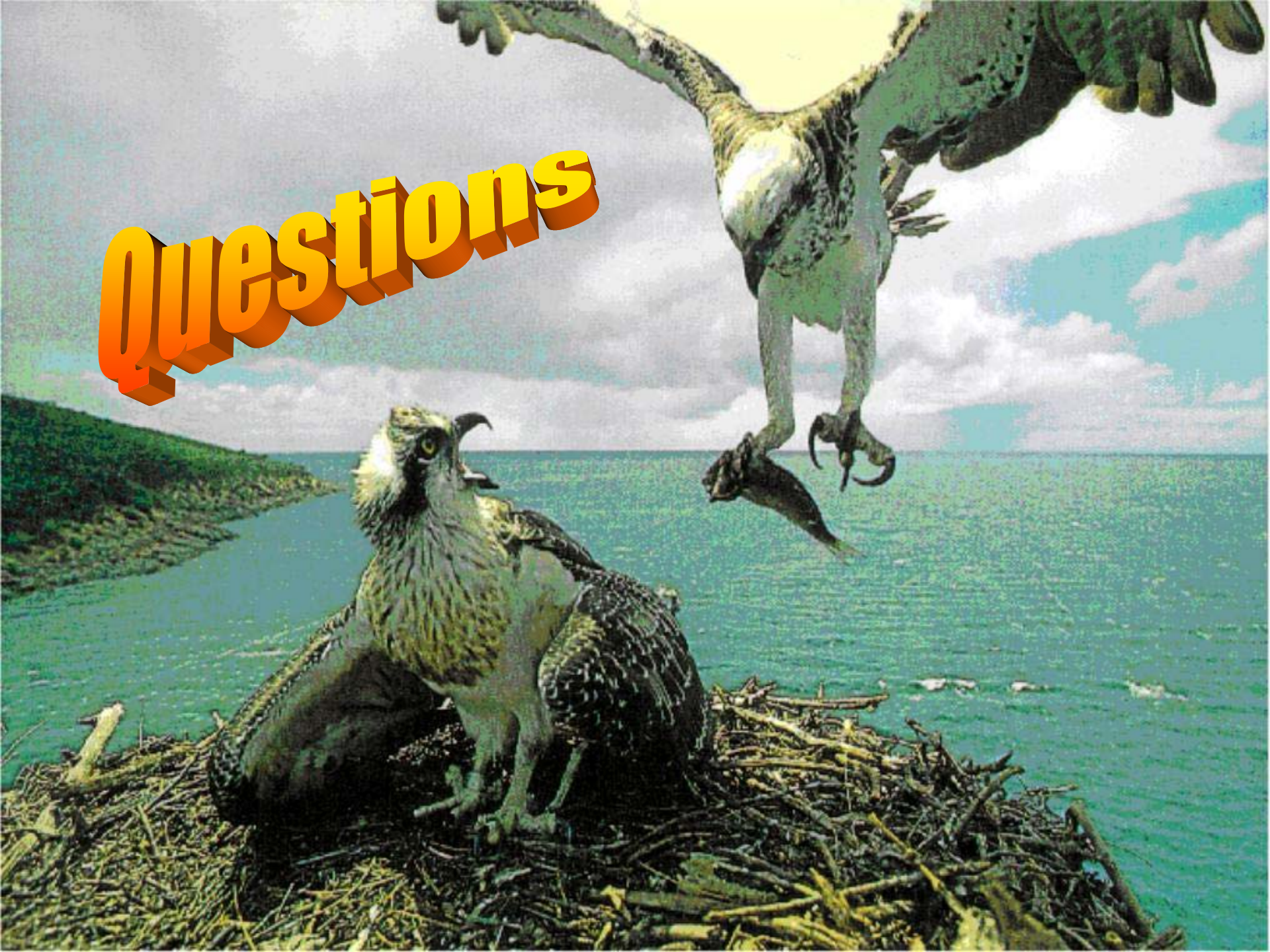
www.iemr.org
iemr@hvgb.net

P.O. Box 1859, Stn. B
Happy Valley-Goose Bay
Labrador, NF A0P 1E0


Questions