

**CARTWRIGHT JUNCTION TO HAPPY VALLEY-GOOSE BAY
TRANS LABRADOR HIGHWAY
WATERFOWL COMPONENT STUDY DEFICIENCY STATEMENT
Issued April 2003**

THROUGHOUT

N the Component Study is consistent in its description of waterfowl occurring in relative low densities which is incorrect and inaccurately represents the importance of the area for waterfowl. Once population estimates/densities are recalculated (see below) provide the context for how the study area densities compare to other known densities in Labrador. Also provide the context for the contribution of these birds to the population.

N provide segregated information on common and red-breasted mergansers given their differing breeding phenologies and habitat requirements.

Section 1.4 Study Area

N the study area is described as comprising areas of wetlands and waterbodies within 5 km either side of the proposed route yet the flightlines depicted on figures 4.2a through 4.6e indicate that substantial tracts of wetlands were not surveyed. Discuss the survey coverage and relate the flightlines to the homogeneous distribution of wetlands, especially on the Eagle River Plateau. Describe how detected waterfowl populations/numbers may underrepresent actual numbers in the study area, and the likelihood of important wetlands and concentrations having been omitted and/or missed. Provide the rationale for omitting important areas of coverage, and reevaluate population estimates by extrapolation to include wetlands that were not surveyed.

N provide an explanation as to why the study area comprised a 5 km radius of the proposed route instead of the 10 km radius required by the Terms of Reference issued by the proponent to the consultant. Evaluate the validity of the study results given the reduced study area.

Section 2.1 Aerial Surveys

N provide an explanation as to why flight lines approximately 500 metres apart such that a minimum of two passes are made on each side of the road right-of-way were not flown as required by the Terms of Reference issued by the proponent to the consultant. Evaluate the validity of the study results given the reduced flight lines.

N provide the rationale for the survey dates as they relate to the three distinct breeding phenologies of waterfowl groups, i.e., i) early nesting geese-dabbler duck group; ii) late nesting diving duck group, and iii) harlequin duck which have specialized habitat requirements.

N describe how the lateness of the 2002 spring chronology could be expected to affect:
a) spring staging observations on May 9, since lakes/ponds and wetlands were still ice-covered,

- b) breeding observations on May 21 for Canada Geese and Dabbling Ducks since most lakes/ponds and wetlands on the Eagle River Plateau were still ice-covered,
- c) late nesting species observations on June 1-2 since waterbodies on the Eagle River Plateau were still 50% ice-covered,
- d) brood observations on July 18, especially for late nesting species,
- e) fall staging observations on August 28-29 in light of a), b), c) and d).

Section 4.1 Regional Population Status of Ducks

Inland Ducks and Canada Geese

N compare the proposition that “nesting success is more influenced by spring temperature than availability of water” with published works linking predator and prey dynamics with cycles in productivity and populations in the north boreal zone.

Sea Ducks

N compare the information presented on Harlequin Duck and Barrow’s Goldeneye with most recent COSEWIC status reports for the two species.

N provide a more comprehensive presentation, with references, on the international conservation concern for sea ducks. Relate global issues and concerns for sea duck conservation including perspectives of the Sea Duck Joint Venture under the North American Waterfowl Management Plan. Place Labrador in its perspective importance to interior breeding of sea ducks. Update sea duck references provided as available.

N discuss trends in available data for Labrador-Quebec with respect to winter inventory data from the Atlantic Coast.

N provide the source identifying Barrow’s Goldeneye breeding location as the north shore of the St. Lawrence River.

Section 4.2.3 Broods/Moulting

N brood age class data collection is standard protocol for conducting brood surveys. Provide an explanation if this data was not collected. Provide any age class information that was collected.

N relate age class data to an assessment of the likelihood that the timing of the survey was too early.

N clarify how the lack of observations of scoters may have been affected by the survey’s focus on habitat not utilized by scoter broods.

Section 4.2.4 Fall Staging

- N describe how the strong presence of ring-necked ducks observed may or may not support that the species has expanded greatly into Labrador over the past two decades.
- N provide age class data for ring-necked duck broods. Provide an explanation if this data was not collected.
- N describe the likelihood that most or all ring-necked ducks would not have been capable of flight by the 2002 sport hunt season opening date.
- N describe how fall staging by sea ducks (notably scoters) and other late nesting species may not have been captured by these surveys.

Section 4.4.1 Wetland Size Versus Waterfowl Abundance

- N provide the rationale for the suggested similarity between waterfowl abundance (Table 4.4) and waterfowl density (Table 4.5) considering the Tables have only two wetlands in common.
- N provide an evaluation as to which is more relevant to assessing the “significance” of wetlands or if both criteria can be considered equally applicable.
- N describe how waterfowl use may be influenced by wetland proximity, e.g., a small, isolated wetland compared to a small wetland in a complex that provides larger edge habitat than a large wetland.

Section 4.4.2 Probability of Occurrence of Waterfowl Versus Wetland Areas

- N elaborate on the relationship presented in Figure 4.8 and explain why actual numbers of waterfowl are not strongly related to wetland area.
- N compare the results of a quadratic regression for the waterfowl to wetland size relationship with the logistic regression presented.

OMITTED - Wetland and Riparian Habitat Potential for Waterfowl

- N provide a description of habitat potential which is identified as an objective for the Component Study in Section 1.2. Use this information when extrapolating waterfowl populations in areas of the study area that were not surveyed.

EDITORIAL REVISIONS

- N literature citations should always be to the primary source.
- N methods are interspersed throughout results and discussion. Each survey was done differently. Methods used for each life history stage should be described in methodology.

- N there are many figures with a great deal of raw data. These could be presented as appendices with summary tables of results in the text to facilitate interpretation.
- N section 1.2 should state that waterfowl have four discreet life history stages around the breeding period: spring staging, nesting, brood rearing and fall staging. Since waterfowl behaviour and habitat requirements differ between stages, each will be treated separately.
- N section 4.1 relates reproductive rates in sea ducks to determination of population status. Reproductive rate of a species is completely unrelated to the concept of determining population status. The two statements should therefore not be linked.
- N Tables 4.2 and 4.3 should clearly indicate the reduction in Plot size in 1996, otherwise it appears there is an inexplicable decline in birds after 1995.
- N include available data on scoters in Tables 4.2 and 4.3.
- N reconcile the number of wetlands surveyed with wetland waterfowl observations in section 4.4.1 and adjust percentages as necessary.
- N classify avifauna listed in Appendix A as either early or late breeding chronology.