SCIENCE RESPONSE TO INFORMATION REQUESTS SUBMITTED TO THE ENBRIDGE PIPELINE PROJECT ENVIRONMENTAL IMPACT ASSESSMENT HEARINGS RESPECTING MARINE FISH

Context

Fisheries and Oceans Canada's (DFO) Environmental Assessment and Major Projects Division (EAMP), Pacific Region, requested that DFO Science, Pacific Region, on May 15, 2012, provide information regarding specific Information Requests (IRs) submitted to the Enbridge Review Panel that DFO Science has the expertise to evaluate. As the IRs for which Science advice was requested cover a range of issues and scientific disciplines, separate Science Responses have been developed for each category of IRs, and in some cases specific IRs. In addition to science related questions, some IRs included elements that were questions pertaining to DFO policy, management or legal information. This Science Response addresses the scientific elements of the following questions:

- Has the Proponent provided the additional baseline information on marine fish communities and the additional fishing surveys requested in IR No.2 to the Proponent? If so, please provide copies of this information. [NGP Response to Federal Government IR No.2, number 2.13; Volume 2, Part 1, section 61]. If not, has the Proponent agreed to provide this information, and if so when? [NGP Response to Federal Government IR No.2, number 2.13; Volume 2, Part 1, section 61]
- How is this information relevant to the assessment of potential risks associated with the Project? [NGP Response to Federal Government IR No.2, number 2.13; Volume 2, Part 1, section 61]
- How is this data relevant to the assessment of potential risks associated with the Project? [NGP Response to Federal Government IR No.2, number 2.14; Volume 2, Part 1, section 61]
- Please provide copies of the studies cited by DFO in Information Request No. 2 to the Proponent, section 2.15, linking the effects of sound to decreases in catch per unit effort for rockfish species. [NGP Response to Federal Government IR No.2, number 2.15; Volume 2, Part 1, section 61]
- How is an assessment of the decreases in catch per unit [effort] for rockfish species relevant to the assessment of potential risks associated with the Project? [NGP Response to Federal Government TR No.2, number 2.15; Volume 2, Part 1, section 61]

This Science Response report is from the Fisheries and Oceans Canada, Canadian Science Advisory Secretariat, Regional Science Special Response Process (SSRP) of May 29th, 2012 on the Science advice in response to information requests submitted by Intervenors to the Enbridge Northern Gateway pipeline project environmental assessment Panel Review Process. Additional publications from this process will be posted as they become available on the Fisheries and Oceans Canada Science Advisory Schedule at www.dfo-mpo.gc.ca/csas-sccs/index-eng.htm.

Background

The Enbridge Northern Gateway Project proposes to ship dilute bitumen from Kitimat, British Columbia to markets in China and California with tankers of the class Very Large Crude Carriers (VLCC) (Vol. 1, B1-2, Enbridge Northern Gateway Project Section 52 Application). The tanker route from Kitimat through confined waterways in British Columbia and then into open waters of Hecate Strait, Dixon Entrance and Queen Charlotte Sound in British Columbia are illustrated in Figure 1. For assessment purposes Enbridge Northern Gateway defines two areas, the Confined Channel Assessment Area (CCAA) (Figure 2) and the Open Water Assessment Area (OWA) which is BC waters to the territorial sea limit (Figure 1). Incoming ships will deliver cargoes of condensate. Enbridge Northern Gateway estimate 71 condensate and 149 oil tankers call in at the Kitimat terminal for a total of 440 transits per year (Vol. 8C, B3-37, Enbridge Northern Gateway Project Section 52 Application). A marine terminal will be constructed near Kitimat with two tanker berths and one utility berth (Vol. 1, B1-2, Enbridge Northern Gateway Project Section 52 Application). The Project Effected Assessment Area (PEAA) that will be associated with the terminal construction is illustrated in Figure 3.

There were two IR submissions made to the Joint Review Panel (JRP) by DFO. Enbridge Northern Gateway provided responses to requests for information in the IRs. Since then Intervenor review of the Environmental Assessment documents prepared by the proponent (Enbridge Northern Gateway) and of the IRs and the responses by the proponent has resulted in a series of further questions to DFO by Intervenors.

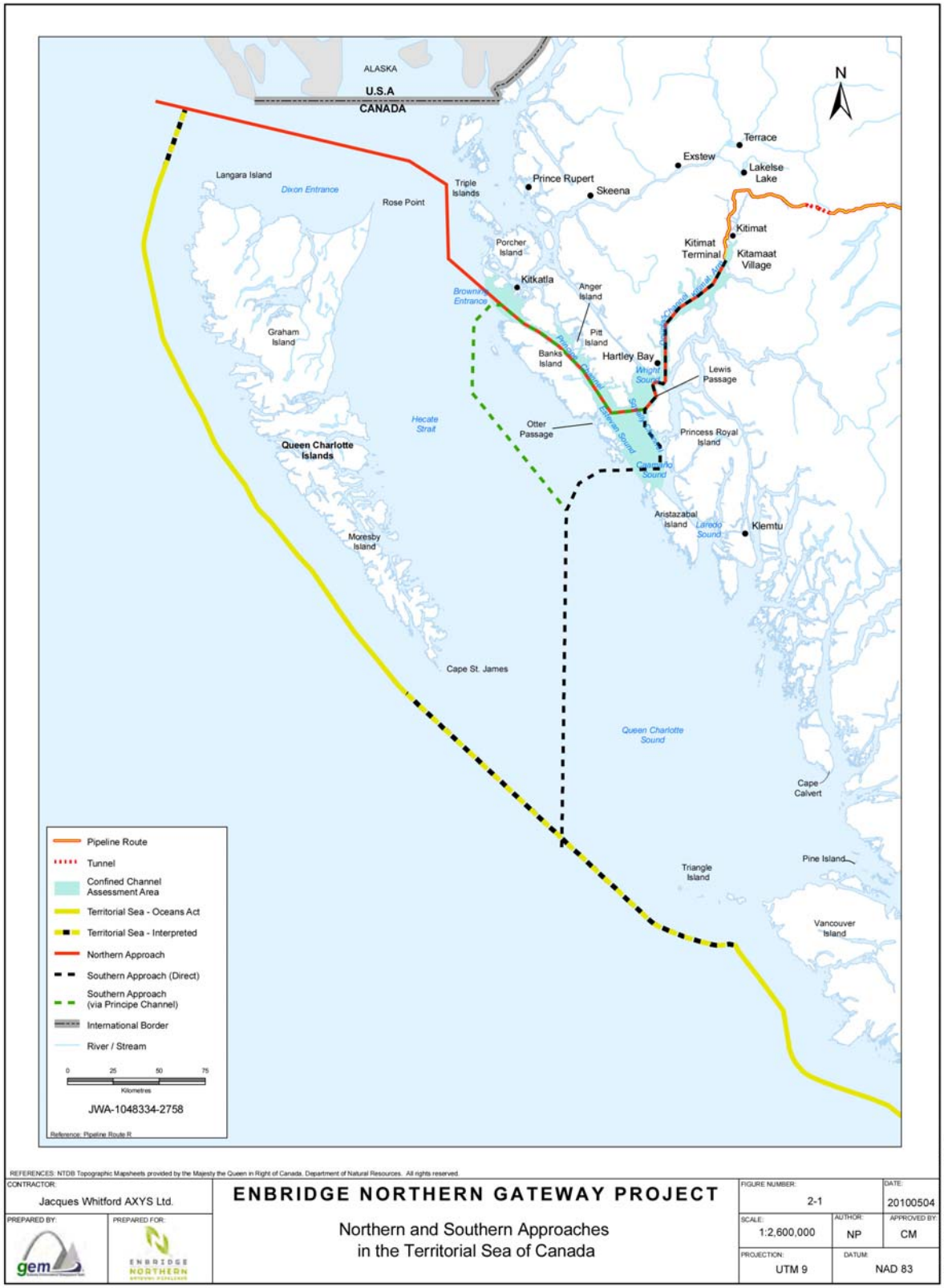

Figure 1. Map illustrating the proposed tanker routes through the Confined Channel and Open Water Assessment Areas (CCAA and OWA). The OWA extends to the territorial sea boundary (from Volume B9-42 Enbridge Northern Gateway Project).

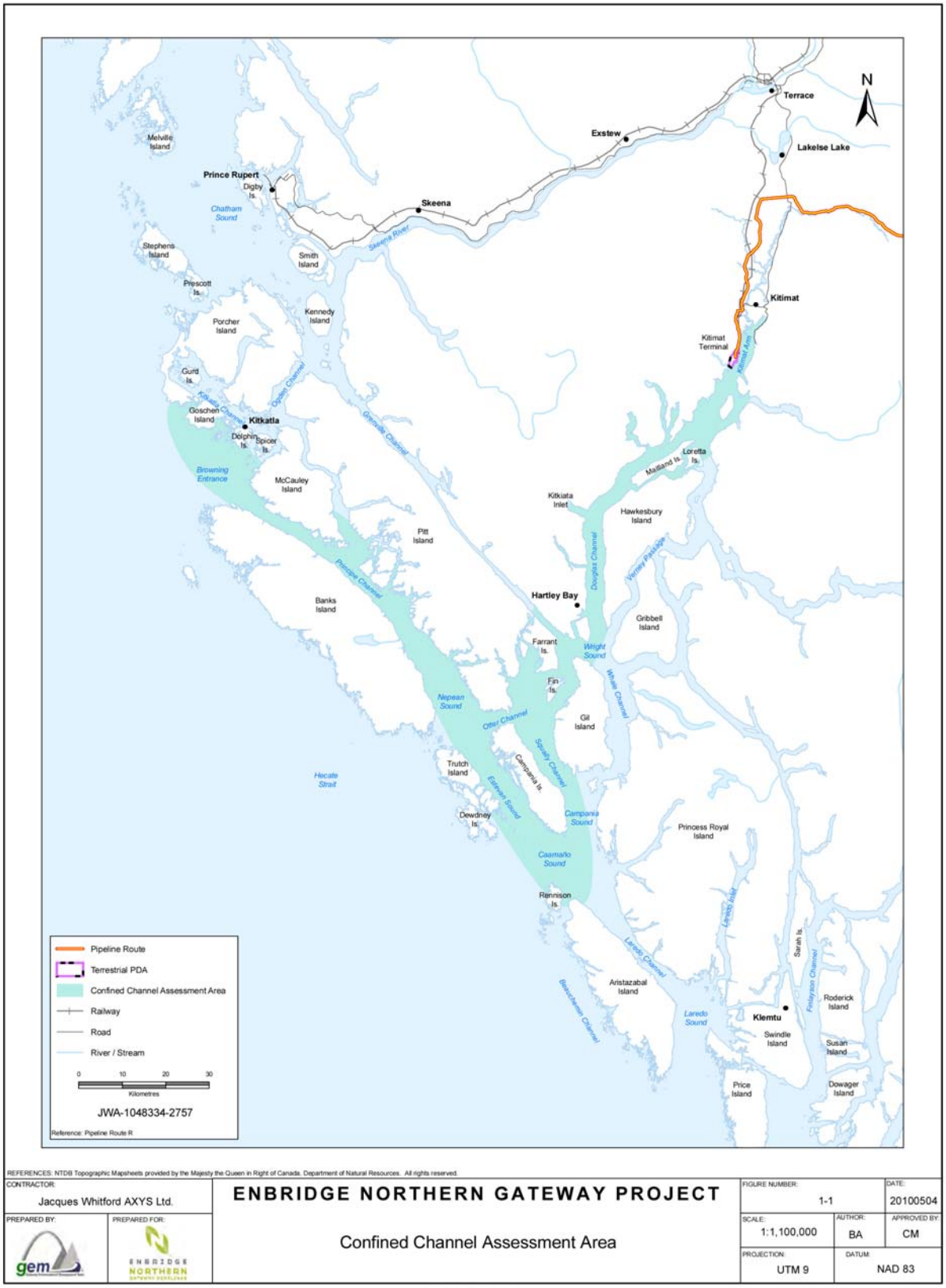

Figure 2. Map illustrating the location and extent of the Confined Channel Assessment Area (CCAA) (from Volume 8B Enbridge Northern Gateway Project Section 52 Application).

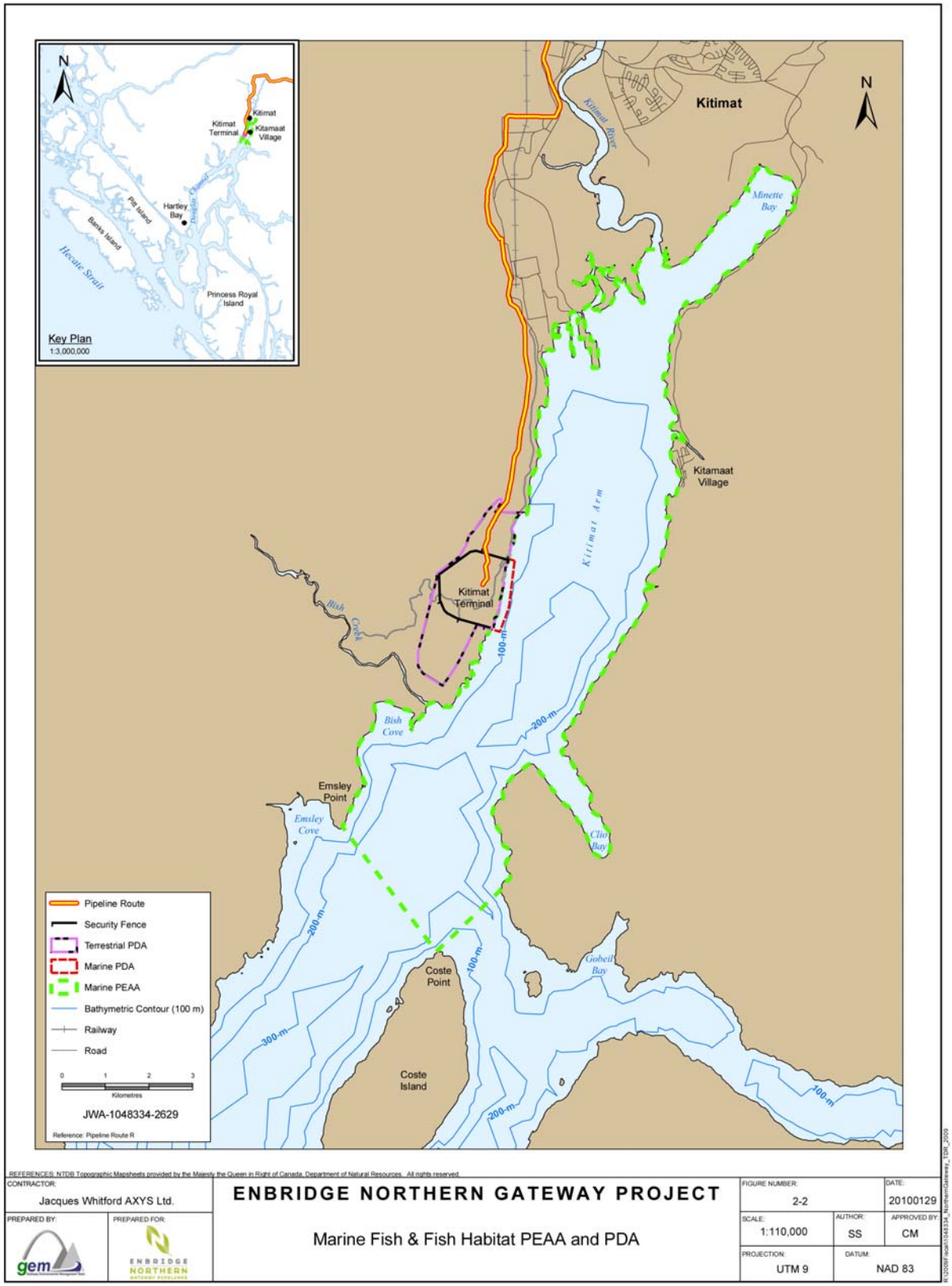

Figure 3. Map illustrating the location and extent of Project Effect Assessment Area (PEAA). (from Enbridge Northern Gateway Project Technical Data Report, Marine Fish and Fish Habitat 2010).

Analysis and Responses

The proponent has not provided additional information to DFO Groundfish Science. The surveys undertaken by the proponent were not sufficiently representative of the area and were restricted to the PEAA and thus do not represent the distribution and abundance of marine fish resources in the CCAA. DFO Groundfish Science has not been notified about additional surveys being undertaken.

Without a more detailed characterization of the marine fish community in the CCAA, it is not possible to assess the extent and nature of potential impacts on the marine fish community resulting from project related activities or accidental spills. Complete baseline information is essential to understanding and identifying changes in the marine fish community that may result from these activities.

Baseline data are also relevant in assessing the risk of financial losses to fisheries because, without adequate characterization of the resources within the CCAA, it will not be possible to assess losses or potential losses to fisheries in the event of a spill.

The impacts of noise from a geophysical survey device were shown to have an impact on rockfish catch per unit effort (Skalski et al. 1992). The noise levels that fish were exposed to in that study were greater than those the proponent anticipates from shipping for this project. Nonetheless the proponent has stated that there were no studies showing impacts on marine fish from acoustic disturbance and the above study refutes that conclusion. The cited study is relevant to the assessment of risk because it indicates that a reduction in fisheries catch rates due to increased noise from shipping is possible.

Conclusions

Due to the lack of data and information provided by the proponent, there is significant uncertainty regarding the potential effects that the proponents activities will have on marine fish populations and marine fisheries in the PEAA and the CCAA.

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Sources of Information

Enbridge Northern Gateway Project Joint Review Panel 2012. https://www.neb-one.gc.ca/ll-eng/livelink.exe/fetch/2000/90464/90552/384192/620327/customview.html?func=ll&objId=620327&objAction=browse&sort=-name. Accessed May 22, 2012

Skalski, J.R., Pearson, W.H, and Malme, C.I. 1992. Effects of sound from a geophysical survey device on catch-per-unit-effort in a hook-and-line fishery for rockfish (Sebastes spp). Can J. Fish. Aquat. Sci. 49:1357-1365.

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