

**Environmental Assessment
East Canada CSEM Survey, 2014–2018
Amendment**

Prepared by



Prepared for



**12 June 2017
Project No. FA0110-1**

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Amendment**

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Introduction

This document is an Amendment of the Environmental Assessment (EA) of the Electromagnetic Geoservices Canada Inc. (EMGS) East Canada Controlled Source Electromagnetic (CSEM) Survey, 2014–2018 (LGL 2014a) and the associated Addendum (LGL 2014b), and three Amendments (LGL 2014c, 2015, 2017). The proposed change to the Project activities assessed in this Amendment is the removal of the use of a picket vessel for the 2017 season.

Removal of the picket vessel

EMGS proposes to remove the use of the picket vessel, as previously indicated in Table 6.1 “Summary of mitigation measures” of LGL (2014a), for the 2017 season. The picket vessel was proposed as one of many measures to mitigate the potential effect of the Project on the Fisheries VEC, specifically physical conflict with fishing gear. Considering the nature of CSEM surveys, in that the survey vessel travels through the planned survey area to deploy receivers ahead of towing the CSEM source that could potentially entangle fishing gear, and the location of planned survey activities in 2017 (Figure 1), the risk of encountering fishing gear during the towing will be minimal. In addition, the CSEM vessel will have a fisheries liaison officer (FLO) and two marine mammal observers (MMOs) onboard to spot fishing gear in the water during all survey operations, including receiver deployment operations. The other measures proposed in the EA (LGL 2014a) to mitigate the potential of damage to fishing gear will still apply. They include:

- conduct upfront planning to avoid high concentrations of fishing gear;
- utilize a Single Point of Contact (SPOC);
- release advisories and communications;
- employ FLO;
- compensation plan; and
- plan transit route to and between survey areas (if required).

Effects Assessment

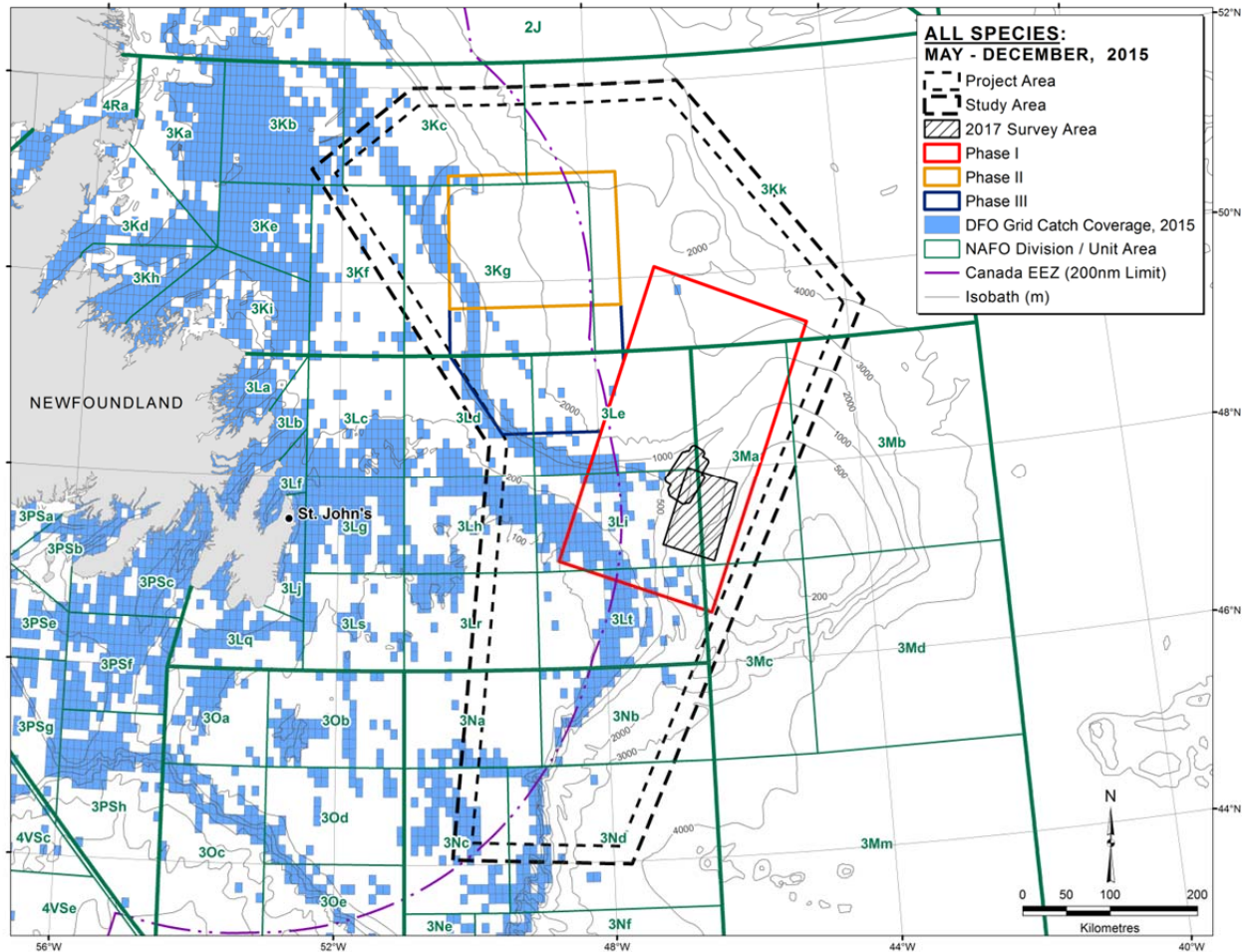
Effects on the Valued Environmental Components (VECs) have been reviewed based on the proposed Project amendment and all of the conclusions from the original EA (LGL 2014a) and its supporting documents (LGL 2014b, 2014c, 2015a, 2017) which remain valid.

The potential physical interaction with the fisheries (i.e., gear damage) will remain minimal considering the location of the 2017 survey area with respect to fishing activities (see Figure 1) and the small footprint of the CSEM survey vessel. As indicated in the EA (LGL 2014a), a CSEM vessel tows a short single streamer at depth (50 m above the bottom) compared to the 6–10 km long typical seismic streamers near the surface (typically 8–12 m below the surface).

Other vessels can safely pass within 1,000 m of the CSEM vessel's stern. In the event of identifiable fishing gear damage attributable to EMGS activities, compensation will be instituted.

The absence of a picket vessel will also have positive effects on the Project, including:

- reduced amount of sanitary/domestic waste being produced;
- reduced risk of accidental spill from the picket vessel;
- reduced bird attraction and potential strandings due to vessel light; and
- reduced potential for marine mammal vessel strikes.



Source: DFO commercial landings database, 2015.

Figure 1 Location of the 2017 Survey Area and Distribution of Commercial Fishery Harvest Locations, All Species, May–December 2015.

Conclusion

The proposed removal of the picket vessel for the 2017 season does not change any of the EA conclusions. There will be *no significant* residual environmental effects caused by the removal of the picket vessel for the 2017 season.

Literature Cited

- LGL (LGL Limited). 2014a. Environmental Assessment East Canada CSEM Survey, 2014-2018. LGL Rep. SA1248. Rep. by LGL Limited, St. John's, NL for Electromagnetic Geoservices Canada (Operator) (EMGS), Vancouver, BC. 192 p. + appendices.
- LGL. 2014b. Environmental Assessment EMGS East Canada CSEM Survey, 2014–2018 Addendum. LGL Rep. SA1248. Rep. by LGL Limited, St. John's, NL, for Electromagnetic Geoservices Americas Inc., Vancouver, BC. 26 p. + appendices.
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