



MEMO TO: Dave Burley

FROM: Elizabeth Young

DATE: May 13, 2015

**SUBJECT: Five Year Review
Southern Newfoundland Strategic Environmental Assessment (SEA)**

The Southern Newfoundland Strategic Environmental Assessment (SEA) (Southern SEA) was published in February 2010. It contains the following commitment in paragraph 2 of Subsection 1.2, page 3 that "*The report will be reviewed in five years to determine if updates are required.*" Further, the C-NLOPB *Environmental Assessment Policy and Procedures* state in Subsection 7.4 that "*Each SEA will be reviewed by Environmental Affairs staff within five years from the date of publication to confirm accuracy and validity of the conclusions.*"

Based on the above commitments the Environmental Affairs Department (EAD) conducted a review to determine if an update to the Southern SEA is required. The review included, but was not limited to, consideration of the following:

- Key conclusions and sensitive/special areas identified in the Southern SEA;
- Direct contact with key government personnel for advice on any imminent change in the sensitive/special areas' status in the next 1-2 years; and
- Any relevant information on the above existing in recent project-based Environmental Assessments (EAs) for activities proposed within the Southern SEA Study Area.

There are two recent project-based EAs in the southern Newfoundland offshore area with Study Areas that overlap the Southern Newfoundland SEA Study Area. The 2014 EAs and associated documents are:

GX Technology Canada Ltd.

- *Environmental Assessment of GX Technology Canada Ltd's GrandSPAN 2D Seismic, Gravity and Magnetic Survey, 2014-2018* (AMEC March 2014);

- *GX Technology Canada Ltd's GrandSPAN 2D Seismic, Gravity and Magnetic Survey, 2014-2018 Revised Environmental Assessment Addendum: Responses to 28 May 2014 and 4 July 2014 Consolidated Review Comments* (AMEC 20 July 2014);

Multi Klient Invest AS

- *Environmental Assessment of MKI Southern Grand Banks Seismic Program, 2014-2018* (LGL March 2014);
- *Environmental Assessment of MKI Southern Grand Banks Seismic Program, 2014-2018 Addendum* (LGL 14 July 2014);
- *Amendment to the Environmental Assessment of MKI's Southern Grand Banks Seismic Program, 2014-2018* (LGL March 2015); and
- *Environmental Assessment Update of the MKI Southern Grand Banks Seismic Program, 2014-2018* (LGL May 2015).

WesternGeco Canada recently initiated the EA process in January 2015 for a seismic program in the southeastern Newfoundland offshore. The *Environmental Assessment of WesternGeco's Southeastern Newfoundland Offshore Seismic Program, 2015-2024* (LGL May 2015) was recently submitted and will be made available for comment. The Study Area for this EA also overlaps a portion of the Southern Newfoundland SEA Study Area. Figure 1 identifies the boundaries for all three EAs in relation to the Southern SEA Study Area.

All EAs are provided to external agencies and other interested parties (e.g. FFAW, One Ocean) for review and comment. The EAs are guided by a Scoping Document prepared by the C-NLOPB, as well as by advice and information received, and issues identified through communications and consultations with other agencies, interest groups, and stakeholders. The scope of project-based EAs includes a description of the:

- Physical Environment, including bathymetry and geology, climatology, physical oceanography, and sea ice and icebergs;
- Biological Environment, including fish and fish habitat, seabirds, marine mammals and sea turtles, and species at risk;
- Socioeconomic Environment, including marine fisheries; and
- Sensitive and Special Areas, including Important Bird Areas (IBA), Ecologically and Biologically Significant Areas (EBSAs); Canada-NAFO Coral/Seamount/Sponge Closure Areas.

Environmental Assessments also provide:

- A description of the project;
- A summary of potential issues that may be associated with the project;
- An assessment of the environmental effects on the environment due to the project;
- An assessment of the effects of the environment on the project;

- The means by which potentially significant adverse effects may be mitigated through design, scheduling, and/or operational procedures; and
- A description of any follow-up monitoring that may be required.

At the time of application for program authorizations in the Project Area, the Operator is required to provide information to the C-NLOPB regarding the adaptive management of requirements of the SARA into program activities (e.g., introduction of new species or critical habitat to Schedule 1); additional mitigations; implementation of recovery strategies and/or monitoring plans. Any new information, if available, that may alter the EA conclusions is to be provided. This is typically provided in the form of an EA Update.

The Southern SEA report identified a number of sensitive/special areas within and immediately adjacent to the Southern SEA Study Area (see Figure 2). The conclusions in the Southern SEA that applied to these areas are identified below along with their most recent status, based on the findings of the EAD during the review.

- *The timing of seismic survey activities may be restricted to avoid peak fish spawning/nursery areas identified in the SEA Area.*

Update

The 2010 conclusion remains applicable.

- *In areas with known coral community abundances, activities involving the direct physical disturbance of the seabed may be restricted. Enhanced mitigation measures to reduce or eliminate effects on corals from the disposal of offshore wastes may be required. A 14,040 km² CAD-NAFO Coral Protection Zone currently exists as a mandatory temporary closure to fishing (to 31 December 2012) on the slope of the Grand Bank in NAFO Division 3O.*

Update

A review of closed areas for protection of vulnerable marine ecosystems (VME) was carried out by NAFO in 2014. The CAD-NAFO Coral Protection Zone closure area was renewed by NAFO on September 29, 2014 for an additional six (6) years, thus extending the closure to 31 December 2020.

- **The 2010 conclusion remains applicable.**

- *The possible location of a shipwreck, HMCS Shawinigan has been identified by DND. The location, while unknown, may be located near 47°34'N 59°11'W. Additional unexploded ordnance (UXO) may be “the presence of a Second World War torpedoed merchant ship (*Empire Sailor*)” within EL 1087R at a location of 43°53'N 55°12'W. An “explosives restricted area” is possibly located at 44.75°N 55°W, and an “explosives and chemical restricted area” is possibly located at 44°N; 55.25°W. A potential UXO site known as the “Sydney Disposal Area” may be located at the western edge of the SEA in position 46.08N, 058 W0. Wellsite or geohazard surveys may be required prior to any authorization involving physical disturbance (e.g. seabed sampling, drilling programs) in these areas.*

Update

The review of recent project-based EAs in this area has revealed additional UXO data. National Defence Canada (DND) records indicate that there are two additional shipwrecks present within the Southern SEA Study Area: the USS Pollux (45.88N, 55.48W); and the U-656 Submarine (45.24, 53.25W). There is also one additional UXO, the HMCS Valleyfield (46.04N, 52.40 W), immediately adjacent to the Southern SEA Study Area. These vessels contained munitions at the time of sinking and may continue to pose an explosive hazard.

- The 2010 conclusion generally remains applicable.

- *Potential designation of critical habitat for the leatherback turtle. The federal Leatherback Turtle Working Group is considering updating the Leatherback Action Plan to include a critical habitat designation within the SEA Area. Spatial and temporal mitigations may be required to avoid critical life stages.*

Update

Critical habitat for the Leatherback Turtle in Atlantic Canada was not defined in the 2006 Recovery Strategy. Subsequent research and scientific review (Fisheries and Oceans Canada [DFO] 2012) has suggested that there are three important habitat areas for Leatherback Turtle foraging in Atlantic Canadian waters: (1) south of Nova Scotia (NS); (2) north to east of Cape Breton; and (3) south of the Burin Peninsula, NL (see attached Figure 3 from DFO 2012), all of which are outside the Southern SEA Study Area. Leatherback turtles can be found in Atlantic Canadian waters at all times of the year but can be found in greatest abundance from June-October. This information is being used to inform the identification of critical habitat in a forthcoming amendment to the 2006 Recovery Strategy. During the recent Species at Risk Committee meeting in January 2015, an update was provided by DFO on the designation of critical habitat for the Leatherback Sea Turtle. This update and direct contact on May 12, 2015 with DFO's Species at Risk Division representative, confirmed that consultation will begin in 2015.

- The 2010 conclusion remains generally applicable; there currently is no information to indicate that critical habitat for the Leatherback Turtle will be identified within the Southern SEA Study Area.

- *Potential designation of a DFO MPA. Four EBSAs associated with the Placentia Bay-Grand Banks LOMA (Bурgeo Bank; Laurentian Channel and Slope; St. Pierre Bank; and Southwest Shelf Edge and Slope) occur in the SEA Area. Three EBSAs proposed by DFO Maritime Region on the offshore Scotian Shelf occur either partially or entirely within the SEA Area. The decisions regarding the conduct of exploration activity will depend on the area designated by DFO and cannot be made until the area is designated as a MPA. Offshore oil and gas activities in or adjacent to the potential MPAs and future protected areas will be bound by the protection measures defined in the appropriate legislative framework for these areas. Additional mitigation, if required, will be determined at the project-specific environmental assessment stage.*

Update

The Laurentian Channel Ecologically and Biologically Significant Area (EBSA), an area in the northwestern portion of the Southern SEA Study Area, was chosen by DFO as the Area of Interest (AOI) for a Marine Protected Area (MPA). The process of formally designating the MPA is expected to progress during 2015 and the final MPA area likely will cover a large portion of the original Laurentian Channel EBSA. On June 8, 2011, it was announced by DFO that the St. Ann's Bank EBSA, within the Eastern Scotia Shelf LOMA, had become a new AOI for potential designation as a MPA under the *Oceans Act*. The St. Ann's Bank EBSA was not one of the EBSAs within the Eastern Scotian Shelf LOMA that occurred either partially or entirely within the Southern SEA Study Area. A representative of DFO's Oceans Division confirmed on May 12, 2015 that "*There are no additional Coral or Sponge closures nor any additional Ecologically and Biologically Significant Areas in the South Newfoundland SEA Study Area since the first version of this document. Those previously described are still in effect.*" There are no immediate plans to progress another EBSA towards an MPA.

- Parks Canada has identified the "South Coast Fjords Area" off southern Newfoundland as a potential NMCA within the SEA Area. With regard to the proposed NMCA, decisions regarding the conduct of exploration activity will depend on the area designated by Parks Canada. These decisions cannot be made until the area is designated by Parks Canada as a NMCA.

Update

The Parks Canada Website, as of January 16, 2014, does not include the "South Coast Fjords Area" as one of the 29 marine regions in Canada (Figure 4). A representative of Parks Canada's Protected Areas Establishment Division confirmed to EAD staff on May 11, 2015 that the "South Coast Fjords Area" is no longer being pursued as a National Marine Conservation Area (NMCA). There are no other NMCAAs within the Southern SEA Study Area being considered at this time.

- The 2010 conclusion is no longer applicable; there are no potential restrictions relating to NMCA designation immediately foreseeable.

Based on the updated information obtained during the review of the Southern SEA, which included direct contact with DFO, Parks Canada, and Environment Canada representatives, a revised figure (Figure 5) is attached illustrating areas described in this memo. Environment Canada confirmed that there were no new sensitive/special areas within the Southern SEA Study Area since 2010. There has been no change in the status of the South Grand Bank preliminary Representative Marine Area (RMA) identified by Parks Canada. The review determined the following changes to the original Southern SEA sensitive/special areas.

- Designation of the Laurentian Channel and Slope EBSA in the northwest corner of the Study Area as an AOI for a MPA within the Placentia Bay-Grand Banks Large Ocean Management Area (PB-GB LOMA);

- Two additional UXO areas identified by DND; and
- The “South Coast Fjords Area” is no longer being pursued as a National Marine Conservation Area (NMCA).

Conclusion

An Update to the Southern Newfoundland SEA is not required at this time. This determination is based on: recent project-based EAs discussed above which were reviewed by key government personnel; and recent discussions with key government personnel to determine if there are any imminent changes in these “special areas” status in the next 1-2 years.

Based on the above information, the overall Southern Newfoundland SEA (2010) conclusion is still applicable.

“...the SEA indicates that petroleum exploration activities can be undertaken in the Southern NL area using the mitigations described in the document. A project-specific environmental assessment will determine the nature and extent of these restrictions or non-standard mitigations for each activity proposed in each area. If it is determined during an assessment process that baseline information is required in order to assess impact predictions, the operator may then be required to undertake data collection. It is likely that during the early exploration phase, such data collection can be conducted opportunistically as part of ongoing industry activity. In the event that petroleum resources with development potential are discovered, the C-NLOPB will consult with the appropriate operator, government agencies and interested parties in the public to determine the specifics of data collection effort that would be required to support a future development application.”

References

DFO. 2011. Website. (<http://www.inter.dfo-mpo.gc.ca/maritimes/Oceans/OCMD/marine-Protection/St-Anns-Bank-Information>)

DFO. 2012. Assessment of Leatherback Turtle (*Dermochelys coriacea*) Fishery and Non-fishery Interactions in Atlantic Canada Waters. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2012/041.

NAFO. 2015. Northwest Atlantic Fisheries Organization conservation and enforcement measures. NAFO/FC Doc. 15/01. Serial No. N6409. (<http://www.nafo.int/about/media/other-news/2014/09-29b.html>).

Parks Canada. 2014. Website. (<http://www.pc.gc.ca/eng/progs/amnc-nmca/cnamnc-cnnmca/index/carte-map.aspx>) and (<http://www.pc.gc.ca/eng/progs/amnc-nmca/cnamnc-cnnmca/index/carte-map-txt.aspx>).

Figures

Three recent Project Based Environmental Assessment Project Areas in relation to the Southern Newfoundland SEA Study Area

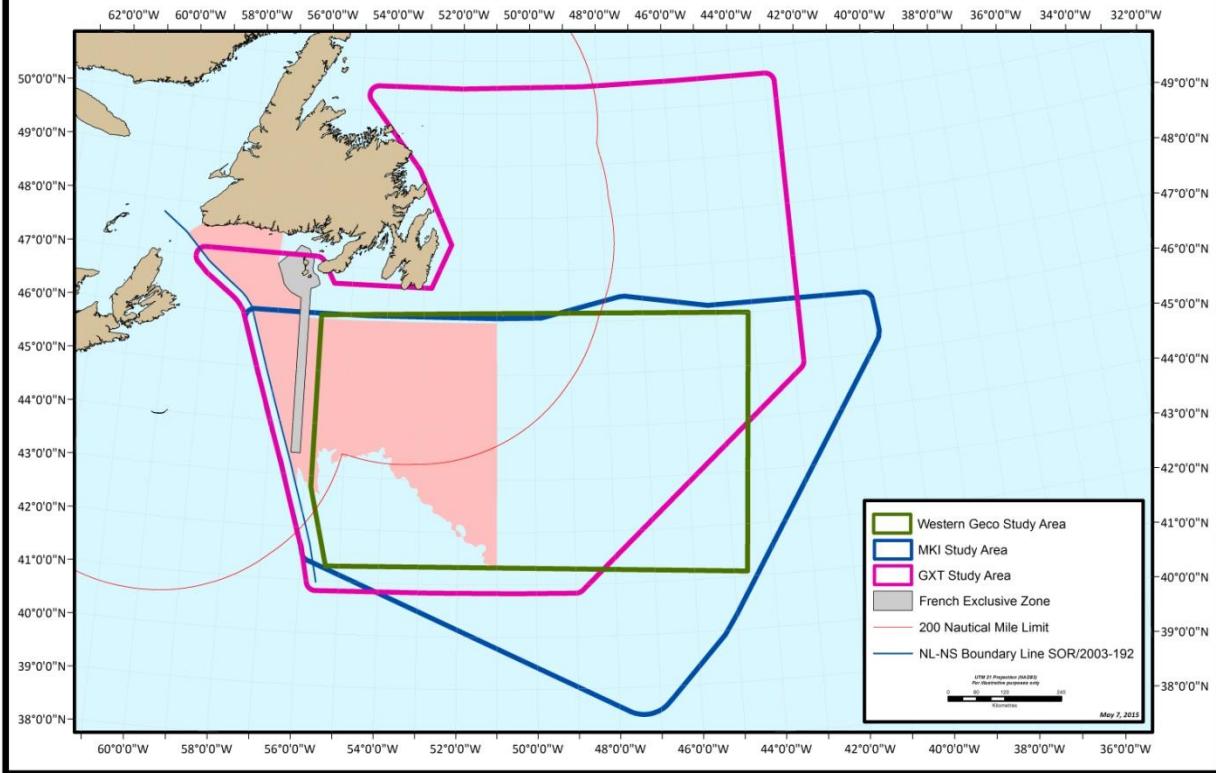


Figure 1- Project-Based EA Study Areas in relation to the Southern SEA Study Area.

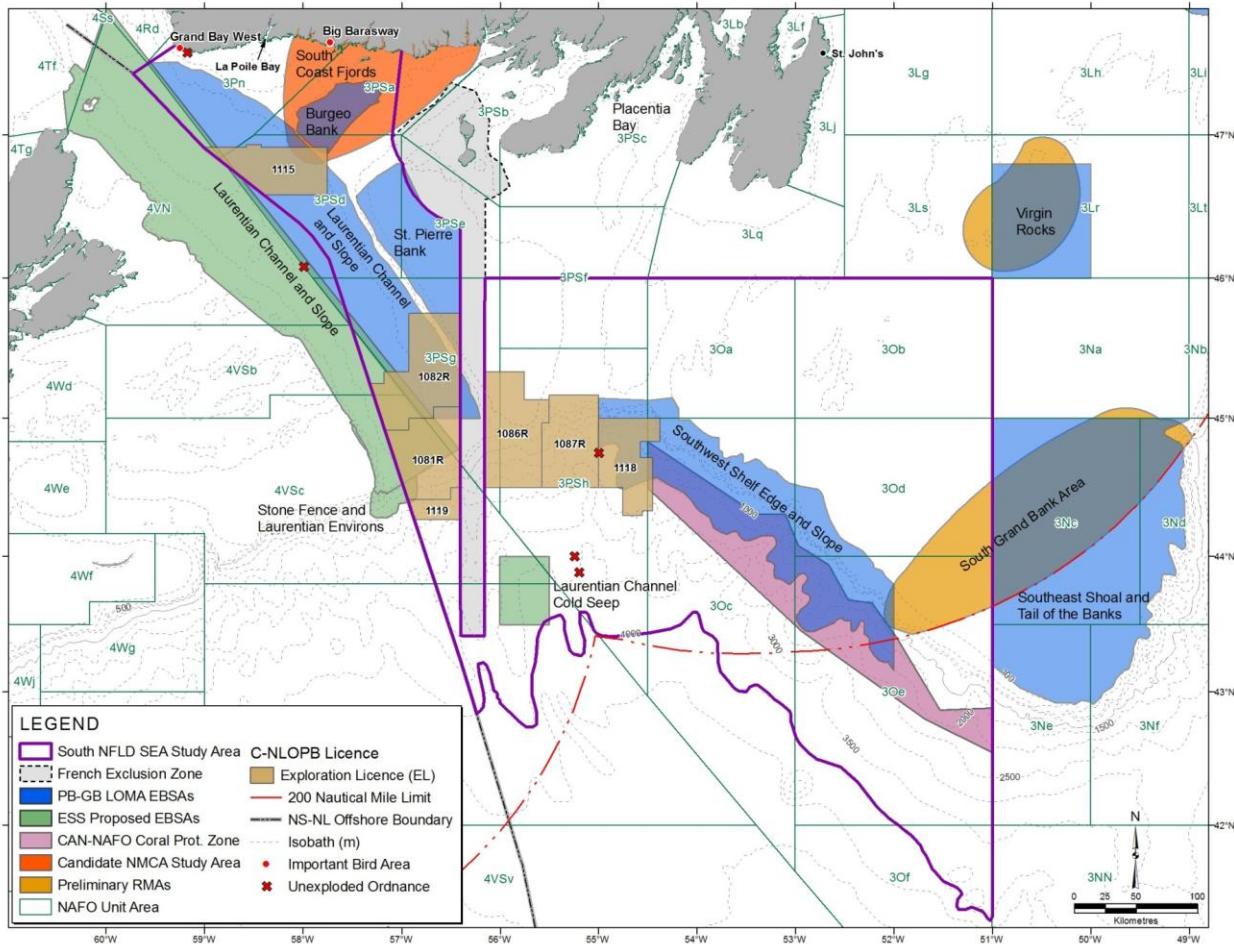


Figure 2 - Southern Newfoundland SEA (2010) – Sensitive/Special Areas within or adjacent to the SEA Study Area.

- What are the current sources of other, non-fisheries related interactions,
 - What level of mortality is caused by each source; and
 - Are these levels increasing or decreasing?

The information provided in this advisory report will be used by the Species at Risk Program in the five-year review of the leatherback turtle Recovery Strategy and in the development of the associated Action Plan.

Species Biology and Ecology

The leatherback turtle (*Dermochelys coriacea*) is the most widely distributed, and largest of all marine turtles. In the Canadian Atlantic, leatherbacks may attain curved carapace lengths of 175 cm, and weigh 640 kg (James et al. 2007). Genetics and tag-recapture data confirm that leatherbacks in Canadian waters originate from nesting beaches in the wider Caribbean; South and Central America; and Florida, USA (James et al. 2007; Goff et al. 1994). The species primarily feeds on soft-bodied, gelatinous organisms, such as medusae (sea jellies), salps, and siphonophores, prey that are seasonally abundant in temperate shelf and slope waters off eastern Canada. Some leatherbacks from the western Atlantic undertake annual migrations to Canadian waters to forage (James et al. 2005). While found throughout Atlantic Canadian waters, leatherback turtles are often concentrated in what is thought to be important foraging habitat (Figure 2). Leatherback turtles can be found in Atlantic Canadian waters at all times of the year but can be found in greatest abundance from June – October.

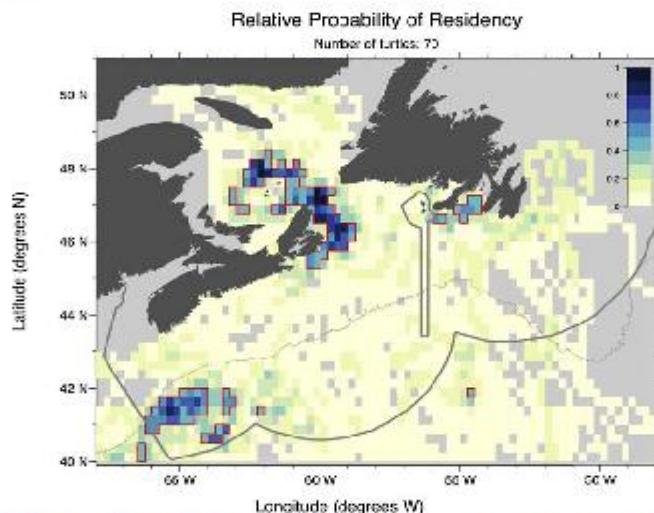


Figure 2. Areas of important habitat for leatherback turtles in Canadian waters, as indicated by satellite telemetry. Scale represents aggregated residency probability. Red polygons denote areas where aggregated residency probabilities ≥ 0.4 for all satellite tracked turtles. Thick grey line indicates Atlantic Canadian Exclusive Economic Zone boundary; thin grey line indicates 1000 m isobath. Source: M.C. James and I.A. Jonsen unpublished data; as presented in DFO 2012. Not to be cited outside the context of this zonal advisory process.

Figure 3 – Areas of important habitat for Leatherback Sea Turtles, as indicated by satellite telemetry.

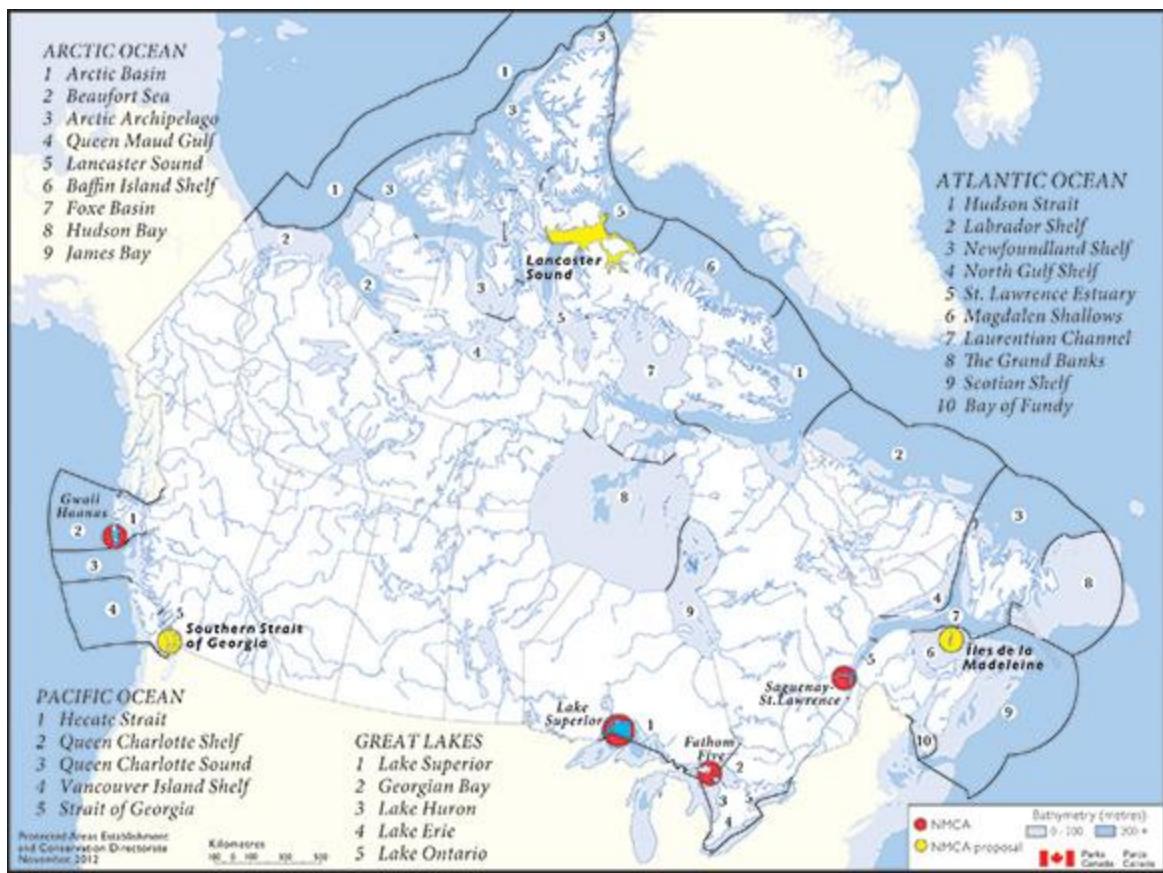


Figure 4 – Parks Canada NMCA system (January 16, 2014)

Southern Newfoundland SEA Sensitive Areas/Special Areas within or adjacent to the SEA Study Area (2015)

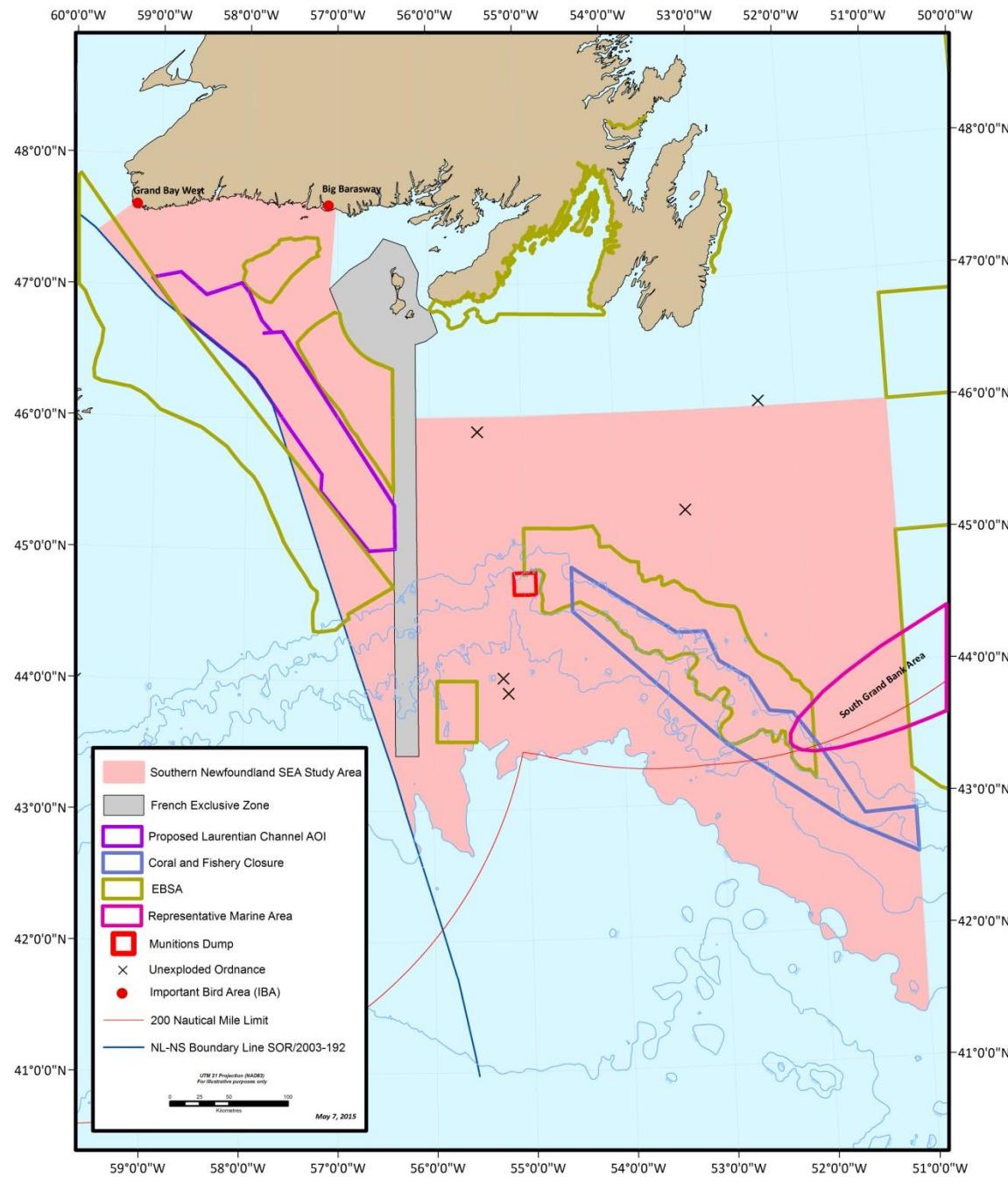


Figure 5 – Southern Newfoundland SEA – Sensitive/Special Areas within or adjacent to the SEA Study Area (2015)