

## **APPENDIX A**

### **Eastern Newfoundland SEA – Consultation Report**



# EASTERN NEWFOUNDLAND STRATEGIC ENVIRONMENTAL ASSESSMENT

## Consultation Report

### Draft Report

Submitted to:

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# 1 INTRODUCTION

The Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) is responsible, on behalf of the Governments of Canada and Newfoundland and Labrador, for petroleum resource management in the Newfoundland and Labrador (NL) Offshore Area.

Since 2002, the C-NLOPB has been undertaking Strategic Environmental Assessments (SEAs) of marine areas in which the issuance of exploration licences could be contemplated and which have not been subject to substantial levels of previous, project-level environmental assessment (EA). SEA is a relatively broad-based, regional approach to EA that examines the environmental issues that may be associated with a plan, program or policy proposal, and therefore allows for the identification, analysis and incorporation of environmental considerations at the earliest stages of planning and decision-making.

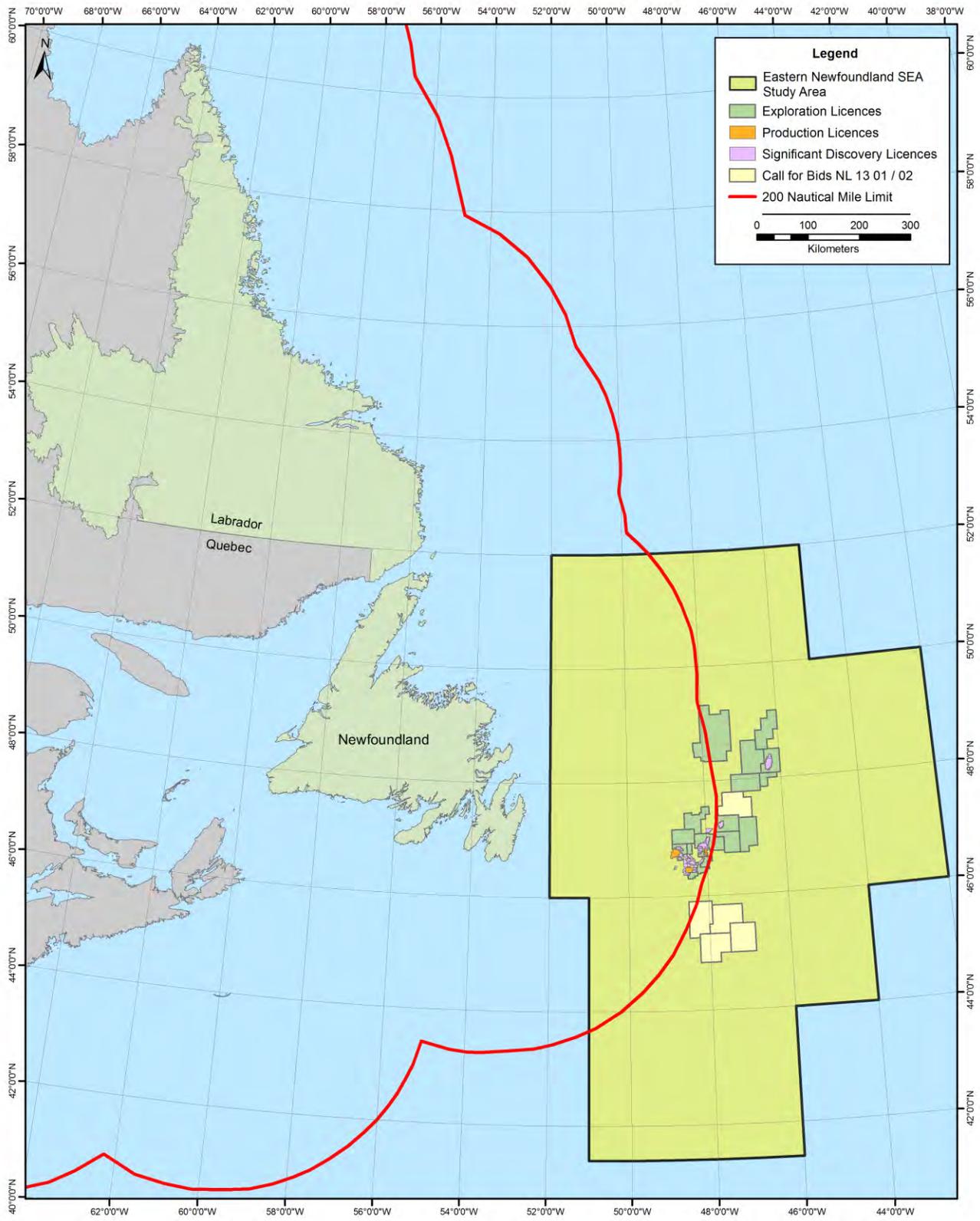
The C-NLOPB has conducted a number of SEAs for various portions of the NL Offshore Area, which provide information on the regional environmental setting and associated environmental considerations, and which then help to inform subsequent regulatory decisions regarding future offshore petroleum activities in the area in question. The Board has also committed to review its SEAs and to update them as required.

The C-NLOPB is currently completing an SEA for the Eastern Newfoundland Offshore Area, which covers an approximately 680,000 km<sup>2</sup> marine area off Eastern Newfoundland (Figure 1.1). The Eastern Newfoundland SEA involves updating the previous Orphan Basin SEA (2003) and expanding the overall geographic coverage to the south and east. The SEA provides information on the existing environment within the SEA Study Area and identifies and highlights any environmental considerations which may be associated with future oil and gas activities in the region.

An important and integral component of the C-NLOPB's SEA process is public and stakeholder consultation. These consultation initiatives are undertaken in order to identify any associated questions or concerns regarding future oil and gas exploration and/or development activities in an area and their potential environmental effects, so that these issues can be considered in the SEA.

This SEA Consultation Report provides an overview of the nature and key outcomes of the consultation program that has been conducted as part of the Eastern Newfoundland SEA.

**Figure 1.1 The Eastern Newfoundland Offshore Area (SEA Study Area)**



## 2 CONSULTATION METHODS AND ACTIVITIES

Consultation is often considered to be the cornerstone of the EA process, and public and stakeholder engagement often take place at various stages of an assessment. In this way, potential issues can be identified early to help inform, shape and focus the analysis, as well as inform eventual and associated planning and regulatory decisions. It is generally accepted that consultation is also an essential component of the SEA process, and is a key contributor to its overall effectiveness. As a forum for information-sharing and dialogue, SEA consultation can help identify the various issues and interests that may be associated with a proposed policy, plan or program, thereby allowing these to be known and considered early in and throughout an SEA.

The consultation program for the Eastern Newfoundland SEA has included discussions with government departments and agencies, stakeholder groups and the general public through a range of approaches. Various mechanisms have been used to provide interested groups and individuals with information on the SEA objectives and process, and on past, on-going and potential oil and gas licensing and activities in the region, as well as allowing them to review and consider this information and formulate and provide their questions and views.

The key purpose of the SEA consultation program to date has therefore been to identify questions, concerns and issues related to potential future oil and gas exploration and development in the Eastern Newfoundland Offshore Area and the potential environmental effects of these activities which require consideration in the SEA.

The nature and conduct of the various consultation activities that have been carried out to date as part of the Eastern Newfoundland SEA are described and summarized in this Chapter.

### 2.1 SEA Working Group and Scoping Document

The planning and preparation of the SEA and its associated consultation activities has been guided by a *Scoping Document*, which outlines the factors to be considered, the scope of those factors and other guidelines for preparing the SEA Report.

A Draft SEA Scoping Document was initially prepared by C-NLOPB staff with the assistance of a Working Group comprised of members representing 13 federal and provincial government departments and agencies and non-governmental organizations, as listed below:

- 1) C-NLOPB (Chair)
- 2) Fisheries and Oceans Canada (Oceans Ecosystems Management – NL Region)
- 3) Environment Canada
- 4) Natural Resources Canada (Frontier Lands Management Division Energy Sector)
- 5) Transport Canada
- 6) Parks Canada
- 7) NL Department of Natural Resources (Energy Branch)
- 8) NL Department of Fisheries & Aquaculture
- 9) Fish, Food and Allied Workers Union (FFAW)
- 10) One Ocean
- 11) Nature Newfoundland and Labrador
- 12) WWF - Canada

- 13) Canadian Parks and Wilderness Society (CPAWS)
- 14) Canadian Association of Petroleum Producers (CAPP)

The SEA Scoping Document was prepared and released by the C-NLOPB in early May 2013, and eventually formed the basis for the C-NLOPB’s Request for Proposals for the preparation of the assessment. The Scoping Document also outlines the general types of, and proposed locations and methods for, the public and stakeholder consultation activities to be completed as part of the SEA process.

At the onset of SEA planning and preparation, a *Consultation Plan* was developed by the SEA Study Team and submitted for review by the C-NLOPB and its SEA Working Group. This Plan outlined in some detail the planned nature of, and approach for, the planned consultation activities, including their proposed dates and times, venues, advertising and other logistical considerations.

A Draft Consultation Plan was prepared and submitted in late July 2013, and provided a mechanism for consulting with the C-NLOPB and the SEA Working Group and obtaining their input prior to finalizing the consultation program in August 2013 and its implementation in September 2013.

## 2.2 Public Open Houses

As specified in the SEA Scoping Document, the consultation program included a series of “Public Open Houses” held in locations throughout Eastern Newfoundland and elsewhere in the province, as listed in Table 2.1 below and illustrated in Figure 2.1:

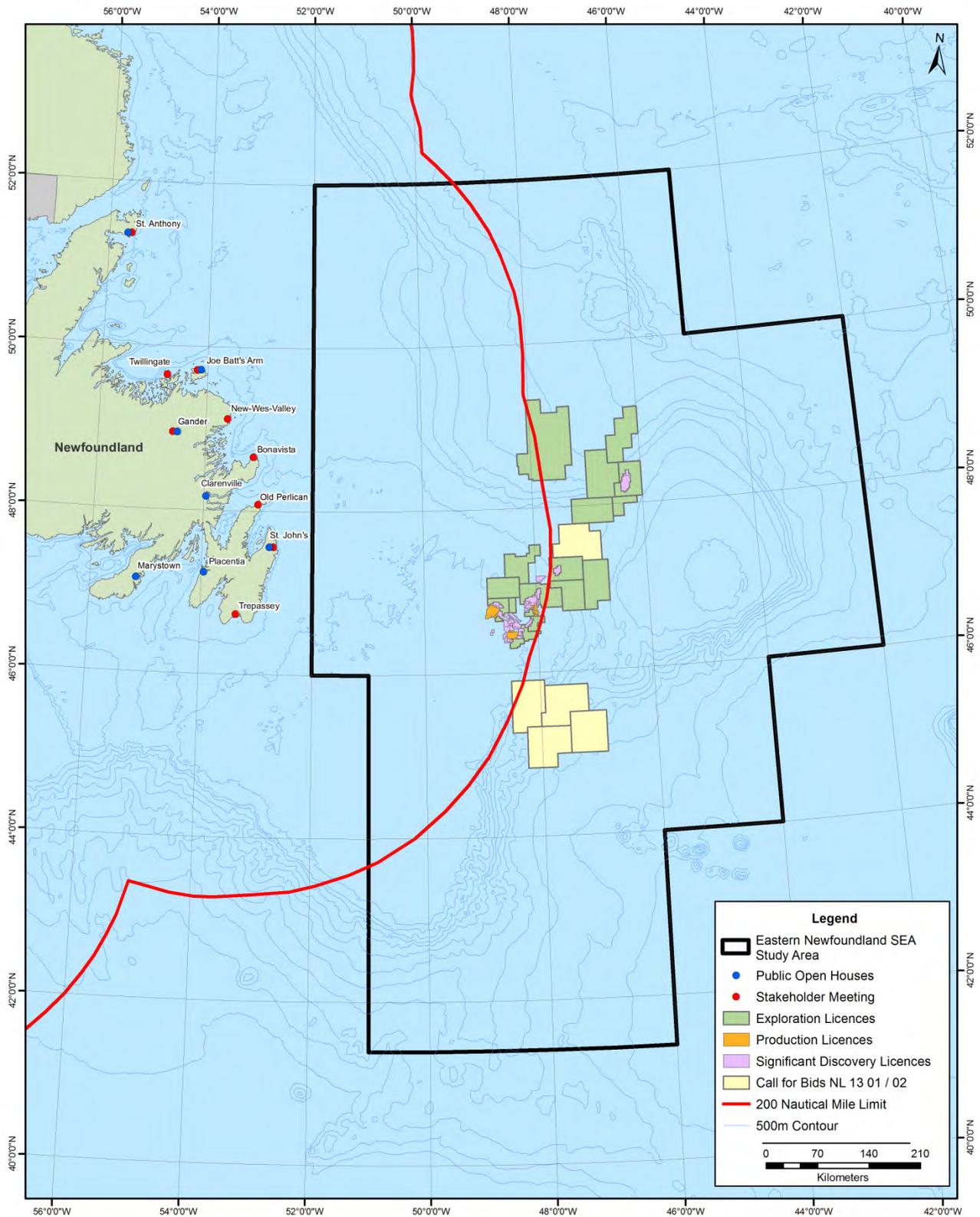
**Table 2.1 Public Open Houses held as part of the Eastern Newfoundland SEA Consultations**

Community	Date and Time	Location
Joe Batt’s Arm NL	Mon Sept 9 2013 (6-9 pm)	Community Hall
Gander NL	Tues Sept 10 2013 (6-9 pm)	Gander Hotel
Clarenville NL	Wed Sept 11 2013 (6-9 pm)	Clarenville Inn
Marystown NL	Thurs Sept 12 2013 (6-9 pm)	Marystown Hotel
Placentia NL	Mon Sept 16 2013 (6-9 pm)	Cultural Arts Centre
St. John’s NL	Tues Sept 17 2013 (6-9 pm)	Comfort Inn
St. Anthony NL	Thurs Sept 19 2013 (6-9 pm)	Lions Club

The public open houses took the form of evening “drop in” sessions, held from 6 – 9 pm at the identified venue in each community.

This format was selected by the SEA Study Team, in discussion with the C-NLOPB and its SEA Working Group, for various reasons. Firstly, it allows all interested parties to come to the sessions on their own time, and to proceed to receive information, ask questions and provide input at their own pace and in whatever manner and format that they felt most comfortable. By adopting this open house format, the SEA Study Team attempted to establish a relatively informal and relaxed environment, where participants could provide input and ask questions through one-on-one conversations, and/or in small groups, however they preferred.

**Figure 2.1 Eastern Newfoundland SEA: Public Open House and Stakeholder Meeting Locations**



These consultations intentionally occurred at a very early stage of the SEA process, before the completion of the SEA Report itself. The intended purpose of the consultation program was therefore not to present the results of the SEA, but rather, to provide the SEA Study Team with early input and understanding regarding the key public and stakeholder questions, issues and perspectives related to potential future oil and gas activities in the region, so that this information could help inform and shape the nature and content of the SEA analyses and eventual report.

The consultation sessions were advertised extensively through newspaper ads that provided details on the purpose, location and timing of the sessions (Attachment 1), as well as through other local and province-wide media and other means, as outlined in the Table below. All of the public open houses sessions were advertised in a single ad placed in each of the relevant regional and province-wide newspapers listed below, in order to optimize overall advertising coverage of the SEA consultation program.

**Table 2.2 Advertising for SEA Consultation Sessions**

Newspaper Advertisements	Other Advertising
<p><i>The Telegram</i> (St. John's, Province wide- Daily):            Saturday August 31, 2013            Saturday September 14, 2013</p>	<p>C-NLOPB News Release with detailed information on SEA consultation sessions (August 30, 2013)</p>
<p><i>The Pilot</i> (Lewisporte, Twillingate, Notre Dame Bay - weekly):            Wednesday August 28, 2013</p>	<p>Information also provided as “Public Service Announcements” to the following radio stations / networks:</p> <ul style="list-style-type: none"> <li>• VOCM (province wide)</li> <li>• CBC - St. John’s</li> <li>• CBC – Central NF</li> <li>• CBC – Western NF</li> <li>• CBC Fisheries Broadcast</li> <li>• OZ FM (province wide)</li> <li>• Coast 101.1 (St John’s)</li> <li>• 99.1 Hits FM (St. John’s)</li> <li>• K-Rock (St. John’s)</li> </ul>
<p><i>The Beacon</i> (Gander, Gander Bay, Notre Dame Bay - weekly):            Thursday August 29, 2013</p>	
<p><i>The Packet</i> (Clarenville, Bonavista, Bonavista Bay - weekly):            Thursday August 29, 2013</p>	
<p><i>The Southern Gazette</i> (Marystown, Grand Bank, Burin Peninsula - weekly):            Tuesday August 27, 2013</p>	
<p><i>The Compass</i> (Carbonear, Bay Roberts, Harbour Grace - weekly):            Tuesday September 3, 2013</p>	
<p><i>The Charter</i> (Placentia, Long Harbour, Argentia - weekly):            Thursday September 5, 2013</p>	
<p><i>The Northern Pen</i> (St. Anthony, Northern Peninsula - weekly):            Monday September 2, 2013</p>	

The consultation sessions were also covered by local media, both before and following the open houses, which provided a degree of additional information regarding, and advertising for, the SEA consultations.

Representatives of the C-NLOPB and its SEA Study Team (AMEC) were present at all consultation meetings to provide information and clarification, answer questions, and to record any and all questions, issues and perspectives raised verbally. Upon arrival, public open house participants were greeted by a SEA Study Team representative at a sign-in table, who provided an overview of the open house purpose and format and distributed a handout which included maps of the Eastern Newfoundland SEA Study Area and the overall NL Offshore Area.

The public open houses included an introductory presentation at the beginning of each session, which was then repeated at approximately the half way point of the meeting (as required), which was specified in the newspaper ads for the SEA consultations (see Attachment 1). The presentation provided a general overview of the nature and purpose of the SEA, the key objectives of the public consultations and how their results will be recorded and used, and the future process for release and public review of the Draft SEA Report (Attachment 4). The presentation generally included and summarized the information on the information display panels (see below). At the end of the presentation, participants were encouraged to ask questions or provide comments, and invited to view the information panels and maps (see below) and engage in discussion with the SEA Study Team.

The public consultation sessions included six information stations arranged throughout the open house venue, consisting of tables with large information panels. These included the following:

- 1) C-NLOPB Overview (purpose, role, mandate, map of NL Offshore Area)
- 2) Offshore Oil and Gas Licencing and Activities (overview of C-NLOPB land rights issuance / licencing process, and generic descriptions of offshore oil and gas exploration activities that may be undertaken)
- 3) Eastern Newfoundland Offshore Area (including a map and description of the SEA Study Area, existing licences, previous and on-going oil and gas activities)
- 4) C-NLOPB SEA Process and Eastern Newfoundland SEA (nature, purpose, objectives)
- 5) Environmental Setting and Considerations (components of the existing environment being addressed in the SEA, environmental issues that may be associated with offshore oil and gas activities, standard environmental protection measures)
- 6) 2013 Eastern Newfoundland SEA (process, outcomes and timeline / next steps) and the 2003 Orphan Basin SEA (summary of its key information and findings)

The purpose of these information panels was to provide general background information, and to serve as a basis for prompting dialogue and the sharing of information and input by consultation participants. Copies of the public open house information panels are provided in Attachment 2 of this report.

**Figure 2.2 Public Open House Layout and Format (Examples)**



At each public open house, representatives of the SEA Study Team (C-NLOPB and AMEC) were clearly identified through name tags, and were positioned at and/or between stations. A key focus was on obtaining and recording information and input related to:

- Questions, issues or concerns regarding offshore oil and gas activities and their potential effects in the Eastern Newfoundland Offshore Area;
- Suggestions for any mitigation measures or other means through which these issues could be addressed in future planning and decisions / actions;
- Local knowledge regarding the existing biophysical environment in the SEA Study Area, and
- Information on fisheries and/or other marine activities and components in the region.

Comment / feedback forms were also provided (Attachment 2), which addressed each of the questions and issues noted above. Attendees were given the option of completing these at the session and leaving them with the SEA Study Team, or completing and submitting them later (full contact information was included). It was also made clear that participants could submit their input in any format they choose, and this need not be restricted to the structure of / questions on the feedback form itself, and they could do so at any time in the SEA process. These feedback forms were also posted on the C-NLOPB website (in both pdf and ms word formats).

The SEA Study Team members were involved in continuously taking notes and otherwise recording any and all input received throughout the public open house, and at the end of each session the consultation team met as a group to debrief and compile all information and input received.

### 2.3 Stakeholder Meetings

A series of Stakeholder Meetings were also arranged and conducted with identified organizations at select locations throughout Eastern Newfoundland. The SEA Scoping Document specified that “Stakeholder meetings will be held in Trepassey, Old Perlican, Bonavista, New-Wes-Valley, Fogo Island, Twillingate, and other surrounding communities that may be identified during the development of the Consultation Plan.” These meetings were intended to supplement the larger public open house sessions, and in particular, they provided an opportunity to meet with identified stakeholder groups in key areas, during the daytime “working hours” for these organizations. Through the development and discussion of the SEA Consultation Plan, Stakeholder Meetings were planned and held as listed in the Table below and illustrated in Figure 2.1:

**Table 2.3 Stakeholder Meetings held as part of the Eastern Newfoundland SEA Consultations**

Community	Date and Time	Location
Joe Batt’s Arm NL	Monday Sept 9 2013 (1-3 pm)	Community Hall
Twillingate NL	Tuesday Sept 10 2013 (10 am – 12 pm)	Anchor Inn Hotel
Gander NL	Tuesday Sept 10 2013 (3-5 pm)	Gander Hotel
New-Wes-Valley NL	Wednesday Sept 11 2013 (10:30 am – 12:30 pm)	Barbour Heritage Site
Bonavista NL	Thursday Sept 12 2013 (10:30 am – 12:30 pm)	Royal Canadian Legion
Old Perlican NL	Friday Sept 13 2013, (1-3 pm)	Old Perlican Fire Hall
Trepassey NL	Monday Sept 16 2013 (10:30 am – 12:30 pm)	Father Mallowney Social Centre
St. John’s NL	Tuesday Sept 17 2013 (1-3 pm)	Comfort Inn
St. Anthony NL	Thursday Sept 19 2013 (2-4pm)	Lions Club

Organizations were identified by the SEA Study Team through a general search process, using the internet, telephone directories, the team’s knowledge and experience in working in these areas as well as their existing contacts and networks, and with the advice and input of the C-NLOPB and its SEA Working Group. Based on these searches and discussions, an initial list of local stakeholder organizations was developed, each of which were sent an invitation to the Stakeholder Meeting(s) in their area by email (see Attachment 3).

Given the number of communities and areas being visited and thus the number of potentially relevant stakeholder groups involved, the challenges of identifying and reaching all relevant organizations were recognized at the onset. The newspaper advertisement for the SEA consultations (Attachment 1) therefore also referenced and listed the planned Stakeholder Meetings, and invited any and all interested organizations to contact the SEA Study Team to confirm and arrange their attendance at one or more of the meetings. The invitations also asked all recipients to forward the invitation to any other stakeholder groups that they felt

would have an interest. Through this “snowball” process, a number of additional groups were identified and invited, and it became clear that in some cases the invitation was distributed widely by various organizations.

Through the Stakeholder Meetings, the SEA Study Team attempted to reach the largest number of groups possible, and to include a good cross section of the various types of groups and interests that may be interested in the SEA – including local communities, fishers groups, environmental and social interest groups, industry and business associations. Any and all organizations that requested an invitation or who otherwise chose to attend a meeting were permitted to do so and were welcomed at the meetings.

These Stakeholder Meetings involved an approximately two hour meeting at the identified venue at each location, which began with a presentation by the SEA Study Team outlining the nature and purpose of the SEA. This presentation was the same as that provided during the public open house sessions (see Section 2.2 and Attachment 4). This was then followed by a general, round table discussion. Notes were again taken by the SEA Study Team at each meeting, highlighting the various questions, issues and perspectives.

**Figure 2.3 Stakeholder Meeting Layout and Format (Examples)**



The SEA Study Team also allotted time in several locations to meet with fishers and fishing groups, if requested. This included potential fisher meetings in the following locations:

- Twillingate / Farewell area (Sunday September 8, 2013);
- Fogo Island (Monday September 9, 2013);
- New-Wes-Valley (Wednesday September 11, 2013);
- Clarenville (Wednesday September 11, 2013);
- Bonavista (Thursday September 12, 2013);
- Old Perlican (Friday September 13, 2013);
- Placentia (Monday September 16, 2013);
- St. John’s (Tuesday September 17, 2013); and
- St. Anthony (Thursday September 19, 2013).

Although no meetings were requested, FFAW representatives and individual fishers attended several of the Stakeholder Meetings and Public Open Houses, as described in the following Chapter.

### 3 CONSULTATION RESULTS

This Chapter provides an overview of the results and key findings of the consultation program that has been carried out for the Eastern Newfoundland SEA to date, including meeting attendance, key questions and issues raised and other outcomes.

#### 3.1 Meeting Attendance

The overall attendance at each of the above described Eastern Newfoundland SEA Public Open Houses and Stakeholder Meetings is summarized in Table 3.1 and 3.2, respectively.

**Table 3.1 SEA Public Open House Attendance**

Community	Date, Time and Location	Number of Attendees	SEA Team Members Present
Joe Batt's Arm NL	Mon Sept 9 2013 (6-9 pm), Community Hall	0	E Young (C-NLOPB), S Bonnell, D Cote, J Paynter(AMEC)
Gander NL	Tues Sept 10 2013 (6-9 pm), Gander Hotel	2	
Clarenville NL	Wed Sept 11 2013 (6-9 pm), Clarenville Inn	5	
Marystown NL	Thurs Sept 12 2013 (6-9 pm), Marystown Hotel	2	
Placentia NL	Mon Sept 16 2013 (6-9 pm), Cultural Arts Centre	2	E Young (C-NLOPB), S Bonnell, D Cote (AMEC)
St. John's NL	Tues Sept 17 2013 (6-9 pm), Comfort Inn	9	E Young (C-NLOPB), S Bonnell, D Cote, D Robbins (AMEC)
St. Anthony NL	Thurs Sept 19 2013 (6-9 pm), Lions Club	0	E Young (C-NLOPB), S Bonnell (AMEC)

**Table 3.2 SEA Stakeholder Meeting Attendance**

Community	Date, Time and Location	Number of Attendees and Groups Represented	SEA Team Members Present
Joe Batt's Arm NL	Monday Sept 9 2013, 1-3 pm, Community Hall	0	E Young (C-NLOPB), S Bonnell, D Cote, J Paynter(AMEC)
Twillingate NL	Tuesday Sept 10 2013, 10 am – 12 pm, Anchor Inn Hotel	5, including: <ul style="list-style-type: none"> <li>• FFAW / fishers (4)</li> <li>• University of Toronto</li> </ul>	
Gander NL	Tuesday Sept 10 2013, 3-5 pm, Gander Hotel	3, including: <ul style="list-style-type: none"> <li>• FFAW</li> <li>• Parks Canada</li> <li>• University of Toronto</li> </ul>	
New-Wes-Valley NL	Wednesday Sept 11 2013, 10:30 am – 12:30 pm, Barbour Heritage Site	5, including: <ul style="list-style-type: none"> <li>• FFAW / fishers (4)</li> <li>• University of Toronto</li> </ul>	E Young (C-NLOPB), S Bonnell, J Paynter AMEC)

<b>Community</b>	<b>Date, Time and Location</b>	<b>Number of Attendees and Groups Represented</b>	<b>SEA Team Members Present</b>
Bonavista NL	Thursday Sept 12 2013, 10:30 am – 12:30 pm, Royal Canadian Legion	12, including: <ul style="list-style-type: none"> <li>• FFAW / fishers (11)</li> <li>• University of Toronto</li> </ul>	E Young (C-NLOPB), S Bonnell, D Cote, J Paynter(AMEC)
Old Perlican NL	Friday Sept 13 2013, 1-3 pm, Old Perlican Fire Hall	7, including: <ul style="list-style-type: none"> <li>• FFAW / fishers (6)</li> <li>• University of Toronto</li> </ul>	E Young (C-NLOPB), S Bonnell, J Paynter AMEC)
Trepassey NL	Monday Sept 16 2013, 10:30 am – 12:30 pm, Father Muldowney Social Centre	2, including: <ul style="list-style-type: none"> <li>• FFAW</li> <li>• NL Parks &amp; Natural Areas Division</li> </ul>	E Young (C-NLOPB), S Bonnell, D Cote (AMEC)
St. John's NL	Tuesday Sept 17 2013, 1-3 pm, Comfort Inn	17, including: <ul style="list-style-type: none"> <li>• NL Dept of Innovation, Business and Rural Development</li> <li>• NL Dept of Tourism, Culture &amp; Recreation</li> <li>• FFAW / fishers (2)</li> <li>• North Atlantic Fisheries Organization (NAFO)</li> <li>• Ocean Choice International (3)</li> <li>• NL Oil &amp; Gas Industries Association (NOIA)</li> <li>• St. John's Board of Trade</li> <li>• NL Association of Seafood Producers</li> <li>• NE Avalon Atlantic Coastal Action Program (ACAP)</li> <li>• Memorial University of NL</li> <li>• Canadian Parks and Wilderness Society (CPAWS)</li> <li>• Nature NL (2)</li> <li>• University of Toronto</li> </ul>	
St. Anthony NL	Thursday Sept 19 2013, 2-4 pm, Lions Club	10, including: <ul style="list-style-type: none"> <li>• FFAW / fishers (4)</li> <li>• NL Dept of Innovation, Business and Rural Development</li> <li>• Local MHA's Office</li> <li>• NL Wildlife Federation</li> <li>• St. Anthony and Area Chamber of Commerce</li> <li>• St. Anthony Basin Resources Inc (SABRI) (2)</li> </ul>	E Young (C-NLOPB), S Bonnell (AMEC)

## 3.2 Overview of Consultation Results and Key Findings

The following sections provide an overview summary of the key results and outcomes of the SEA consultation program to date, as reflected in the verbal and written comments provided to the Study Team either during and/or following each Public Open House and Stakeholder Meeting.

These are presented in no particular order, although an attempt has been made to generally group these by key subject or theme. Also, of necessity and for the sake of brevity, the information has been summarized and in some cases coalesced to attempt to accurately but succinctly reflect the main issues and perspectives provided, rather than present a verbatim recount of all input received.

It should also be noted that in many cases, consultation participants provided information and opinions regarding environmental components or phenomena, the perceived effects of oil and gas and other human activities, commentary on regulatory or policy matters and other issues, all of which have been summarized and presented here. No attempts have been made to authenticate or in any way refute any such anecdotal information, and the objective of this Consultation Report is to present “what we heard”.

This Consultation Report forms part of the SEA Report released for public review and comment, at which time participants have an opportunity to provide any additional information or clarification to help ensure that their questions and issues are accurately and appropriately reflected herein.

### 3.2.1 Environmental Setting

- Comments on the overall vastness of the Eastern Newfoundland Offshore Area, and the diversity (and dynamic nature) of the various fishing and other human activities that occur in this very large region.
- Weather and oceanographic characteristics and factors (including fog / visibility, icebergs) and associated environmental and safety considerations will have to be important considerations in planning and completing any offshore oil and gas activities off Newfoundland (equipment, timing, avoiding safety issues involving other vessels, etc).
- The importance of the “Bonavista Corridor” for the movement of cod through the SEA Study Area.
- Various identified “shoal patches” in the region, which are important for crab.
- There are corals and sponges and other important species and systems in the SEA Study Area, both inside and outside of the 200 nautical mile limit. There are new observational data on corals and sponges which have not yet been published, and which therefore are not available to inform licencing and project reviews.
- Fishers on the northeast coast of Newfoundland use parts of the Orphan Basin for commercial fishing activity, particularly in the northwest portion of the SEA Study Area. There are turbot grounds in deepwater areas (48°N down to 54-55°N), within the 200 nautical mile limit. These fishers use nets and draggers in these areas. Over half of the Orphan Basin area consists of grounds for crab and is used for shrimp and turbot fishing. They fish crab from approximately April to June, shrimp for 6-7 months each year, and turbot for about one and a half months. Crab fishing primarily occurs far offshore.

- Fishers on the Bonavista Peninsula fish for shrimp and turbot in the northwestern portion of the Orphan basin and for crab in the western and central part of the SEA Study Area, as well as in other areas and locations.
- Fishers on the northern portion of the Avalon Peninsula fish throughout NAFO 3L and 3N, including for crab, shrimp, and other species both offshore and nearshore. Area 3L is reportedly now seeing the best crab fishing in years.
- Fishers on Burin Peninsula fish primarily in area of the south coast of Newfoundland, including in NAFO 3Ps and 4R. Little if any of their fishing activity occurs in the SEA Study Area.
- Fishers on the Northern Peninsula fish in parts of the SEA Study Area, including the portion that occupies the northwestern portion of the Orphan Basin region. This includes important areas for crab (April – June), shrimp (May – October, especially in summer), turbot (approximately two weeks in each of June and August) and other species (including parts of NAFO 3K and 2J). Crab is fished both inside and outside of the 200 nautical mile limit.
- Overall, there is commercial fishing in the SEA Study Area from early April until late October. This includes fishing activity in the current Exploration Licence blocks off Eastern Newfoundland. Fishing areas and times change considerably from year to year.
- The Flemish Cap is an important area overall, both ecologically and from a fishing perspective. The “triangle area” just east of the existing Exploration Licences in that portion of the SEA Study Area is especially important for shrimp and capelin.
- It is also important to recognize that other countries also undertake commercial fishing activity in the SEA Study Area, particularly outside of the 200 nautical mile limit. A lot of the fishing activity around the Flemish Cap, for example, is international (non-Canadian). Information on these fisheries is much more difficult to obtain.
- Fishers and fish processors in Newfoundland and Labrador are hoping to see improved stocks and increased quotas for certain fish species in this area, including cod, American plaice, and others.
- Participants commented on the difficulty of identifying and making specific comments on key ecological and fishing areas in the Eastern Newfoundland Offshore Area, at this early (SEA) stage. It is difficult to pin-point specific important locations and periods, as most areas are used at some point in time, and the environment and fishing industry are always changing.
- The marine environment is changing, as these “regime shifts” are evident in different species occurring, migrating and spawning at different locations, depths and times than has traditionally been the case.
- These biophysical changes are also then reflected in a changing fishing industry, especially in terms of fishing locations, times and gear types. For example, as the ocean warms, fishers expect that they will fish more for groundfish. Many have kept their groundfish licences on the Grand Banks in anticipation of this trend in the future.

- Fishers commented on the importance of considering their information and knowledge as being valid and valuable, not just “anecdotal” and less important than what the scientists say.
- It is important to consider not only what the fishery looks like now, but also what it looked like in the past (historical perspective) and may look like in the future (e.g., if cod come back; increased use of mobile gear, etc). Consider how this future fishery might interact with and be affected by the oil and gas industry off Eastern Newfoundland.
- The importance of marine birds in the overall ecosystem, as the primary indicator of ecosystem health. There are 40-60 million marine birds in the region on an annual basis. With current data sets and technologies, key areas and times (“hotspots”) can be identified and tracked.
- There are important seabird colonies in the region, which should be identified and mapped in the SEA Report. The Witless Bay Islands are important ecologically and economically. Cape St. Mary’s and Long Islands are important / protected areas as well.
- Seabirds nest on islands within or near the SEA Study Area, including Baccalieu Island and others, especially in the early part of the year. They winter in areas near Hibernia and elsewhere.
- The SEA should obtain and present information on nesting murrelets in the area. More information and research on black-legged kittiwakes is required.
- Kittiwakes arrive nearshore in February, whereas the gannets arrive in the spring near St. Patrick’s Day. The timing of the arrival and departure of most marine bird species has been quite consistent over the years.
- The SEA should identify any data gaps that are relevant to the scope of the SEA and/or which would be applicable to any future project-specific assessments.
- In particular, there is a recognized lack of fish data in the areas outside the 200 nautical mile limit. Other countries (such as Spain) are reportedly doing some survey work, but these results are not available.
- NAFO has identified important marine areas and ecosystems, some of which occur within the SEA Study Area and which should be referenced and mapped in the SEA Report.
- A suggestion that the SEA Report should highlight and make recommendations about the need for better sharing of the environmental information collected by offshore operators, including between companies and with regulatory authorities and other interested parties.
- The SEA Report should, in addition to its biophysical focus, consider and include socioeconomic information and analysis.

### **3.2.2 Environmental Considerations and Possible Mitigation**

- Concerns about the potential for oil and gas activities to block or otherwise affect cod presence and migration through the area. Also need to consider other species that move through the area at certain times of the year, such as salmon.

- Concerns about the potential for Exploration Licences to be issued in any areas that are near the Eastern Newfoundland shoreline.
- The potential for interactions and conflicts between fishing gear and offshore oil and gas activities, especially across such a vast area as that being considered in this SEA.
- Given weather and oceanographic conditions in this region, most fishing and oil and gas activities are planned and occur within the same time period (apx April to October), which increases the potential for interactions and negative effects to occur.
- Concerns about any possibility of areas being closed to fishing activity as a result of offshore oil and gas projects (such as their associated safety zones), including the associated logistical and economic issues that this could create for fishers. Reports that this is already occurring because of existing oil operations in the SEA Study Area.
- An observation that oil and gas operators are starting to look (and extend their activities) further and further, including into more and more important fishing areas off Newfoundland and elsewhere. These are affecting fishing on a project-specific and cumulative basis.
- Concerns about the potential effects of marine based seismic activity on marine life and the fishing industry, People want to know more the effects of offshore seismic activities on the abundance and distribution of shellfish and finfish species, and there does not seem to be any certainty or clarity on this.
- There have been reports by fishers that fish presence and fish catches have decreased considerably in areas immediately following seismic activities, including crab and other species. There is uncertainty around these effects due to noted variation in local observations and also within the scientific research.
- Fishers and the FFAW are concerned about seismic surveys being undertaken around the time of exploratory / survey fisheries, especially for crab. There is a fear that the effects of seismic sound on fish numbers and distributions will negatively influence fish survey results, and thus, affect management measures and quotas.
- Seismic surveys can also have direct interactions with fishing vessels and gear, which can be disruptive to vessel movement and/or cause damage.
- A stated need for specific and clear management and regulation of seismic survey work (spatial and temporal) to avoid negative interactions with fishing activity.
- There is a recognized need for good and continuous communication and cooperation between the oil and gas operators and the fishing industry to avoid any negative issues and interactions.
- An observation that many of the exploration companies and their vessels / rigs are based in international locations and work all over the world. Operators need to ensure that they are very familiar with the Canadian context and the rules of how to operate in our waters.

- In some cases, seismic operators have gone outside their planned and approved areas and times, and this has resulted in issues and conflicts. Need clear and firm regulatory processes and rules, with clear and effective remedies in the case of non-compliance. This will help build further confidence that the regulatory processes are working.
- A suggestion that there should be no seismic work done during the fishing season because of the uncertainty of what its environmental effects are.
- The need to ensure that exploration wells are decommissioned and monitored properly when they are completed and eventually abandoned.
- Concerns about the potential for, and possible environmental and socioeconomic consequences of, an accidental oil spill in the Eastern Newfoundland Offshore Area.
- Reiteration of the need to ensure that appropriate spill prevention measures are implemented, and that adequate equipment and robust procedures are in place to respond to any such spill in a timely and effective manner.
- A suggestion that there needs to be more emphasis on the recovery of any spilled oil, rather than letting natural processes deal with any spilled hydrocarbons or other materials.
- A suggestion that fishers should be trained and placed on retainer as oil spill responders throughout Newfoundland and Labrador, through funding provided by the oil and gas industry.
- The need to learn from past experiences, and for oil spill prevention and response procedures and capabilities to improve over time.
- Operators should have to demonstrate that they are capable to responding to any spill, and appropriate and adequate financial compensation measures must be guaranteed. It is important to ensure that there is sufficient liability and compensation to fully address any impacts to fishers and their livelihoods.
- There is a need for more information and a better understanding amongst fishers about how any such compensation systems would work in the event of an oil spill.
- Suggestions that pre-drilling sea bottom surveys should cover larger areas, with the resulting information also being made publicly available by the operators and/or regulators.
- Mistaken Point is a provincial protected area, and is seeking UNESCO World Heritage Status. Any effects to this area, especially from an oil spill, would be significant and not able to be cleaned up effectively.
- Concerns about the possible environmental effects and safety implications of increased vessel traffic (supply and otherwise) to, from and within the region which may be associated with future oil and gas related activities.
- Possible application of international law and associated designations and management measures to control vessel traffic in the SEA Study Area, outside of the 12 nautical mile limit.

- Concerns about the introduction of invasive species from vessel ballast water exchange and other sources, and the potential environmental and socioeconomic effects of these. Possible research on, or management measures for, such species could be funded by the oil and gas operators.
- A need for more information on, and better planning and communication regarding, iceberg towing operations by oil and gas operators off Eastern Newfoundland. An iceberg that is moved away from its natural path to avoid interacting with an oil installation can then affect crab pots or other fishing equipment and activity.
- A comment that not there are not enough local economic benefits that occur as a result of oil and gas activity. Fishers and other local residents are asked to accept and assume the risks, with little or no reward.
- Relevant education and training initiatives need to be developed related to this industry. As an early planning tool, the SEA can help stakeholders to become informed, determine what education skills are required and available, and work on bridging the gaps. This can also help municipalities and others plan for any future growth.
- Recognition of the important economic and social benefits that often results from oil and gas activity, for workers, businesses, communities, governments, technology and training institutions, infrastructure and others.

### **3.2.3 Regulatory, Policy and Procedural Issues**

- General questions about the C-NLOPB, its licencing and authorizations / approvals processes, and the type and amount of oil and gas exploration activity that has occurred or is occurring in the SEA Study Area to date.
- The overall purpose and nature of the SEA, including its schedule, the SEA Report (structure and content) and its review, as well as the nature and use of its eventual recommendations.
- Questions about the offshore area that comes under the jurisdiction of the C-NLOPB, especially outside of the 200 nautical mile limit, out to the edge of the continental shelf.
- The relationship of the SEA process to project-level EAs, and requested confirmation and clarification that any subsequent exploration (seismic and drilling) or production projects would still be subject to project-specific EA reviews.
- The relationship of seismic surveys to any existing or possible future Exploration Licences, and the types of approvals and authorizations that are required from government for such surveys.
- Questions around whether the SEAs completed by the C-NLOPB have ever identified and recommended specific area and/or times where oil and gas activities should be prevented or otherwise restricted.
- The timing at which drilling activity usually takes place in the region, and on the operational criteria and limits that affect IT (especially regarding winds and waves) and their establishment and enforcement.

- Statements of overall support for the SEA process and its associated consultative elements, and recognition of the benefits of identifying and attempting to address environmental issues as early as possible in the planning (licencing) process.

### **3.3 SEA Consultation Summary and Next Steps**

The planning and preparation of the Eastern Newfoundland SEA has included a program of public and stakeholder consultation, which involved meetings and discussions with government departments and agencies, stakeholder groups and the general public through a range of approaches, as described in the preceding sections. The key purpose of the SEA consultation program has been to identify questions, concerns and issues related to potential future oil and gas exploration and development in the Eastern Newfoundland Offshore Area and the potential environmental effects of these activities which require consideration in the SEA.

The information and input gathered through the SEA consultation process, as summarized in this Consultation Report, has and will continue to inform and shape the nature and focus of the SEA, by helping identify key information requirements and issues that require consideration in the assessment.

**ATTACHMENT 1**

***Newspaper Ad***



**EASTERN NEWFOUNDLAND  
STRATEGIC ENVIRONMENTAL ASSESSMENT**  
*Public and Stakeholder Consultations*

The Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) is completing a *Strategic Environmental Assessment* (SEA) for the **Eastern Newfoundland Offshore Area**.

The SEA will provide information on the regional environmental setting and associated environmental considerations, and will help inform future licencing decisions regarding offshore oil and gas activities in this area.

The Eastern Newfoundland SEA will involve updating the previous Orphan Basin SEA and expanding its geographic coverage to the south and east. Please see: [http://www.cnlopb.nl.ca/env\\_strategic.shtml](http://www.cnlopb.nl.ca/env_strategic.shtml)

**Public Open Houses** are being held to provide information and receive initial public input into the SEA, as follows:

<b>Community</b>	<b>Date and Time</b>	<b>Location</b>
Joe Batt's Arm NL	Mon Sept 9 2013 (6-9 pm)	Community Hall
Gander NL	Tues Sept 10 2013 (6-9 pm)	Gander Hotel
Clarenville NL	Wed Sept 11 2013 (6-9 pm)	Clarenville Inn
Marystown NL	Thurs Sept 12 2013 (6-9 pm)	Marystown Hotel
Placentia NL	Mon Sept 16 2013 (6-9 pm)	Cultural Arts Centre
St. John's NL	Tues Sept 17 2013 (6-9 pm)	Comfort Inn
St. Anthony NL	Thurs Sept 19 2013 (6-9 pm)	Lions Club

These sessions are open to all interested individuals and organizations. Representatives of the C-NLOPB and its SEA Study Team (AMEC) will be present to provide information and receive questions and other input. This will include a short introductory presentation at 6:00 and 7:30 pm.

**Stakeholder Meetings** are also being planned for September 2013 in: 1) Joe Batt's Arm, 2) Twillingate, 3) Gander, 4) New-Wes-Valley, 5) Bonavista, 6) Old Perlican, 7) Trepassey, 8) St. John's and 9) St. Anthony. Interested groups should contact the SEA Team to receive information on dates and locations, and to arrange their attendance.

**Written input** may also be provided at any time. Future opportunities for input will include a public review period on the Draft SEA Report, which will be posted on the C-NLOPB website or provided upon request.

For further information or to provide written input, please contact:

Steve Bonnell  
AMEC Environment & Infrastructure  
133 Crosbie Road, PO Box 13216  
St. John's, NL Canada A1B 4A5  
Fax (709) 722-7353  
Email [EasternNF-SEA@amec.com](mailto:EasternNF-SEA@amec.com)



## **ATTACHMENT 2**

### ***Public Open House Materials***

Sign in Sheet

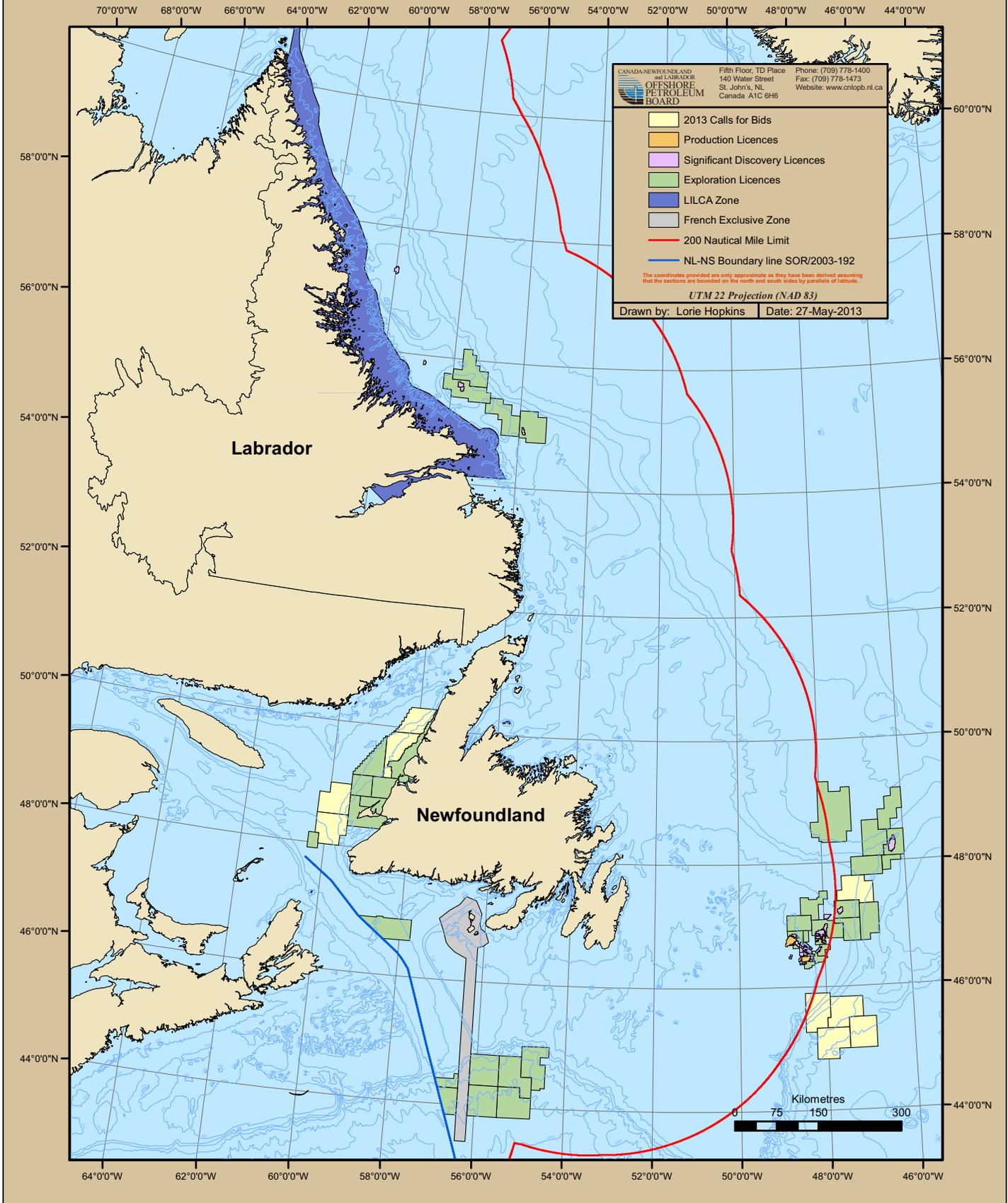
Information Panels

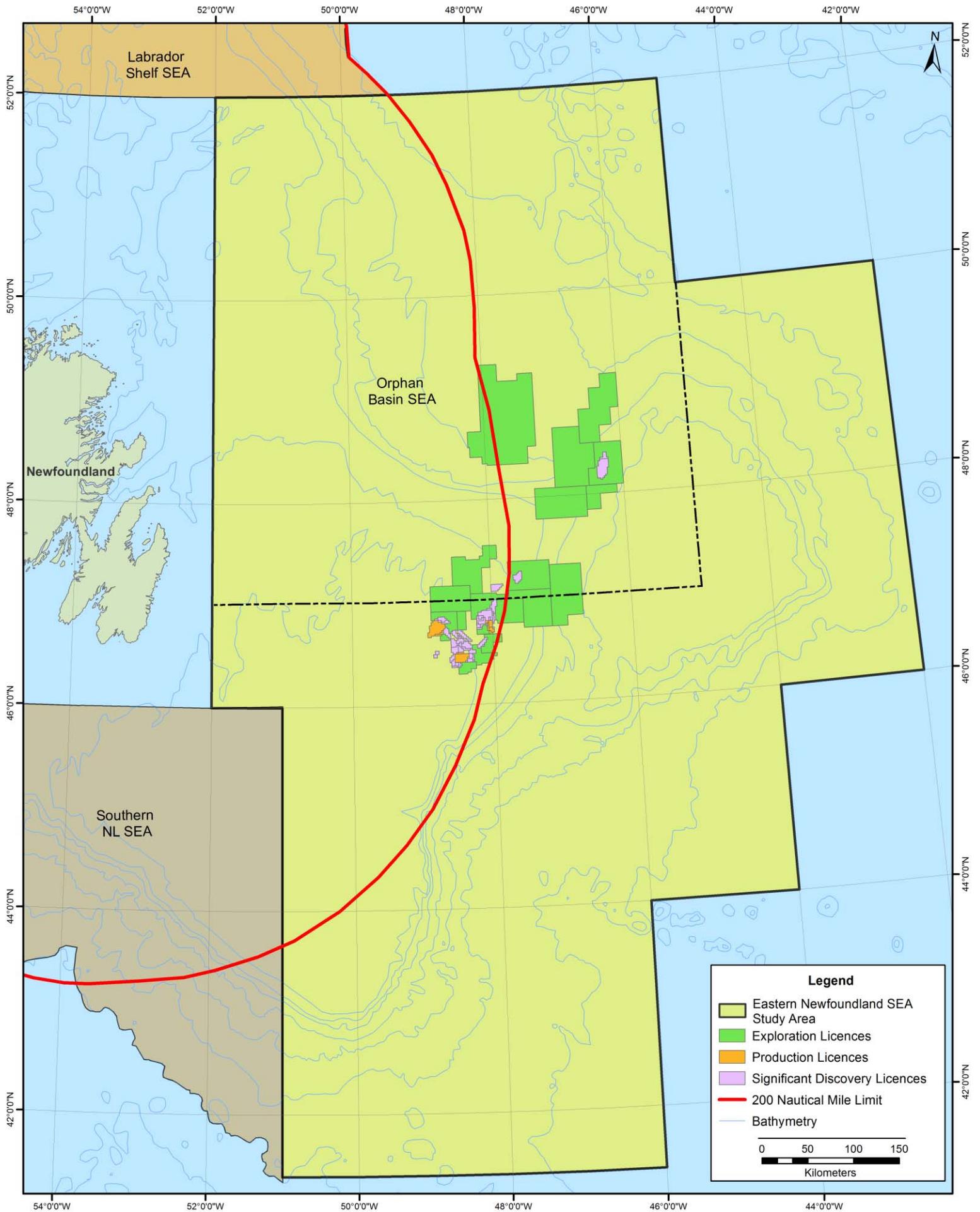
Map Handout

Comment / Feedback Form



# Newfoundland and Labrador Offshore Licence Information





## CANADA – NEWFOUNDLAND AND LABRADOR OFFSHORE PETROLEUM BOARD

- The Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) was created in 1985 through the *Atlantic Accord*. It is responsible, on behalf of the Governments of Canada and Newfoundland and Labrador, for the regulation of the oil and gas industry in the Newfoundland and Labrador Offshore Area. The Board reports to the Federal and Provincial Ministers of Natural Resources.

### Mandate

- To interpret and apply the provisions of the *Atlantic Accord* and the *Atlantic Accord Implementation Acts* to all petroleum-related activities in the Newfoundland and Labrador Offshore Area, and to oversee compliance with those statutory provisions

### Role

- To facilitate the exploration for and development of the hydrocarbon resources in the Newfoundland and Labrador Offshore Area in a manner that conforms to the statutory provisions for:
  - Worker safety
  - Environmental protection
  - Effective management of land tenure
  - Maximum hydrocarbon recovery and value, and
  - Canada / Newfoundland & Labrador benefits

### Objectives

#### *Safety*

- To verify that Operators have appropriate safety plans in place
- To verify, through audits and inspections, that Operators follow their safety plans and applicable statutory requirements
- To verify, through compliance actions, that deviations from approved plans and applicable statutory requirements are corrected

#### *Environmental Protection*

- To verify that Operators assess and provide for any effects of the environment on the safety of their operations
- To verify that Operators perform an environmental assessment, pursuant to Canadian laws, of the effects of their operations on the environment and prepare a plan and provide for mitigation where appropriate
- To verify, through compliance actions, that Operators comply with their environmental plans

#### *Resource Management*

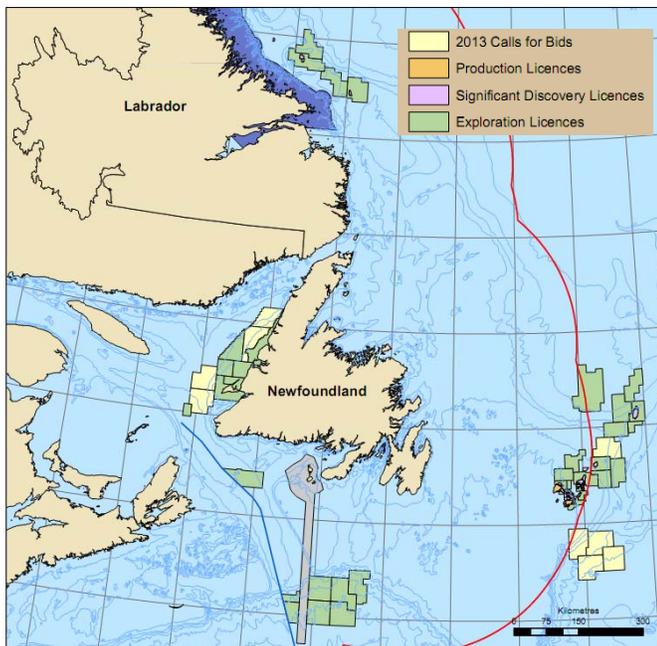
- To effectively and efficiently administer land tenure
- To oversee production activities for consistency with maximum recovery, good oilfield practice, production accounting and approved plans
- To build a knowledge base for the Newfoundland & Labrador Offshore Area through the acquisition and curation of samples and data from exploration and production activity

#### *Industrial Benefits*

- To verify Operators have an approved Canada / Newfoundland & Labrador Benefits Plan that addresses their statutory obligations

**C-NLOPB RIGHTS ISSUANCE PROCESS**

- The C-NLOPB is responsible for petroleum resource management in the Newfoundland & Labrador Offshore Area



## OFFSHORE OIL AND GAS EXPLORATION ACTIVITIES

### Offshore Geophysical Surveys (Natural or Artificial Source Methods)

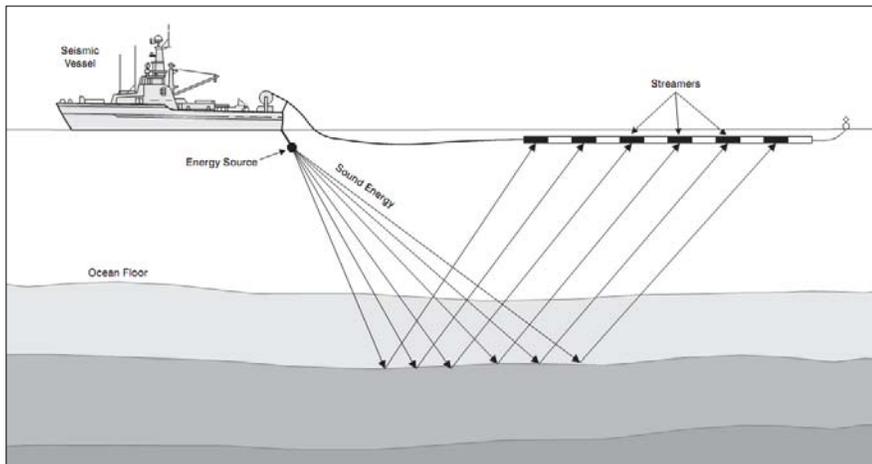
- Used to identify geological formations that may contain petroleum resources
- In seismic surveys, high-energy sound sources (airguns) are towed behind a vessel
- Vessels follow track lines along a prescribed grid crossing potential hydrocarbon prospects
- Reflected sound energy is recorded by sensitive hydrophones (streamers) towed behind the vessel
- Computer systems convert reflected acoustic signals into seismic data for mapping

*2D seismic surveys:* Cover larger areas with a single streamer

*3D seismic surveys:* Cover smaller areas with multiple streamers (greater density)

### Well Drilling

- Wells may be drilled to confirm the presence, or define the extent, of petroleum resources at a location (often as first identified through seismic surveys)
- Various types of offshore drilling installations can be used once a drill site or target is determined, depending upon water depth and sea and ice conditions



### Exploration Projects – Required Authorizations and Approvals

- A proposed oil and gas exploration program requires a range of authorizations and approvals
- These do or may include the following:
  - 1) **Operating Licence**
  - 2) **Authorizations:** Operations (Drilling, Production or Other), Geophysical Program, Diving Program
  - 3) **Approvals** (e.g., Approval to Drill a Well; Development Plan, CA-NL Benefits Plan)
- Operators must demonstrate that they can work in a safe and environmentally responsible manner

## OVERVIEW OF PREVIOUS OIL AND GAS LICENCING AND ACTIVITIES

- SEA Study Area includes an approximately 680,000 km<sup>2</sup> area offshore Eastern Newfoundland
- Existing Licences for offshore oil and gas activities include:
  - 19 Exploration Licences
  - 52 Significant Discovery Licences
  - 11 Production Licences

### Exploration

- Offshore exploration activities may include:
  - 1) *Seismic and Other Geophysical Surveys*: Using geophysical methods to locate and map potential petroleum reservoirs
  - 2) *Drilling of Wells*: To confirm the presence or define the extent of a petroleum reservoir
- Past exploration activities in the SEA Study Area:
  - 380,000 line km of 2D seismic and 1,650,000 CMP km of 3D data (1964 - 2012)
  - 315 wells drilled (1966 - 2013)

### Production

- Several producing oil fields (approximately 1.3 billion barrels produced to date), with one under development:

**Hibernia Oilfield:**

Discovered in 1979  
 Production since Nov 1997 (GBS)  
 Reserve estimates: Approx 1.4 billion barrels (as of April 25, 2013)  
 + Hibernia South Extension (2011)



**Terra Nova Oilfield:**

Discovered in 1984  
 Production since Jan 2002 (FPSO)  
 Reserve estimates: Approx 500 million barrels (as of April 25, 2013)



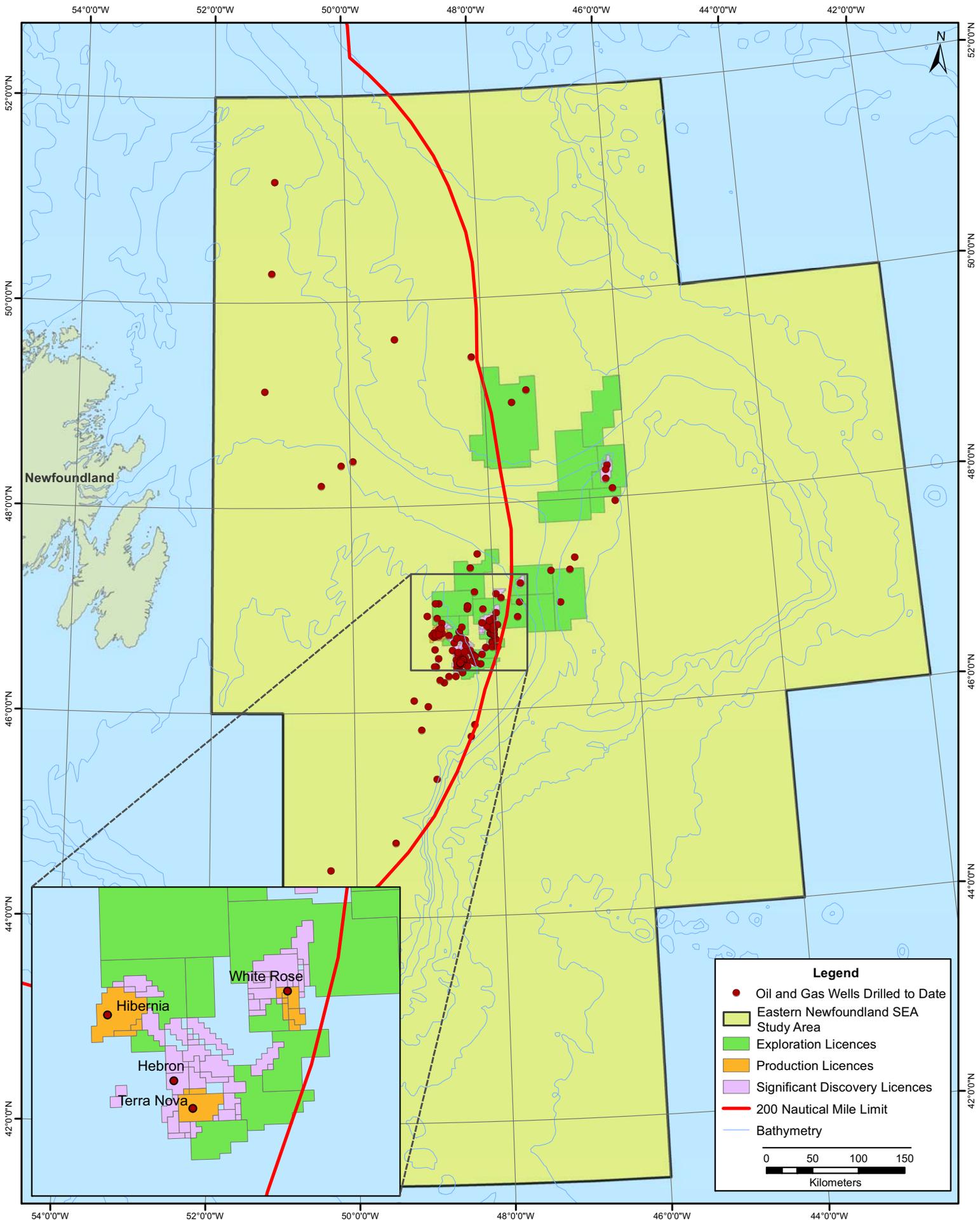
**White Rose Oilfield and Satellite Expansions:**

Discovered in 1984  
 Production since Nov 2005 (FPSO)  
 Reserve estimates: Approx 300 million barrels (as of April 25, 2013),  
 incl White Rose Expansion Fields  
 - North Amethyst (May 2010)



**Hebron Oilfield:**

Discovered in 1980  
 Reserve estimates: > 700 million barrels (as of April 25, 2013)  
 First Oil planned for 2017 (GBS)



### STRATEGIC ENVIRONMENTAL ASSESSMENT (SEA)

- Involves identifying the potential environmental outcomes of a proposed strategic initiative (policy, plan or program)
- SEA is a proactive and “issues based” approach to environmental assessment (EA)
- Considers environmental issues at the early stages of planning (before eventual projects are proposed and assessed)

- SEAs typically include:

- 1) An overview of the existing environmental setting:

*Biophysical* (the natural environment)

*Socioeconomic* (human activities)

- 2) Early identification of important potential environmental issues and interactions

- 3) Identification of any key environmental sensitivities to guide future decisions

- SEAs allow for consideration of environmental issues early in strategic planning and decision-making

- The C-NLOPB has been undertaking SEAs in the NL Offshore Area since 2002

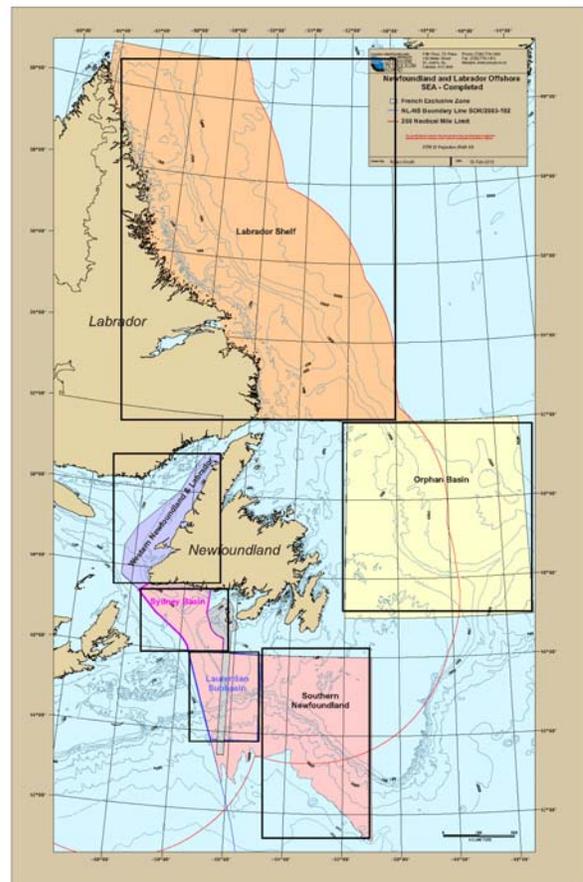
- SEAs have been completed in areas:

- Where the issuance of new exploration licences could be contemplated, and
- Which have not previously been subject to substantial levels of project EA

- SEAs inform future decisions regarding the potential issuance of new Exploration Licence(s) in the SEA Study Area

- These SEAs are reviewed regularly and updated as required

- SEAs do not replace eventual project-specific EAs, although they may help inform and focus them

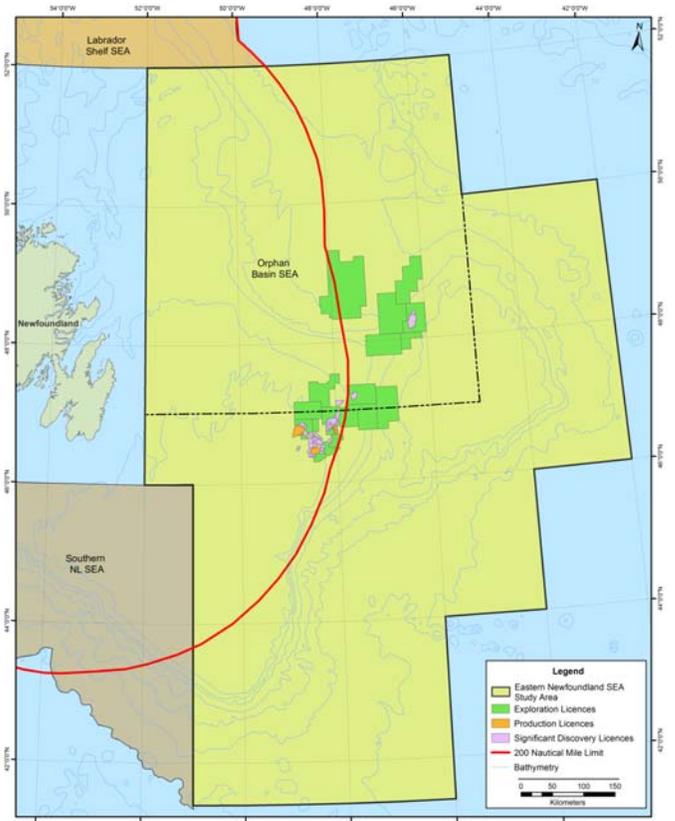
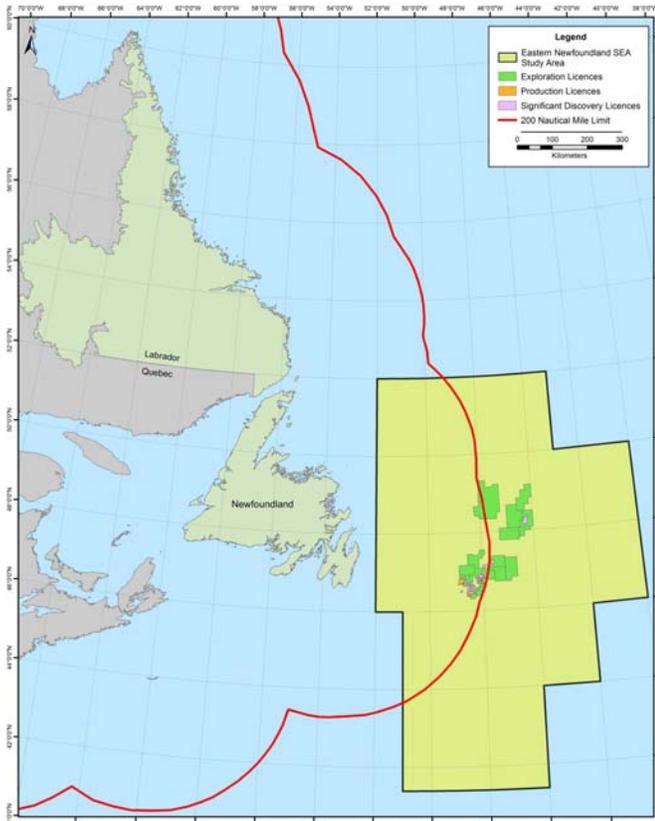


## EASTERN NEWFOUNDLAND SEA

- The C-NLOPB is currently completing an SEA for the *Eastern Newfoundland Offshore Area*
- The SEA will provide information on the regional environmental setting and associated environmental considerations, and will help inform future licencing decisions regarding offshore petroleum activities in this area

### SEA Purpose, Objectives and Scope

- Provide overview of existing environmental setting
- Describe typical offshore oil and gas exploration activities
- Describe existing and potential petroleum production activities
- Describe and evaluate potential environmental effects and interactions (project and cumulative)
- Highlight any key environmental issues and sensitivities
- Identify any information or knowledge gaps and opportunities
- Identify and recommend potential mitigation and planning measures and monitoring
- Assist and inform future C-NLOPB decisions about possible additional exploration rights in the region
- Inform and help to focus future projects and their EAs



**ENVIRONMENTAL SETTING**

- The SEA will provide information on the existing regional environment in the Study Area, including:

**Physical Environment**

- Geology
- Seismicity
- Bathymetry
- Meteorology and Climatology (including Climate Change)
- Sea Ice, Ice Islands and Icebergs
- Oceanography
- Unexploded Ordinances



**Biological Environment**

- Plankton
- Benthos (including Deep Water Corals)
- Marine Invertebrates
- Finfish
- Seabirds
- Marine Mammals and Sea Turtles
- Species at Risk
- Important Habitats and Times
- Sensitive / Special Areas



**Human Activities**

- Commercial and Recreational Fisheries
- Aquaculture
- Marine Recreation and Tourism
- Submarine Cables
- Commercial Vessel Traffic
- Canadian Naval Exercises



**Through these consultations, the SEA Team is interested in obtaining information about the marine environment from the Public and Stakeholder Groups**

## **POTENTIAL ENVIRONMENTAL INTERACTIONS AND MITIGATION**

### **Seismic Surveys**

- Possible avoidance of survey areas by marine fish, birds, mammals and turtles
- Attraction to or avoidance of seismic vessels (e.g., lights, noise)
- Potential accidental emissions or discharges (spills) and associated environmental effects
- Interference with fishing or other marine activities

#### *Some Environmental Protection Measures*

- Minimizing air gun noise levels and survey area / duration
- Use of seismic “soft start” procedures
- Avoidance of known sensitive areas and times
- Fishing industry communication and coordination
- Safety zones and fishing gear compensation plans
- Compliance with applicable legislation, regulations and guidelines

### **Well Drilling (Exploration and Delineation) and Production**

- Water quality and sea bottom effects from drill cuttings or other marine discharges
- Air emissions (exhausts, flaring) and noise
- Avoidance of areas by marine fish, birds, mammals and turtles
- Marine biota attraction to offshore installation and vessels (lights, noise), disruption or mortality
- Potential accidental emissions or discharges (blowouts and spills) and associated environmental effects
- Interference with fishing or other marine activities

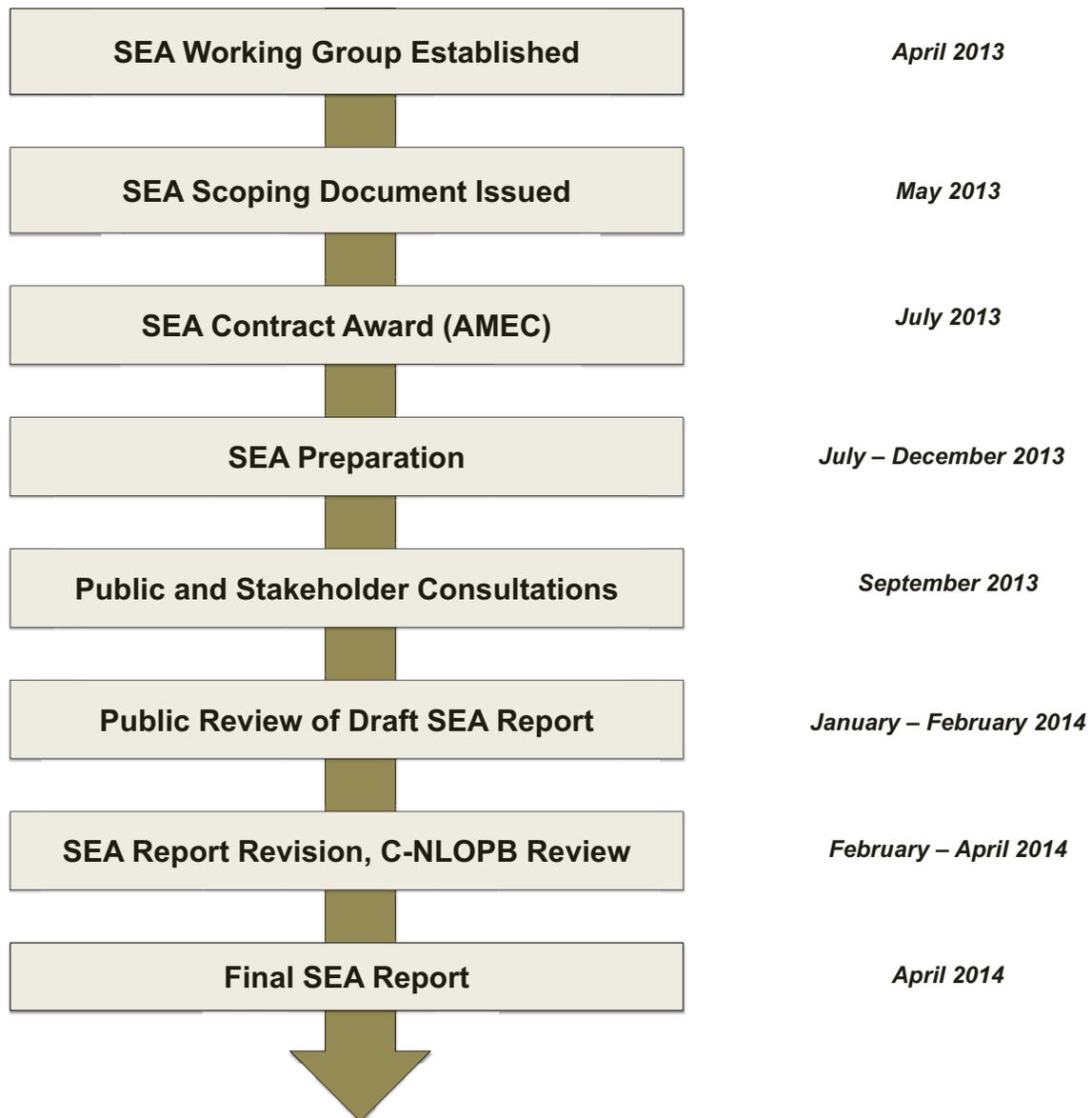
#### *Some Environmental Protection Measures*

- Avoidance of known sensitive areas and times
- Use of water-based muds (WBMs) / low toxicity fluids
- Treatment of SBM-associated drill cuttings to comply with guidelines prior to discharge
- Use of oily water separators and high efficiency burners
- Collection and release of stranded birds
- Chemical screening, selection and management
- On-shore disposal of wastes
- Avoidance and reduction of emissions and discharges
- Compliance with environmental legislation, regulations and guidelines
- Fishing industry communication and coordination
- Safety zones and fishing gear compensation plans
- Oil spill prevention, preparedness and response procedures

**EASTERN NEWFOUNDLAND SEA: OUTCOMES AND NEXT STEPS**

- The Eastern Newfoundland SEA will:
  - Provide information on the existing environmental setting (biophysical components and human activities)
  - Describe past and potential offshore oil and gas activities in the region
  - Identify potential environmental interactions and mitigation measures
  - Identify key environmental planning considerations (e.g., particularly important species / activities, areas, times)
  - Assess potential cumulative environmental effects
  - Evaluate information availability and identify any data gaps
- The SEA will help to inform future licencing decisions by the C-NLOPB for this region

**SEA PROCESS, OUTCOMES AND CURRENT TIMELINE**



REVIEWING AND UPDATING THE ORPHAN BASIN SEA (2003)

- The Eastern Newfoundland SEA will involve updating the previous Orphan Basin SEA and expanding its geographic coverage to the south and east

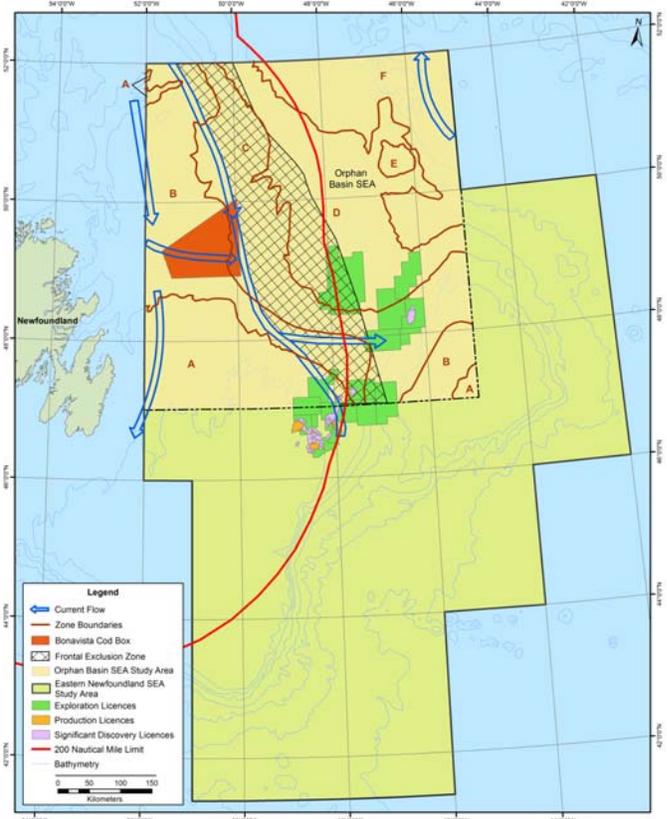
- Some key findings and conclusions of the 2003 Orphan Basin SEA include:

- 1) Potential sensitivity of the *Bonavista Cod Box*
- 2) Intensive commercial fishing activity on shelf and slope areas
- 3) Enhanced production / important feeding areas:
  - a) Slope of Northern Grand Banks; and
  - b) Fronts associated with the Labrador Current.

- 4) Potential biophysical “zones” for planning purposes:

- Zone A: Top Shelf (< 200 m)
- Zone B: Low Shelf (200 m to < 400 m)
- Zone C: Deep Break (400 m to < 2,000 m)
- Zone D: Deep Basin (2,000 m to 3,000 m)
- Zone E: Orphan Knoll (1,800 m to 2,000 m)
- Zone F: Very Deep Basin (3,000 m to 4,000+ m)

- 5) Data gaps for some marine species, processes, areas



- 2003 Orphan Basin SEA concluded that oil and gas exploration could be undertaken, with:

- a) Implementation of standard environmental protection / mitigation measures
- b) Possible restriction of certain activities in the Bonavista Cod Box, and
- c) Project-specific Environmental Assessments, with site-specific data collection as required



**ATTACHMENT 3**

***Invitation to Stakeholder Meetings***

**EASTERN NEWFOUNDLAND STRATEGIC ENVIRONMENTAL ASSESSMENT**  
**Invitation to *Stakeholder Meetings* and *Public Open Houses***

The Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) is completing a **Strategic Environmental Assessment (SEA)** for the **Eastern Newfoundland Offshore Area**.

As part of the SEA consultation program, the C-NLOPB is hoping to meet with key organizations through a series of focussed Stakeholder Meetings in a number of communities.

Please see the attached invitation for yourself or another representative of your organization to attend one or more of these upcoming meetings in September 2013.

If your group is interested in participating, please RSVP to this email address at your earliest convenience.

We would also invite you to pass this information on to any other organization(s) in your area who may also have an interest in the SEA, with a request that they contact us as well if they are interested in attending.

Thank you in advance

**Steve J. Bonnell**  
**Environmental Assessment Practice Leader**  
**AMEC**

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133 Crosbie Road  
St. John's, NL Canada A1B 4A5  
amec.com

**ISO 9001:2008 Quality Management System (St. John's)**



## EASTERN NEWFOUNDLAND STRATEGIC ENVIRONMENTAL ASSESSMENT Invitation to Stakeholder Meetings and Public Open Houses

The Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) is completing a Strategic Environmental Assessment (SEA) for the **Eastern Newfoundland Offshore Area** (Please see attached Figure 1).

The SEA will provide information on the regional environmental setting and associated environmental considerations, and will help inform future licencing decisions regarding offshore oil and gas activities in this area.

The Eastern Newfoundland SEA will include updating the previous Orphan Basin SEA and expanding its geographic coverage to the south and east. For further information, please see: [http://www.cnlopb.nl.ca/env\\_strategic.shtml](http://www.cnlopb.nl.ca/env_strategic.shtml)

The C-NLOPB will be holding a series of Public Open Houses to provide information and receive initial public input into the SEA. Please see below for details on these upcoming open house sessions.

As part of the SEA consultation program, the C-NLOPB is also hoping to meet with key organizations through a series of focussed **Stakeholder Meetings** in a number of communities.

You or another representative of your organization are cordially invited to participate in a **Stakeholder Meeting** with the C-NLOPB and other invited stakeholders in your area, at one of the following locations and times:

- 1) **Joe Batt's Arm NL: Monday Sept 9 2013, 1-3 pm – Community Hall**
- 2) **Twillingate NL: Tuesday Sept 10 2013, 10 am – 12 pm – Anchor Inn Hotel**
- 3) **Gander NL: Tuesday Sept 10 2013, 3 -5 pm – Gander Hotel**
- 4) **New-Wes-Valley NL: Wednesday Sept 11 2013, 10:30 am – 12:30 pm – Barbour Heritage Site, Waterfront Property**
- 5) **Bonavista NL: Thursday Sept 12 2013, 10:30 am – 12:30 pm – Royal Canadian Legion**
- 6) **Old Perlican NL: Friday Sept 13 2013, 1-3 pm – Old Perlican Fire Hall (Social Room)**
- 7) **Trepassey NL: Monday Sept 16 2013, 10:30 am – 12:30 pm – Father MULLOWNEY Social Centre**
- 8) **St. John's NL: Tuesday Sept 17 2013, 1-3 pm – Comfort Inn**
- 9) **St. Anthony NL: Thursday Sept 19 2013, 2-4 pm – Lions Club**

These meetings will include a short presentation by the C-NLOPB and its SEA Study Team (AMEC), followed by a round table discussion involving the invited participants.

**Please RSVP to [EasternNF-SEA@amec.com](mailto:EasternNF-SEA@amec.com) at your earliest convenience.**

Members of your organization are also invited and encouraged to attend one or more of the following SEA **Public Open Houses**, which have been advertised in local newspapers and through other means.

<b>Eastern Newfoundland SEA: Public Open Houses</b>		
Joe Batt's Arm NL	Mon Sept 9 2013 (6-9 pm)	Community Hall
Gander NL	Tues Sept 10 2013 (6-9 pm)	Gander Hotel
Clarenville NL	Wed Sept 11 2013 (6-9 pm)	Clarenville Inn
Marystown NL	Thurs Sept 12 2013 (6-9 pm)	Marystown Hotel
Placentia NL	Mon Sept 16 2013 (6-9 pm)	Cultural Arts Centre
St. John's NL	Tues Sept 17 2013 (6-9 pm)	Comfort Inn
St. Anthony NL	Thurs Sept 19 2013 (6-9 pm)	Lions Club
Written input may also be provided at any time. Future opportunities for input will include a public review period on the Draft SEA Report, which will be posted on the C-NLOPB website or provided upon request		

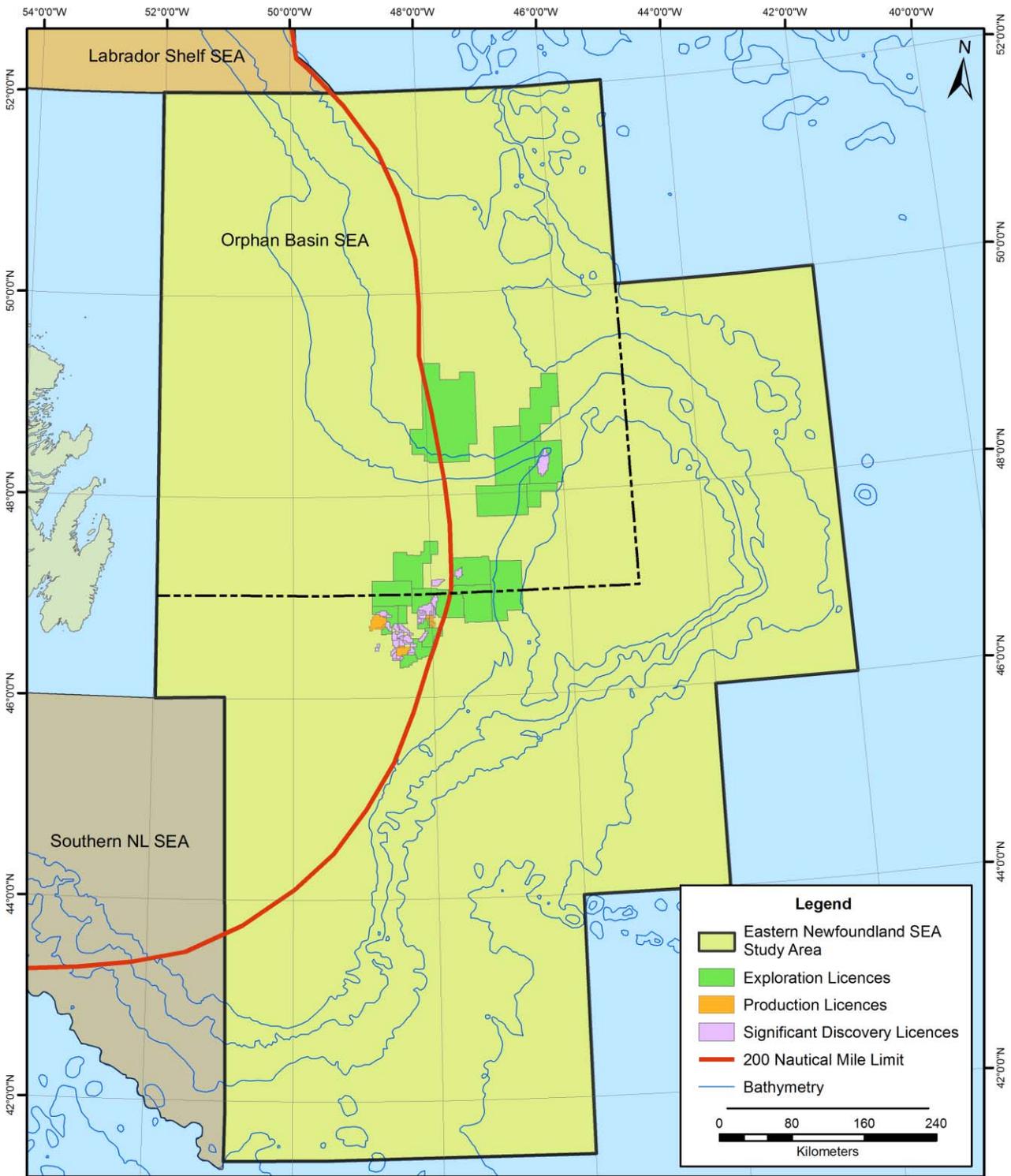


Figure 1: Eastern Newfoundland SEA Study Area



**ATTACHMENT 4**

***Presentation Given at SEA Consultation Meetings***

# **Eastern Newfoundland Strategic Environmental Assessment**

## ***Introduction and Overview for Public and Stakeholder Consultations***

**Canada - Newfoundland & Labrador  
Offshore Petroleum Board**

**September 2013**



Canada-Newfoundland and Labrador  
**Offshore Petroleum Board**

# Presentation Overview

- Welcome and Introduction
- C-NLOPB Overview
- Offshore Petroleum Licencing in the NL Offshore Area
- Eastern Newfoundland Offshore Area
- Strategic Environmental Assessment (SEA): Purpose and Objectives
- Eastern Newfoundland SEA: Process, Scope and Outcomes
- SEA Schedule and Next Steps



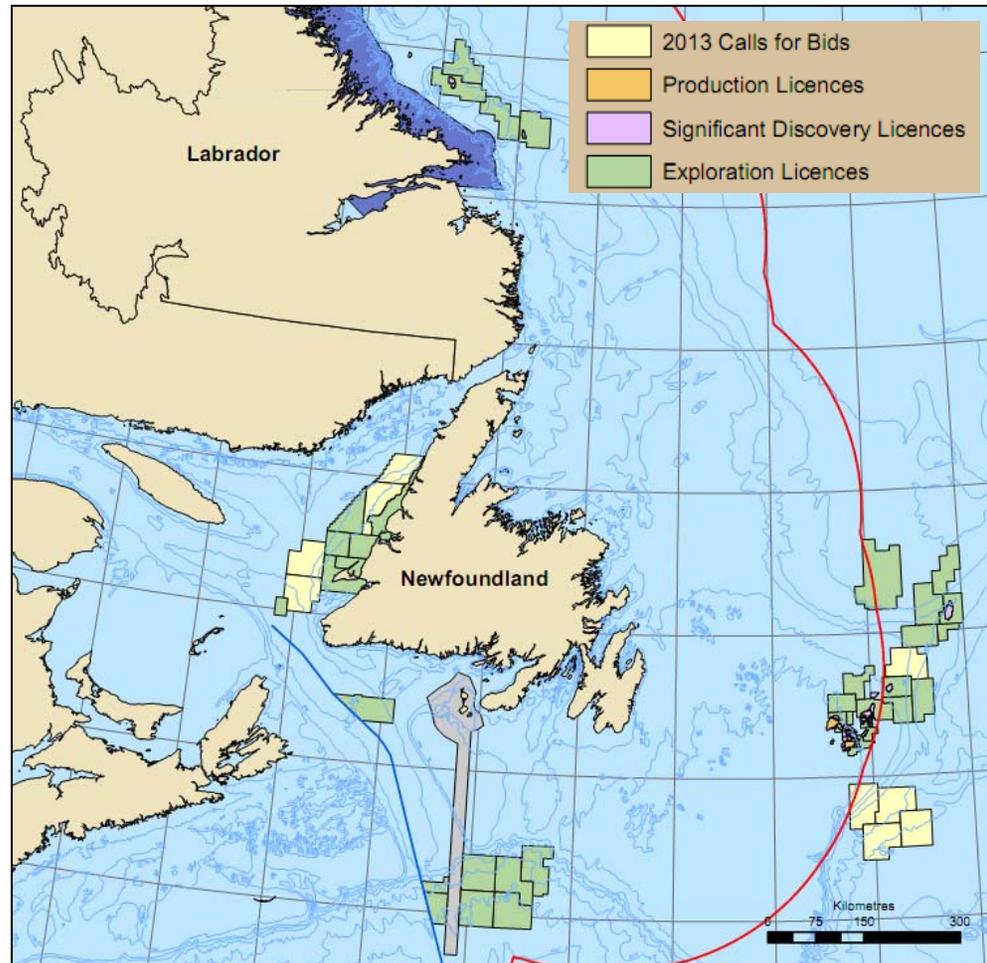
# C-NLOPB Overview

- Created in 1986 by the Governments of Canada and Newfoundland & Labrador through the *Atlantic Accord*
- Responsible for the regulation of the oil and gas activities offshore Newfoundland and Labrador
- The Board's role is to facilitate the exploration for and development of the hydrocarbon resources in this area in a manner that conforms to the statutory provisions for:
  - Worker Safety
  - Environmental Protection
  - Effective Management of Land Tenure
  - Maximum Hydrocarbon Recovery and Value, and
  - Canada / Newfoundland & Labrador Benefits



# Offshore Petroleum Licencing

- The C-NLOPB administers land rights issuance processes and other regulatory requirements for oil and gas activities in the NL Offshore Area



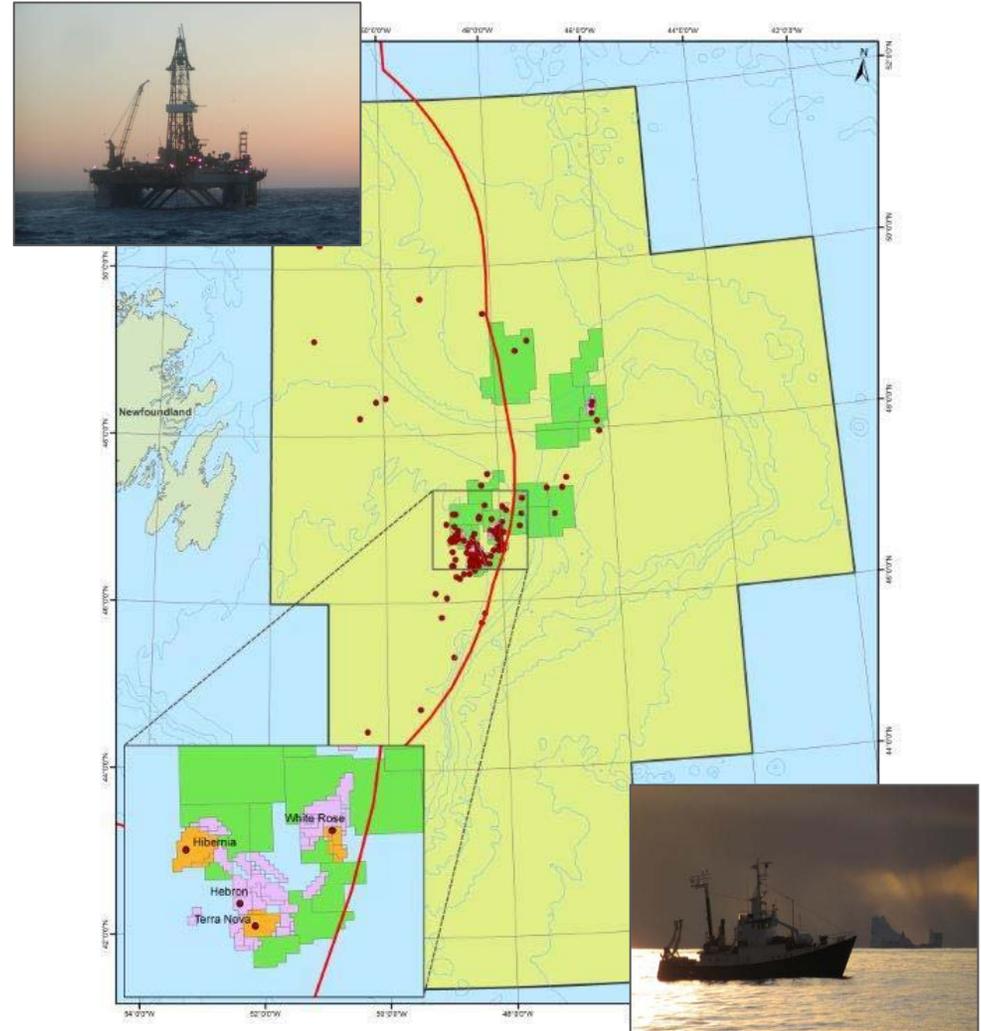
# C-NLOPB Typical Call for Bids Cycle

Step	Time frame
Call for Nominations Opens	September – October
Nominations Close	October-November
Board Submits Plan for Rights Issuance to Ministers for upcoming year	January 31
Board decides to issue Call for Bids	January – March
Ministers' Approval to issue Call for Bids and Call for Bids issued	February - April
Call for Bids Closed	November – December
Issuance of Exploration Licences	January (following year)
<b>* Minimum 120 day call period after close of SEA</b>	



# Eastern Newfoundland Offshore Area

- Covers an approximately 680,000 km<sup>2</sup> area offshore Eastern Newfoundland
- Existing Petroleum Licences in the area include:
  - 19 Exploration Licences
  - 52 Significant Discovery Licences
  - 11 Production Licences
- Offshore oil and gas activities have been occurring since 1964, and to date have included:
  - 380,000 line km of 2D seismic data
  - 1.65 million CMP km of 3D seismic data, and
  - 315 wells drilled (1966 - 2013)



# Eastern Newfoundland Offshore Area (Continued)

- There are several producing oilfields, with another currently under development (Approx 1.3 billion barrels produced to date)

## Hibernia Oilfield

- Discovered in 1979
- Production since Nov 1997 (GBS)



## Terra Nova Oilfield

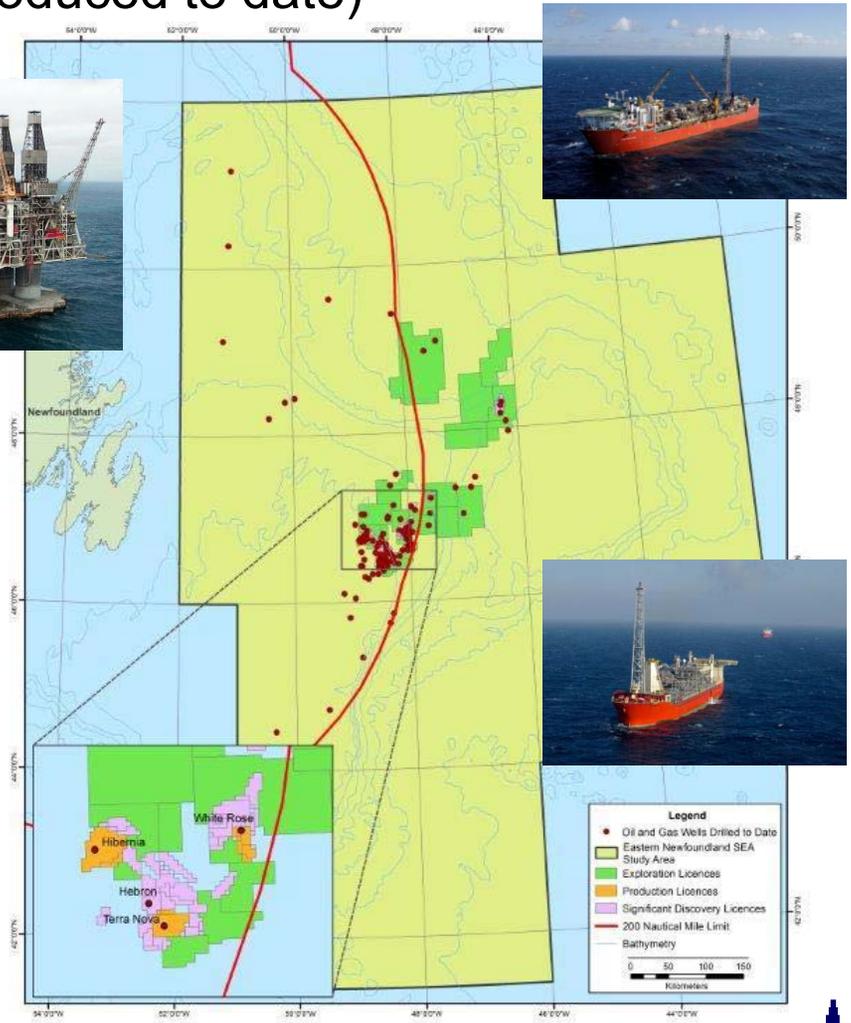
- Discovered in 1984
- Production since Jan 2002 (FPSO)

## White Rose Oilfield (& Satellite Expansions)

- Discovered in 1984
- Production since Nov 2005 (FPSO)
- + Expansion Fields (North Amethyst, May 2010)

## Hebron Oilfield

- Discovered in 1980
- First oil planned for 2017 (GBS)



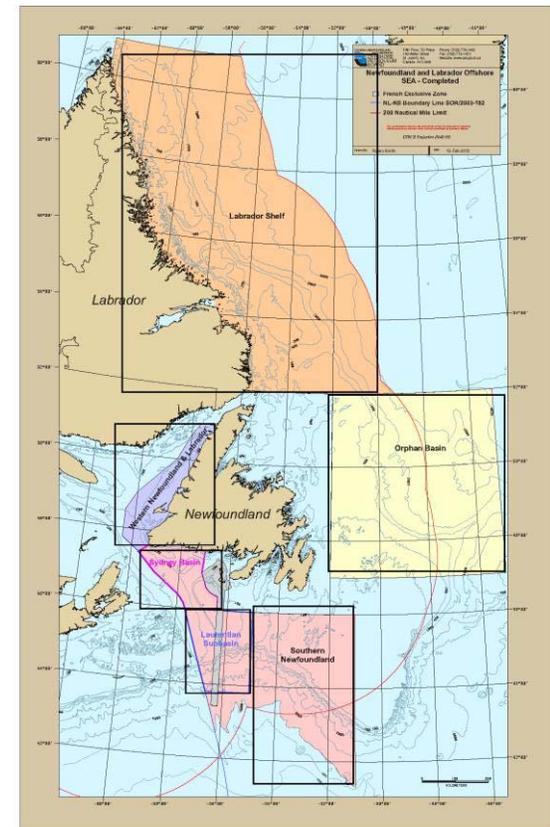
# SEA Purpose and Objectives

- SEA is a proactive and “issues based” approach to environmental assessment
- Involves identifying potential environmental issues at the early stages of planning (policy, plan, program), before projects are proposed and defined
- SEAs typically include:
  - An overview of the existing environmental setting (biophysical and human)
  - The early identification of potential environmental issues and interactions, and
  - An identification of any key environmental sensitivities to help guide future decisions
- SEA allows for consideration of environmental issues early in strategic planning and decision-making



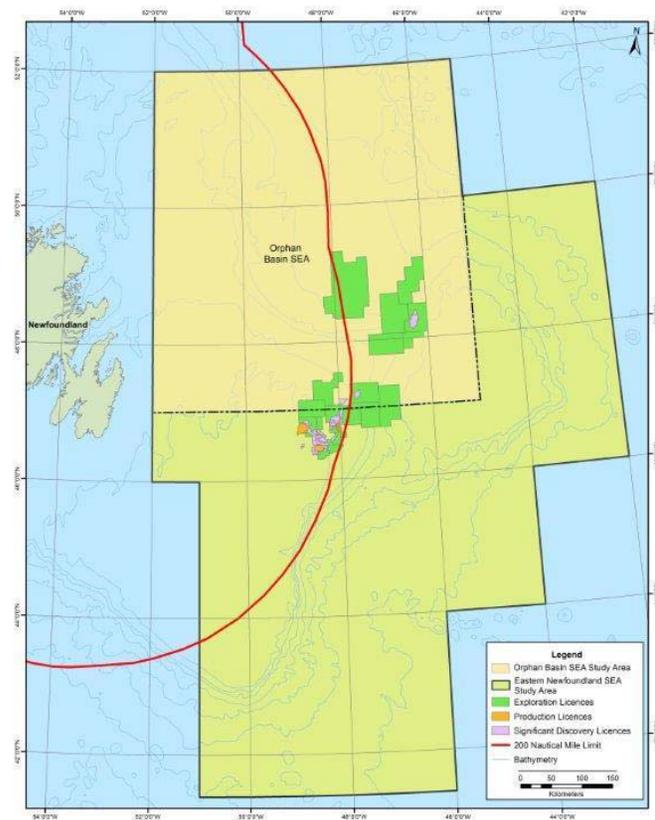
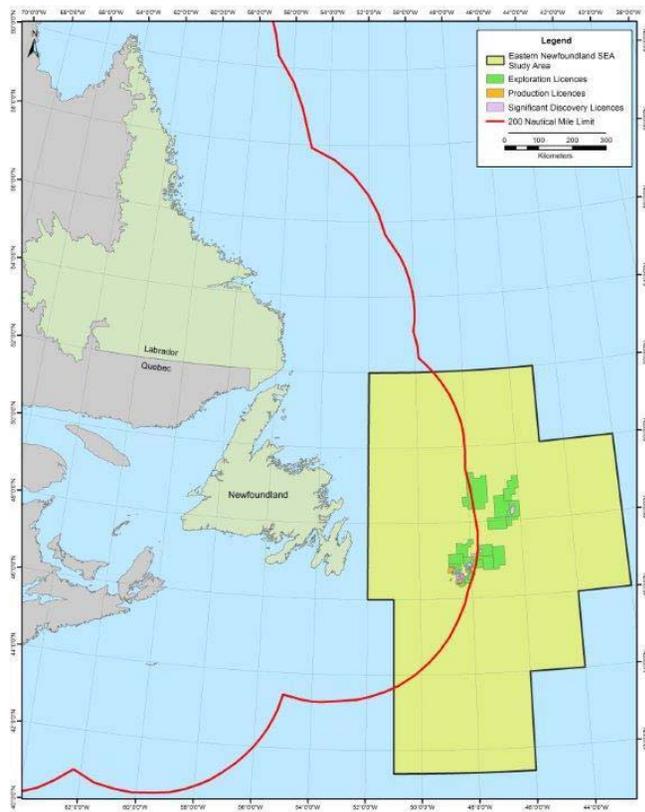
# SEA Purpose and Objectives (Continued)

- The C-NLOPB has been undertaking SEAs in the NL Offshore Area since 2002, in areas where:
  - The issuance of new Exploration Licences may be contemplated, and
  - Which have not been subject to substantial levels of Project EA
- These SEAs inform the C-NLOPB's "*decisions*" regarding the potential issuance of new Exploration Licences in that area
- SEAs are reviewed and updated as required
- Any oil and gas exploration or production activities are still subject to individual EA review (May be informed and focused by SEA)
- + Other required authorizations / approvals



# Eastern Newfoundland SEA

- This SEA will involve updating the previous *Orphan Basin SEA* (2003) and extending its geographic coverage to the south and east



# Eastern Newfoundland SEA (Continued)

- SEA Purpose, Objectives and Scope:
  - Overview of existing environmental setting
  - Describe typical oil and gas exploration activities
  - Describe existing and potential petroleum production activities
  - Describe and evaluate potential environmental effects (project and cumulative)
  - Highlight any key environmental issues and sensitivities
  - Identify any information / knowledge gaps and opportunities
  - Identify and recommend mitigation / planning measures and monitoring
- SEA results will help inform future C-NLOPB licencing decisions for this area
  - Whether exploration rights should be issued in whole, in part, or at all

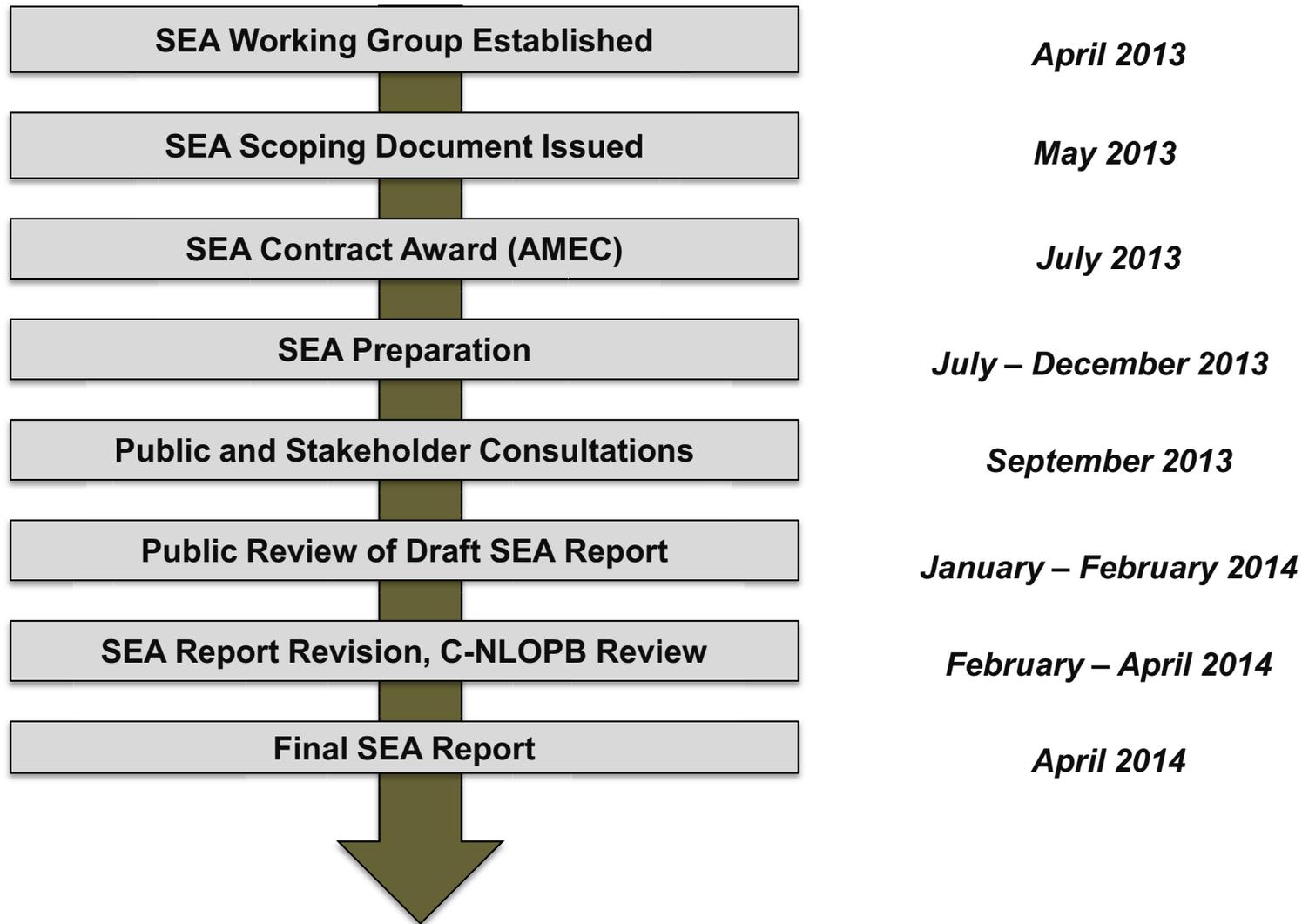


# Eastern Newfoundland SEA (Continued)

- Through these Public and Stakeholder Consultations, we are hoping to obtain information and perspectives related to:
  - 1) *Issues Scoping:*** Questions and comments on potential offshore petroleum activities and their potential effects (both adverse and positive). What are the main questions and issues that you feel need to be considered and addressed in the SEA?
  - 2) *Environmental Planning and Mitigation:*** Any suggestions on potential measures that could be taken to help address your comments or concerns (including in C-NLOPB licensing decisions and/or as mitigation measures for any future projects).
  - 3) *Environmental Information:*** Knowledge and perspectives on the existing environment in the SEA Study Area, including oceanography, fish, birds, mammals, fishing and other human activities, that would be relevant to the SEA and to future planning and licencing decisions



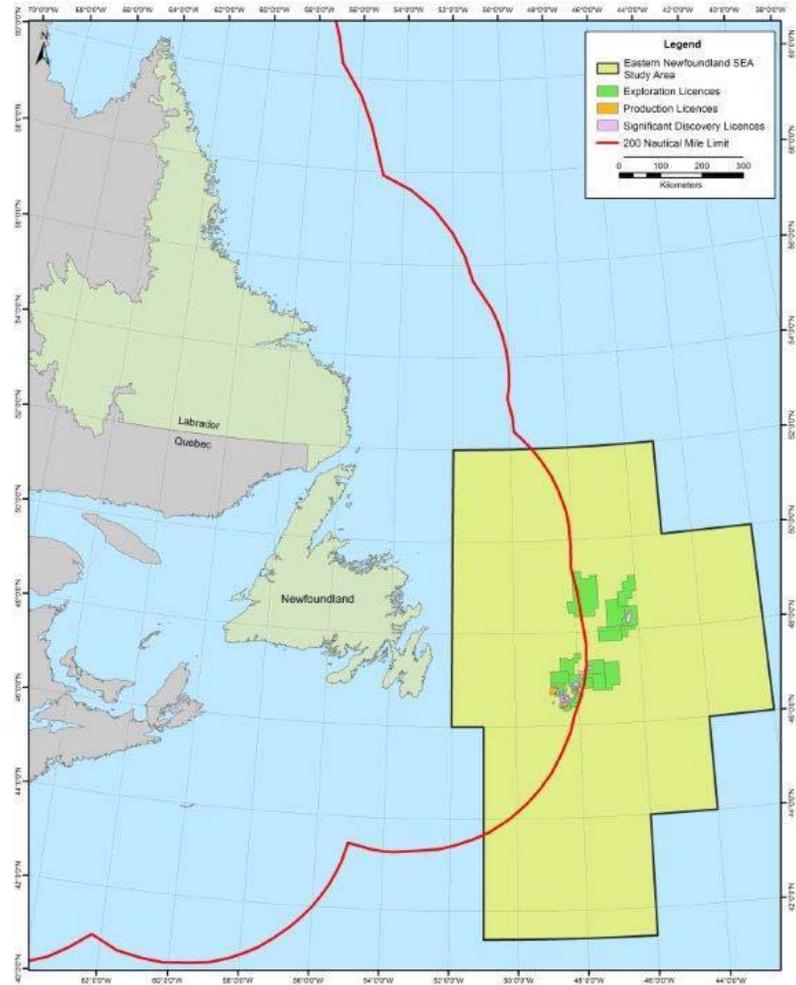
# SEA Process, Outcomes and Current Timeline



# Eastern Newfoundland Strategic Environmental Assessment

Thank you.

*(Questions and Discussion....)*



## **APPENDIX B**

**Common and Scientific Names of Species Referenced in the SEA Report**

**COMMON AND SCIENTIFIC NAMES OF SPECIES REFERENCED IN THE SEA**

<b>MARINE FISH AND FISH HABITAT - INVERTEBRATES</b>	
<b>Common Name</b>	<b>Scientific Name</b>
American lobster	<i>Homarus americanus</i>
Amphipod species	<i>Gammarus duebeni</i>
Amphipods	Amphipoda
Basket star	<i>Gorgonocephalus arcticus</i>
Brittlestar	Ophiuroidea
Chalky macoma	<i>Macoma calcarea</i>
Cladocerans	Cladocera
Coffin box bryozoan	<i>Membranipora membranacea</i>
Colonial sea squirt	<i>Didemnum vexillum</i>
Copepod species	<i>Calanus finmarchicus</i>
Copepod species	<i>Calanus hyperboreus</i>
Copepod species	<i>Centropages hamatus</i>
Copepod species	<i>Euchaeta norvegica</i>
Copepod species	<i>Oithona</i> spp.
Copepod species	<i>Pseudocalanus</i> spp.
Copepod species	<i>Temora longicornis</i>
Deep sea coral species	<i>Drifa glomerata</i>
Deep sea coral species	<i>Flabellum angulare</i>
European green crab	<i>Carcinas maenas</i>
Golden star tunicate	<i>Botryllus schlosseri</i>
Gorgon's head basket star	<i>Gorgonocephalus caputmedusae</i>
Hooded shrimp	Cumacea
Icelandic scallops	<i>Chlamys islandica</i>
Jellyfish	Scyphozoa
Lion's mane jellyfish	<i>Cyanea capillata</i>
Lugworm	<i>Arenicola marina</i>
Moon jellyfish	<i>Aurelia aurita</i>
Northern shrimp	<i>Pandalus borealis</i>
Pale sea urchin	<i>Strongylocentrotus pallidus</i>
Polychaete species	<i>Prionospio steenstrupi</i>
Polychaete species	<i>Spiriobis</i> spp.
Polychaete worms	Polychaeta
Propellor clam	<i>Cyrtodaria siliqua</i>
Sand dollar	<i>Echinarachnius parma</i>
Sandworm	<i>Nereis</i> spp.
Sea anemone	Actiniaria
Sea butterfly	Limacina
Sea scallop	<i>Placopecten magellanicus</i>
Shrimp species	<i>Pandalus propinquus</i>
Sipunculan worms	Sipuncula
Snow crab	<i>Chionoecetes opilio</i>

<b>MARINE FISH AND FISH HABITAT - INVERTEBRATES</b>	
Sponge species	<i>Geodia barretti</i>
Sponges	<i>Geodia sp.</i>
Striped pink shrimp	<i>Pandalus montagui</i>
Surf clam	<i>Spisula solidissima</i>
Violet tunicate	<i>Botrylloides violaceus</i>
Whelk	<i>Buccinum sp.</i>

<b>MARINE FISH AND FISH HABITAT - FINFISH</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Acadian redfish	<i>Sebastes fasciatus</i>
Albacore tuna	<i>Thunnus alalunga</i>
American eel	<i>Anguilla rostrata</i>
American plaice	<i>Hippoglossoides platessoides</i>
Arctic alligatorfish	<i>Aspidophoroides olriki</i>
Arctic cod	<i>Boreogadus saida</i>
Arctic eelpout	<i>Lycodes reticulatus</i>
Atlantic bluefin tuna	<i>Thunnus thynnus</i>
Atlantic cod	<i>Gadus morhua</i>
Atlantic halibut	<i>Hippoglossus hippoglossus</i>
Atlantic herring	<i>Clupea harengus harengus</i>
Atlantic mackerel	<i>Scomber scombrus</i>
Atlantic salmon	<i>Salmo salar</i>
Atlantic wolffish	<i>Anarhichas lupus</i>
Barndoor skate	<i>Dipturus laevis</i>
Barracudina	Paralepididae
Basking shark	<i>Cetorhinus maximus</i>
Bigeye tuna	<i>Thunnus obesus</i>
Black dogfish	<i>Centroscyllium fabricii</i>
Blue hake	<i>Antimora rostrata</i>
Blue shark	<i>Prionace glauca</i>
Capelin	<i>Mallotus villosus</i>
Common alligatorfish	<i>Aspidophoroides monopterygius</i>
Cusk	<i>Brosme brosme</i>
Daubed shanny	<i>Lumpenus maculatus</i>
Deepwater redfish	<i>Sebastes mentella</i>
Eelpout species	<i>Lycodes sp.</i>
Greenland halibut, Turbot	<i>Reinhardtius hippoglossoides</i>
Greenland shark	<i>Somniosus microcephalus</i>
Haddock	<i>Melanogrammus aeglefinus</i>
Hookear Sculpin	<i>Artediellus sp.</i>
Lanternfish	Myctophidae
Longfin Hake	<i>Physis chesteri</i>
Longhorn Sculpin	<i>Myoxocephalus octodecemspinosus</i>
Longnose eel	<i>Synaphobranchus kaupi</i>
Marlin spike	<i>Nezumia bairdi</i>

<b>MARINE FISH AND FISH HABITAT - FINFISH</b>	
Monkfish	<i>Lophius americanus</i>
Northern alligator fish	<i>Agonus decagonus</i>
Northern sand lance	<i>Ammodytes dubius</i>
Northern wolffish	<i>Anarhichas denticulatus</i>
Pollock	<i>Pollachius virens</i>
Porbeagle shark	<i>Lamna nasus</i>
Redfish	<i>Sebastes sp.</i>
Rose fish	<i>Sebastes marinus</i>
Roughhead grenadier	<i>Macrourus berglax</i>
Roundnose grenadier	<i>Coryphaenoides rupestris</i>
Sand lance	<i>Ammodytes sp.</i>
Sculpin	<i>Triglops sp.</i>
Shortfin mako	<i>Isurus oxyrinchus</i>
Smooth skate	<i>Malacoraja senta</i>
Snake blenny	<i>Lumpenus lumpretaeformis</i>
Spatulate sculpin	<i>Icelus spatula</i>
Spiny dogfish	<i>Squalus acanthias</i>
Spotted wolffish	<i>Anarhichas minor</i>
Swordfish	<i>Xiphias gladius</i>
Thorny skate	<i>Amblyraja radiata</i>
Vahl's eelpout	<i>Lycodes vahlii</i>
White hake	<i>Urophycis tenuis</i>
White shark	<i>Carcharodon carcharias</i>
Winter skate	<i>Leucoraja ocellata</i>
Witch flounder	<i>Glyptocephalus cynoglossus</i>
Wolffish	Anarhichadidae
Yellowtail flounder	<i>Limanda ferruginea</i>

<b>MARINE BIRDS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
American Black Duck	<i>Anas rubripes</i>
American Golden-plover	<i>Pluvialis dominica</i>
American Wigeon	<i>Anas americana</i>
American Redstart	<i>Setophaga ruticilla</i>
Arctic Tern	<i>Sterna paradisaea</i>
Atlantic Puffin	<i>Fratercula arctica</i>
Barrow's Goldeneye	<i>Bucephala islandica</i>
Black Guillemot	<i>Cephus grylle</i>
Black Scoter	<i>Melanitta americana</i>
Black-backed Woodpecker	<i>Picoides arcticus</i>
Black-bellied Plover	<i>Pluvialis squatarola</i>
Black-headed Gull	<i>Chroicocephalus ridibundus</i>
Black-legged Kittiwake	<i>Rissa tridactyla</i>
Black-throated Green Warbler	<i>Setophaga virens</i>
Blue-winged Teal	<i>Anas discors</i>

<b>MARINE BIRDS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Boreal Owl	<i>Aegolius funereus</i>
Buff-breasted Sandpiper	<i>Tryngites subruficollis</i>
Canada Goose	<i>Branta canadensis</i>
Caspian Tern	<i>Hydroprogne caspia</i>
Common Eider	<i>Somateria mollissima</i>
Common Goldeneye	<i>Bucephala clangula</i>
Common Loon	<i>Gavia immer</i>
Common Merganser	<i>Mergus merganser</i>
Common Murre	<i>Uria aalge</i>
Common Tern	<i>Sterna hirundo</i>
Double-crested Cormorant	<i>Phalacrocorax auritus</i>
Dovekie	<i>Alle alle</i>
Dunlin	<i>Calidris alpina</i>
Eskimo Curlew	<i>Numenius borealis</i>
Glaucous Gull	<i>Larus hyperboreus</i>
Gray-cheeked Thrush	<i>Catharus minimus</i>
Great Black-backed Gull	<i>Larus marinus</i>
Great Cormorant	<i>Phalacrocorax carbo</i>
Great Skua	<i>Stercorarius skua</i>
Great Shearwater	<i>Puffinus gravis</i>
Greater Yellowlegs	<i>Tringa melanoleuca</i>
Green-winged Teal	<i>Anas carolinensis</i>
Harlequin Duck	<i>Histrionicus histrionicus</i>
Herring Gull	<i>Larus argentatus</i>
Hudsonian Godwit	<i>Limosa haemastica</i>
Iceland Gull	<i>Larus glaucoides</i>
Ivory Gull	<i>Pagophila eburnea</i>
Killdeer	<i>Charadrius vociferus</i>
Leach's Storm-petrel	<i>Oceanodroma leucorhoa</i>
Least Sandpiper	<i>Calidris minutilla</i>
Lesser Black-backed Gull	<i>Larus fuscus</i>
Long-tailed Jaeger	<i>Stercorarius longicaudus</i>
Magnolia Warbler	<i>Setophaga magnolia</i>
Mallard	<i>Anas platyrhynchos</i>
Manx Shearwater	<i>Puffinus puffinus</i>
Mew Gull	<i>Larus canus</i>
Mourning Warbler	<i>Geothlypis philadelphia</i>
Northern Fulmar	<i>Fulmarus glacialis</i>
Northern Gannet	<i>Morus bassanus</i>
Northern Goshawk	<i>Accipiter gentilis</i>
Northern Pintail	<i>Anas acuta</i>
Northern Shoveler	<i>Anas clypeata</i>
Olive-sided Flycatcher	<i>Contopus cooperi</i>
Ovenbird	<i>Seiurus aurocapilla</i>

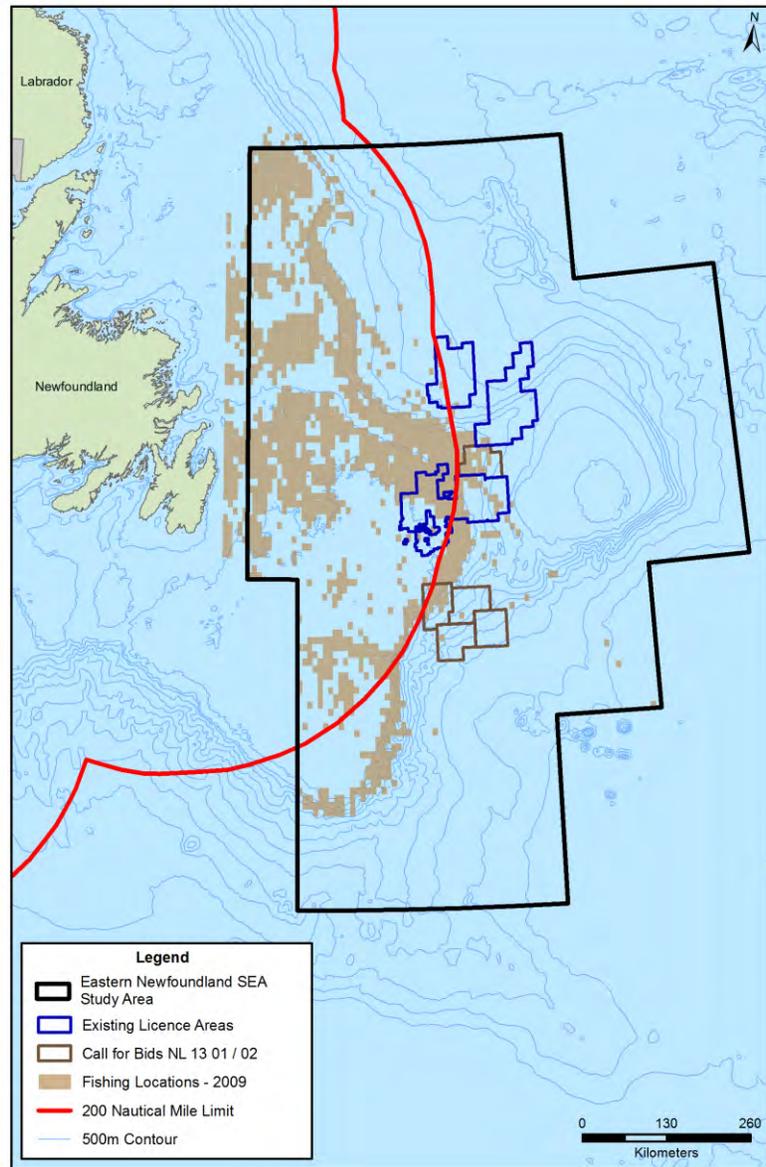
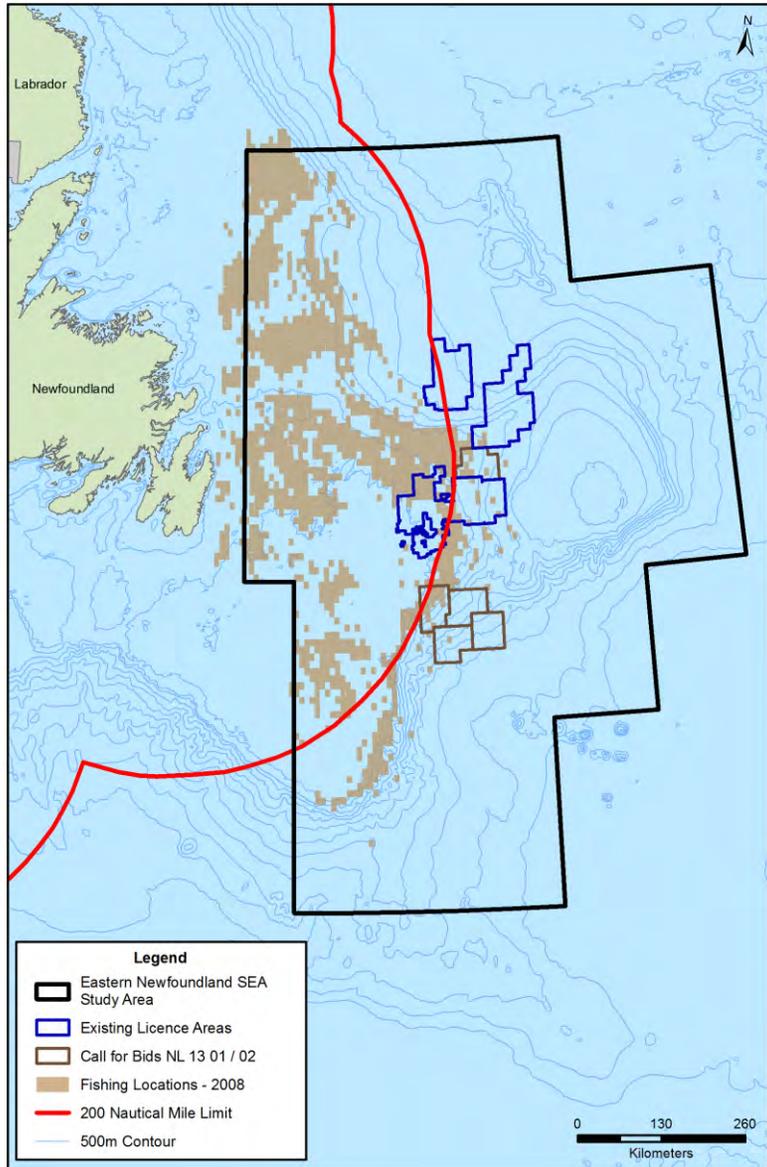
<b>MARINE BIRDS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Palm Warbler	<i>Setophaga palmarum</i>
Parasitic Jaeger	<i>Stercorarius parasiticus</i>
Peregrine Falcon	<i>Falco peregrinus</i>
Pied-billed Grebe	<i>Podilymbus podiceps</i>
Piping Plover	<i>Charadrius melodus</i>
Pomarine Jaeger	<i>Stercorarius pomarinus</i>
Purple Sandpiper	<i>Calidris maritima</i>
Razorbill	<i>Alca torda</i>
Red Crossbill	<i>Loxia curvirostra</i>
Red Knot	<i>Calidris canutus rufa</i>
Red Phalarope	<i>Phalaropus fulicaria</i>
Red-necked Phalarope	<i>Phalaropus lobatus</i>
Ring-billed Gull	<i>Larus delawarensis</i>
Ring-necked Duck	<i>Aythya collaris</i>
Rock Ptarmigan	<i>Lagopus muta</i>
Roseate Tern	<i>Sterna dougallii</i>
Ruby-crowned Kinglet	<i>Regulus calendula</i>
Ruddy Turnstone	<i>Arenaria interpres</i>
Rusty Blackbird	<i>Euphagus carolinus</i>
Sabine's Gull	<i>Xema sabini</i>
Sanderling	<i>Calidris alba</i>
Savannah Sparrow	<i>Passerculus sandwichensis</i>
Semipalmated Plover	<i>Charadrius semipalmatus</i>
Semipalmated Sandpiper	<i>Calidris pusilla</i>
Short-eared Owl	<i>Asio flammeus</i>
Sooty Shearwater	<i>Puffinus griseus</i>
South Polar Skua	<i>Stercorarius maccormicki</i>
Spotted Sandpiper	<i>Actitis macularius</i>
Surf Scoter	<i>Melanitta perspicillata</i>
Tennessee Warbler	<i>Oreothlypis peregrina</i>
Thick-billed Murre	<i>Uria lomvia</i>
Whimbrel	<i>Numenius phaeopus</i>
White-rumped Sandpiper	<i>Calidris fuscicollis</i>
White-winged Scoter	<i>Melanitta deglandi</i>
Wilson's Storm-petrel	<i>Oceanites oceanicus</i>
Yellow-bellied Flycatcher	<i>Empidonax flaviventris</i>

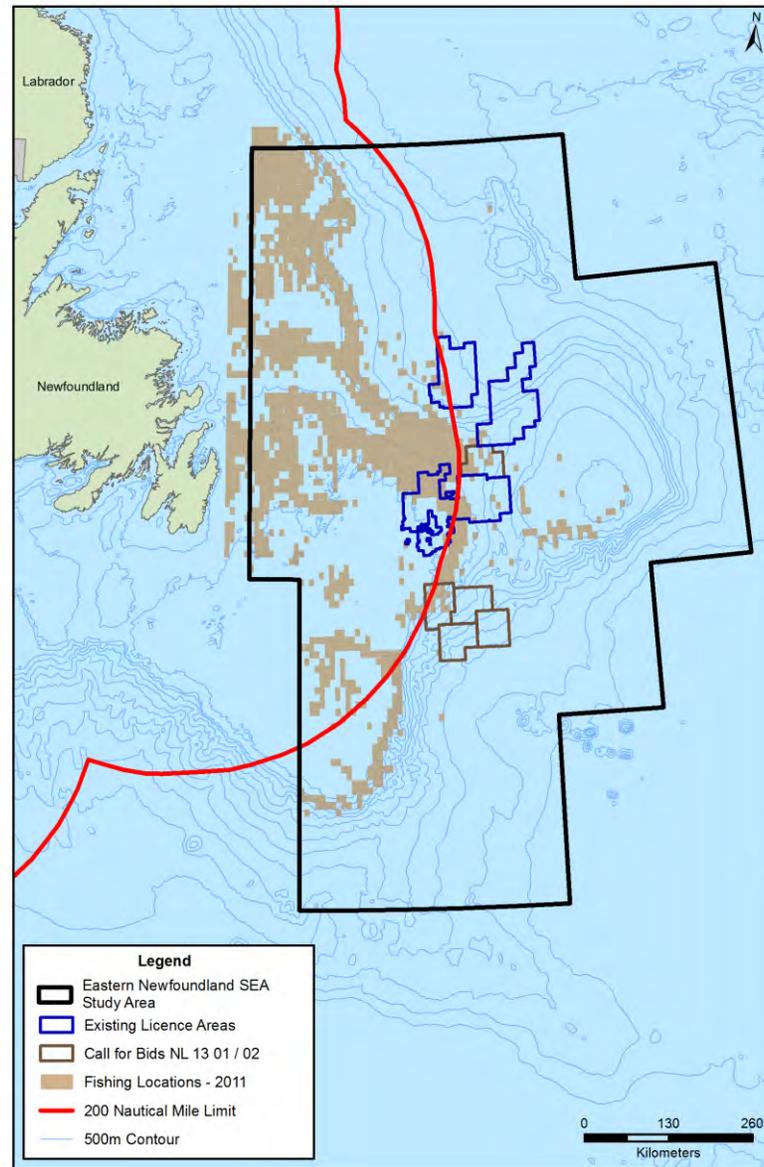
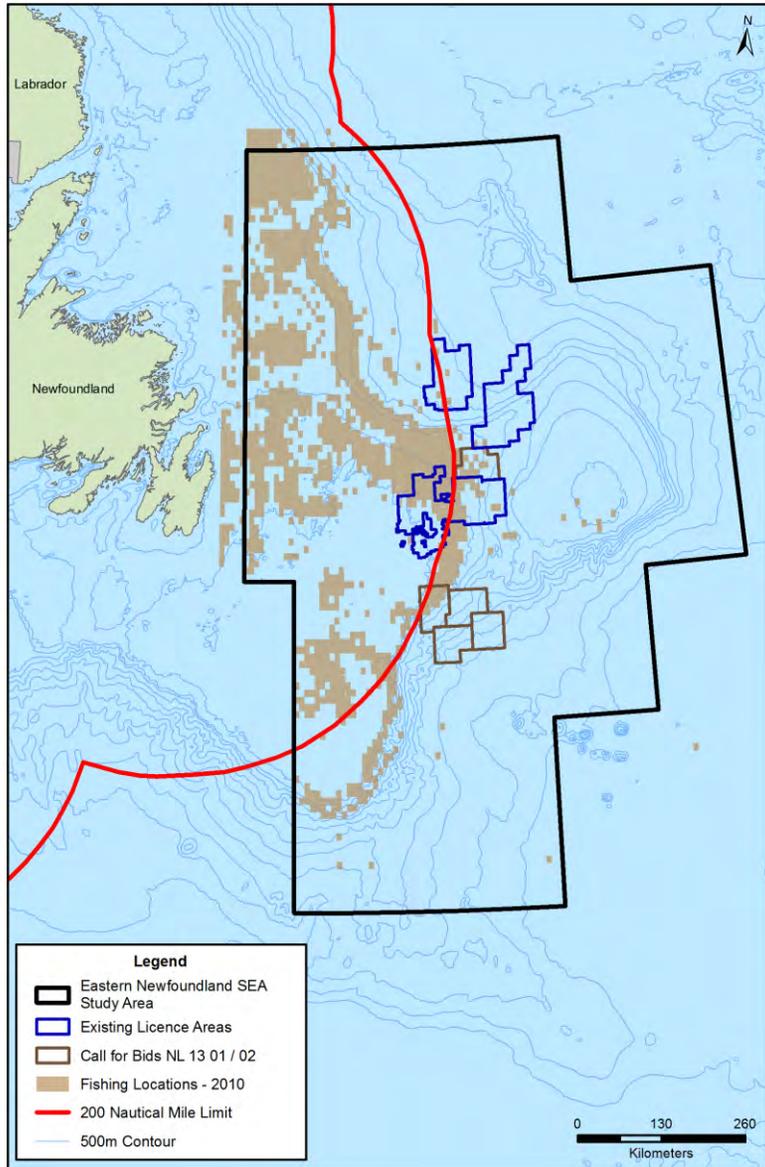
<b>MARINE MAMMALS AND SEA TURTLES</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Atlantic white-sided dolphin	<i>Lagenorhynchus acutus</i>
Bearded seal	<i>Erignathus barbatus</i>
Blue whale	<i>Balaenoptera musculus</i>
Common bottlenose dolphin	<i>Tursiops truncatus</i>
Fin whale	<i>Balaenoptera physalus</i>

<b>MARINE MAMMALS AND SEA TURTLES</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Grey seal	<i>Halichoerus grypus</i>
Harbour porpoise	<i>Phocoena phocoena</i>
Harbour seal	<i>Phoca vitulina</i>
Harp seal	<i>Pagophilus groenlandica</i>
Hooded seal	<i>Cystophora cristata</i>
Humpback whale	<i>Megaptera novaeangliae</i>
Killer Whale	<i>Orcinus orca</i>
Long-finned pilot whale	<i>Globicephala melas</i>
Minke whale	<i>Balaenoptera acutorostrata</i>
North Atlantic right whale	<i>Eubalaena glacialis</i>
Northern bottlenose whale	<i>Hyperoodon ampullatus</i>
Ringed seal	<i>Phoca hispida</i>
Risso's Dolphin	<i>Grampus griseus</i>
River otter	<i>Lontra canadensis</i>
Sei whale	<i>Balaenoptera borealis</i>
Short-beaked common dolphin	<i>Delphinus delphis</i>
Sowerby's beaked whale	<i>Mesoplodon bidens</i>
Sperm whale	<i>Physeter macrocephalus</i>
White-beaked dolphin	<i>Lagenorhynchus albirostris</i>
Kemp's ridley turtle	<i>Lepidochelys kempii</i>
Leatherback turtle	<i>Dermochelys coriacea</i>
Loggerhead turtle	<i>Caretta caretta</i>

## **APPENDIX C**

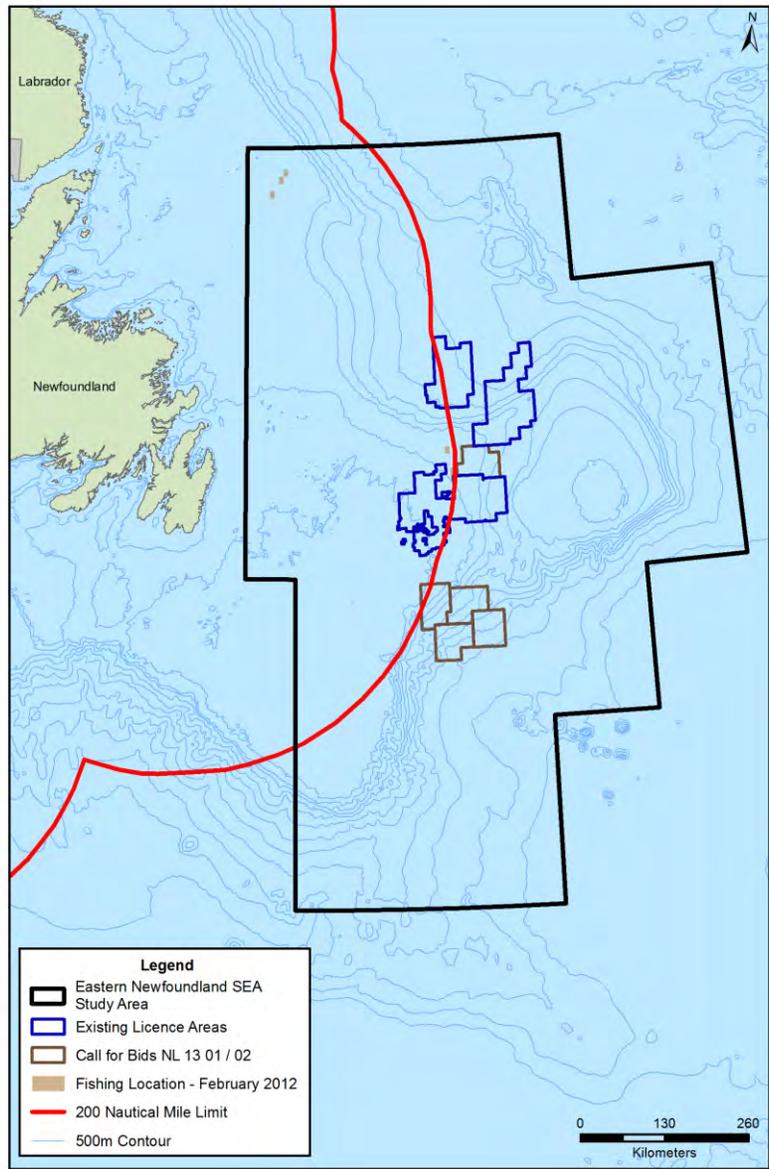
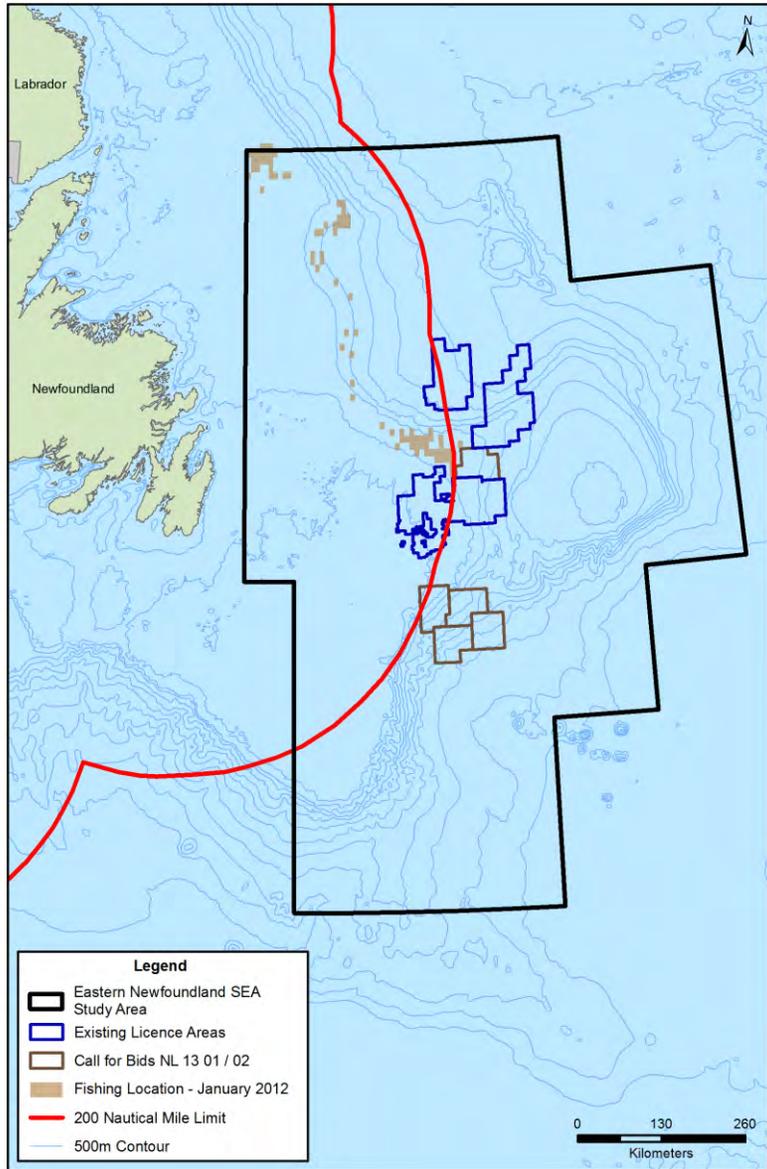
**Commercial Fishing Locations (2008 – 2011)**

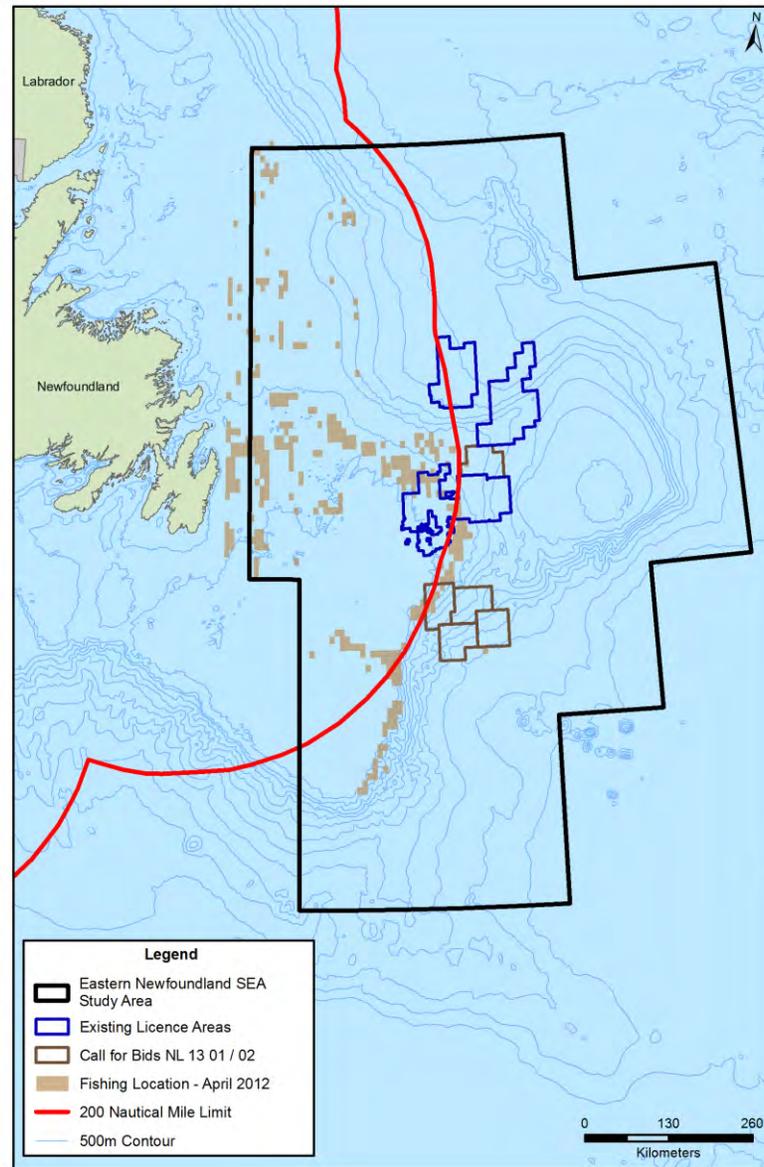
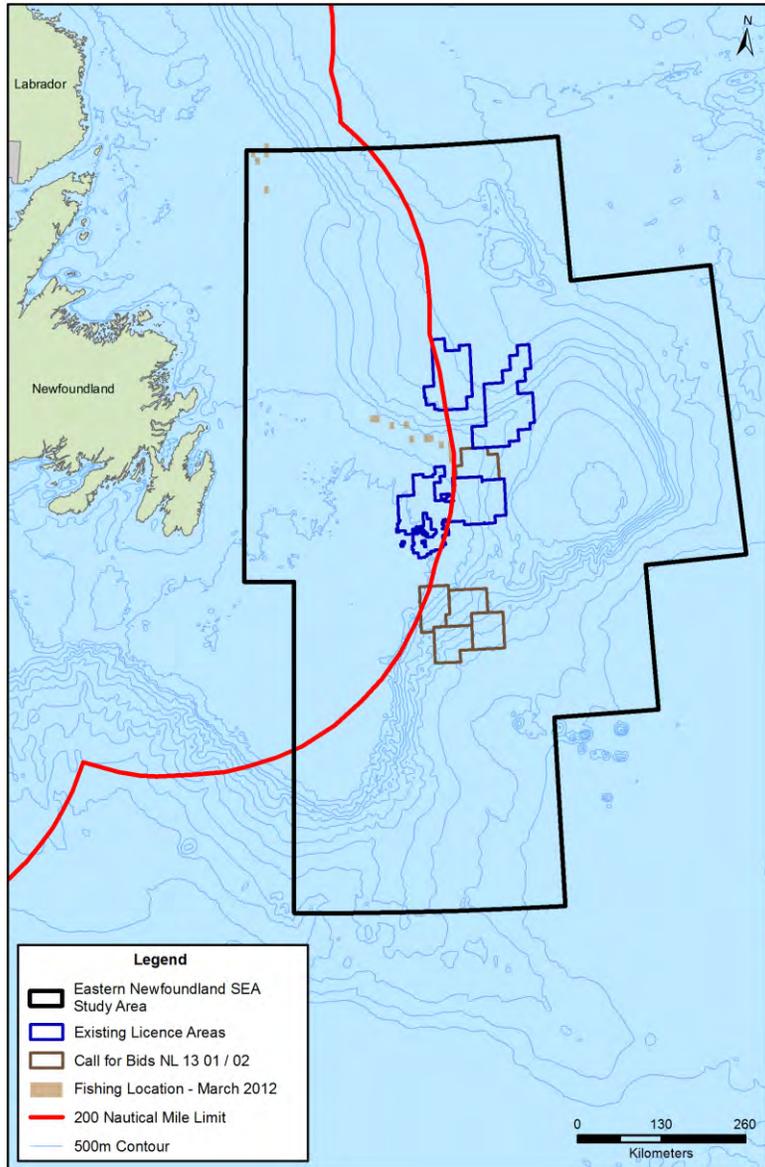


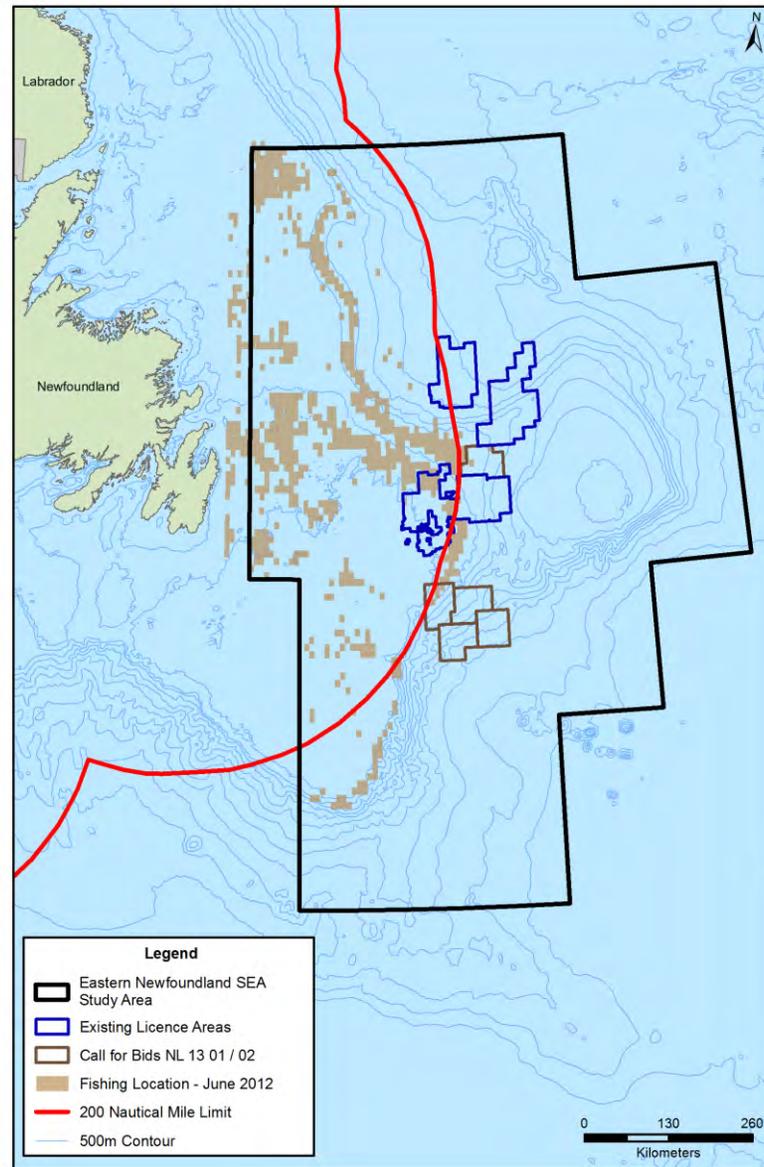
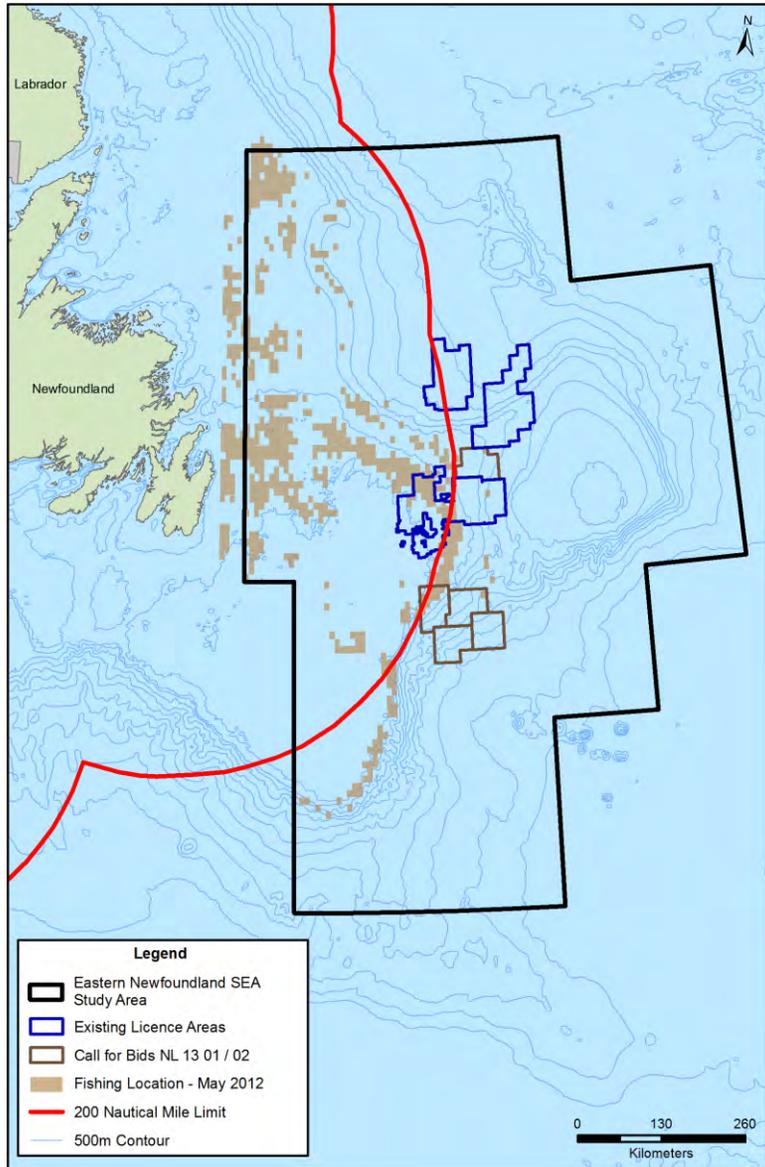


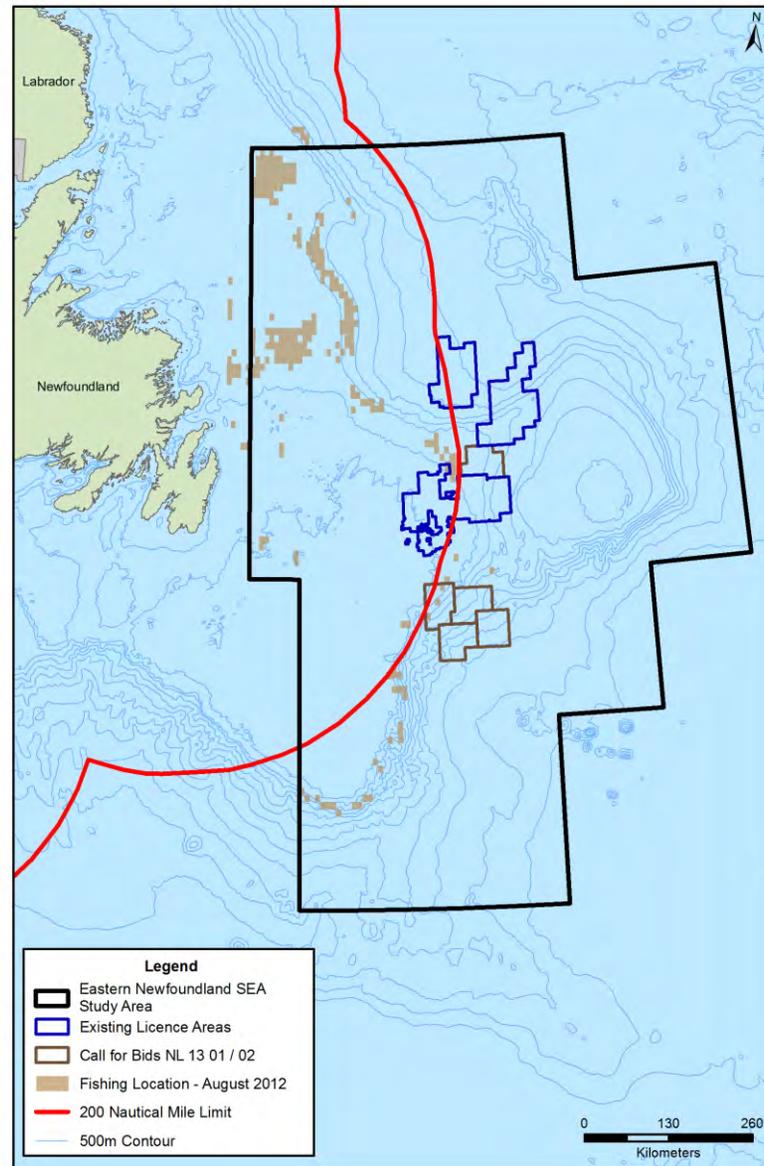
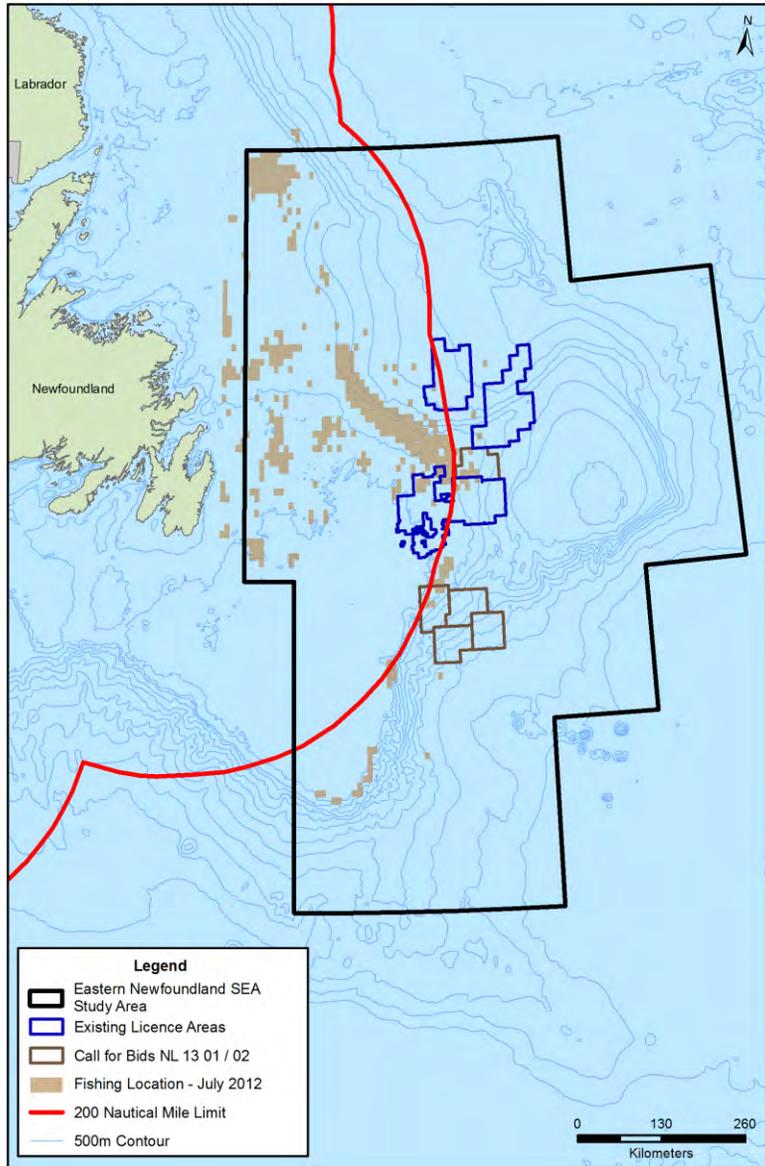
## **APPENDIX D**

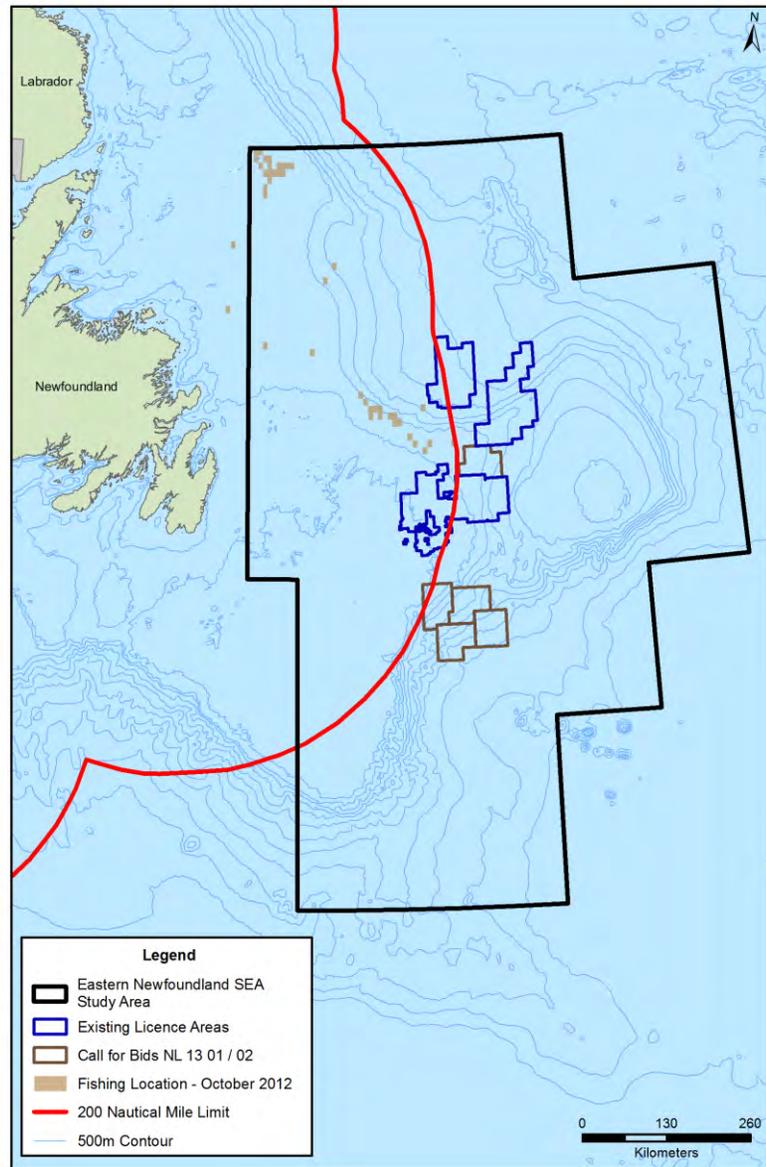
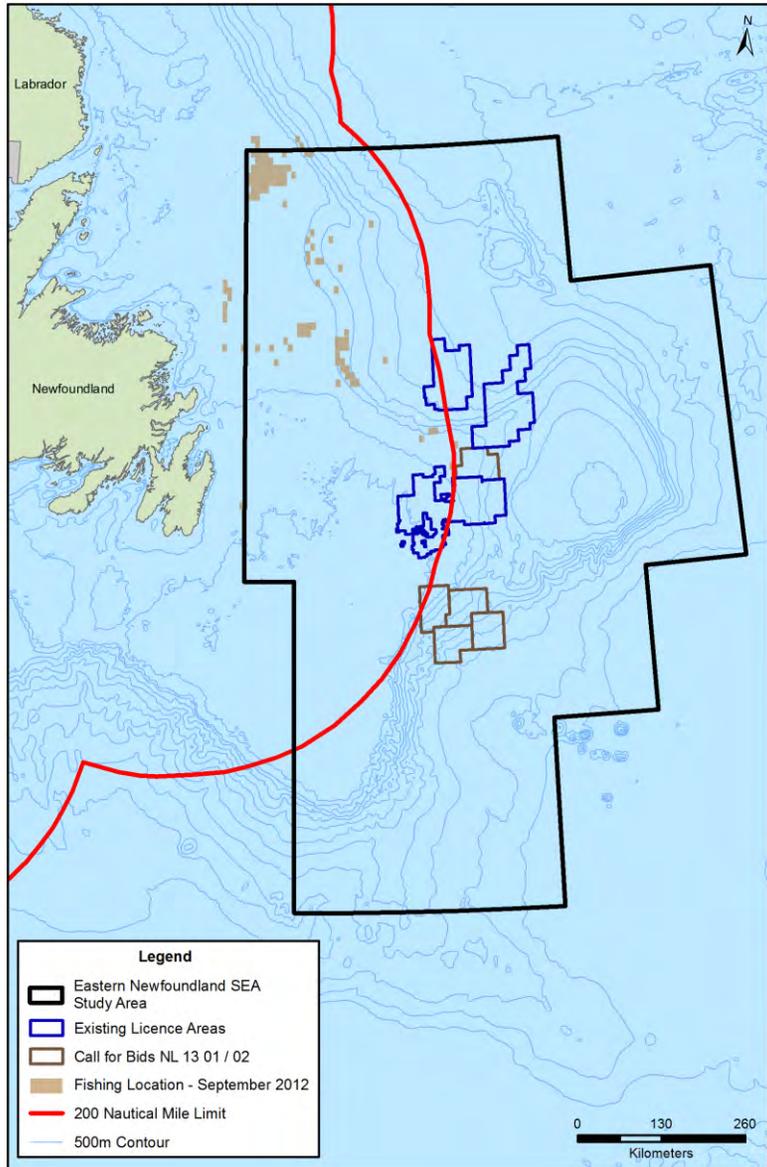
**Commercial Fishing Locations by Month (2012 and 2008 – 2011)**

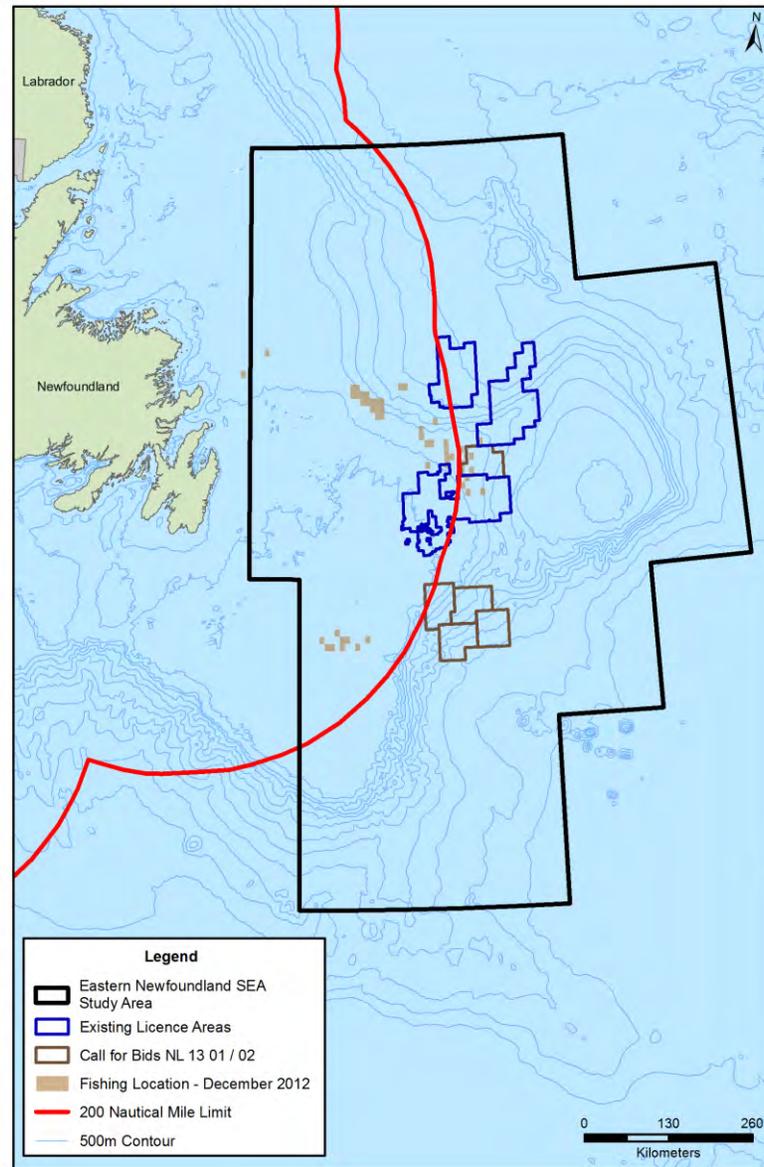
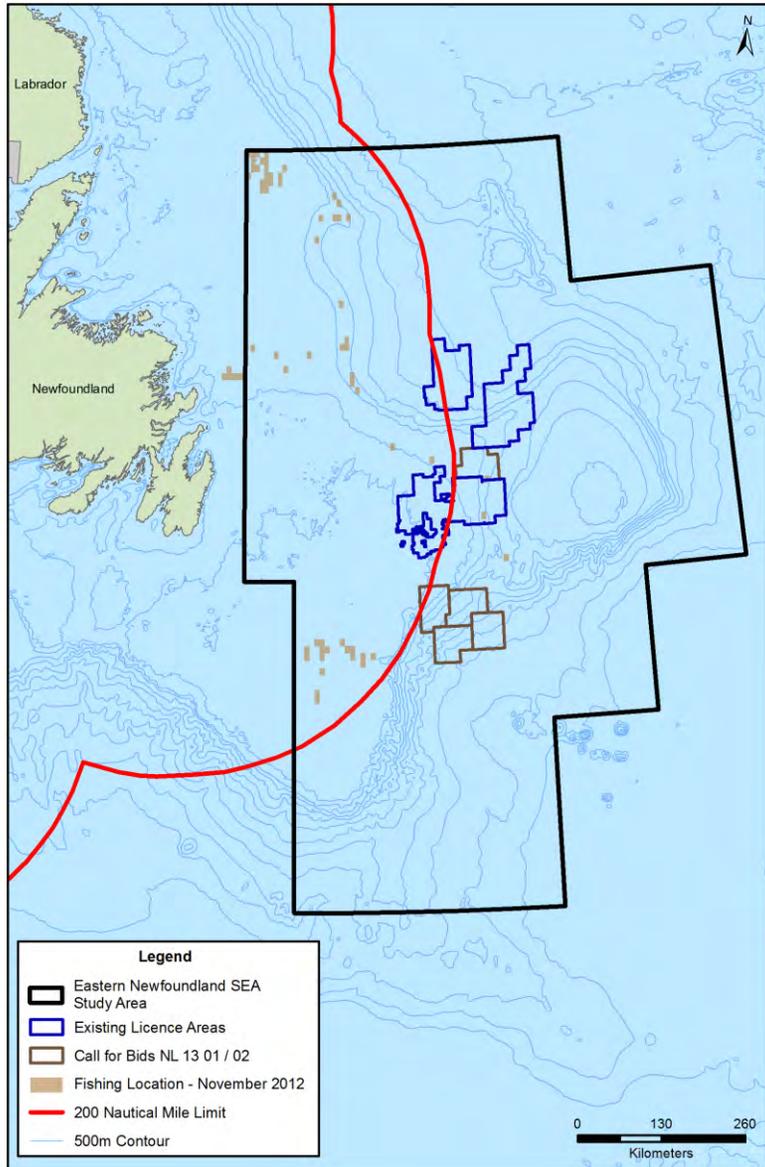


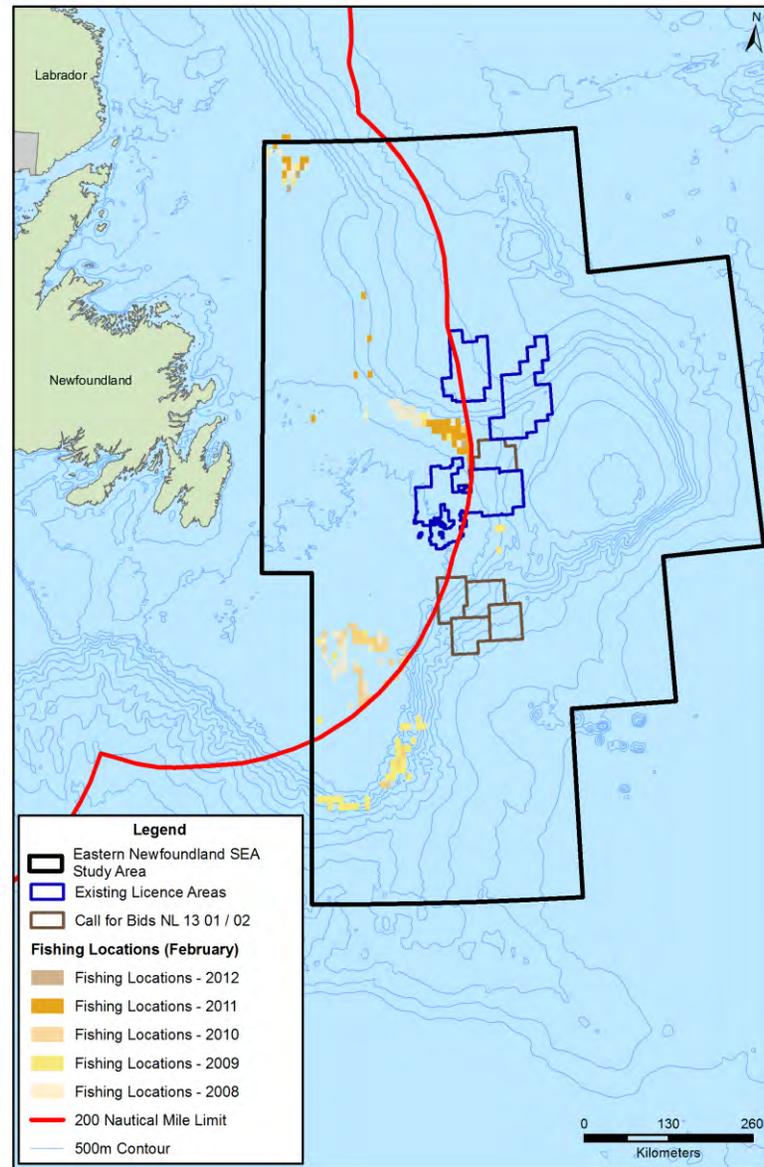
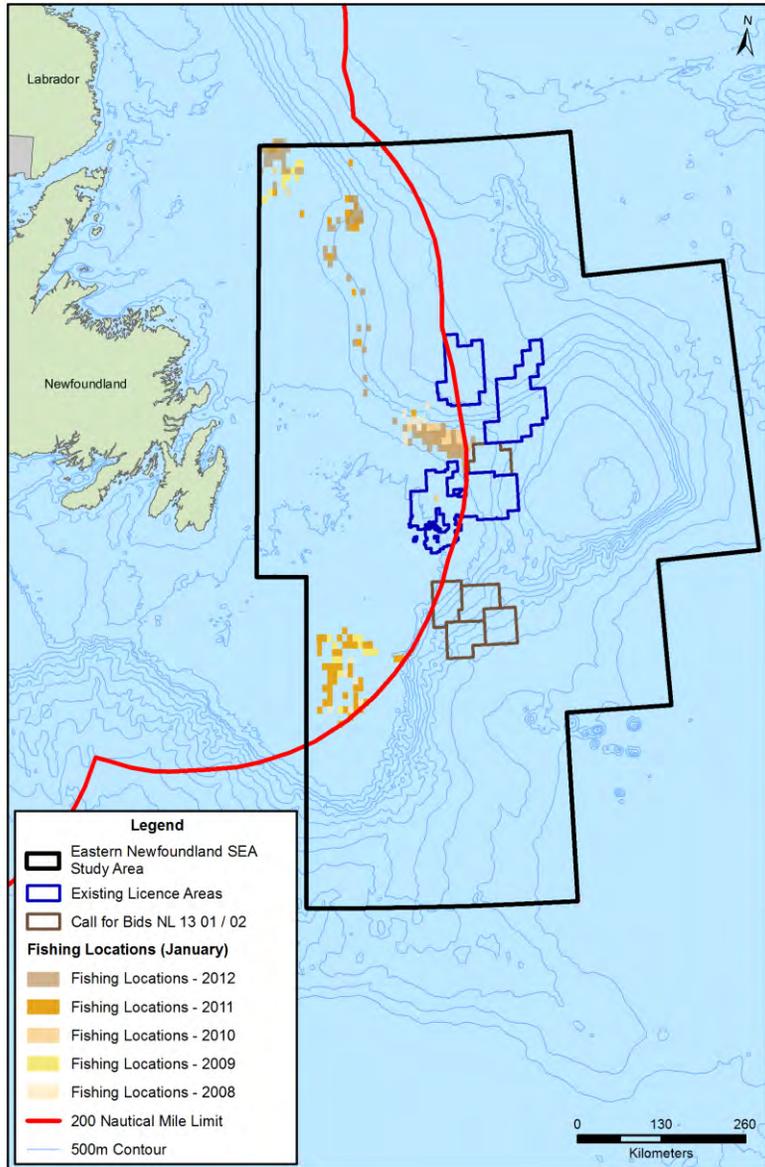


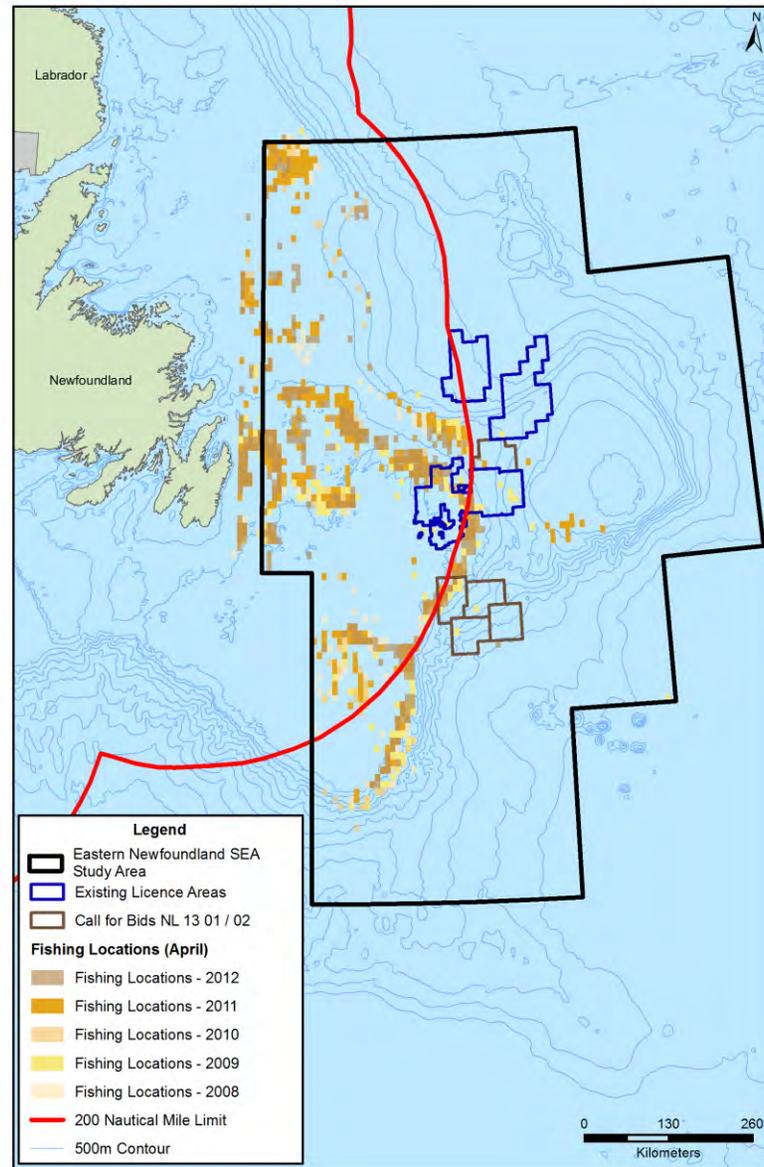
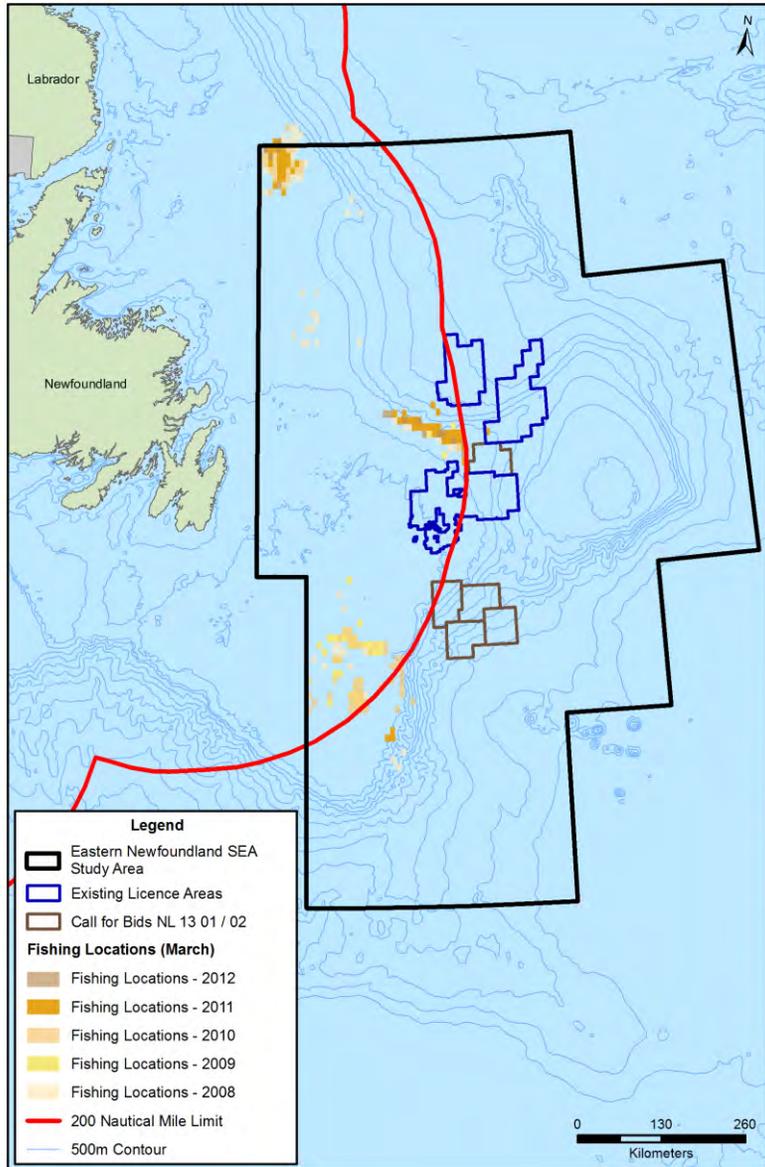


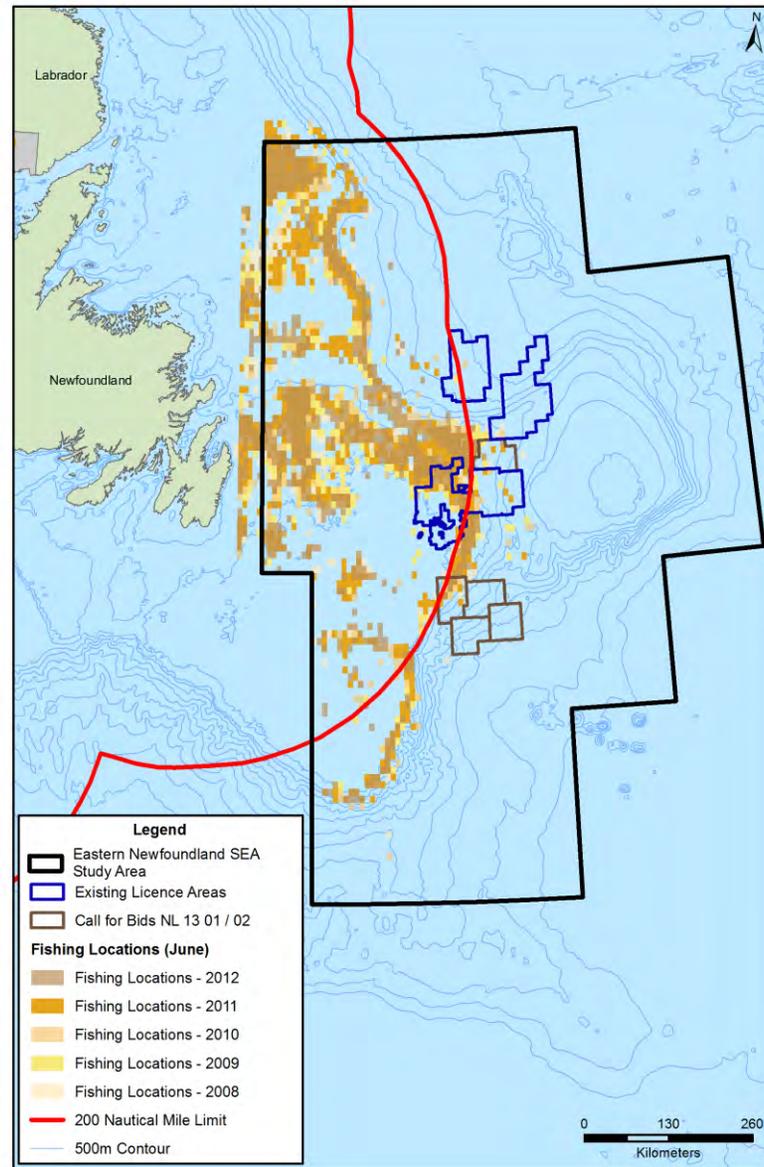
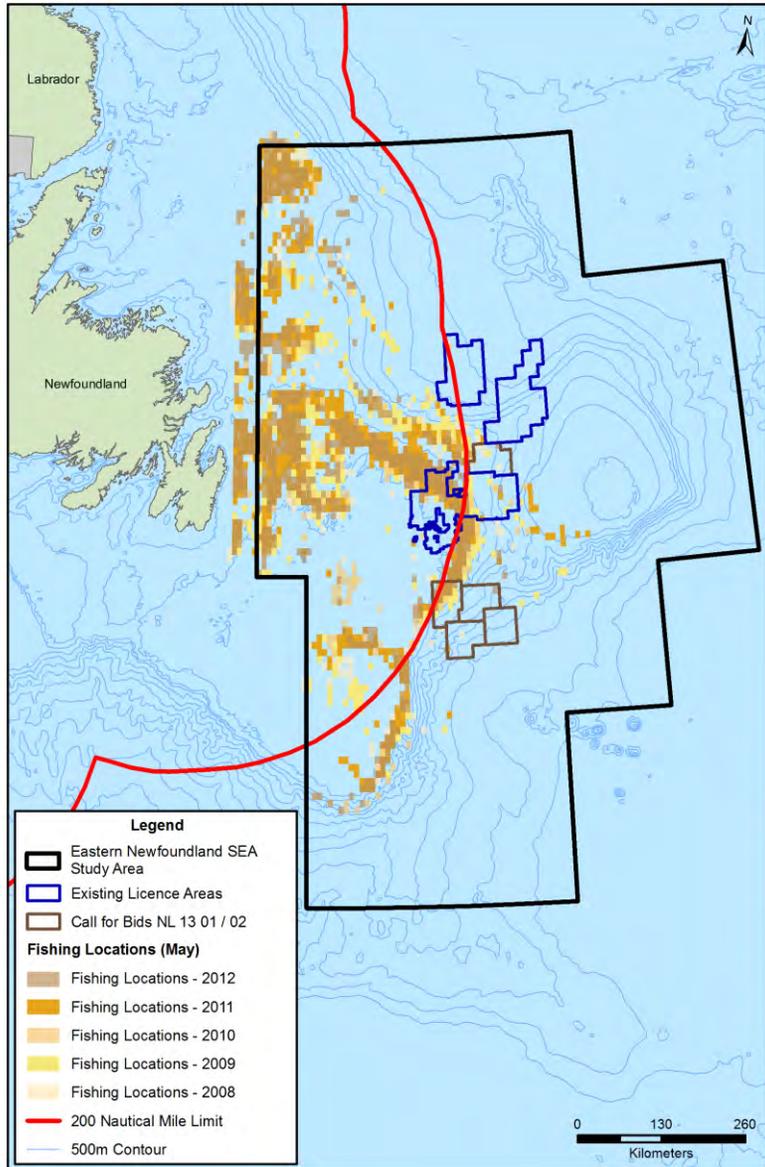


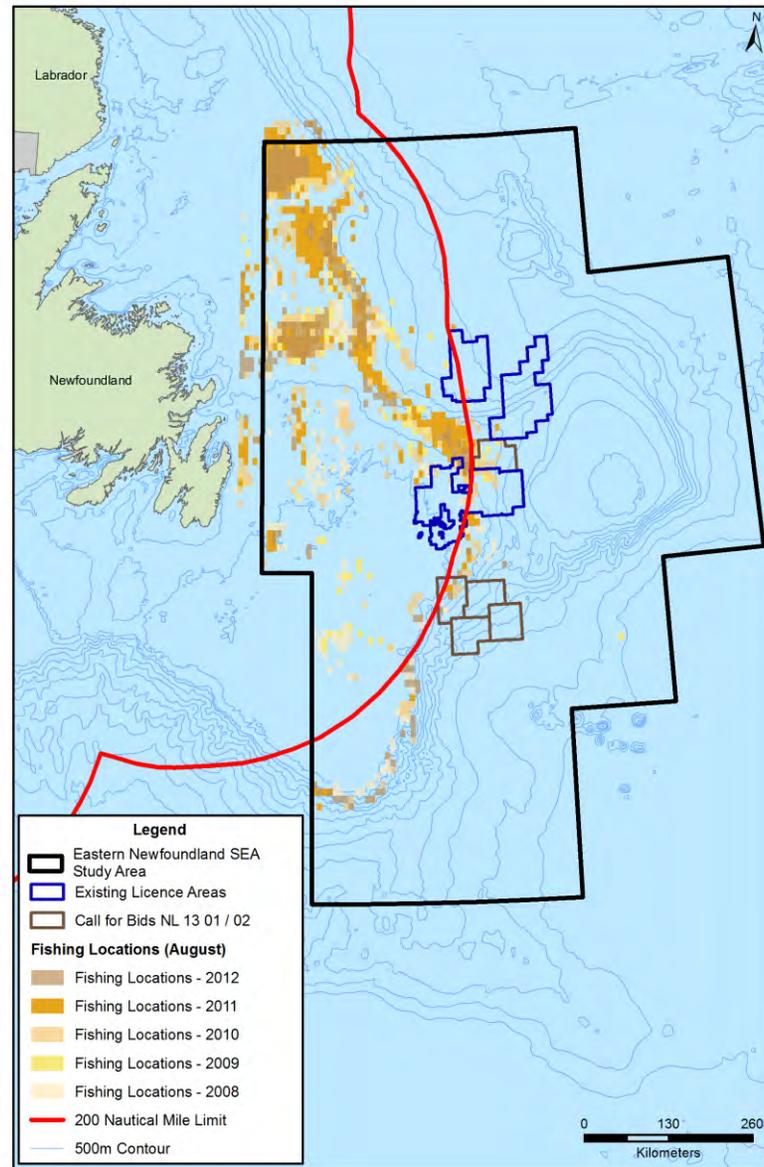
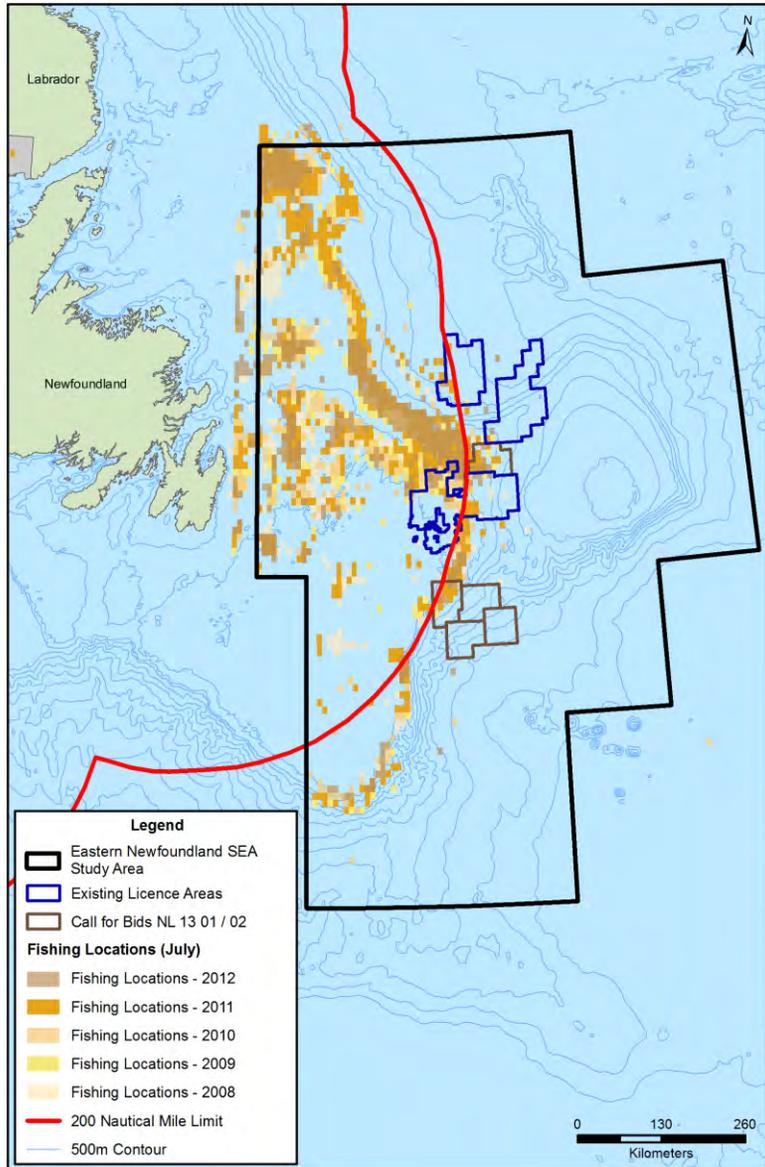


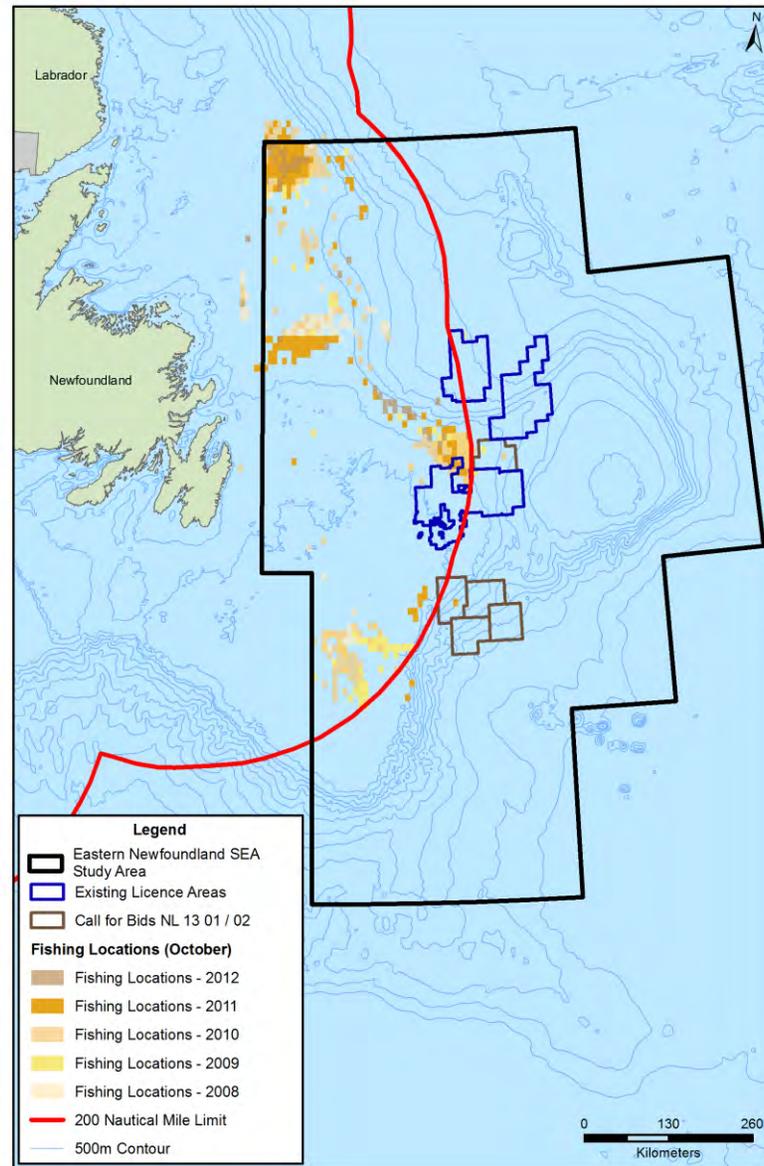
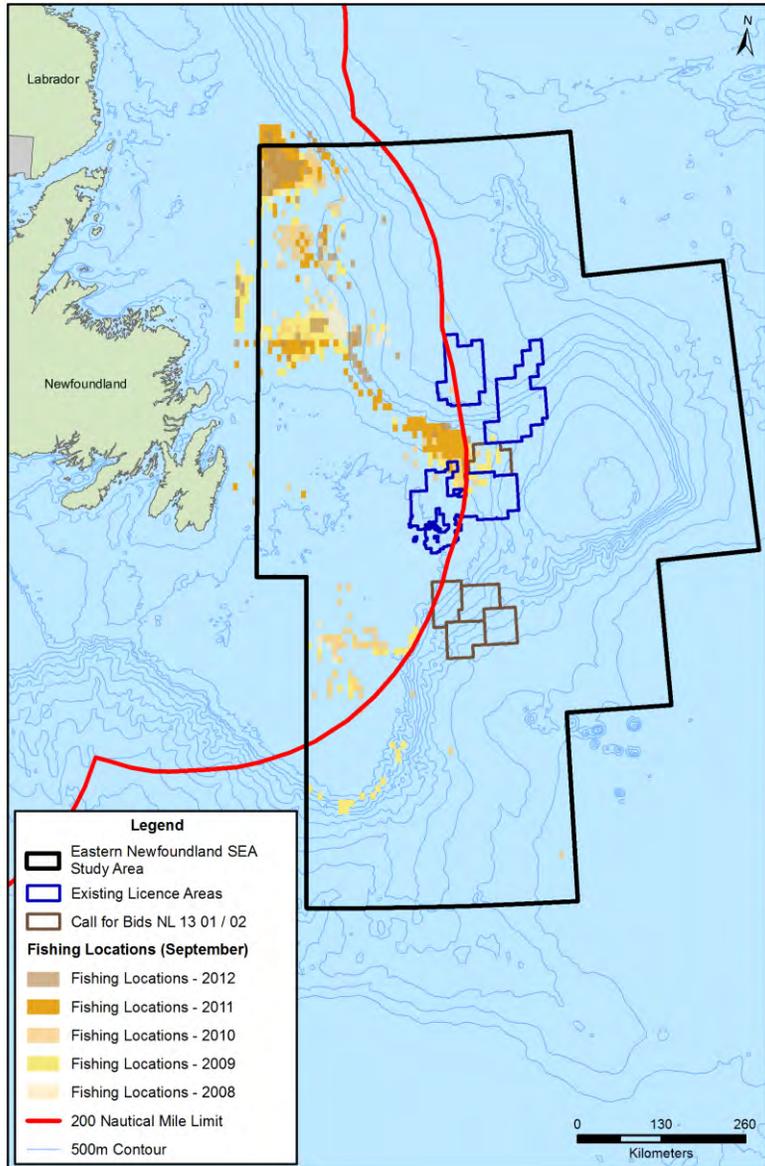


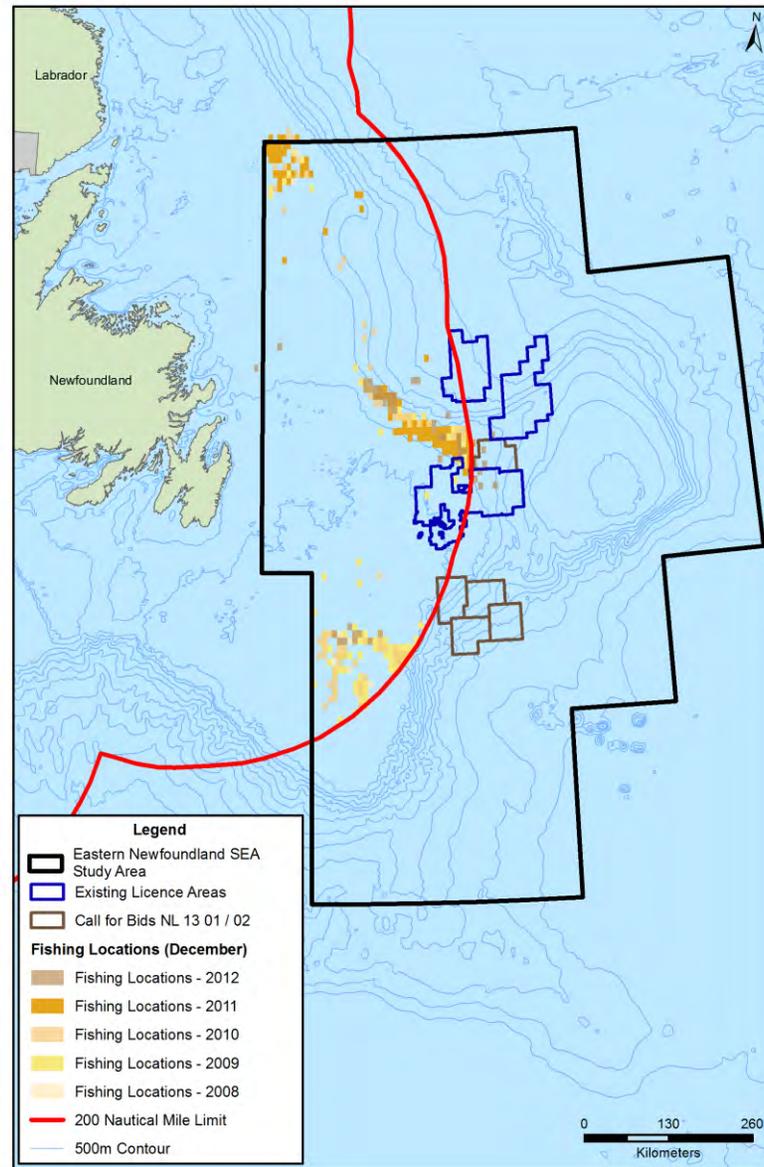
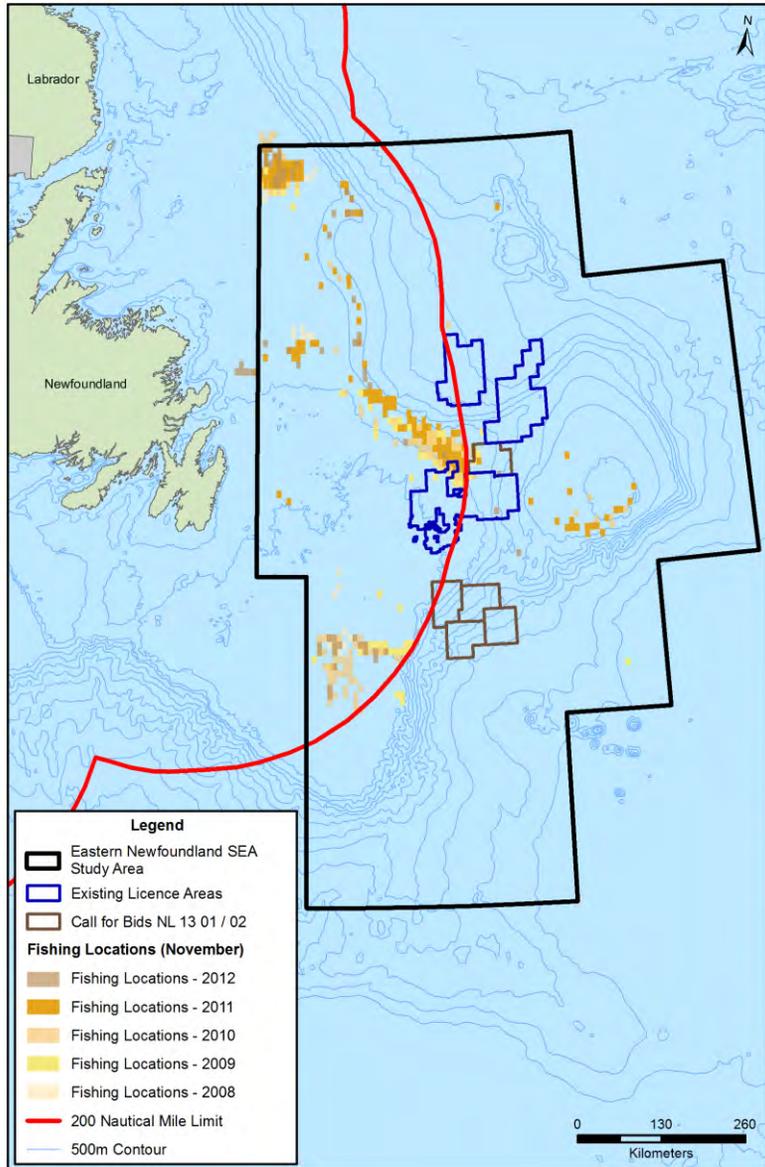






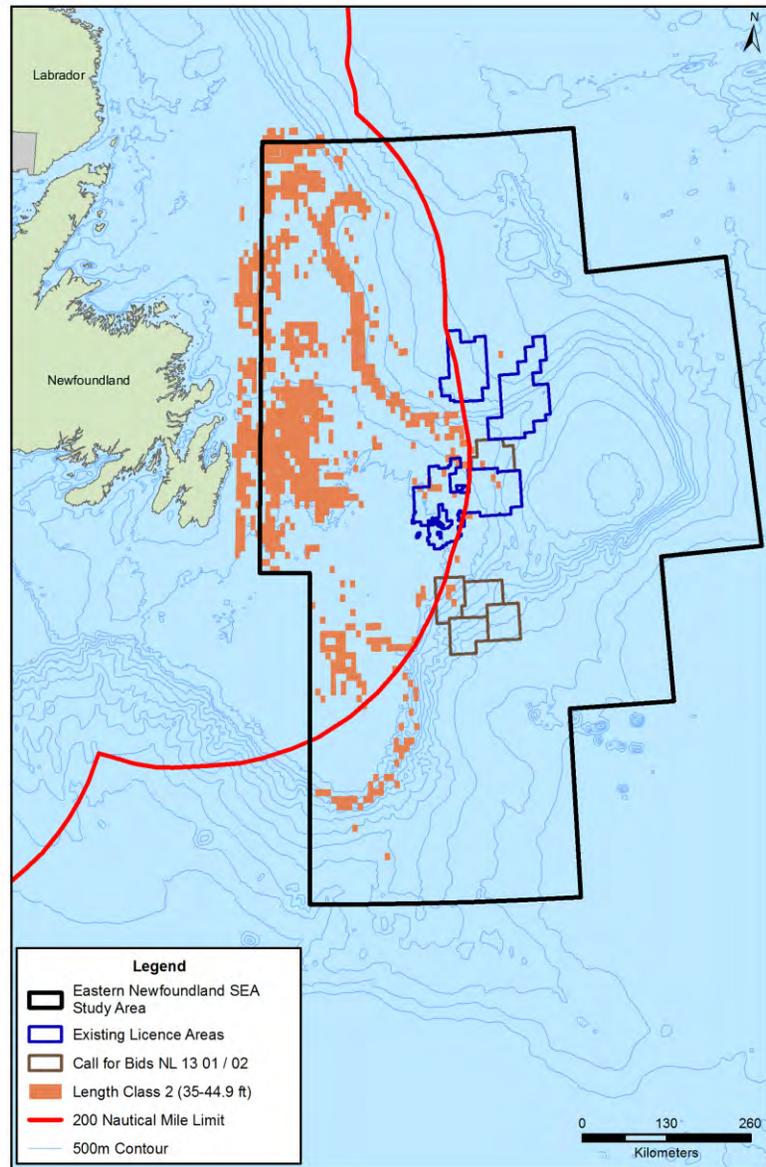
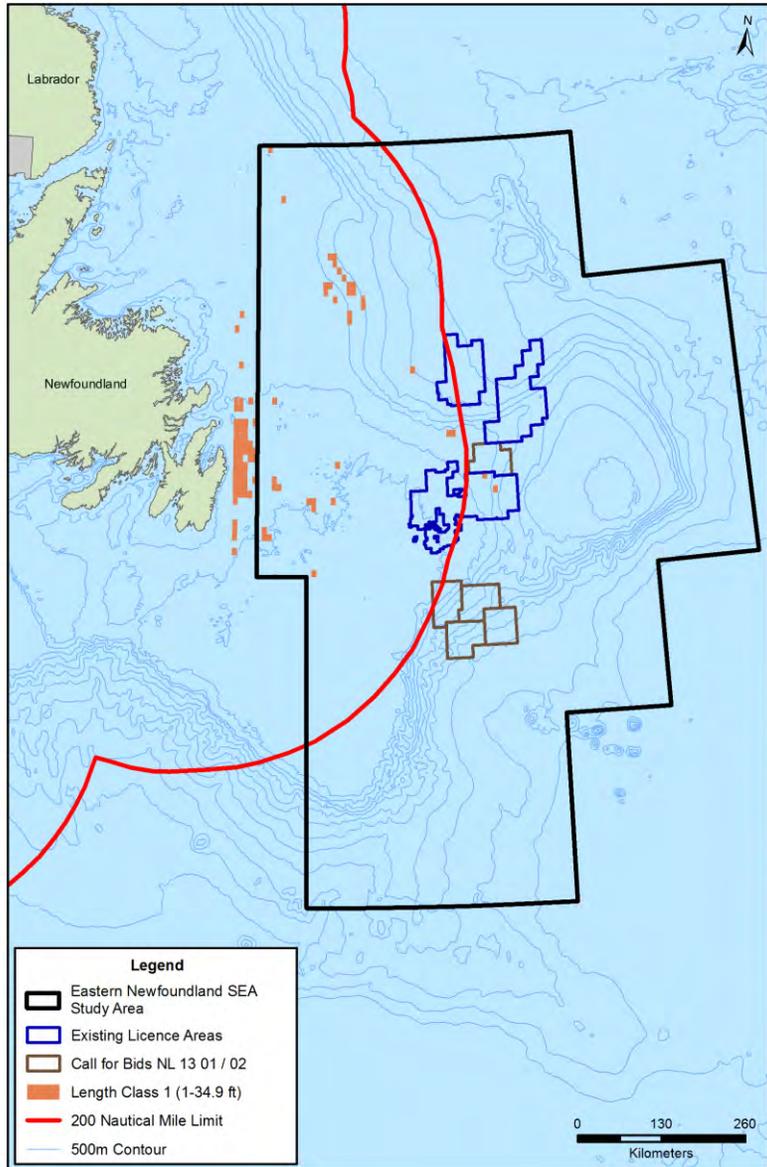


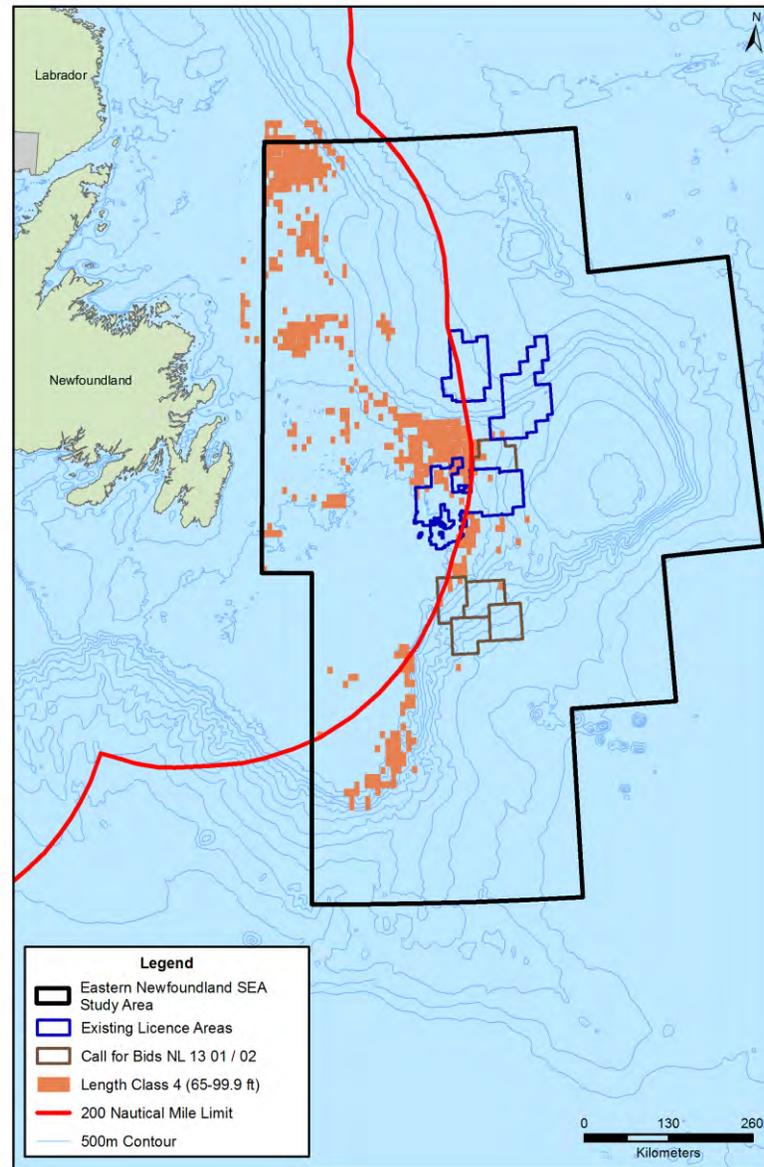
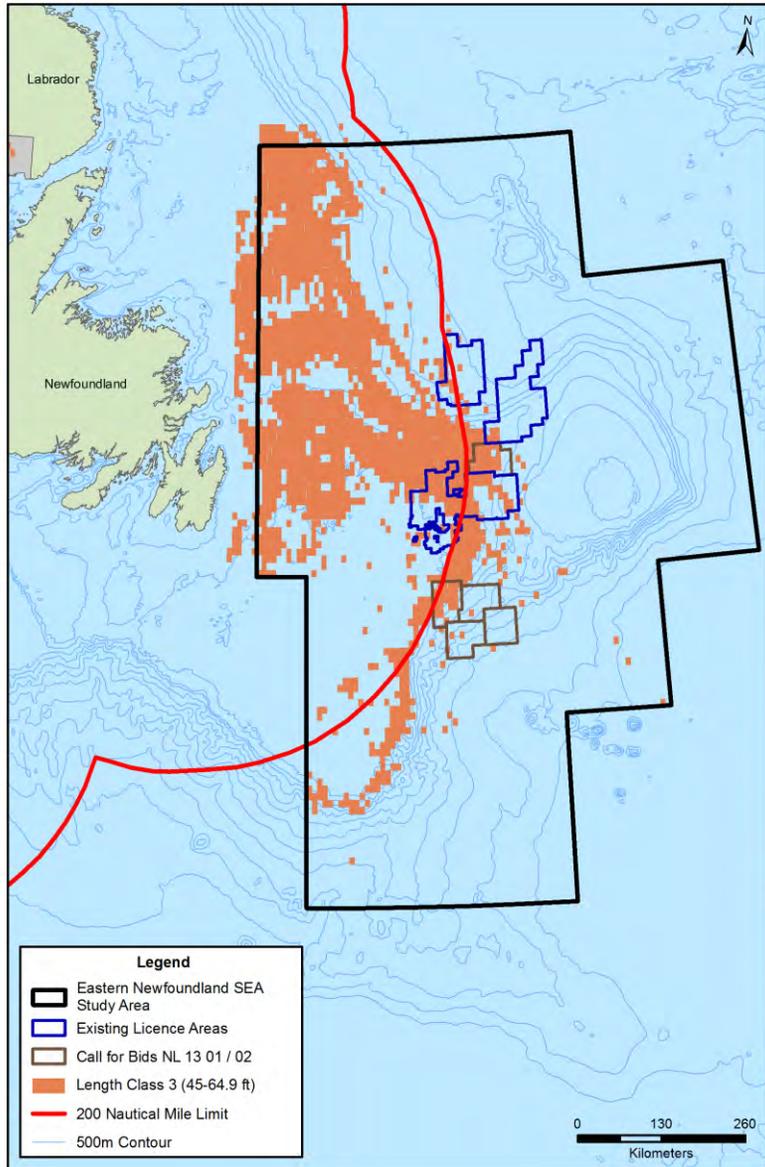


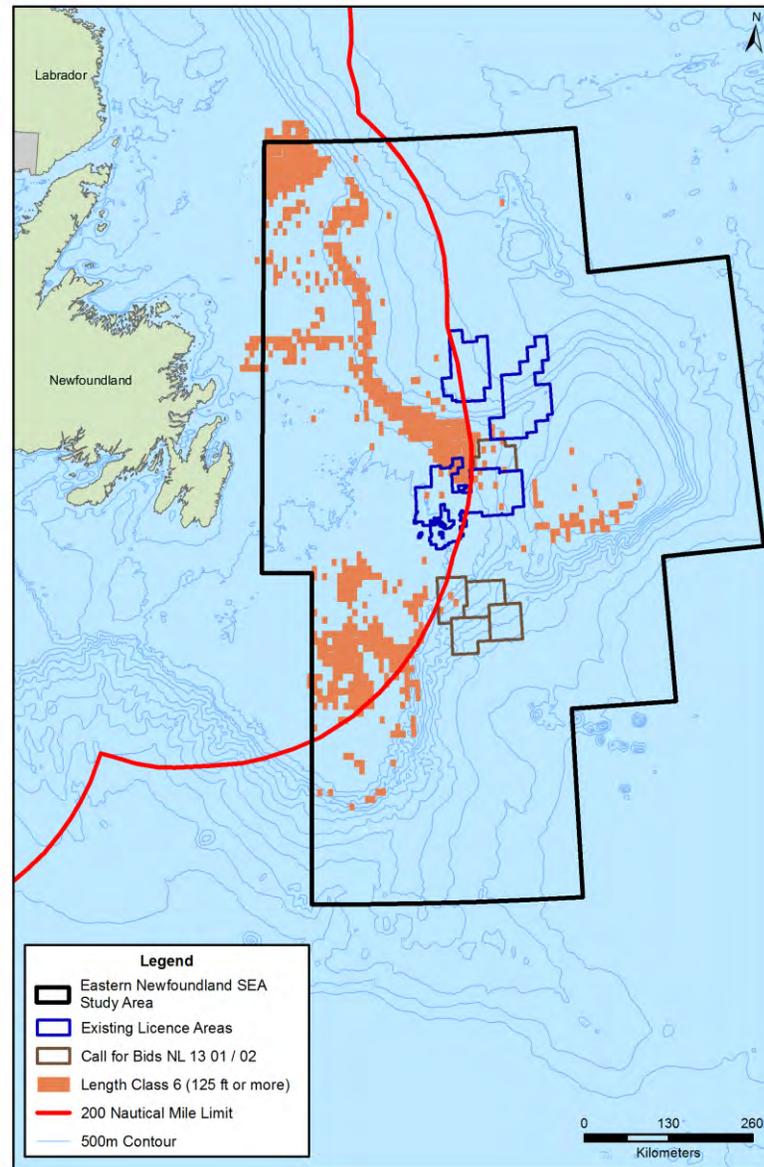
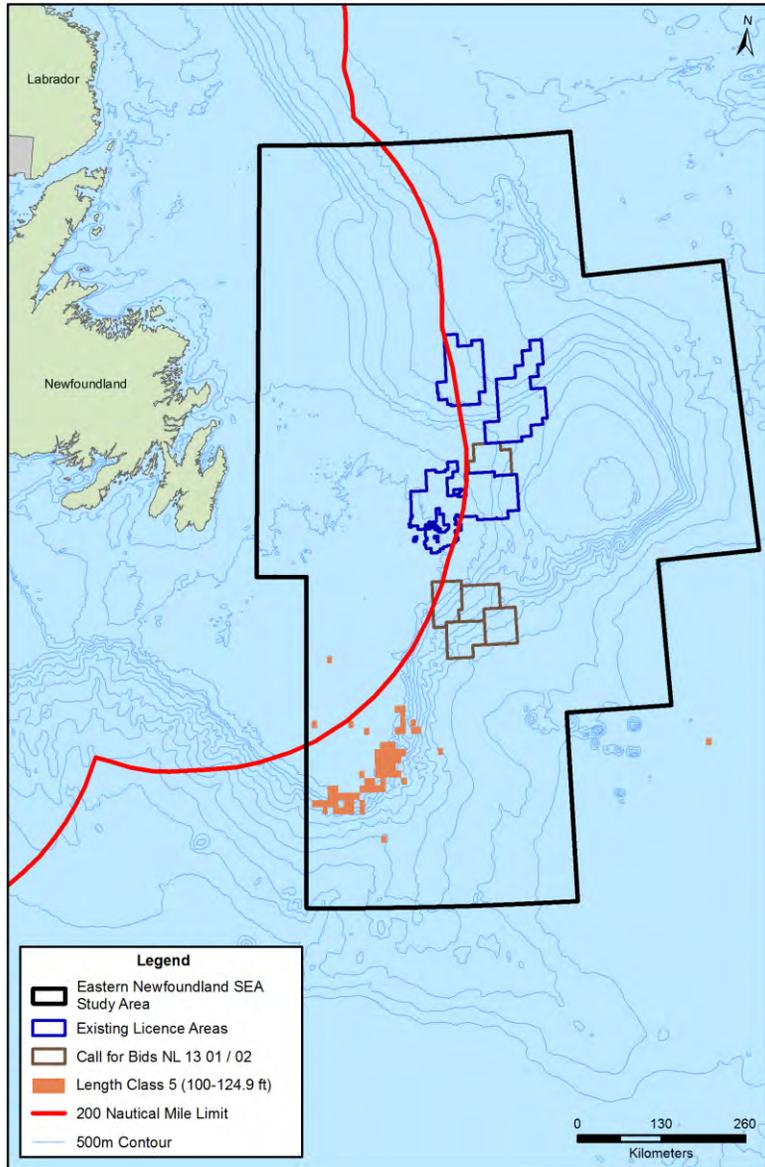


## **APPENDIX E**

### **Commercial Fishing Locations by Vessel Size (Length Class)**







## **APPENDIX F**

**Commercial Fishing Locations by Season for Select Species (2008 – 2012)**

