Equinor Canada Ltd.
Newfoundland and Labrador Offshore Area
2021 Environmental Assessment Update

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1.0 INTRODUCTION

Environmental assessments (EAs) for offshore oil and gas exploration and production activities are scope for multiple activities that are typically carried out over multiple years. The Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB), in its EA decisions, requires that operators, when applying for various authorizations (e.g. Operations Authorization, Geological / Geotechnical / Environmental Program Authorization, Geophysical Program Authorization, Vertical Seismic Profile Authorization) submit information confirming that the proposed activities fall within the scope of a previously approved EA, indicate if the EA predictions remain valid, and provide an update on species at risk (SAR). The information in this document herein provides the information to support the above requirements and notes changes that need to be addressed.

This document provides the necessary update to the existing EA for 2021 project activities by ensuring that the scope of the assessment and mitigations committed to in the EA remain valid.

The purpose of this 2021 EA Update is to:

- Provide an overview of proposed field program activities for the upcoming year
- Update applicable baseline information for key environmental components that has become available since the EA was produced
- Described the engagement and consultation activities undertaken
- Confirm that the nature and scope of the proposed activities are within the scope of the previously approved EA, including the appropriateness and adequate of the associated environmental effects predictions and mitigation measures

This EA Update is specific to the Equinor Canada Ltd. (Equinor) 2021 field program (refer to Section 2.1.1). The scope of the project activities planned in 2021 were assessed under the approved EA noted in Table 1.1.

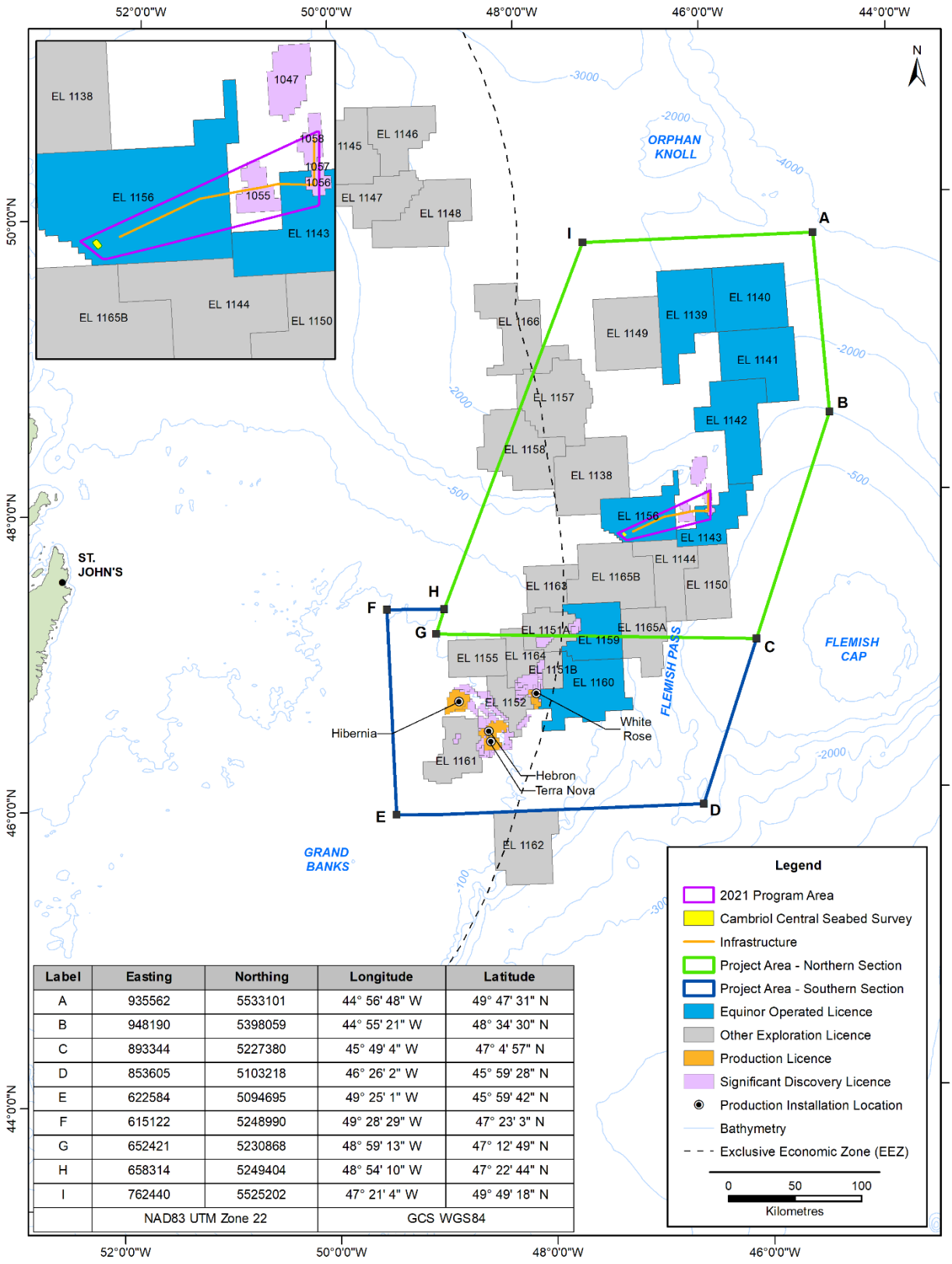
Table 1.1 Approved EA

Document	Temporal Scope	Reference No.
Flemish Pass Exploration Drilling Program Environmental Impact Statement (EIS) (Statoil 2017)	Year-round, 2019 to 2027 inclusive	Canadian Impact Assessment Registry (CIAR) 80129 (Impact Assessment Agency of Canada [IAAC] 2019)
Responses to Information Requirements (Statoil 2018, Statoil and ExxonMobil 2018, Equinor and ExxonMobil 2018a, 2018b)		
EA Decision Statement – Flemish Pass Exploration Drilling Project (Environment and Climate Change Canada [ECCC] 2019)		

2.0 ENVIRONMENTAL ASSESSMENT UPDATE

2.1 Geographic Scope of Approved EA

The Project Area, as defined in the previously approved EA (Statoil 2017) is illustrated in Figure 2-1 and coordinates are provided in Tables 2.1 and 2.2 for the Northern and Southern Sections of the Project Area, respectively. Table 2.3 provides the coordinates for the 2021 Program Area.



Label	Easting	Northing	Longitude	Latitude
A	935562	5533101	44° 56' 48" W	49° 47' 31" N
B	948190	5398059	44° 55' 21" W	48° 34' 30" N
C	893344	5227380	45° 49' 4" W	47° 4' 57" N
D	853605	5103218	46° 26' 2" W	45° 59' 28" N
E	622584	5094695	49° 25' 1" W	45° 59' 42" N
F	615122	5248990	49° 28' 29" W	47° 23' 3" N
G	652421	5230868	48° 59' 13" W	47° 12' 49" N
H	658314	5249404	48° 54' 10" W	47° 22' 44" N
I	762440	5525202	47° 21' 4" W	49° 49' 18" N
	NAD83 UTM Zone 22		GCS WGS84	

Figure 2-1 Project Area and Corner Point Coordinates

Table 2.1 Project Area – Northern Section Coordinates

Project Area Vertices	Coordinates – NAD83 UTM ZONE 22N			
	Longitude (DMS)	Latitude (DMS)	Easting (m)	Northing (m)
A	44° 56' 48" W	49° 47' 31" N	935562	5533101
B	44° 55' 21" W	48° 34' 30" N	948190	5398059
C	45° 49' 04" W	47° 04' 57" N	893344	5227380
G	48° 59' 13" W	47° 12' 49" N	652421	5230868
I	47° 21' 04" W	49° 49' 18" N	762440	5525202

Table 2.2 Project Area – Southern Section Coordinates

Project Area Vertices	Coordinates – NAD83 UTM ZONE 22N			
	Longitude (DMS)	Latitude (DMS)	Easting (m)	Northing (m)
C	45° 49' 04" W	47° 04' 57" N	893344	5227380
D	46° 26' 02" W	45° 59' 28" N	853605	5103218
E	49° 25' 01" W	45° 59' 42" N	622584	5094695
F	49° 28' 29" W	47° 23' 03" N	615122	5248990
G	48° 59' 13" W	47° 12' 49" N	652421	5230868
H	48° 54' 10" W	47° 22' 44" N	658314	5249404

Table 2.3 2021 Program Area Coordinates

Program Area Corners	Longitude	Latitude	Easting U23	Northing U23
Top Left	-47.13991874	47.84865961	339909	5301696
Top Right	-46.18556008	48.09986636	411734	532808o
Bottom Right	-46.20264796	47.9092551	410131	5306914
Bottom Left	-47.04739334	47.79888305	346684	5295977

2.2 Temporal Scope of Approved EA

The activities scoped in the previously approved EA (Statoil 2017) could be carried out year-round from 2019 to the end of 2027.

2.3 Proposed Activities for 2021

For 2021, Equinor is proposing to complete a field program between the months of June and August 2021 with the potential to extend into the fall months if operations require. The expected scope of work includes a seabed survey, comprised of an environmental seabed habitat survey and sediment (geotechnical) investigation.

2.3.1 2021 Seabed Survey

The general objective of the offshore seabed survey is to provide adequate detailed information of the seabed conditions for detail design and planning details of field infrastructure and installation.

The seabed survey is to be completed using autonomous underwater vehicle (AUV). The general objective of the environmental habitat survey is to collect digital images of the benthic habitat for identification of coral, sponges, and sea pens along potential future project areas and well sites. The general objective of the sediment investigation is to provide design parameters for future project development. Typical structures that need geotechnical design support are conductors, templates, and infield infrastructure.

The AUV seabed survey will be performed within the indicated corridors listed in Section 2.3.1.1, the Cambriol Central polygon identified in the inset of Figure 2-1, in water depths ranging from 600 to 1,170 m. Prior to commencing the seabed survey, sea trials will likely be carried out to test the deployment, retrieval, and functionality of the AUV and remotely operated vehicle (ROV). Sea trials typically take between one and two days. The final locations will be determined in consultation with the Fish, Food and Allied Workers-Unifor (FFAW-Unifor) to determine that there is no conflict with ongoing fishing activities in the area of the sea trials. Survey requirements may evolve as program continues in development, requirements will be communicated and implemented in the Survey Plan.

An AUV or ROV contains approximately 20 L of hydraulic fluid in a closed system, and therefore there is no risk of hydraulic fluid loss during normal operations. Chemicals that will be, or have the potential to be, discharged to the marine environment, will be screened in consideration of the Geotechnical Selection Guidelines for the Drilling and Production Activities on Frontier Lands (Chemical Screening Guidelines) (National Energy Board [NEB] et al. 2009).

2.3.1.1 Environmental Habitat Survey

The seabed survey will provide Equinor with detailed bathymetry information and imagery summaries within target areas to support design and planning of future seabed infrastructure. The total survey area covers approximately 71 km²; the survey will be completed using a multibeam echosounder (MBES), sub-bottom profiler, and side-scan sonar, with a target MBES resolution of 0.3 m or less. Target areas to be surveyed include:

- A 1-km-wide corridor from the existing surveyed field center to the Cappahayden field location, a distance of 18.7 km²
- A 1-km-wide corridor from Cappahayden location to the Cambriol field location, Central location, a distance of 25.8 km²
- A 1-km-wide corridor from the Cambriol Central location to Cambriol East location, a distance of 3 km²
- The BdN central area not covered in previous campaigns, a distance of 2.9 km²

- The extended corridor from BdN central area to existing survey at Baccalieu field location, a distance of 7.9 km²
- A 1-km-wide corridor from Baccalieu field location to the Harpoon field location, a distance of 12.35 km²

The water depth for bathymetric data collection ranges from approximately 400 m in the east and 1,170 m in the field centre area. The time to complete the bathymetric survey is estimated to be four days.

2.3.1.2 Wellsite Survey (Coral and Sponge)

Coral and sponge survey(s) will be carried out at potential wellsite(s) using an AUV as the primary method of data collection. Exact location(s) have not been determined at this time but will be completed within the designated Program Area (Figure 2-1). Survey(s) will not be completed outside of licences held by Equinor.

The duration of the survey(s) is expected to be completed within 3 to 15 days, however survey plan will be developed to determine survey patterns as part of the GPA. Equinor will inform Fisheries and Oceans Canada (DFO) and the C-NLOPB, as well as other stakeholders (e.g., fisheries organizations) once the location have been selected (e.g., survey areas, equipment, and duration).

Survey transect length and pattern around well sites will be based on applicable drill cutting dispersion model results. If five or more corals measuring over 30 cm were clustered in 100 m², drilling could not commence, and the proposed borehole location relocated in accordance with C-NLOPB guidelines. Transects around anchor sites should extend at least 50 m from the extent of the anchor pattern. Survey locations, pattern and transect lines will be pre-determined as per accepted survey plan.

A marine biologist with experience in identification of deep water corals and sponges will be on-board during the habitat survey to interpret data and determine if the well site location is within the C-NLOPB requirements for presence of corals, sponges, and seapens. If required, the biologist will advise if further survey (i.e., imagery collection) is needed to identify coral, sponge species or seapen and to complete require measurements/analysis.

An AUV (or ROV if required to support operations) contain approximately 20 L of hydraulic fluid in a closed system, and therefore there is no risk of hydraulic fluid loss during normal operations. Chemicals that will be, or have the potential to be, discharged to the marine environment, will be screened in consideration of the Geotechnical Selection Guidelines for the Drilling and Production Activities on Frontier Lands (Chemical Screening Guidelines) (National Energy Board [NEB] et al. 2009).

As per the decision statement issued under Section 54 of the Canadian Environmental Assessment Act, 2012, conditions 3.6, Equinor will develop a coral and sponge survey plan, to be accepted by the CNLOPB and DFO prior to commencement of the wellsite surveys. This plan will be implemented throughout the scope of the 2021 project surveys by qualified personal. Results of the coral and sponge survey will be provided to the CNLOPB and DFO within required timeframe.

2.3.1.3 Sediment Investigation

A geotechnical program (sediment investigation) will be conducted within an expected 15 to 20 day duration, excluding weather, operational, or technical delays. The geotechnical program would be conducted using coiled seabed cone penetration testing at each wellsite location and along proposed infrastructure areas. Sediment investigation will be conducted within portions of Exploration Licence (EL) 1156, EL 1143, significant discovery licence (SDL) 1055, and SDL 1057. Sample locations will be confirmed prior to commencing the 2021 geotechnical program within the see 2021 Program Area (Figure 2-1).

The soil investigation scope includes an expected 24 investigation sites (four samples at six wellsite's as per wellsite template design, note sample numbers and locations may change as field layout evolve) at a depth of 30 m at each wellsite within the 2021 Program Area, and 10 seabed samples at a depth of 15 m along the proposed infrastructure location.

The cone penetration testing (CPT) unit will have a 3 m by 3 m footprint on seafloor, and the cone itself will have a 15cm2 area. Prior to landing of the CPT unit a pre survey will be completed using AUV to identify hazards and to identify any corals, sponges or seapens. If species are identified by onboard biologist the location of sediment sampling will be relocated to an area deemed suitable and without harmful impact to habitat.

The proposed geotechnical program will be carried out using a vessel capable of completing geotechnical investigations and subsea services and will be completed in areas with water depths ranging from approximately 400 m to 1,170 m. Due to surveying in these water depths, the geotechnical survey vessel will have dynamic positioning and will not use anchors to maintain position. The selected vessel will be specifically designed to deliver geotechnical investigations and subsea services.

Operating fluids for subsea equipment (e.g., hydraulic fluid, di-electric fluid) will be housed internally, with small volumes of hydraulic fluid to be released during operating functions. Chemicals will be screened and accepted for use as per the Chemical Screening Guidelines (NEB et al. 2009).

2.3.2 Mooring Recovery

Operations will involve use of a supply vessel capable of operating a work class ROV to search for, and release from seabed, up to three oceanographic mooring assemblies that were deployed in 2016 and 2018. ROV intervention is required since the acoustic release mechanisms on each mooring are no longer operable. The ROV will contain approximately 20 L of hydraulic fluid in a closed system, and therefore there is no risk of hydraulic fluid loss during normal operations, all chemicals will be screened and acceptable for use as per the Chemical Screening Guidelines (NEB et al. 2009). Water depth at retrieval locations will be approximately 1,200m. Once released, and on the surface, the moorings will be recovered to deck of the vessel using traditional recovery techniques for oceanographic moorings.

2.3.3 Other Offshore Programs

If Equinor executes other offshore programs outside the scope of this EA update, a separate EA Update will be prepared and submitted to the C-NLOPB.

3.0 ENVIRONMENTAL ASPECTS

This section addresses the environmental aspects associated with the activities outlined in Section 2.3.1.

3.1 Commercial Fisheries

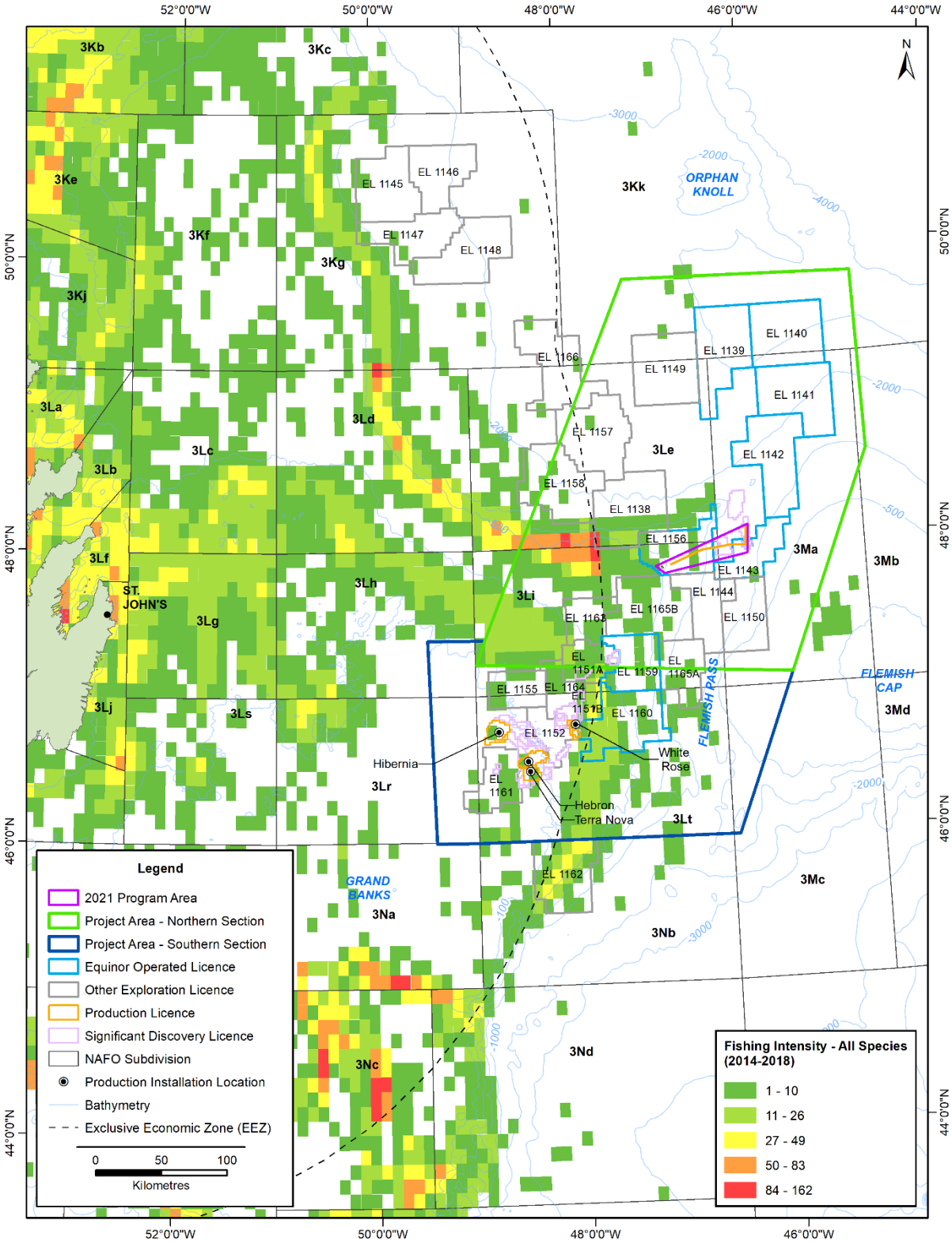
Figure 3-1 illustrates the pattern of fishing activity between 2014 to 2018 for commercial species based on domestic (i.e., Canadian) geospatial catch data as obtained from DFO with respect to Project Area. This pattern of activity is consistent with that documented in the previously approved EA (Statoil 2017).

Within offshore Newfoundland and Labrador (NL) and the Drilling EIS Project Areas, general fishing distribution and activity for most species has remained consistent since the previously approved EA. Quotas for fisheries have changed throughout fishing seasons, resulting in lower harvesting activity for some fisheries. However general fishing trends and locations of harvesting activities for species have remained consistent.

Commercial harvesting for northern shrimp (*Pandalus borealis*) in Shrimp Fishing Area 7 (Northwest Atlantic Fishing Organization [NAFO] Division 3L) was placed under moratoria in 2015 due to declining shrimp stocks and poor recruitment numbers (DFO 2018; 2020a). Commercial harvesting activity for northern shrimp is under moratoria in Division 3L where it occurs within the Canadian 200 nautical mile (NM) Exclusive Economic Zone (EEZ) and in the portion of Division 3L outside the EEZ (and in Division 3M), regulated by NAFO; no directed fishery is planned for 2021 (NAFO 2021). The proposed 2021 activities fall within NAFO Division 3L, as a result there is no directed fishing activity for northern shrimp within the 2021 Program Area (Figure 3-2).

DFO's fishing activity information for commercial species of interest (i.e., Greenland halibut [*Reinhardtius hippoglossoides*] and snow crab [*Chionoecetes opilio]*) are provided in Figures 3-3 and 3-4, respectively. Mapping for additional species of commercial interest (i.e., Atlantic cod [*Gadus morhua*], American plaice [*Hippoglossoides platessoides*], and redfish [*Sebastes* spp.]) are provided in Appendix B.

Snow crab is harvested within the EIS Project Areas but with low activity within Equinor's ELs. Figure 3-4 shows the 2014 to 2018 patterns of Canadian fishing activity for snow crab. The pattern of activity shown for snow crab is showing a decline in fishing activity in the areas / locations associated with proposed 2021 activities as compared to the previously approved EA.



Note: Fishing for northern shrimp in NAFO Division 3L has been under a moratorium since 2015.

Figure 3-1 Pattern of Canadian Fishing Activity (2014 to 2018) for Commercial Species in Relation to the Project Area (Canadian data only)

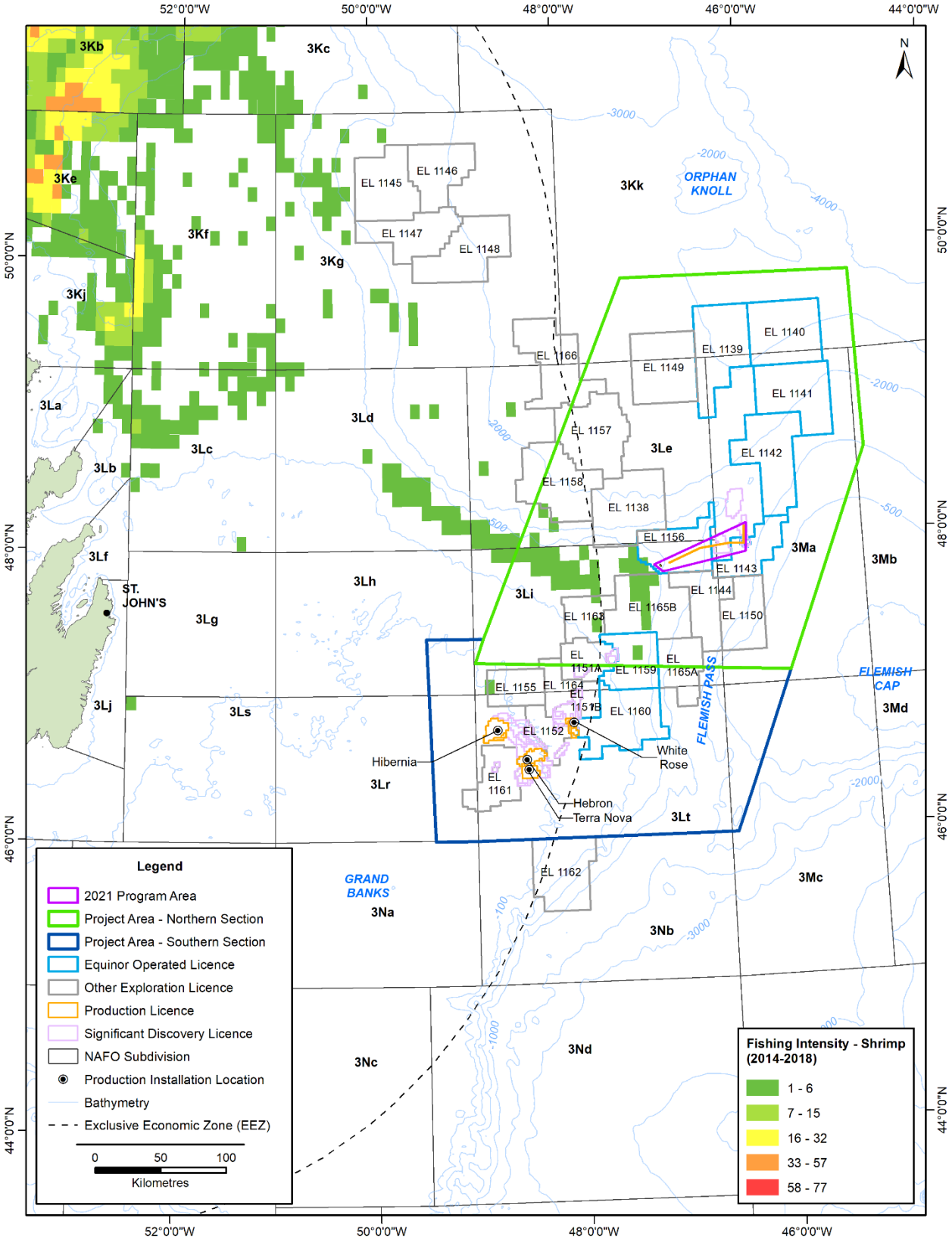


Figure 3-2 Pattern of Northern Shrimp Fishery, 2014 to 2018 (Canadian data only)

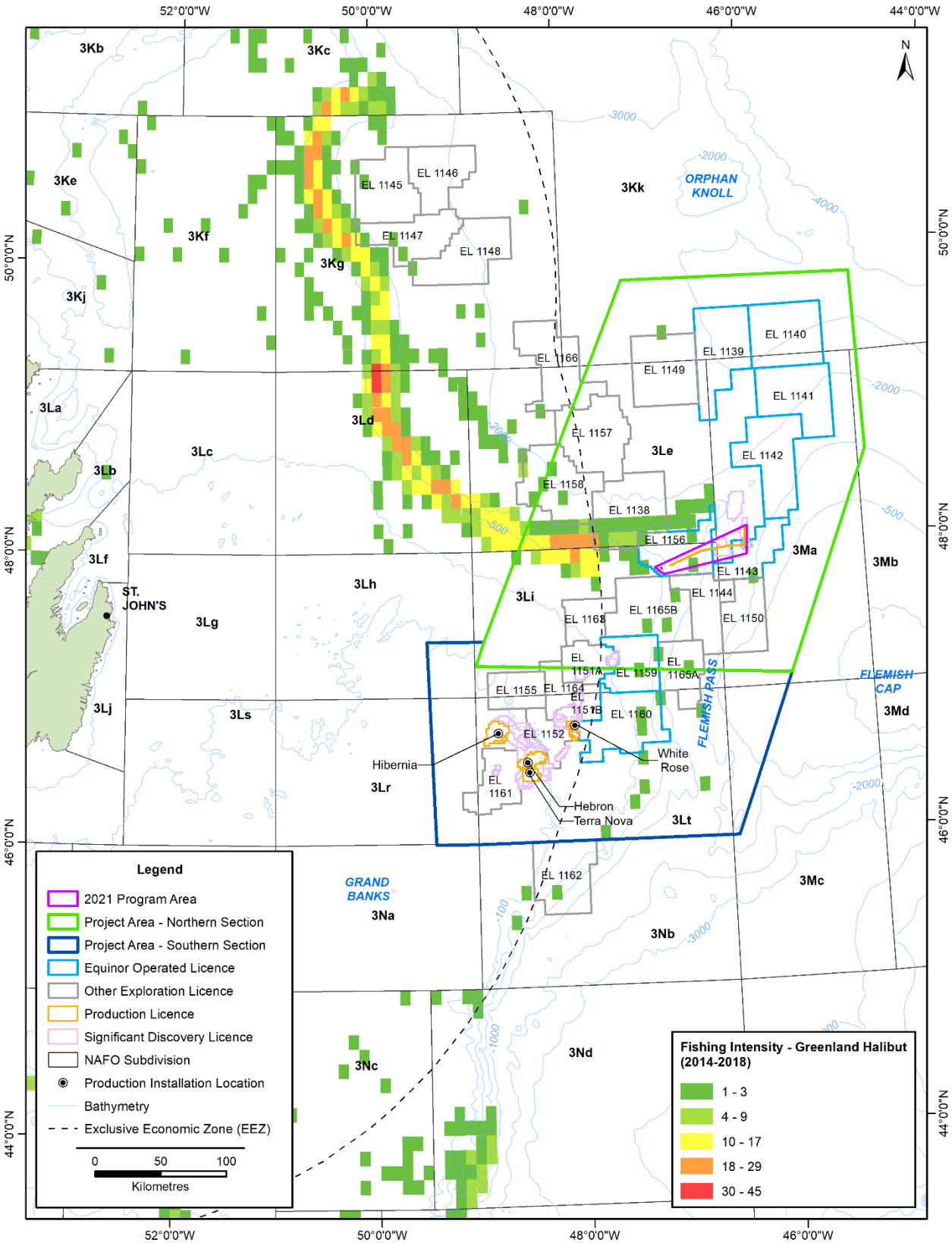


Figure 3-3 Pattern of Greenland Halibut Fishery, 2014 to 2018 (Canadian data only)

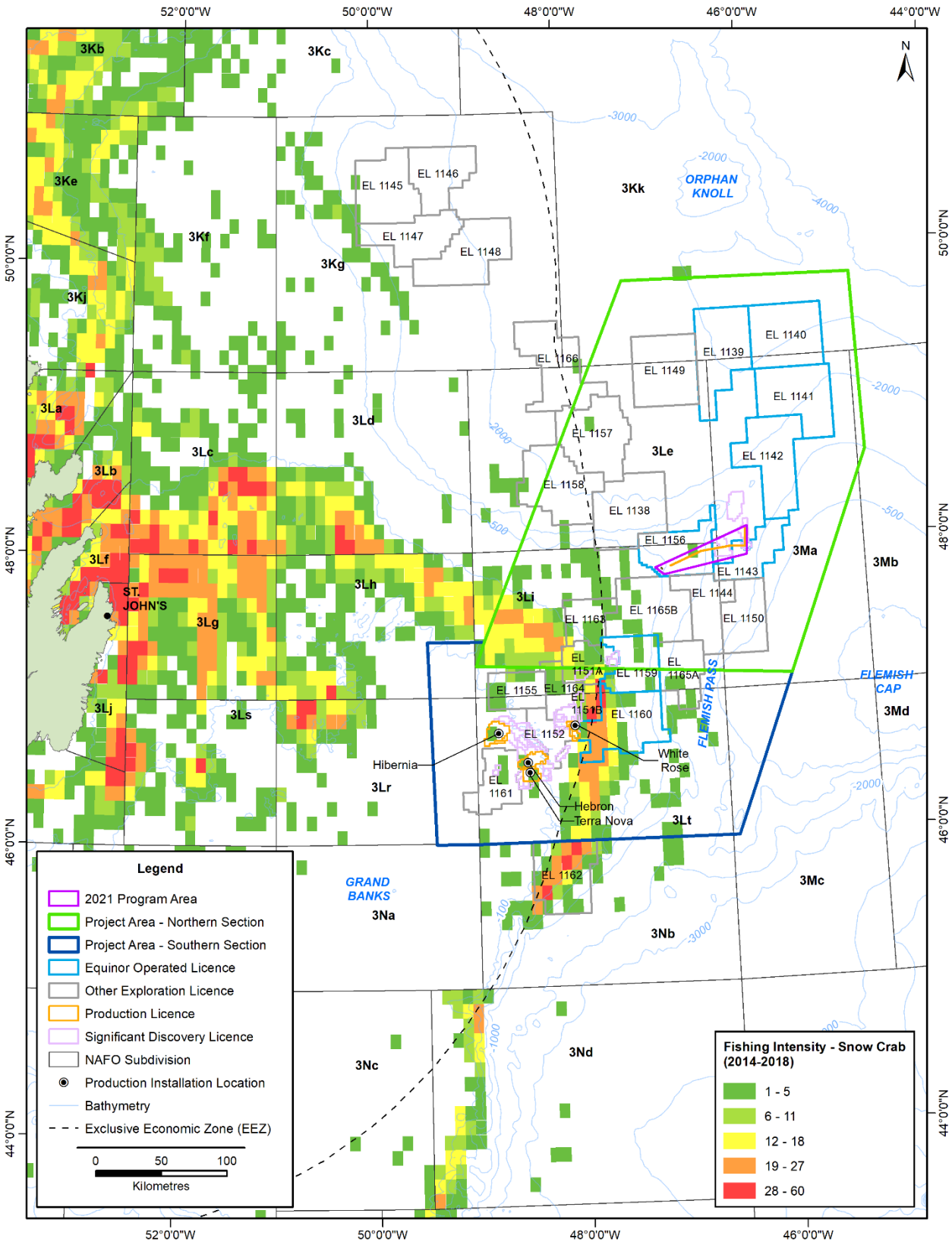


Figure 3-4 Pattern of Snow Crab Fishery, 2014 to 2018 (Canadian data only)

With respect to international fishing, Equinor is aware that redfish will likely be fished by NAFO fishing vessels in the area of the Flemish Pass as part of their activities within the NAFO “footprint”, outside the EEZ.

The fisheries quotas allocated to NAFO vessels for 2021 are described in NAFO/COM Doc. 21-01 (NAFO 2021). This document indicates a total allowable catch (TAC) of 12,225 tonnes (t) for Greenland halibut and 46,648 t for redfish. Of these amounts, 1,834 t of Greenland halibut TAC and 14,252.6 t of redfish TAC have been allocated to Canadian vessels. Domestically, the most recent fisheries management decision for snow crab set the current TAC for the 2021 fishing season in NAFO Divisions 3LNO at 23,648 t (DFO 2021), which is an increase compared to the 2020 season (17,587 t) (DFO 2020b).

For international fishing operations, the data on previous fishing activities cannot be definitively used to predict the extent quota allocations will be taken in the EIS Project Areas. There is no scheduled northern shrimp fishery in NAFO Division 3L for 2021 due to the current moratorium in place.

3.2 Species at Risk

Appendix C outlines SAR as designated by the *Species at Risk Act* (SARA) and Committee on the Status of Endangered Wildlife in Canada (COSEWIC), as well as the Newfoundland and Labrador *Endangered Species Act*, for the Grand Banks and Flemish Pass areas.

A review of the SARA species-specific recovery plans and critical habitat statements, as noted in Appendix C, do not indicate that new or modified mitigation measures are required beyond those already committed to by Equinor for the scope of the operations addressed by the previously approved EA relevant to the activities described in this update. There are four species that have the potential to occur in the Project Areas with identified critical habitat. These are described below.

Since submission of the previously approved EA, COSEWIC has added the beluga whale (*Delphinapterus leucas*; Eastern Hudson Bay population; threatened) and Leach’s storm-petrel (*Oceanodroma leucorhoa*; Atlantic population; threatened) during their annual assessment (COSEWIC 2020). The list of SAR in the EIS Project Areas has been updated from the previously approved EA (Appendix C).

3.2.1 North Atlantic Right Whale

North Atlantic right whale (*Eubalaena glacialis*) has a Critical Habitat Protection Statement pursuant to SARA (DFO 2009); however, there has been no critical habitat designated in the EIS Project Areas and based on known sightings to date, it is an infrequent visitor to the EIS Project Areas (Statoil 2017). The critical habitat designated for this species is in the Grand Manan Basin in the Bay of Fundy, which is outside the EIS Project Areas. The National Oceanic and Atmospheric Administration (NOAA) Northeast Fisheries Science Centre (NEFSC) has an interactive North Atlantic Right Whale Sightings Map and most reported sightings between January 2010 and end January 2020 have been along the United States eastern seaboard, southwest of Nova Scotia and east of New Brunswick (NOAA NEFSC 2020). A few observations occurred off NL and none were reported within the 2021 Project Area (NOAA NEFSC 2020). A few observations were also documented in the Flemish Pass Exploration Drilling EIS (Statoil 2017).

3.2.2 Northern Bottlenose Whale (Scotian Shelf Population)

The northern bottlenose whale (*Hyperoodan ampullatus*) (Scotian Shelf population) has a Critical Habitat Protection Statement pursuant to SARA Government of Canada 2018). However, the identified critical habitat is outside the EIS Project Areas and in the Scotian Shelf area (Statoil 2017). There is some evidence that northern bottlenose whale are also found on the edge of the Grand Banks near the Flemish Cap, although it's unclear whether these individuals are from the Scotian Shelf or Davis Strait-Baffin Bay population (Statoil 2017; DFO 2016, 2017). Seismic activities are not planned for 2021, which reduces potential interactions and effects with this species.

3.2.3 Northern and Spotted Wolfish

The "Recovery Strategy for Northern Wolffish (*Anarhichas denticulatus*) and Spotted Wolffish (*Anarhichas minor*), and Management Plan for Atlantic Wolffish (Anarhichas lupus) in Canada" (DFO 2020c) identifies critical habitat for the northern and spotted wolffish. DFO has issued Critical Habitat Protection Statements for these species (Government of Canada 2020a, 2020b). The critical habitat identified falls within the EIS Project Areas but does not overlap with the 2021 Program Area.

3.3 Special Areas

As illustrated in Figure 3-5, there are a number of special areas within the EIS Project Areas, including NAFO Fishery Closure Areas, a marine refuge, Vulnerable Marine Ecosystems (VMEs), and Ecologically or Biologically Significant Areas (EBSAs).

As illustrated in Figure 3-5, 2021 Program Area overlaps with the United Nations Convention of Biological Diversity EBSA – Slopes of the Flemish Cap and Grand Bank, which has a total area of approximately 87,817 km². This special area contains most of the aggregations of indicator species for VMEs in the NAFO Regulatory Area and includes NAFO closures to protect corals and sponges and a component of Greenland halibut fishery grounds in international waters. A high diversity of marine taxa, including Threatened and listed species are found within this area. A small VME of sea pens is also within the 2021 Program Area.

Given the location of special areas associated with sea pens, nature of drill cuttings deposition and the mitigation measures noted above, the conclusions of the previously approved EA and amendments remain valid.

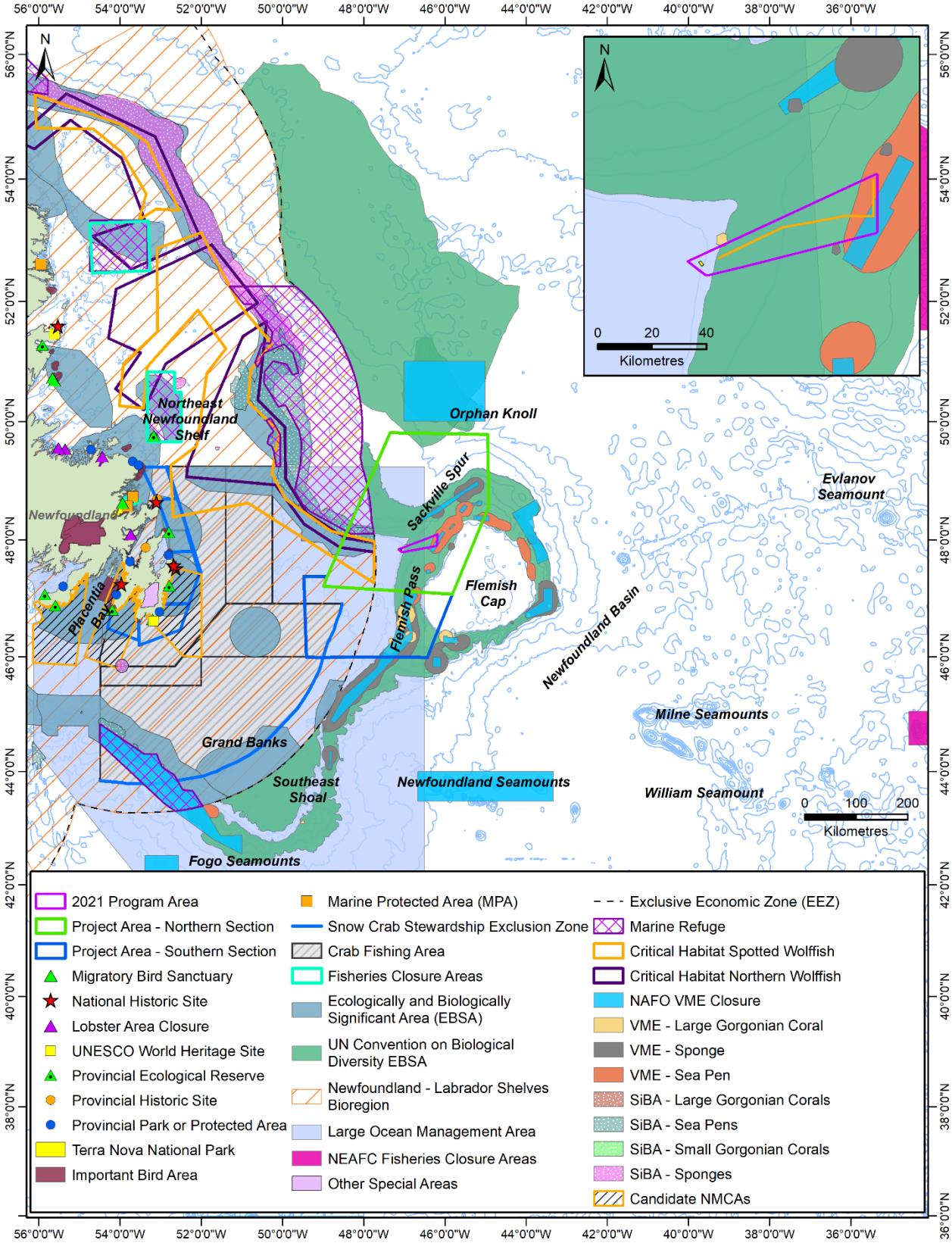


Figure 3-5 Locations of Special Areas within and near the Project Areas and 2021 Program Area

3.4 Mitigation Measures

Equinor re-commits to implementing the mitigation measures described in the approved EA for the proposed activities to be carried in 2021. Mitigation measures to be implemented for the proposed 2021 activities, as outlined in the previously approved EA and amendments, include the following:

- Communication with DFO regarding research vessel surveys
- Fishing gear and vessel compensation program
- Establish a SPOC for consultation with fishers and Indigenous groups
- Marine mammal and seabird observations, including protocols for observing and reporting
- Handling and release of stranded seabirds including protocols for these activities
- Adherence to the C-NLOPB's Chemical Screening Guidelines (NEB et al. 2009)
- Adherence to the C-NLOPB's Offshore Waste Treatment Guidelines (NEB et al. 2010)
- Communication with DND regarding planned offshore military activity
- Communication with Indigenous groups as per decision statement conditions including an Indigenous Fisheries Communication Plan
- Communicate according to approved Fishers Communication Plan (Equinor 2020b)
- Communication with One Ocean and NAFO (through DFO)
- SPOC for reporting potential fishing gear interactions during 2021 activities
- Issuance of NAVWARNs and notification to stakeholders
- Notice to shipping is not required as there are no shipping lanes in the well locations for the 2021 activities
- As per Equinor Marine Operations Plan and Environmental Protection and Compliance Monitoring Plan supply and other support vessels will maintain 300 m from Cape St. Francis and Witless Bay Islands Important Bird and Biodiversity Areas, unless there is an emergency
- Marine vessels will reduce speed to a maximum of 13 kilometres per hour [7 knots] when a marine mammal or sea turtle is observed or reported within 400 m of a supply vessel, expect if not feasible for safety reasons

3.5 Engagement

3.5.1 Regulatory Agencies

3.5.1.1 C-NLOPB – EA Commitments and Conditions

Commitments and conditions applicable to the 2021 activities are outlined in the Flemish Pass EIS (e.g., refer to table 17.2 in Statoil 2017), responses to select Information Requirements (Equinor and ExxonMobil 2018a, 2018b; Statoil 2018; Statoil and ExxonMobil 2018), and conditions outlined in the Decision Statement (Environment and Climate Change Canada [ECCC] 2019).

Equinor will continue to meet with the C-NLOPB on a regular basis review the Decision Statement conditions (ECCC 2019) and associated compliance plans, commencement / completion dates, and verification details. The frequency of meetings will be determined with the C-NLOPB; however, it is anticipated that monthly meetings will occur initially and will then increase to biweekly for the duration of the 2021 program.

3.5.1.2 C-NLOPB – Follow-up and Monitoring Programs

Under the EA Decision Statement (ECCC 2019), Equinor is required to execute a follow-up and monitoring program. Compliance associated with this program will be provided to the C-NLOPB and associated regulatory agencies within established timelines and reporting format.

3.5.1.3 DFO – Research Vessel Surveys

DFO undertakes annual fisheries research surveys in the NL offshore area. Table 3.1 provides a tentative schedule for DFO research surveys for 2021 (L. Mello, pers. comm. 2021). Equinor will coordinate with DFO prior to commencement of proposed 2021 activities described in Section 2.1.1 to determine if there are spatial or temporal conflicts.

Table 3.1 Proposed 2021 DFO Research Vessel Surveys

Vessel	Activity	NAFO Divisions	Planned Start	Planned End
RV Needler	NL Spring Survey	To be determined	March 28, 2021	June 15, 2021
	NL Fall Survey	To be determined	September 22, 2021	December 14, 2021
RV Teleost	NL Spring Survey	To be determined	April 7, 2021	April 20, 2021
	NL Summer AZMP	To be determined	March 30, 2020	April 21, 2020
	Calibrations	To be determined	June 29, 2021	July 29, 2021
	NL Fall Survey	To be determined	October 6, 2021	December 17, 2021

There is also an annual Industry-DFO Collaborative Post Season Trap Survey for snow crab, which is conducted using commercial and modified snow crab traps at established trap stations. The survey typically starts in late August or early September after the commercial snow crab season has ended. Appendix D outlines the 2021 locations of the post-season survey, and there is no overlap with proposed 2021 drilling activities. Note that locations inside the Laurentian Channel, 30 Coral, and Northeastern Shelf Marine Refuges (outside the 2021 Program Area) will be moved to approximately 800 to 1,000 m outside the nearest boundary.

3.5.1.4 DND – Military Exercises

Equinor SSU Manager will contact the Department of National Defence to determine if there are planned military activities scheduled in 2021 in the vicinity of the proposed 2021 activities.

3.5.2 Fishers

Information regarding the proposed 2021 activities will be provided to the following fisheries organizations:

- Association of Seafood Producers (ASP)
- Atlantic Groundfish Council (AGC)
- FFAW-Unifor
- Ocean Choice International (OCI)

There is also ongoing liaison with the fishing industry through the regular meetings of the One Ocean Industry Board that includes representatives from the various operating oil and gas operators and the fishing sector.

Equinor recognizes that other countries fish outside Canada's 200 NM EEZ. To reduce potential conflict, Equinor will inform Canada's representative, DFO, on NAFO regarding 2021 activities and will also communicate Navigational Warnings (NAVWARNs) to the NAFO Secretariat via DFO.

Equinor recognizes that communication and coordination between oil and gas industry activities and fishing interests are critical to avoid or reduce interference with either industries offshore operators. Key factors to achieve this from Equinor's perspective include:

- Implementing protocols outlined in the 2020 Fisheries Communication Plan (Equinor 2020)
- Ongoing communication with commercial fish harvesters in the Project Area including AGC, ASP, FFAW-Unifor and OCI
- Ongoing communication with One Ocean and NAFO (through DFO)
- If nearshore sea trials are required, determining final location in consultation with FFAW-Unifor to prevent conflicts with ongoing fishing activities in sea trial areas
- There are no designated shipping lanes within the designated 2021 activities
- Establishing a single point of contact (SPOC) for reporting potential fishing gear interactions during 2021 activities
- Implementing a compensation program for damages resulting from program activities, and in consideration of the Compensation Guidelines Respecting Damages Relating to Offshore Petroleum Activities (C-NLOPB and Canada-Nova Scotia Offshore Petroleum Board [CNSOPB] 2017)
- Issuing NAVWARNs

Fisheries groups have been provided the expect scope of work for the planned 2021 project activity via electronic mail. Follow up conversations were conducted between FFAW and Equinor to discuss and conclude that a fisheries liaison officer will not be required during the implementation of the 2021 project work scope. It was noted as well that this fishing of snow crab has increased in volume, previous location determined acceptable for near shore trials will not be available for use. It was agreed upon to work with FFAW prior to nearshore operations to determine an acceptable location.

3.5.3 Indigenous Groups

All indigenous groups have been provided notice via electronic mail notification of the intended scope of work associated with the 2021 project activities. Further consultation will be provided upon request. A SPOC will be established to provide consistent and accurate information.

If material changes are made that could have result in adverse impacts on the environment, Equinor will consult with Indigenous groups at least 60 days prior to initiating the change. Potential environmental effects, proposed mitigation measures, follow-up requirements, as well as results of consultation feedback and views will be tracked using the engagement log.

4.0 CONCLUDING STATEMENT

The proposed 2021 project activities to be executed by Equinor has been reviewed and assessed to be within the scope of previously approved EA, specifically:

- The scope and nature of proposed activities and addressed under the previously approved EA and amendments have not changed
- The nature and extent of the fishing activities being undertaken in the Project Area have been validated and have not changed such that proposed activities pose potential effects not previously assessed
- The nature of the SAR in the Project Area have been validated; no new species has been added to Schedule 1 of SARA, two new species have been added to COSEWIC listings (beluga whale (Eastern Hudson Bay population) and Leach's storm-petrel (Atlantic population)
- As noted previously in this update, no critical habitats for these species defined pursuant to the SARA occur in the Project Area
- The mitigation measures defined and committed to in the previously approved EA are still valid and will continue to be implemented
- The commitments and conditions associated with the previously approved EA will be implemented
- Equinor continues to consult with regulatory agencies, fishers and Indigenous groups directly affected by the proposed activities under the previously approved EA

The environmental effects predicted in previously approved EA remain valid. Equinor reaffirms its commitment to implement the mitigation measures, commitments and conditions associated with the EA.

5.0 ADDITIONAL INFORMATION

5.1 Abbreviations

AGC	Atlantic Groundfish Council
ASP	Association of Seafood Producers
AUV	Autonomous Underwater Vehicle
CEAR	Canadian Environmental Assessment Registry
CIAR	Canadian Impact Assessment Registry (formerly the Canadian Environmental Assessment Registry)
C-NLOPB	Canada-Newfoundland and Labrador Offshore Petroleum Board
CNSOPB	Canada Nova Scotia Offshore Petroleum Board
COSEWIC	Committee on the Status of Wildlife in Canada
DFO	Fisheries and Oceans Canada
EA	Environmental Assessment
EBSA	Ecologically or Biologically Significant Area
ECCC	Environment and Climate Change Canada
EEZ	Exclusive Economic Zone
EIS	Environmental Impact Statement

EL	Exploration Licence
Equinor	Equinor Canada Ltd.
ExxonMobil	ExxonMobil Canada Ltd.
FFAW	Fish, Food and Allied Workers Union
IAAC	Impact Assessment Agency of Canada (formerly the Canadian Environmental Assessment Agency)
km	Kilometre
km²	Square Kilometre
MBES	Multibeam Echosounder
NAFO	North Atlantic Fisheries Organization
NAVWARN	Navigational Warning
NEB	National Energy Board
NEFSC	Northeast Fisheries Science Centre
NL	Newfoundland and Labrador
NM	Nautical Mile
NOAA	National Oceanic and Atmospheric Administration
OCI	Ocean Choice International
ROV	Remotely Operated Vehicle
SAR	Species at Risk
SARA	*Species at Risk Act*
SDL	Significant Discovery Licence
SPOC	Single Point of Contact
Statoil	Statoil Canada Ltd.
t	tonne
TAC	Total Allowable Catch
VME	Vulnerable Marine Ecosystem

5.2 Changes from Previous Version

N/A

5.3 Updates Required in Next Version

N/A

5.4 References

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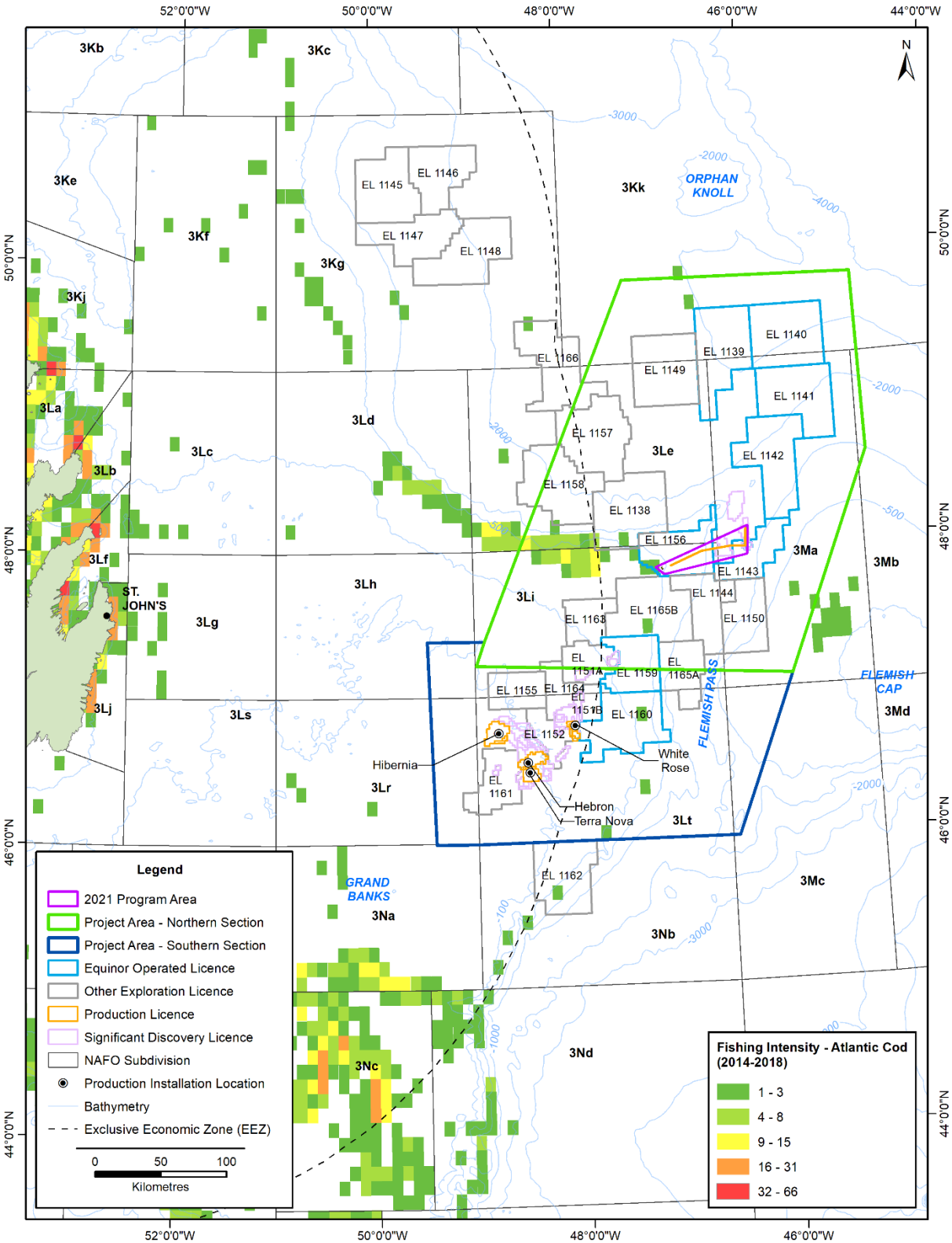
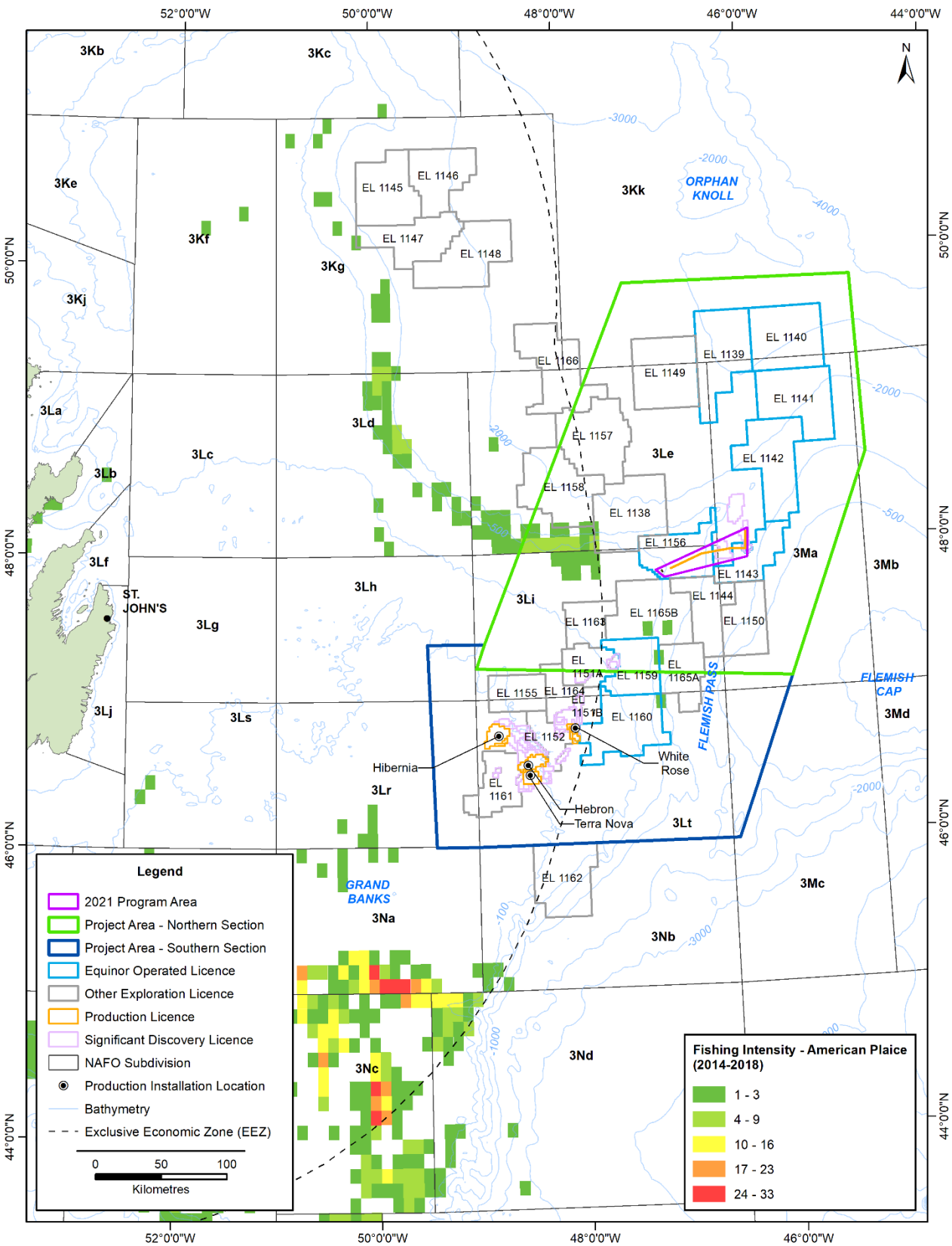
APPENDIX A – DISTRIBUTION LIST

Copy No.	Company	Position	Location
	Equinor	SSU Manager	Equinor's Office, St. John's
	Equinor	VP Operations	Equinor's Office, St. John's
	Equinor	HSE & Regulatory Advisor	Equinor's Office, St. John's
	C-NLOPB	N/A	St John's Office
	FFAW	Industry Liaison	St John's Office
	AGC	Executive Director	Halifax Office
	ASP	Executive Director	St John's Office
	OCI	Director, Fleet Operations	St. John's Office
	One Ocean	Industry Board – Managing Director	St John's Office
	Fugro	Project Lead	St. Johns Office

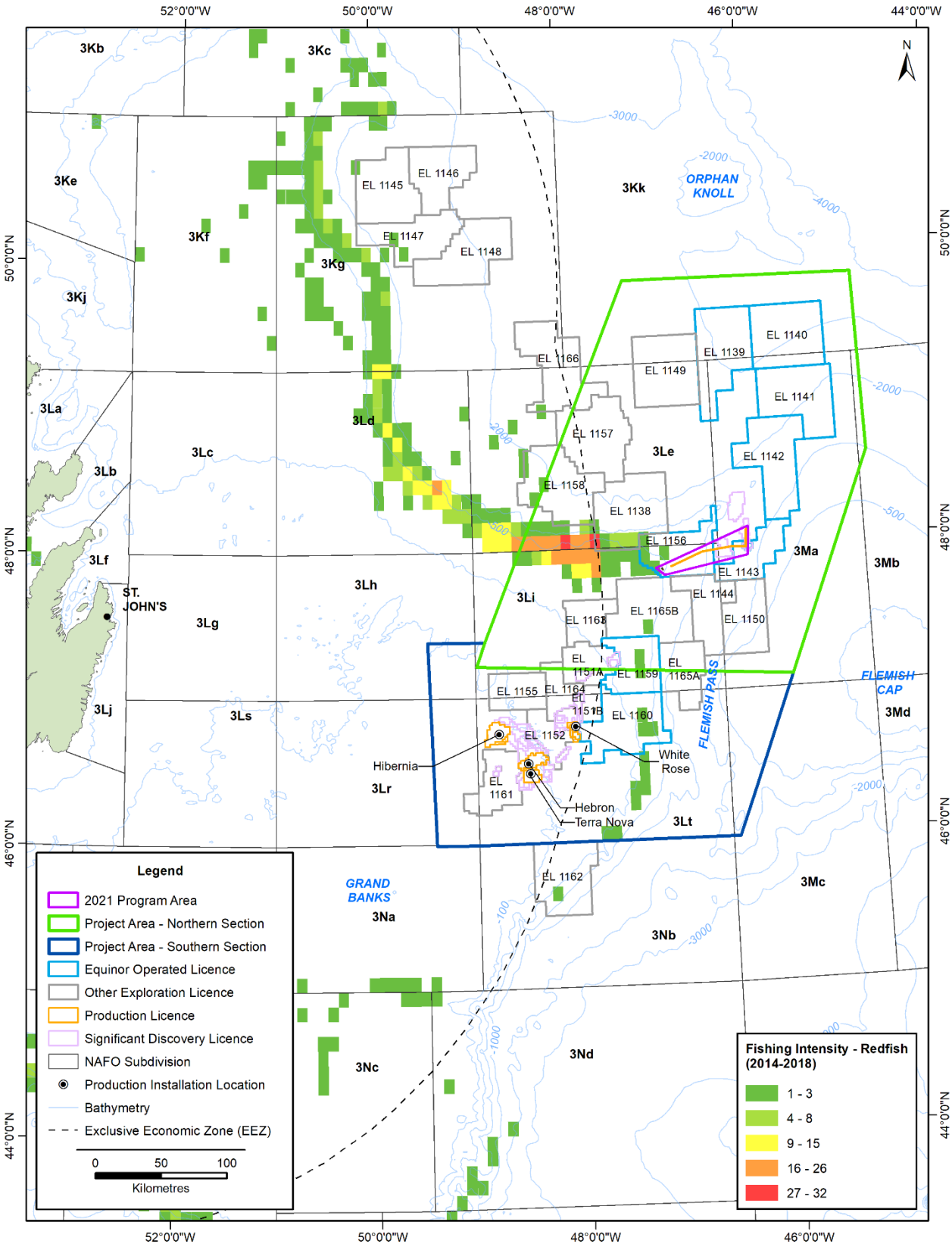
APPENDIX B – FISHING ACTIVITY MAPS FOR COD, AMERICAN PLAICE, AND REDFISH



Pattern of Atlantic Cod Fishery, 2014 to 2018 (Canadian data only)



Pattern of American Plaice Fishery, 2014 to 2018 (Canadian data only)



Pattern of Redfish Fishery, 2014 to 2018 (Canadian data only)

APPENDIX C –SARA-LISTED AND COSEWIC-ASSESSED SPECIES IN THE PROJECT AREA

Family	Species		Federal		Provincial
	Common Name	Scientific Name	SARA Status (Schedule 1)[1]	COSEWIC Designation	Designation
Marine Fish					
Anarhichadidae	Atlantic wolffish	*Anarhichas lupus*	Special Concern[2]	Special Concern	Not listed
Anarhichadidae	Northern wolffish	*Anarhichas denticulatus*	Threatened[2]	Threatened	Not listed
Anarhichadidae	Spotted wolffish	*Anarhichas minor*	Threatened[2]	Threatened	Not listed
Anguillidae	American eel	*Anguilla rostrata*	Not listed	Threatened	Vulnerable
Cetorhinidae	Basking shark	*Cetorhinus maximus*	Not listed	Special Concern	Not listed
Cyclopteridae	Lumpfish	*Cyclopterus lumpus*	Not listed	Threatened	Not listed
Gadidae	Atlantic cod (Newfoundland and Labrador population)	*Gadus morhua*	Not listed	Endangered	Not listed
Gadidae	Cusk	*Brosme brosme*	Not listed	Endangered	Not listed
Lamnidae	Porbeagle	*Lamna nasus*	Not listed	Endangered	Not listed
Lamnidae	Shortfin mako	*Isurus oxyrinchus*	Not listed	Endangered	Not listed
Lamnidae	White shark	*Carcharodon carcharias*	Endangered	Endangered	Not listed
Macrouridae	Roundnose grenadier	*Coryphaenoides rupestris*	Not listed	Endangered	Not listed
Phycidae	White hake (Atlantic and Northern Gulf of St. Lawrence population)	*Urophycis tenuis*	Not listed	Threatened	Not listed
Pleuronectidae	American plaice (Newfoundland and Labrador population)	*Hippoglossoides platessoides*	Not listed	Threatened	Not listed
Rajidae	Smooth skate (Funk Island Deep population)	*Malacoraja senta*	Not listed	Endangered	Not listed
Rajidae	Thorny skate	*Amblyraja radiata*	Not listed	Special Concern	Not listed
Rajidae	Winter skate (Eastern Scotian Shelf and Newfoundland population)	*Leucoraja ocellata*	Not listed	Endangered	Not listed
Salmonidae	Atlantic salmon (South Newfoundland population)	*Salmo salar*	Not listed	Threatened	Not listed

Family	Species		Federal		Provincial
	Common Name	Scientific Name	SARA Status (Schedule 1)[1]	COSEWIC Designation	Designation
Salmonidae	Atlantic salmon (Outer Bay of Fundy population)	*Salmo salar*	Not listed	Endangered	Not listed
Scombridae	Atlantic bluefin tuna	*Thunnus thynnus*	Not listed	Endangered	Not listed
Scorpaenidae	Acadian redfish (Atlantic population)	*Sebastes fasciatus*	Not listed	Threatened	Not listed
Scorpaenidae	Deepwater redfish (Northern population)	*Sebastes mentella*	Not listed	Endangered	Not listed
Squalidae	Spiny dogfish	*Squalus acanthias*	Not listed	Special Concern	Not listed
Marine Birds					
Laridae	Ivory Gull	*Pagophila eburnea*	Endangered[3]	Endangered	Endangered
Scolopacidae	Red-necked Phalarope	*Phalaropus lobatus*	Special Concern	Special Concern	Not listed
Hydrobatidae	Leach's Storm-petrel (Atlantic population)	*Oceanodroma leucorhoa*	Not listed	Threatened	Not listed
Marine Mammals and Sea Turtles					
Balaenopteridae	Blue Whale (Atlantic population)	*Balaenoptera musculus*	Endangered[4,5]	Endangered	Not listed
Balaenopteridae	Fin Whale (Atlantic population)	*Balaenoptera physalus*	Special Concern[6]	Special Concern	Not listed
Balaenidae	North Atlantic Right Whale	*Eubalaena glacialis*	Endangered[7,8]	Endangered	Not listed
Ziphiidae	Northern Bottlenose Whale (Scotian Shelf population)	*Hyperoodon ampullatus*	Endangered[9,10]	Endangered	Not listed
Ziphiidae	Northern Bottlenose Whale (Davis Strait Baffin Bay, Labrador Sea population)	*Hyperoodon ampullatus*	Not listed	Special Concern	Not listed
Ziphiidae	Sowerby's Beaked Whale	*Mesoplodon bidens*	Special Concern[11]	Special Concern	Not listed
Delphinidae	Killer Whale (Northwest Atlantic / Eastern Arctic population)	*Orcinus orca*	Not listed	Special Concern	Not listed
Phocoenidae	Harbour Porpoise (Northwest Atlantic population)	*Phocoena phocoena*	Not listed	Special Concern	Not listed
Monodontidae	Beluga Whale (Eastern Hudson Bay population)	*Delphinapterus leucas*	Not listed	Threatened	Not listed

Family	Species		Federal		Provincial
	Common Name	Scientific Name	SARA Status (Schedule 1)[1]	COSEWIC Designation	Designation
Dermochelyidae	Leatherback Sea Turtle (Atlantic population)	*Dermochelys coriacea*	Endangered[12,13]	Endangered	Not listed
Cheloniidae	Loggerhead Sea Turtle	*Caretta caretta*	Endangered[14]	Endangered	Not listed

1. Blue shading means that Recovery Strategies, Action Plans and/or Management Plans have been issued for the species.

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APPENDIX D – POST SEASON CRAB SURVEY LOCATIONS