

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

7.0 EXISTING HUMAN ENVIRONMENT

The Project Area and larger Eastern Newfoundland offshore area are known to be used for a variety of human activities in the marine environment, and to contain a number of components associated with these activities (e.g., fishing gear, cables). The following sections provide an overview of the existing human environment of the region, including the activities and features that occur and may interact with the Project.

In terms of an overall study area for this chapter, although a primary focus of the description that follows is on the Project Area and LSAs for the various socioeconomic VCs involved (see Chapters 12 and 13) - as it is within these areas that most Project-environmental interactions and effects will occur - the description of the existing human environment also covers the larger RSA (see Section 4.3), and areas beyond for regional context, where relevant based on the nature and coverage of the various sources of environmental baseline information identified, accessed and used.

7.1 Commercial Fisheries

Fisheries are an important component of the socioeconomic environment of Newfoundland and Labrador and other parts of Canada, including for the various communities and regions along the eastern coastline of Newfoundland. The following sections give an overview of marine fisheries and related activities, with a focus on commercial fisheries, as well as describing aquaculture, and Indigenous and recreational fishing activity in or near the region.

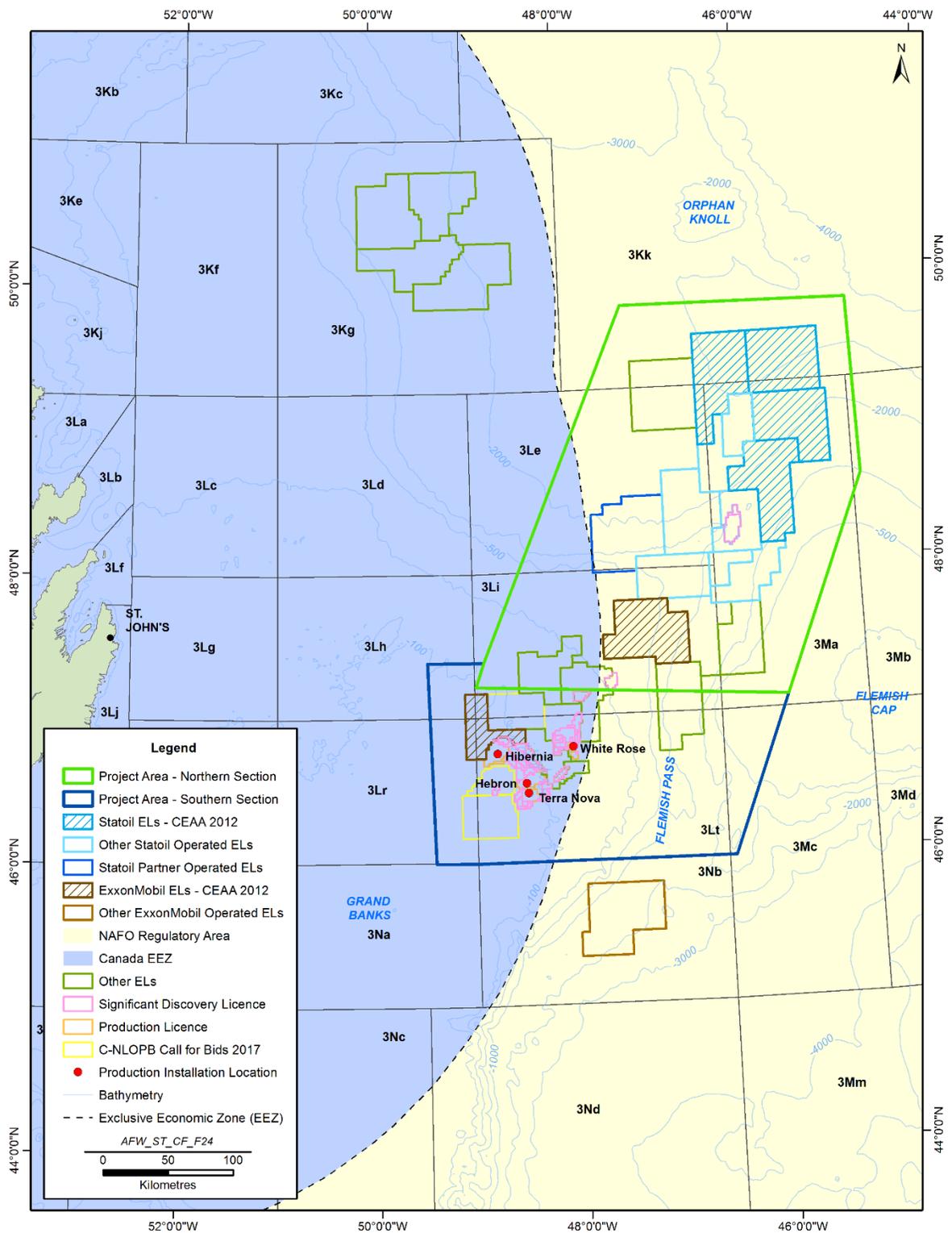
7.1.1 Administrative Areas and Key Information Sources

Two regulatory jurisdictions related to commercial fisheries are present offshore Newfoundland and Labrador. The Government of Canada maintains jurisdiction over commercial fish species within Canada's 200 nautical mile Exclusive Economic Zone (EEZ) and all sedentary species that occur across the extent of Canada's continental shelf. The majority of species fished offshore Newfoundland and Labrador are managed through an associated licensing and quota system managed by the Department of Fisheries and Oceans (DFO). Licenses and quotas for domestically managed species are set by DFO for individual species management areas (e.g., snow crab and northern shrimp), and North Atlantic Fisheries Organization (NAFO) Divisions / Subdivisions and Unit Areas (Figure 7-1).

Beyond the EEZ, NAFO manages several fish stocks and other marine environmental features (such as corals and sponges), and uses its own species management system to allocate quotas and licenses. Multiple member nations take part in commercial harvesting within the NAFO Regulatory Area (NRA) (Figure 7-1), which is approximately 2,707,895 km², comprises approximately 40 percent of the overall NAFO Convention Area, and spans areas adjacent to the EEZs of Canada, the United States, France (St. Pierre et Miquelon), and Greenland (Amec 2014). The NRA is the portion of the NAFO Convention Area that falls outside of areas where coastal states exercise jurisdiction.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017



Source: NAFO (2013)

Figure 7-1 Fisheries Management Areas Offshore Newfoundland and Labrador

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Within the NRA, there exists an area under NAFO jurisdiction known as the fishing footprint (see Section 7.1.5). This footprint is an area that has been identified by NAFO as having high or consistent amounts of bottom fishing activity, that may have effects on vulnerable marine ecosystems. The NAFO fishing footprint is discussed in detail in Section 7.1.5. This footprint is approximately 120,048 km² in size, with approximately 5.4 percent being closed to bottom fishing activities (Amec 2014; NAFO 2016b, 2016c). The NAFO fishing footprint overlaps with the Project Area, and ELs 1135, 1141 and 1142.

The Northwest Atlantic Ocean is divided into a series of NAFO Divisions / Subdivisions for the purposes of managing fisheries resources, which are further subdivided into associated NAFO Unit Areas. NAFO Divisions are divided into Numbers from 0-6 (e.g., Division 3), the specific NAFO Subdivision is indicated by a letter after the Division number (e.g., 3L), and the Unit Area is identified by a lowercase letter (e.g., 3Li). The Project Area and RSA overlap with several of these Unit Areas, and the combination of data from key areas surrounding the Project Area is used to describe these regions. The key NAFO Division and Unit Areas associated with the Project Area and RSA are shown in Table 7.1.

Table 7.1 Key NAFO Divisions and Unit Areas that Overlap the Project Area and RSA

EA Study Area	NAFO Divisions	NAFO Unit Areas
Project Area - Southern Section	3LM	3Lh; 3Li; 3Lr; 3Lt; 3Ma; 3Mb
Project Area - Northern Section	3KLM	3Kk; 3Le; 3Li; 3Ma; 3Mb
RSA	3KLMNO	Unit Areas within Subdivisions 3KLMNO

Because domestic commercial fish harvesting data are reported on a NAFO Division and Unit Area basis, they do not correspond precisely with the defined Project Area for this EIS. To be inclusive, commercial fishing activities are therefore described in the following sections for NAFO Unit Areas that are within or that overlap in part with the Project Area and larger surrounding RSA.

The characterization of existing domestic commercial fishing activities (namely, those which result in fish being landed in Canada) is derived primarily from DFO's commercial landings datasets for the period between 2011 and 2015, the most recent year for such data are currently available. These data include information on domestic fish catches by harvested weight (kg) and value (Canadian dollars), along with other associated variables such as species and gear type. While fish landings from the original datasets are reported in kilograms, the text and associated graphs and tables that follow describe fish quantities in tonnes (t). The landed value of commercial fisheries in this dataset is described as the catch "at the wharf" when it is sold, and therefore does not represent indirect or induced economic benefits, including any value-added processes for fish products. To indicate activity and absolute or relative abundance, harvested weight is considered to be the most useful measure for year-to-year comparison. Value of the harvest may vary annually with species, negotiated prices, changes in exchange rates and fluctuating market conditions.

Along with commercial fish landings data, georeferenced datasets provided by DFO Statistical Services Department have been used to map domestic commercial fish harvesting locations in offshore Eastern Newfoundland. These datasets give a general indication of fishing activity for

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

defined geographic areas, which in the case of offshore Newfoundland, comprises a series of six by four nautical mile grid squares that cover offshore Newfoundland and Labrador, including areas overlapped by the Project Area and RSA. These geo-referenced data are used to plot past harvesting locations, and include several associated variables as available through the dataset, including species, gear type, and month.

Catch data for foreign vessels that are landed outside the EEZ are available and were obtained from NAFO. The STATLANT 21A and 21B datasets provided by NAFO, presented in tonnes and with relevant data up to 2015, were used to characterize relevant commercial fishing activity outside the EEZ. These datasets capture NAFO-managed harvests by Canadian and non-Canadian NAFO states within the NRA.

While the above datasets from DFO and NAFO are the primary sources that are used to describe commercial fishing activity in the vicinity of the Project, various additional sources supplemented them. These include DFO species management plans, DFO and NAFO quota and stock status reports, and other research reports and studies, such as those of the Canadian Science Advisory Secretariat (CSAS) of DFO.

7.1.2 Historic Overview of Domestic Commercial Fisheries

Commercial fishing off the coast of Newfoundland and Labrador has been an important economic activity since the island was settled by Europeans, and is one of the main factors that led to people living in the region year-round. For many decades before 1992, the primary harvesting activities taking place in the offshore areas of Newfoundland, primarily on the Grand Banks, was for groundfish species. This typically saw of large offshore stern otter trawlers harvesting several species, including American plaice, Atlantic cod, redfish, and halibut. With the collapse of groundfish stocks in the early 1990s, a moratorium was declared and directed commercial fisheries for groundfish dropped drastically. This moratorium is still in effect other than for some small directed commercial groundfish fisheries offshore. With the reduction of groundfish fisheries in offshore Newfoundland and Labrador, shellfish species have taken on a larger economic role in the area since 1992. Snow crab and northern shrimp are now the primary species harvested by fishers in offshore Newfoundland and Labrador by both weight and value, although some groundfish and pelagic fish harvesting are still conducted as indicated below.

Quantities of fish landed in offshore Newfoundland and Labrador are shown in Figures 7-2 and 7-3 for the period between 1990 and 2015. These graphs illustrate the changes that have taken place in commercial fishing practices offshore Newfoundland and Labrador. Groundfish landings are compared against landings of other species (e.g., pelagic, shellfish, marine plants) to illustrate the effects of the collapse of ground fisheries and associated fisheries closures over recent years. Groundfish landings are also compared with shrimp and snow crab to show the trends in both these fisheries after the moratoria on groundfish species.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

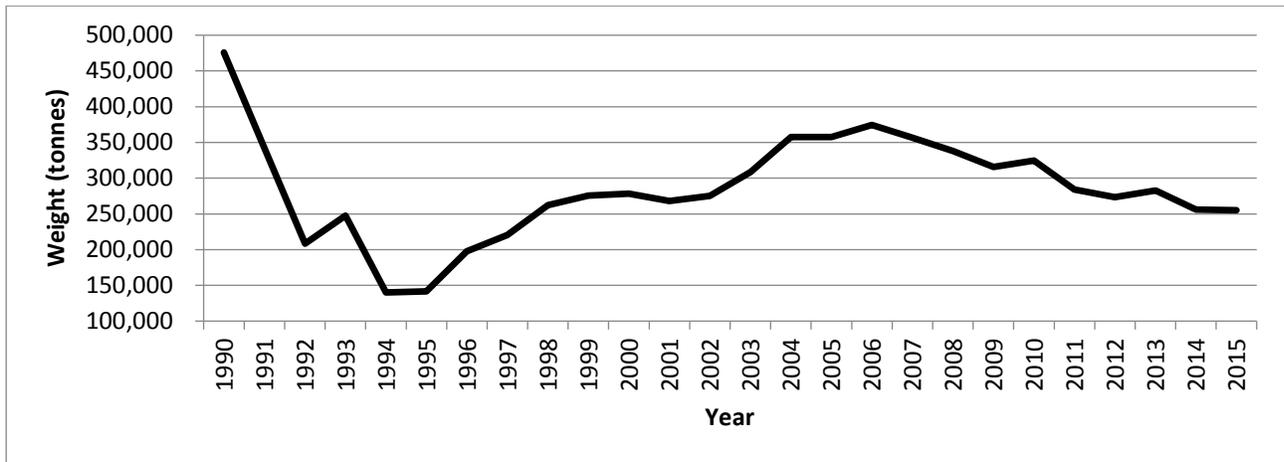


Figure 7-2 Annual Commercial Fish Landings, Newfoundland Region, All Species 1990 to 2015

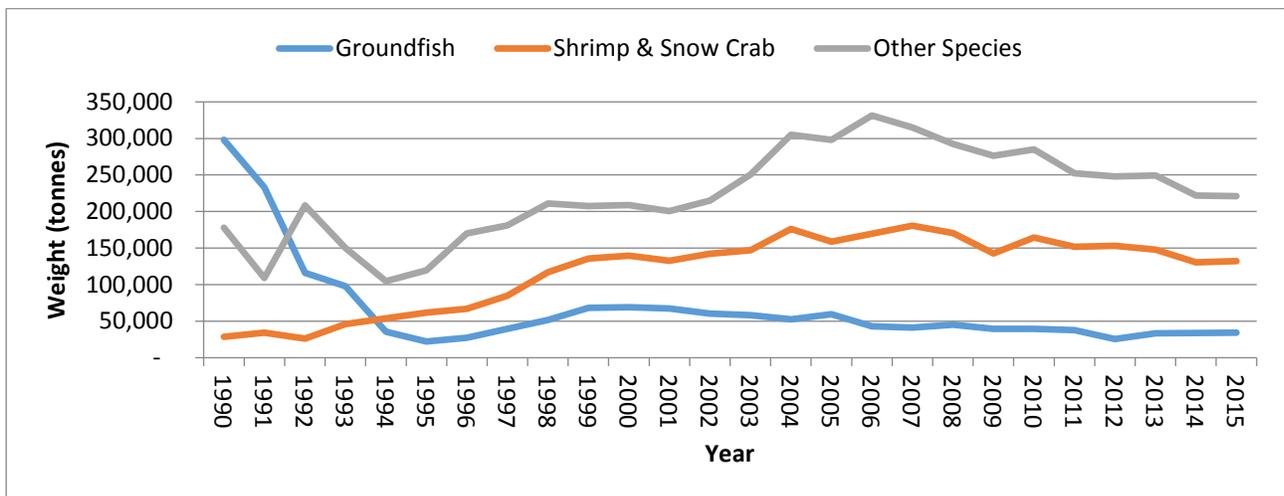


Figure 7-3 Annual Commercial Fish Landings, Newfoundland Region, Groundfish, Shrimp and Snow Crab, and Other Species, 1990 to 2015

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

7.1.3 Current Domestic Fisheries

As summarized in Section 7.1.1, fisheries are managed by DFO through a license and quota system. A summary of current fishery license information is presented in Table 7.2 for the main NAFO Divisions that are relevant to the Project Area and the RSA.

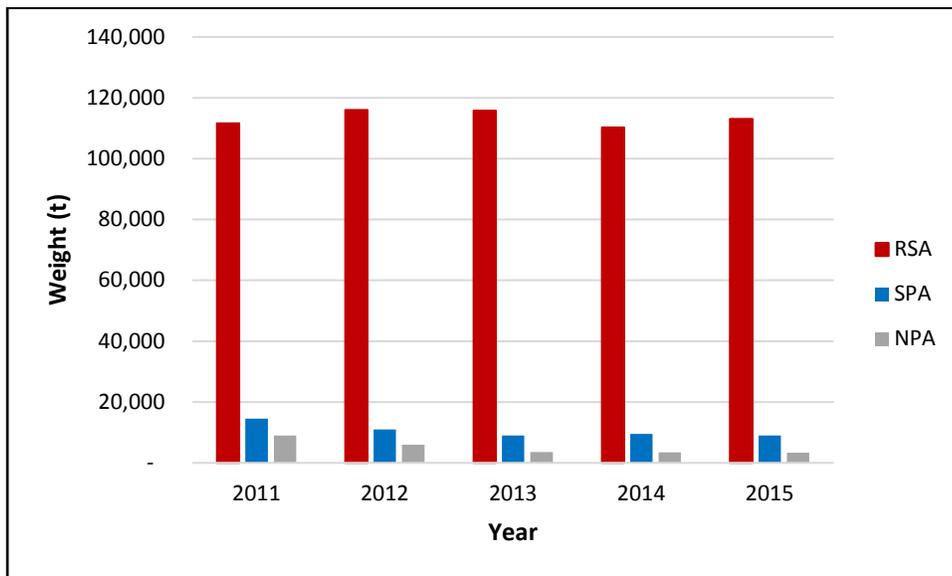
Table 7.2 Commercial Fisheries License Information

NAFO Unit Area	Species	Number of Licenses	Number of Indigenous Commercial-Communal Licenses
3M	Redfish	1	0
3NO	Witch flounder	2	0
3LNO	Yellowtail flounder	4	0
2 + 3K	Greenland halibut	11	0
3LN	Redfish	4	0
3O	Redfish	3	0
3LMNO	Greenland halibut	9	1
3NOPs	Halibut	9	1
Shrimp Fishing Area (SFA) 6	Shrimp	7	1
Note: Information regarding offshore enterprises and licences for snow crab were not publicly available from DFO due to confidentiality reasons.			
Source: J. Toms, pers comm. (2016)			

The total weight and value of commercial fish landings between 2011 and 2015 are shown in Figures 7-4 and 7-5. Total landings within the RSA NAFO Divisions identified earlier changed from 111,636 tonnes (t) in 2011, to approximately 113,113 t in 2015. Landed value was the highest in 2015 at \$403,938,851, compared to \$298,289,650 in 2011. Average annual domestic fish harvests (by quantity and value) for 2011 to 2015, by species, is shown in Table 7.3.

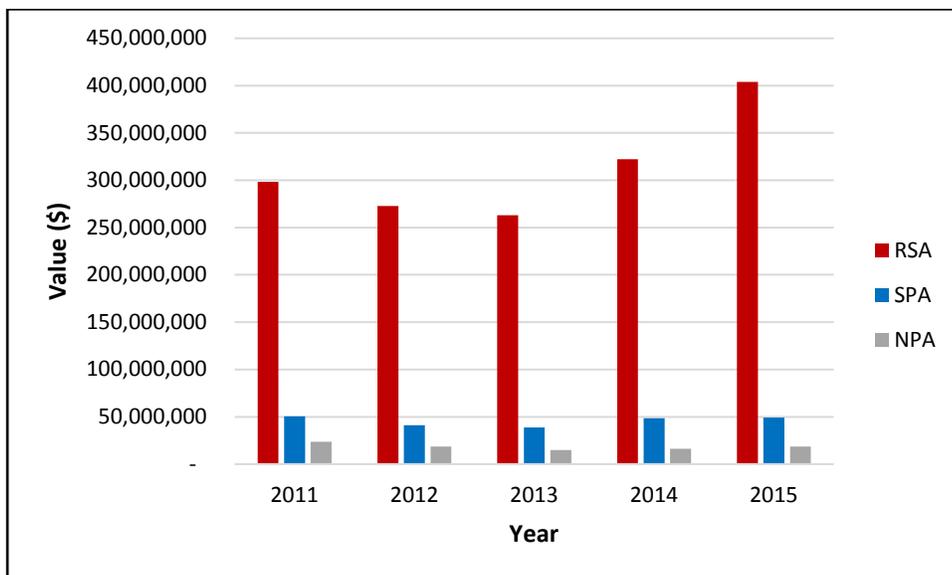
Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017



Source: DFO (2016a)

Figure 7-4 Quantity of Harvest by Year, Project Area and RSA, All Species, 2011 to 2015



Source: DFO (2016a)

Figure 7-5 Value of Harvest, Project Area and RSA, All Species, 2011 to 2015

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.3 Offshore Harvest by Species, 2011 to 2015 - Annual Quantity and Value

Species	Weight (t)	% of Weight	Value (\$)	% of Value
Crab, Queen/Snow	207,056	36.5	992,456,709	63.9
Shrimp, Pandalus Borealis	204,207	36	466,385,580	30.0
Capelin	111,498	19.7	26,806,941	1.7
Cod, Atlantic	18,123	3.2	20,318,259	1.3
Herring, Atlantic	11,763	2.1	3,173,408	0.2
Turbot/Greenland Halibut	9,565	1.7	31,740,304	2.0
Sea Urchins	1,698	0.3	2,998,920	0.2
Seal Fat	877	0.2	442,347	0.03
Lobster	793	0.1	7,562,788	0.5
Crab, Atlantic Rock	267	0.05	217,930	0.01
Winter Flounder	252	0.04	137,114	0.01
Whelk	118	0.02	203,031	0.01
Roe, Lumpfish	102	0.02	809,722	0.1
Shrimp, Pandalus Montagui	99	0.02	280,348	0.02
Grenadier, Rough-Head	99	0.02	28,329	0.002
Total	566,518		1,553,561,731	
Note:				
- Some weight and value landings data for species has been suppressed by DFO for confidentiality reasons				
- Numbers may not add to 100 due to rounding				
Source: DFO (2016a)				

The information presented in Table 7.3 is based on the data that have been provided by DFO as publicly available. However, some catch and landings data are suppressed by DFO for confidentiality purposes, to protect the identity of commercial fish harvesting enterprises that may be operating in the area. As a result, some weight and value information is not available to be included in the EIS. While the weight and value data for some species catches may be suppressed, the species catch is still recorded, which can give further indication of the main species that are harvested in a certain area. Tables 7.4 shows the species that had the highest recorded catches throughout 2011 to 2015 for the RSA.

The key domestic commercial fisheries within the RSA are northern shrimp and snow crab. Other fisheries include groundfish such as halibut and flounder, deep-water bivalves such as clams and scallops, and pelagic fisheries.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.4 Species with the Highest Recorded Number of Domestic Landings Within the RSA, 2011 to 2015

Species	2011	2012	2013	2014	2015	Total
Cod, Atlantic	131	130	207	177	193	838
Crab, Queen/Snow	134	123	121	115	134	627
Shrimp, Pandalus Borealis	108	108	120	95	65	496
Turbot/Greenland Halibut	72	64	135	114	106	491
Halibut – Atlantic	66	66	108	96	103	439
American Plaice	59	41	125	99	81	405
Redfish	44	42	115	80	72	353
Skate	26	31	114	95	81	347
Capelin	24	27	91	74	62	278
Greysole/Witch	55	35	50	35	48	223
Yellowtail Flounder	32	21	56	57	51	217
Herring, Atlantic	41	44	54	33	35	207
Hake, White	20	22	31	40	37	150
Grenadier, Rough-Head	18	28	38	29	29	142
Haddock	31	12	30	28	27	128

Note: Landing is the actual recorded catch of a certain species, regardless of the weight or value of the catch

Source: DFO 2016a

7.1.3.1 Project Area - Northern Section

As noted in Figures 7-4 and 7-5, total weight of landings in the Project Area - Northern Section increased from 2,772 t in 2011 to 3,394 t in 2015. Within the same timeframe, the value of landings increased from \$13,140,355 to \$18,483,487. The offshore harvest by species within the Project Area - Northern Section is shown in Table 7.5, while the species with the highest recorded landings are presented in Table 7.6.

Table 7.5 Offshore Harvest by Species within the Project Area - Northern Section, 2011 to 2015, Annual Quantity and Value

Species	Weight (t)	% of Weight	Value (\$)	% of Value
Crab, Queen/Snow	15,048	59.6	72,413,995	79.0
Shrimp, Pandalus Borealis	9,718	38.5	17,795,224	19.4
Turbot/Greenland Halibut	467	1.9	1,478,566	1.6
Total	25,233		91,687,784	

Note: Some weight and value landings data for species have been suppressed by DFO for confidentiality reasons

Source: DFO 2016a

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.6 Species with the Highest Recorded Number of Landings within the Project Area - Northern Section, 2011 to 2015

Species	2011	2012	2013	2014	2015	Total
Turbot/Greenland Halibut	11	6	28	21	14	80
Redfish	9	7	26	18	14	74
Shrimp, Pandalus Borealis	22	18	17	10		67
Cod, Atlantic	6	2	16	15	10	49
Halibut – Atlantic	6	5	12	8	14	45
American Plaice	7	1	14	14	4	40
Greysole/Witch	9	4	11	6	5	35
Crab, Queen/Snow	6	4	9	6	9	34
Grenadier, Rough-Head	3	4	13	8	5	33
Skate			12	11	5	28
Capelin	1		8	9		18
Groundfish, Unspecified			6			6
Herring, Atlantic		1	2		1	4
Shark, Unspecified				1	1	2
Hake, White				1	1	2
Note: Landing is the actual recorded catch of a certain species, regardless of the weight or value of the catch						
Source: DFO 2016a						

Based on the landed value data, the primary commercial fisheries occurring within the Project Area-Northern Section are snow crab, northern shrimp, and Greenland halibut (turbot). Redfish, Atlantic cod, and American plaice. Other groundfish comprise the remainder of the commercial fishing activity taking place within this area.

7.1.3.2 Project Area - Southern Section

Within the Project Area - Southern Section, the total weight in landings changed from 14,522 t in 2011, to 9,012 t in 2015 (see Figures 7-4 and 7-5). In that same period, the value of landings decreased from \$50,506,400 to \$49,073,453. Offshore harvest by species, and species with the highest recorded number of catches within the Project Area - Southern Section, are shown in Table 7.7 and 7.8, respectively.

The main species harvested within the Project Area - Southern Section are snow crab and northern shrimp. Various groundfish species are also harvested within the area.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.7 Offshore Harvest by Species Within the Project Area - Southern Section, 2011 to 2015, Annual Quantity and Value

Species	Weight (t)	% of Weight	Value (\$)	% of Value
Crab, Queen/Snow	43,890	82.7	211,050,259	92.6
Shrimp, Pandalus Borealis	9,176	17.3	16,776,289	7.4
Total	53,066		227,826,548	
Note: Some weight and value landings data for species have been suppressed by DFO for confidentiality reasons				
Source: DFO 2016a				

Table 7.8 Species with the Highest Recorded Number of Landings within the Project Area - Southern Section, 2011 to 2015

Species	2011	2012	2013	2014	2015	Total
Crab, Queen/Snow	19	17	16	17	19	88
Shrimp, Pandalus Borealis	14	14	11	6		45
Turbot/Greenland Halibut	2	2	17	12	6	39
Redfish	8	1	12	9	7	37
Cod, Atlantic	7	1	14	8	6	36
American Plaice	8	1	14	9	3	35
Skate	1		9	9	4	23
Greysole/Witch	7		5	4	3	19
Halibut – Atlantic	3		3	4	7	17
Grenadier, Rough-Head	1	1	6	6	2	16
Capelin			6	5		11
Yellowtail Flounder	2	1	3	3	1	10
Haddock	3	1	2	1		7
Groundfish, Unspecified			6			6
Hake, White				1	1	2
Source: DFO 2016a						

7.1.3.3 Potential Vessel and Aircraft Traffic Routes

Along the potential vessel and aircraft traffic routes, fish harvesting occurs for various marine species. Because the transit routes go between the onshore supply base and the drilling installation where drilling activity is occurring, vessels must move through various geographic environments (coastal to offshore waters). These areas hold different types of fishing activity. While the offshore area is primarily made up of fisheries for snow crab, northern, shrimp, with some groundfish species harvest, pelagic fisheries such as those for capelin and herring occur primarily in the inshore to mid-shore areas. Fisheries for other shellfish species, such as urchins, scallops, clams, and whelks, occur primarily in the coastal waters of Newfoundland and Labrador, but also extend into offshore areas in

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

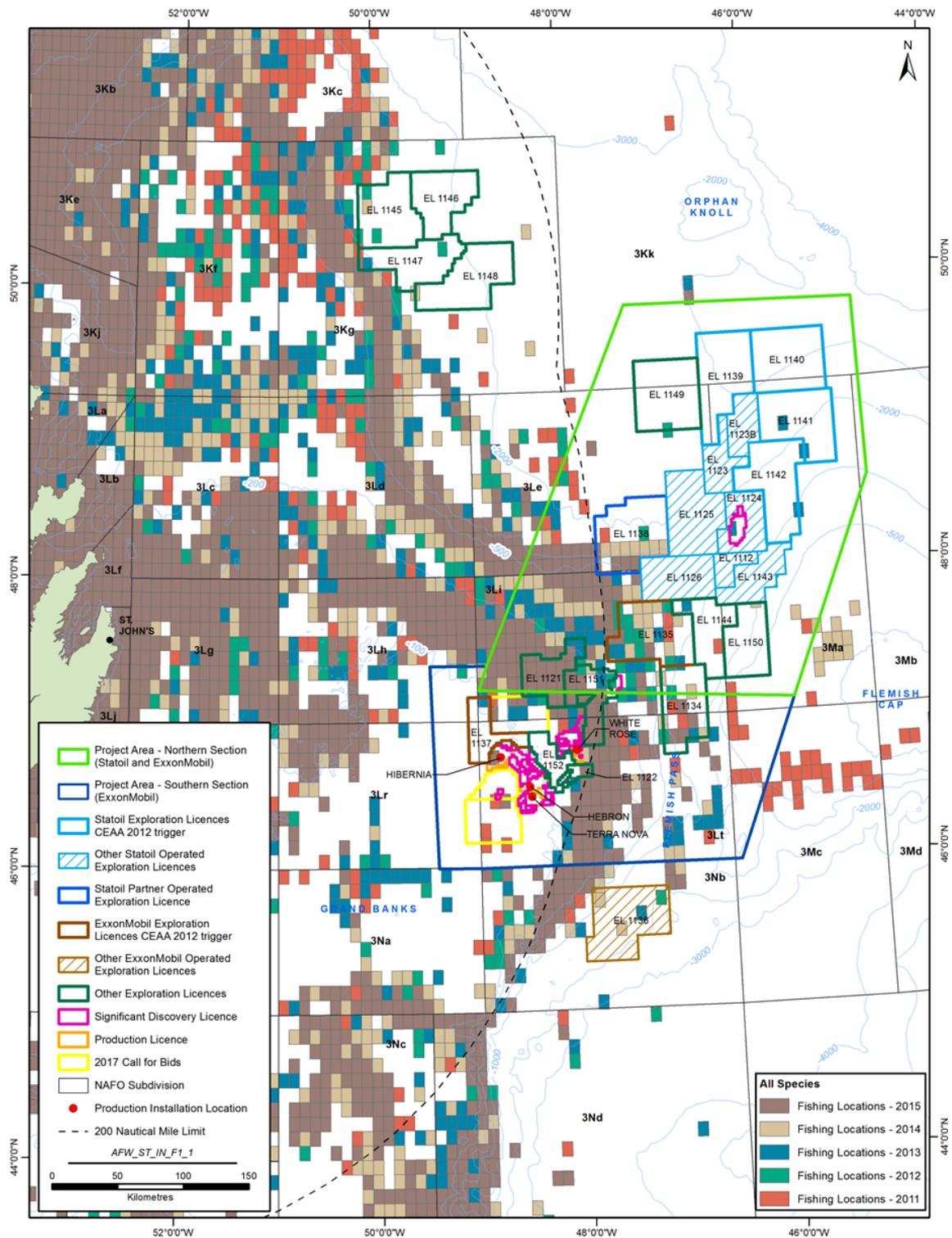
lesser intensities. Because helicopter traffic will be occurring above the marine environment, there is no anticipated interactions between helicopter transit routes and commercial fishing activity.

7.1.4 Location and Timing of Harvest

Geo-referenced domestic harvesting locations for all species from 2011 to 2015 for offshore Newfoundland and Labrador in the vicinity of the Project Area and RSA are shown in Figure 7-6. Each colour depicted in Figure 7-6 represents commercial fisheries harvesting locations for that year, with the most recent activity (2015 data) as the top layer. While the top colour represents the most recent year, there can be fishing activity happening in certain areas over multiple years, as is the case for much of the offshore area. Fishing effort in the region is concentrated primarily along the shelf edge and slope of the Grand Banks at depths between 200 and 500 m. There is a reduced level of harvesting activity within the Flemish Pass itself, including the northern portion of the Pass where ELs 1139, 1140, 1141, and 1142 are located. Based on historic records and other sources, there is a high level of consistency from year to year associated with landing locations for commercial fish harvests in this region.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017



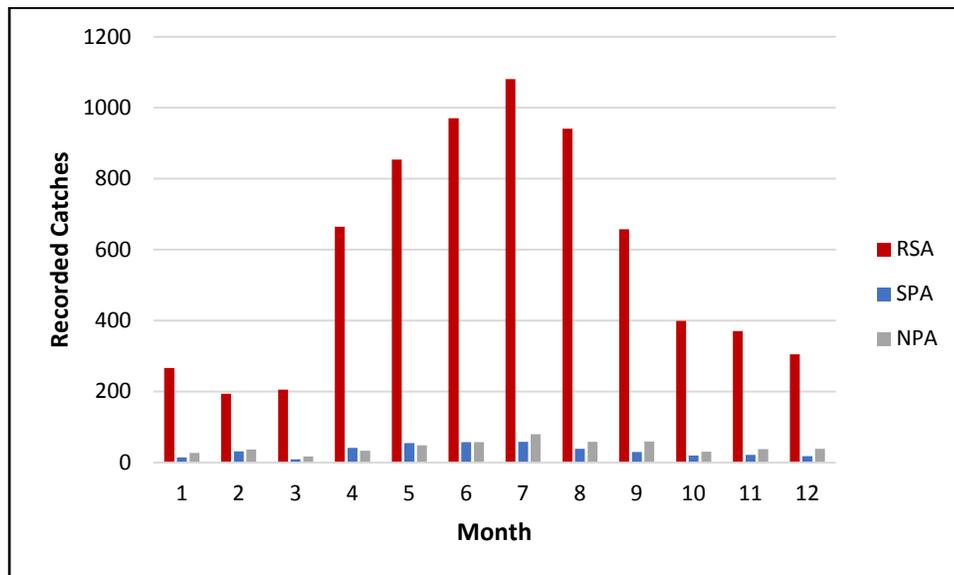
Source: DFO (2016a)

Figure 7-6 Domestic (Canadian) Harvesting Locations, All Species, All Months, 2011 - 2015

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Figure 7-7 shows the seasonal trends in the offshore fisheries and when the highest level of fishing effort takes place offshore Newfoundland and Labrador, based on the number of recorded catches during a given month. As illustrated, the majority of commercial fishing activity takes place between April and August. This coincides with the beginning of certain seasonal fisheries such as snow crab (April). Recorded fishing locations from 2011 – 2015 are shown in Figure 7-8 (by quarter) to further illustrate this trend.

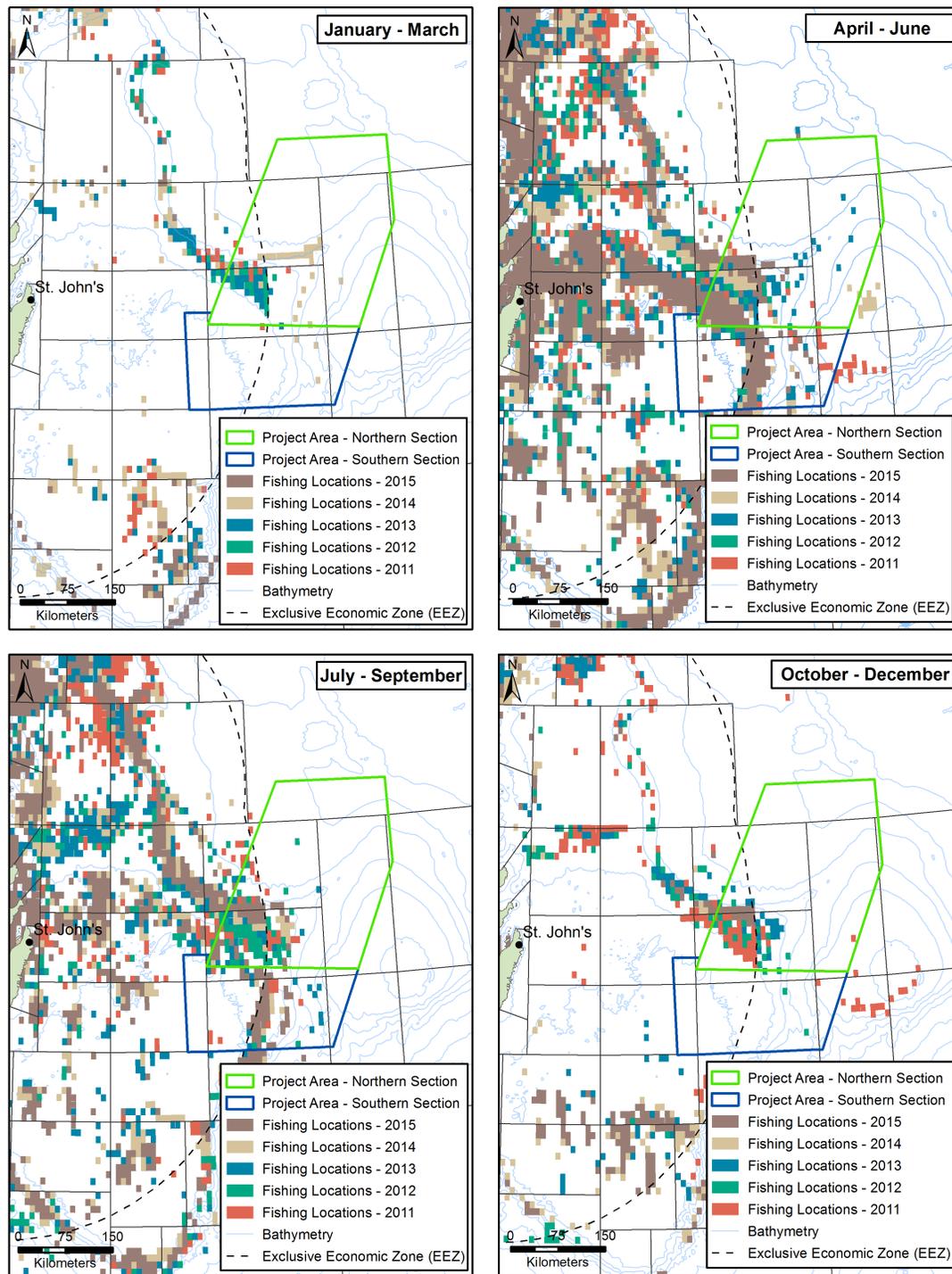


Source: DFO (2016a)

Figure 7-7 Seasonality of Domestic Offshore Fishing Activity, All Species, 2011 to 2015

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017



Source: DFO (2016a)

Figure 7-8 Domestic (Canadian) Harvesting Locations, All Species, Quarterly, 2011 to 2015

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

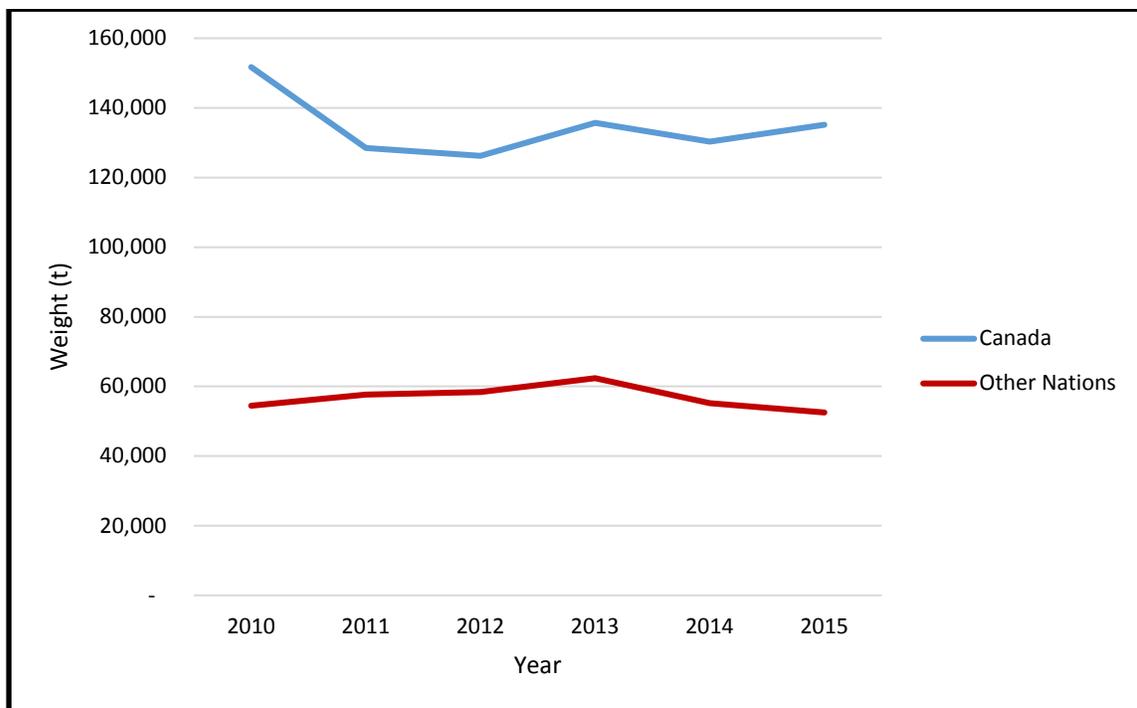
7.1.5 International Fisheries

A portion of the Project Area and RSA fall outside Canada’s EEZ, and is therefore located in international waters. Commercial fish harvest data from NAFOs STATLANT 21A and 21B datasets for NAFO areas 3KLMNO are shown in Table 7.9, and summarize the total weight of commercial harvests in these areas between 2010 and 2015 for all species. Based on the data, Areas 3L and 3K have the highest concentrated fishing effort, while 3O has the lowest level of international fishing activity. Figure 7-9 shows a comparison between Canada and other NAFO states in terms of total weight harvested beyond the EEZ between 2010 and 2015, and illustrates that Canada has historically dominated commercial landings within the region.

Table 7.9 International Fish Catches by NAFO Division (t), 2010 to 2015

NAFO Division	2010	2011	2012	2013	2014	2015	Total
3K	76,768	61,206	63,468	61,144	60,361	66,651	389,598
3L	72,722	68,457	66,443	69,712	65,610	65,348	408,292
3M	20,523	24,938	25,885	27,609	26,024	24,182	149,161
3N	22,672	19,973	17,888	24,971	19,067	14,961	119,532
3O	13,525	11,604	10,977	14,627	14,489	16,569	81,791
Total	129,442	124,972	121,193	136,919	125,190	121,060	1,148,374

Source: NAFO (2016a)



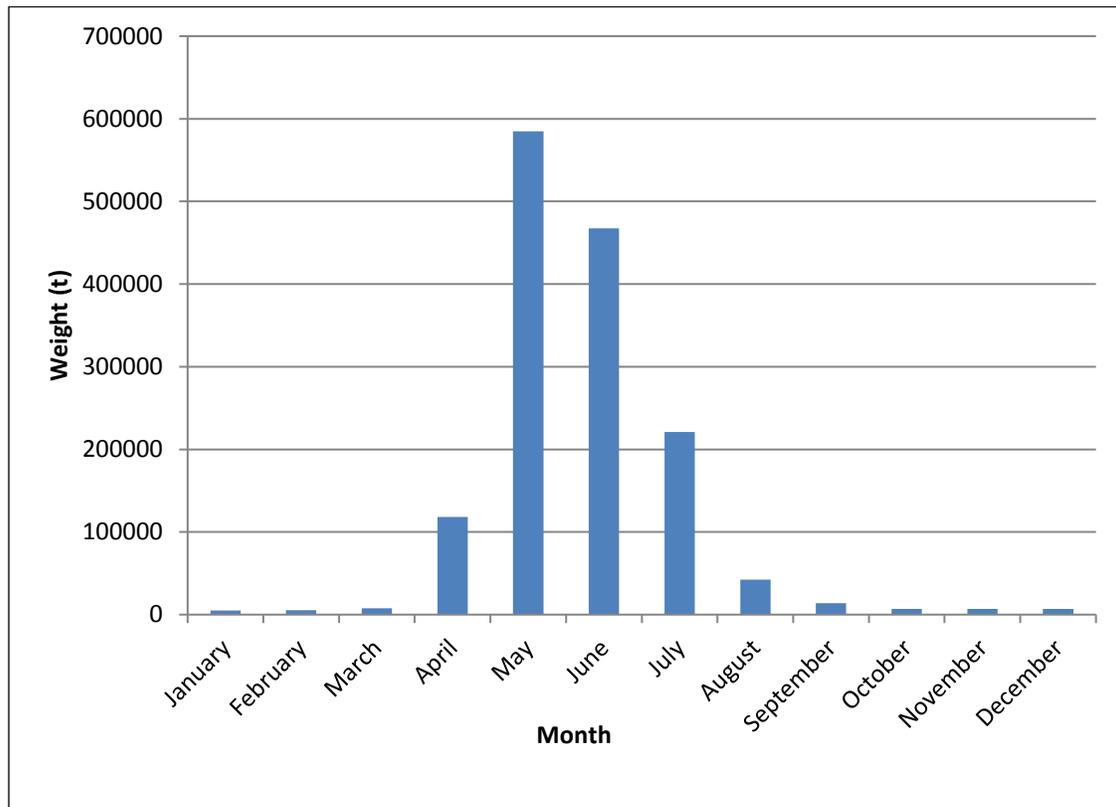
Source: NAFO (2016a)

Figure 7-9 Harvest from NAFO Divisions 3KLMNO, Canadian vs. International Fleets, NAFO Managed Stocks, 2010 to 2015

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

The seasonality of international harvesting of commercial species within 3KLMNO is further illustrated in Figure 7-10. The trend is similar to domestic harvest seasonality for commercial species, in that the most intense harvesting activity typically occurs during the summer, between April and August. While some species are harvested year-round, there is relatively little activity occurring outside of the summer period.



Source: NAFO (2016a)

Figure 7-10 International Harvest by Month, Total, All Species, 2010 to 2015

Similar to domestic harvesting trends, northern shrimp, snow crab, and various groundfish species (Greenland halibut, Atlantic cod, redfish and yellowtail flounder) have traditionally been harvested in the greatest numbers by NAFO member states in this region. Table 7.10 provides an overview of the 20 species with the highest total weight in landings for the period 2011-2015, and illustrates those species harvested in greater numbers during this period. Section 7.1.6 provides an overview of these species.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.10 NAFO Divisions 3KLMNO Primary Harvested Species by Quantity (t), 2011 to 2015

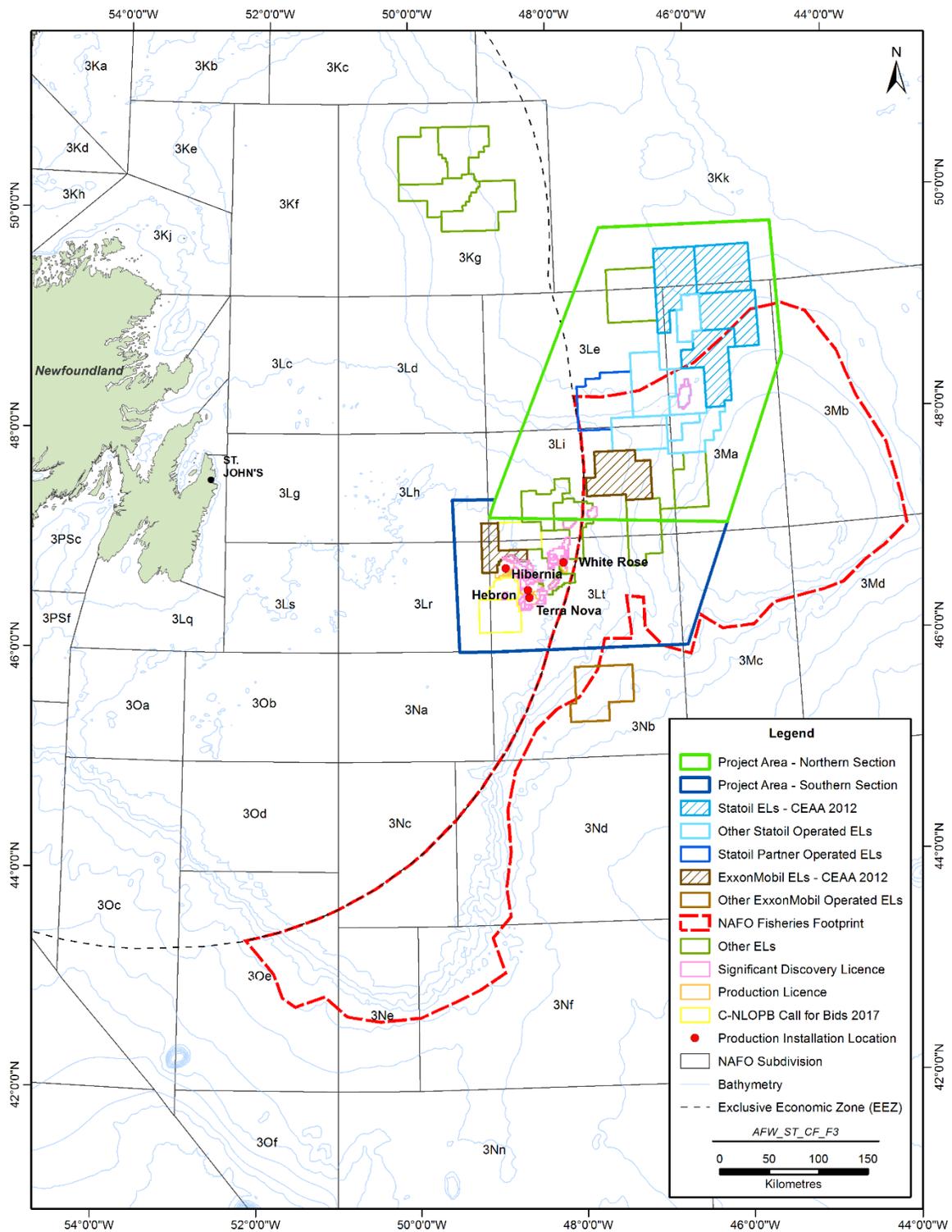
Species	2011	2012	2013	2014	2015	Total
Northern Prawn (shrimp)	46,975	48,327	44,134	37,828	40,892	280,062
Queen Crab	43,682	41,930	42,494	42,348	42,169	256,737
Capelin	20,104	22,240	23,695	23,149	25,102	129,748
Atlantic Redfishes (ns)	17,799	18,557	20,797	19,718	23,534	118,230
Atlantic Cod	14,020	13,073	18,720	19,528	17,724	91,817
Greenland Halibut	13,890	12,151	11,477	12,722	11,751	74,715
Yellowtail Flounder	5,230	3,214	10,537	7,970	6,687	42,929
Skate (ns)	5,744	4,476	4,406	4,552	3,412	28,210
Great Blue Shark	2,633	6,345	6,940	3,315	3,011	24,715
Atlantic Herring	2,123	3,385	5,459	4,455	5,184	23,697
Atlantic Mackerel	487	132	191	31	262	14,851
American Plaice	1,319	1,490	2,455	1,635	1,330	10,289
Pink (pandalid) Shrimps	2,302	1,259	636	2,601	-	9,919
Roughhead Grenadier	1,015	1,308	388	559	208	4,256
Witch Flounder	698	568	601	707	749	4,238
Deepwater Redfish (beaked)	3,838	9	116	-	-	3,963
Atlantic Halibut	264	399	544	874	798	3,178
Swordfish	368	1,133	551	311	453	3,038
Sea Urchin	284	515	631	504	439	2,425
Roundnose Grenadier	458	710	246	140	93	2,153
Note: ns = not specified						
Source: NAFO (2016a)						

In 2007, the United Nations General Assembly issued a request to Regional Fisheries Management Organizations, including NAFO, to regulate bottom fishing activities that have the potential to cause affect vulnerable marine ecosystems. This led to NAFO Fisheries Commission creating new fisheries conservation enforcement measures designed to reduce the effects of bottom trawling on these marine environments. These measures included mapping the occurrence of bottom fishing activities in the NRA, known as the NAFO fishing footprint (Figure 7-11), which overlaps the Project Area, including ELs 1135, 1141, and 1142.

Using a vessel monitoring system as part of its conservation enforcement measures, NAFO is able to maintain historical location records of vessels operating within the fishing footprint, and thus, to map the location and overall intensity of fishing activities within the footprint. Fishing intensity in the area between 2008 and 2012 is summarized in Figure 7-12.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017



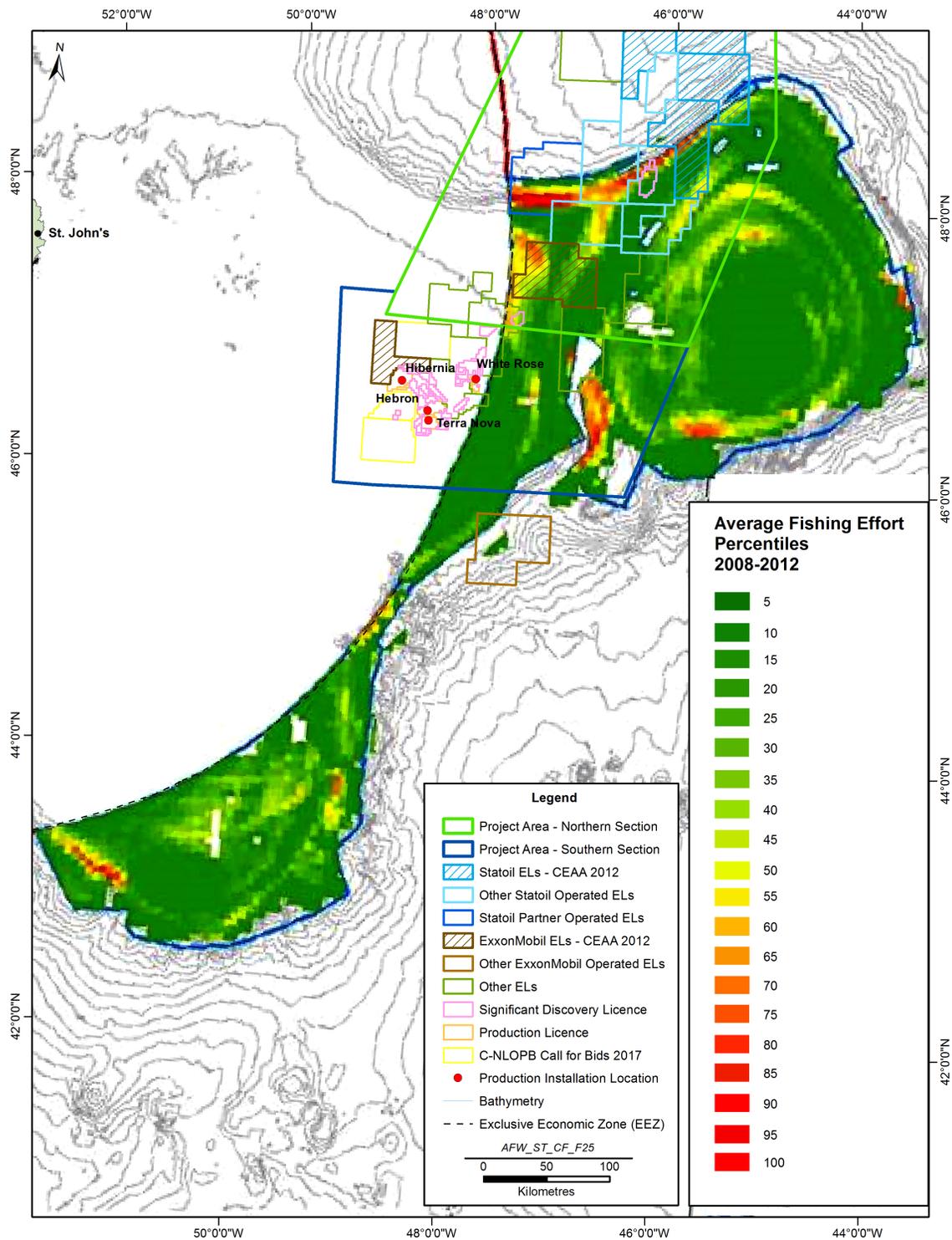
Source: NAFO (2016b)

Figure 7-11 NAFO Fishing Footprint



Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017



Source: NAFO (2014)

Figure 7-12 Intensity of Bottom Fishing Activities in the NAFO Fishing Footprint between 2008 and 2012

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

The data indicate that certain areas of the fishing footprint, including some areas of the Sackville Spur and sections of the Flemish Pass that overlap with the Project Area, are subject to greater degree of fishing activity by NAFO member states than others (NAFO 2014). Currently, ELs 1141 and 1142 (Statoil) overlap with the northern boundary of the NAFO fishing footprint, and EL 1135 (ExxonMobil) is within the footprint boundaries. Depending on the time of year, the area around and within the boundaries of these ELs could see an increase in intensity of bottom fishing activity. ELs 1137 (ExxonMobil) and ELs 1139 and 1140 (Statoil) are outside the administrative boundary of the NAFO fishing footprint.

7.1.6 Description of Key Fisheries by Species

Based on harvested weights and recorded catches, many of the fish species considered to be principal domestic commercial fisheries off Eastern Newfoundland are also considered important internationally. Fish species include northern shrimp, snow crab, Greenland halibut / turbot, yellowtail flounder, Atlantic cod, American plaice, and redfish, each of which is described in further detail below, and with respect to each section of the Project Area.

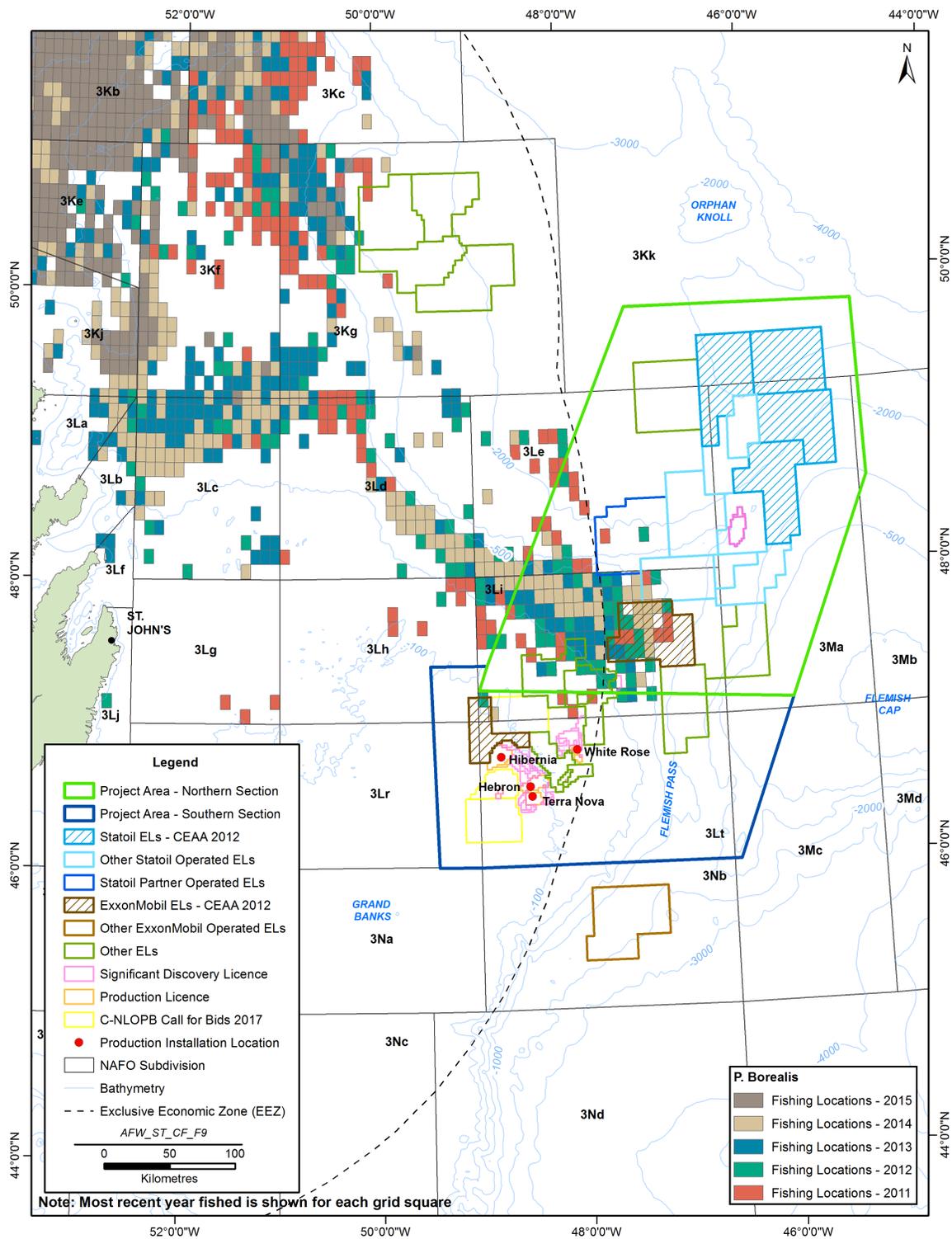
7.1.6.1 Northern Shrimp

The Canadian northern shrimp fishery originated in the 1970s off the coast of Labrador, and occurs throughout the marine areas offshore Newfoundland and Labrador. With the collapse of groundfish fisheries in the 1990s, and the moratoria that still remain, northern shrimp has become one of the largest domestic fisheries in the region, both in terms of harvest quantity and economic value (DFO 2009). The domestic fishery involves both an inshore and offshore fleet of vessels, and commercial harvesting activity is confined to Shrimp Fishing Areas (SFAs) along the east coast of Canada. SFAs 6 and 7 are within or near the Project Area; SFA 7 overlaps with the Project Area (Figure 7-13) whereas SFA 6 is to east of the Project Area. The 3M area and the 3L portion of SFA 7 outside Canada's EEZ are managed by NAFO, which placed a shrimp fishing moratorium for the 3M Division in 2011 (NAFO 2015).

Locations of domestic northern shrimp fishing activity from 2011 – 2015 relative to the Project Area are shown in Figure 7-14, which includes Canadian vessels harvesting in 3L, under quotas set by NAFO for Canadian enterprises. These fishing locations show some overlap with the Project Area and RSA, including portions of EL 1135. Northern shrimp are typically harvested year-round in offshore Newfoundland and Labrador by larger trawlers, but the summer months are usually the most active and productive time to fish for the species. Figure 7-15 shows northern shrimp harvests by month between 2011 and 2015.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

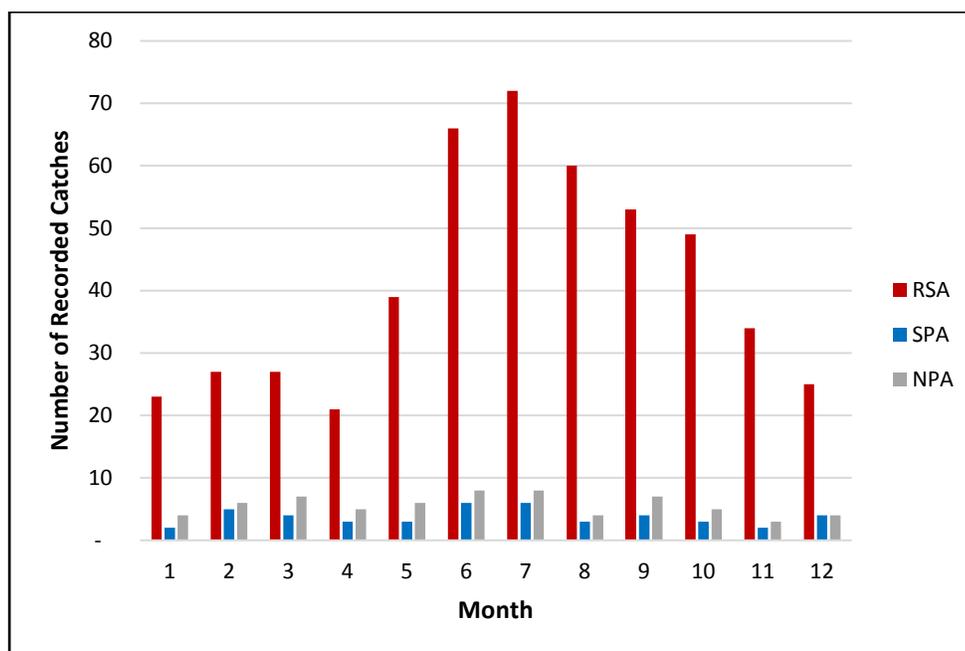


Source: DFO (2016a)

Figure 7-14 Domestic Harvesting Locations, Northern Shrimp, 2011 – 2015

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017



Source: DFO (2016a)

Figure 7-15 Northern Shrimp Harvest by Month, Area, 2011 to 2015

Northern shrimp quotas and annual harvest for 2016 for SFA 6 (DFO managed stocks) are shown in Table 7.11. Table 7.12 indicates quotas for northern shrimp from 2010 to 2016 and highlights the trends that have occurred within the domestic fishery. The Canadian northern shrimp fishery has been in decline since 2010, as evidenced by the 52 percent decrease in overall quota numbers from 2010 to 2015 (see Table 7.12). The greatest change came with the removal of quotas from SFA 7 in 2015 due to declining levels of the species (DFO 2016b).

Table 7.11 Northern Shrimp Quotas and Harvest within SFA 6, 2016

License Category / Quota Definition	Quota (Tonnes)	Taken (Tonnes)	% Taken	Date Closed (dd/mm/yyyy)
Area 6 – 3K Fishers North of 50'30	2,120	1,461	69%	31/12/2016
Area 6 – 3K Fishers South of 50'30	6,729	7,058	105%	31/12/2016
Area 6 – 3L Fishers	3,312	3,006	91%	31/12/2016
Total	19,916	20,206	101%	
Note: No quotas for SFA 7 due to moratorium placed in 2015				
Source: DFO (2016b)				

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.12 Northern Shrimp Quotas (tonnes) within SFA 6 and 7, 2010 to 2016

SFA (NAFO)	2010	2011	2012	2013	2014	2015	2016
SFA 6 (2J)	36,993	30,837	34,204	28,630	10,942	24,096	6,453
SFA 6 (3K)	24,639	21,550	26,040	26,254	20,383	19,916	12,161
SFA 7 (3L)	22,737	15,859	10,000	3,818	1,415	0	0
Total	84,369	68,246	70,244	58,702	32,740	44,012	18,614

Source: Adapted from Husky Energy (2012); updated with data from DFO (2016b).

Northern shrimp stock health and stability has become an area of concern for commercial fishers, both domestically and internationally. In DFO's most recent (2016) assessment of northern shrimp in SFA 6, the total fishable biomass was reported to have declined from 785,000 t in 2006 to 138,000 t in 2015, which is the lowest recorded between 2006 and 2015 (DFO 2016c). Because of the decline in shrimp stocks, the federal government announced a 42 percent reduction for the total northern shrimp quota for the 2016-2017 season in SFA 6 (FFAW-Unifor 2016).

Within the NAFO NRA, the northern shrimp fishery is in a similar situation. A fishing moratorium was placed on northern shrimp in 3M in 2011 due to low levels of recruitment. The latest assessment by NAFO indicates that the stock is still experiencing poor recruitment levels, and is therefore likely to remain low with the moratorium in place. The latest assessment calls for no directed fishery for 2016 and 2017 (NAFO 2015). The stock in 3LNO has also been placed under a moratorium, with no directed fishery occurring in 2015 or 2016 (NAFO 2015). The latest assessment for 3LNO northern shrimp was carried out in 2016, but the results were not available at the time of writing.

7.1.6.1.1 Project Area - Northern Section

Within the Project Area - Northern Section, fish harvesting activity for northern shrimp occurs primarily in the southwest corner of the Project Area boundary (NAFO Area 3Li) (see Figure 7-14). Fishing activity for northern shrimp overlaps with EL 1135 for multiple fishing years; however, there is no recorded fishing activity for northern shrimp overlapping with ELs 1139, 1140, 1141, 1142 in the Project Area – Northern Section.

7.1.6.1.2 Project Area - Southern Section

Based on the geospatial data provided from DFO (see Figure 7-14), there is not a large concentration of commercial fishing activity for northern shrimp within the Project Area - Southern Section. Most harvesting activity is in the upper boundary of the Project Area (NAFO Area 3Li), where the Project Area-Northern Section and Project Area - Southern Section meet. There is little shrimp harvesting around EL 1137, except for two occurrences of activity located within or adjacent to the licence boundary in 2012 and 2014.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

7.1.6.1.3 Potential Vessel and Aircraft Traffic Routes

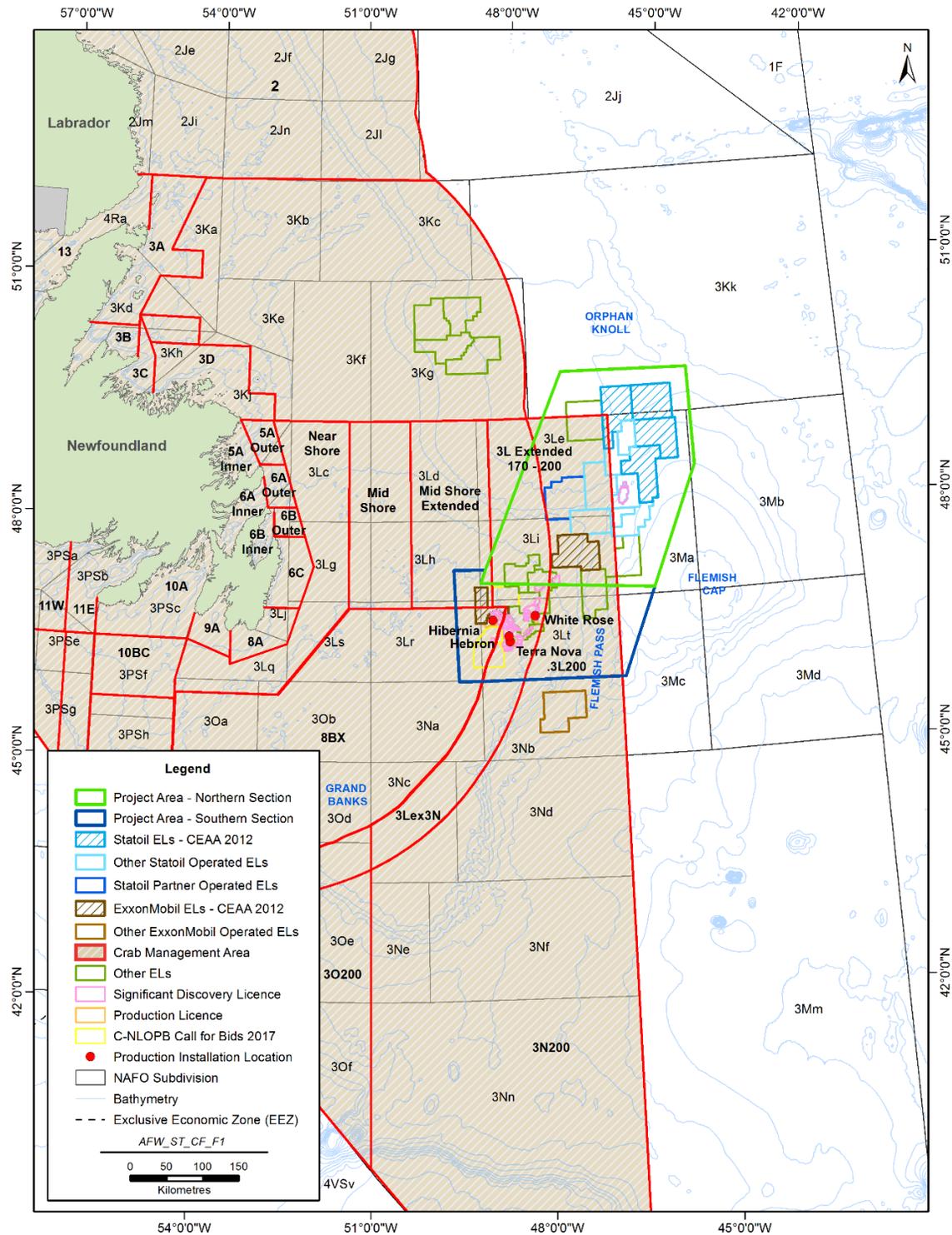
The general distribution of harvesting activity for northern shrimp tends to follow the continental shelf break from the Grand Banks, moving northwest towards Labrador (see Figure 7-14). There does not appear to be a large concentration of fishing activity for northern shrimp between the Project Area, and the east coast of Newfoundland, including near St. John's Harbour where a supply base is located. Between the Project Area and the supply base, there are smaller pockets of commercial fishing activity for northern shrimp present, for various years between 2011 and 2015.

7.1.6.2 Snow Crab

Snow crab, similar to northern shrimp, comprise a large portion of fishing effort offshore Newfoundland and Labrador, and licences can vary considerably from year-to-year. The fishery uses fixed gear, is regulated based on total allowable catch quotas, with the offshore area divided into various Crab Management Areas (CMAs) (Figure 7-16). Within each NAFO Division there are multiple CMAs, each with its own fleet sectors based on vessel size, quotas, and start and end dates. As mentioned in Section 7.1.1, the Government of Canada maintains jurisdiction over commercial fish species within Canada's 200 nautical mile EEZ, and all sedentary species that occur across the extent of Canada's continental shelf. This includes the management of snow crab stocks both within and outside of the EEZ. Quota information for portions of snow crab fleets in NAFO Divisions 3L and 3N for 2015 is presented in Table 7.13.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017



Source: DFO (2016d)

Figure 7-16 Crab Management Areas

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

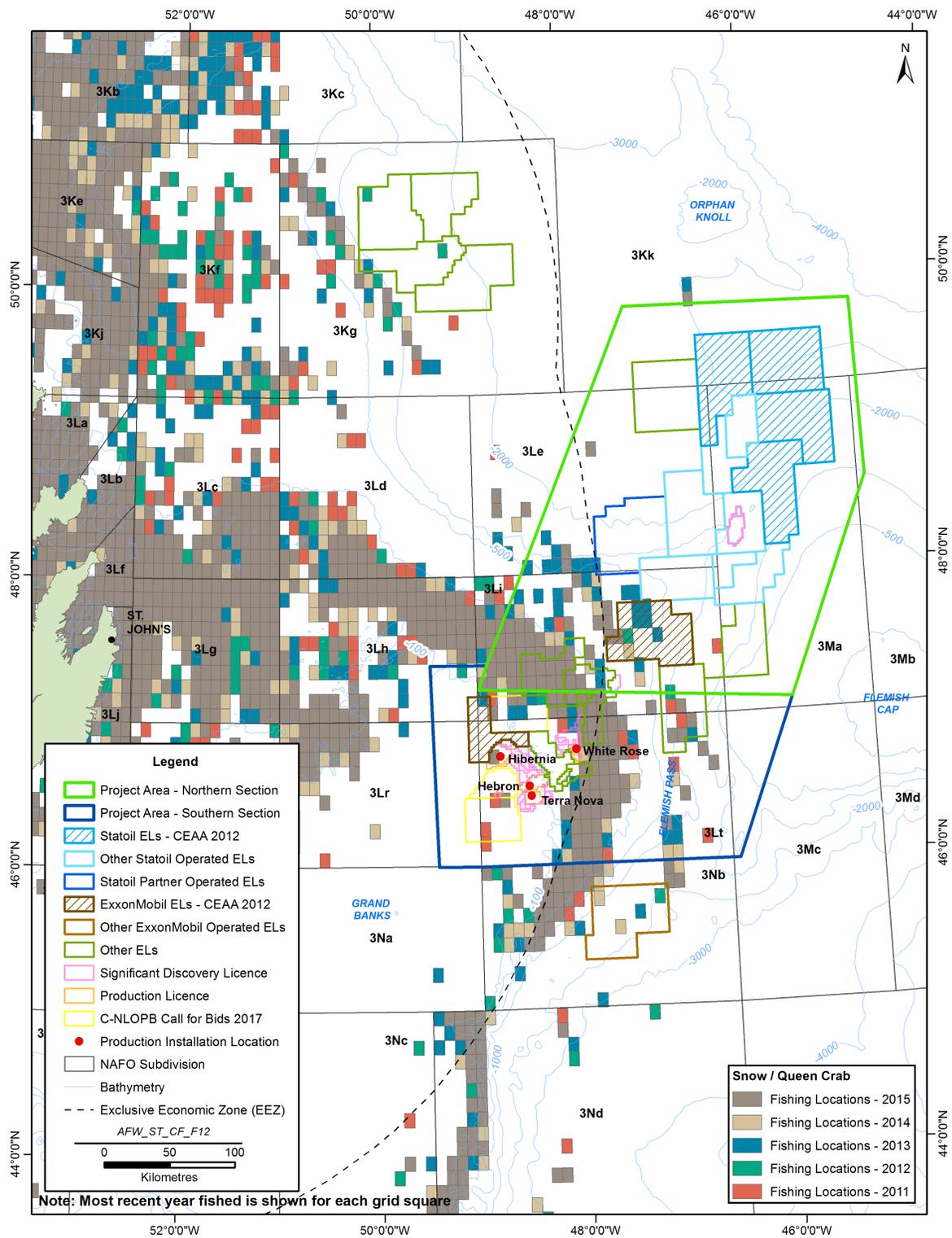
Table 7.13 Midshore and Offshore Snow Crab Quotas and Harvest Within NAFO Divisions 3LN, 2015

License Category / Quota Definition	Quota (Tonnes)	Taken (Tonnes)	% Taken	Date Closed (dd/mm/yyyy)
3L Supplementary Large				
Midshore (MS)	1,576	1,562	99	31/07/2015
Midshore Extended (MSX)	3,780	3,919	104	31/07/2015
Outside 170 & Inside 200 miles (3LX)	2,822	2,953	105	31/07/2015
Outside 200 miles (3L200)	2,053	2,109	103	31/07/2015
3L Supplementary Small				
Midshore (MS)	3,795	3918	103	31/07/2015
Southern Avalon Outside of 50 miles (8B)	800	755	94	31/07/2015
8B Exploratory (8BX)	191	116	61	31/07/2015
3N Supplementary Large				
Outside 200 miles (3N200)	2,527	2,244	89	07/08/2015
Source: DFO (2016b)				

Recorded domestic commercial fishing locations for snow crab from 2011 to 2015 are illustrated in Figure 7-17. Commercial harvesting levels for this species is relatively low within the Project Area - Northern Section, and is concentrated primarily around the shelf edge of the Grand Banks in the Project Area - Southern Section.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017



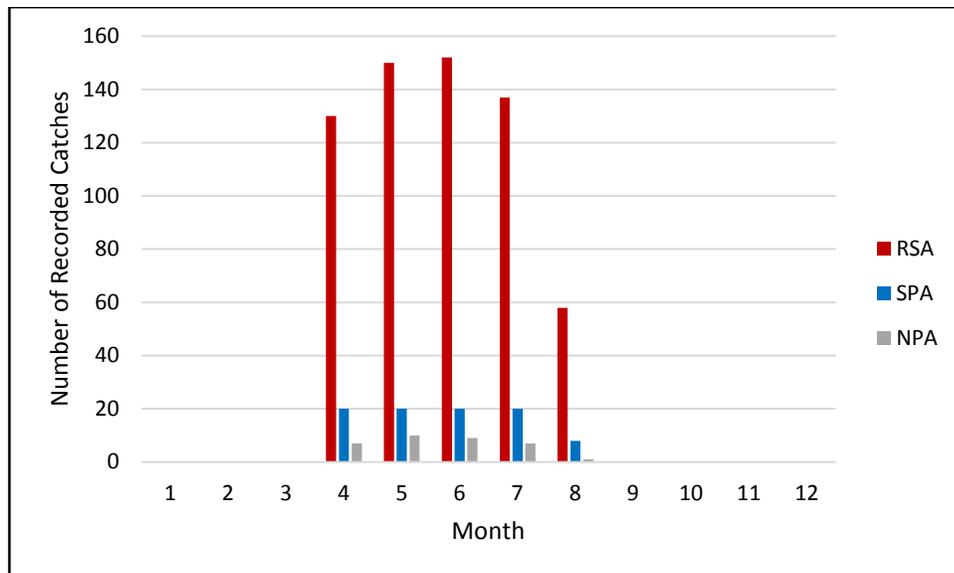
Source: (DFO 2016a)

Figure 7-17 Domestic Harvesting Locations, Snow Crab, 2011 – 2015

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

The seasonality of the snow crab fishery is also illustrated in Figure 7-18, and indicates that the main period for fishing this species occurs between April and July.



Source: DFO (2016a)

Figure 7-18 Snow Crab Harvest by Month, Area, 2011 to 2015

Like northern shrimp, snow crab stocks have also undergone population changes in recent years, following a similar trend of declining landings in multiple CMAs (DFO 2016d). Total landings of snow crab offshore Newfoundland and Labrador (2HJ3KLNOP4R) peaked in 2009 at 53,500 t, and then declined to 47,000 t in 2015. The total exploitable biomass of snow crab has been in decline since 2013, and is now at its lowest observed levels (DFO 2016d).

Because of recent declines of crab stocks in other NAFO Divisions, the snow crab fishery in 3LNO is now becoming the primary fishing area for the species. Snow crab landings in NAFO Division 3K declined by 52 percent since 2008 to their lowest observed level in two decades to 7,200 t. In contrast, snow crab in 3LNO reached landings of 28,750 t in 2015, a record high (DFO 2016d; Mullaney et al. 2016). This supports the idea that the largest aggregation of crab is located within 3LNO, mostly concentrated on the northern shelf of the Grand Banks. However, while 3LNO recorded its highest level of landings in 2015, recruitment of new snow crab was at its lowest observed level, indicating that stocks in 3LNO could soon begin to decline (Mullaney et al. 2016). Future recruitment of the species is forecast to be low due to warming ocean temperatures, which is predicted to have a negative effect on future stock status (DFO 2016d).

7.1.6.2.1 Project Area - Northern Section

Within the Project Area - Northern Section, there is limited commercial fishing activity for snow crab (see Figure 7-17). Like northern shrimp, and other marine fish species, the largest concentrations of fishing activity tend to follow the contours of the continental shelf. There is a small portion of fishing

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

activity that overlaps with the southwest corner of the Project Area, including EL 1135. However, there is no commercial fishing activity for snow crab in the northern portion of the Project Area where ELs 1139, 1140, 1141, and 1142 are located.

7.1.6.2.2 Project Area - Southern Section

As shown on Figure 7-17, there is a large concentration of commercial harvesting activity for snow crab within the Project Area - Southern Section. This is located primarily along the area of the continental shelf slope that falls within the Project Area boundary. There does not appear to be a large amount of fishing activity within the waters of EL 1137, with a small number of locations being fished adjacent to its boundary in various years.

7.1.6.2.3 Potential Supply Vessel and Aircraft Traffic Routes

There is active fishing activity for snow crab around most of mid and inshore Newfoundland, including around the east coast (see Figure 7-17). This also includes areas that will be used by supply vessels to travel between the onshore supply base and the Project Area.

7.1.6.3 Groundfish Species

Groundfish harvests offshore Newfoundland and Labrador have made up relatively modest amounts of commercial fisheries landings in terms of weight and value in recent years, as illustrated above. Many species are fished together in either a targeted fishery, or as by-catch species. Historically, Atlantic cod and American plaice were primary groundfish species in offshore Newfoundland and Labrador before the moratorium in the early 1990s. Since then, yellowtail flounder, Greenland halibut / turbot, and redfish have become important commercial fish species in the region. Atlantic cod still serves as an important commercial fish species because of its historic relevance to Newfoundland and Labrador.

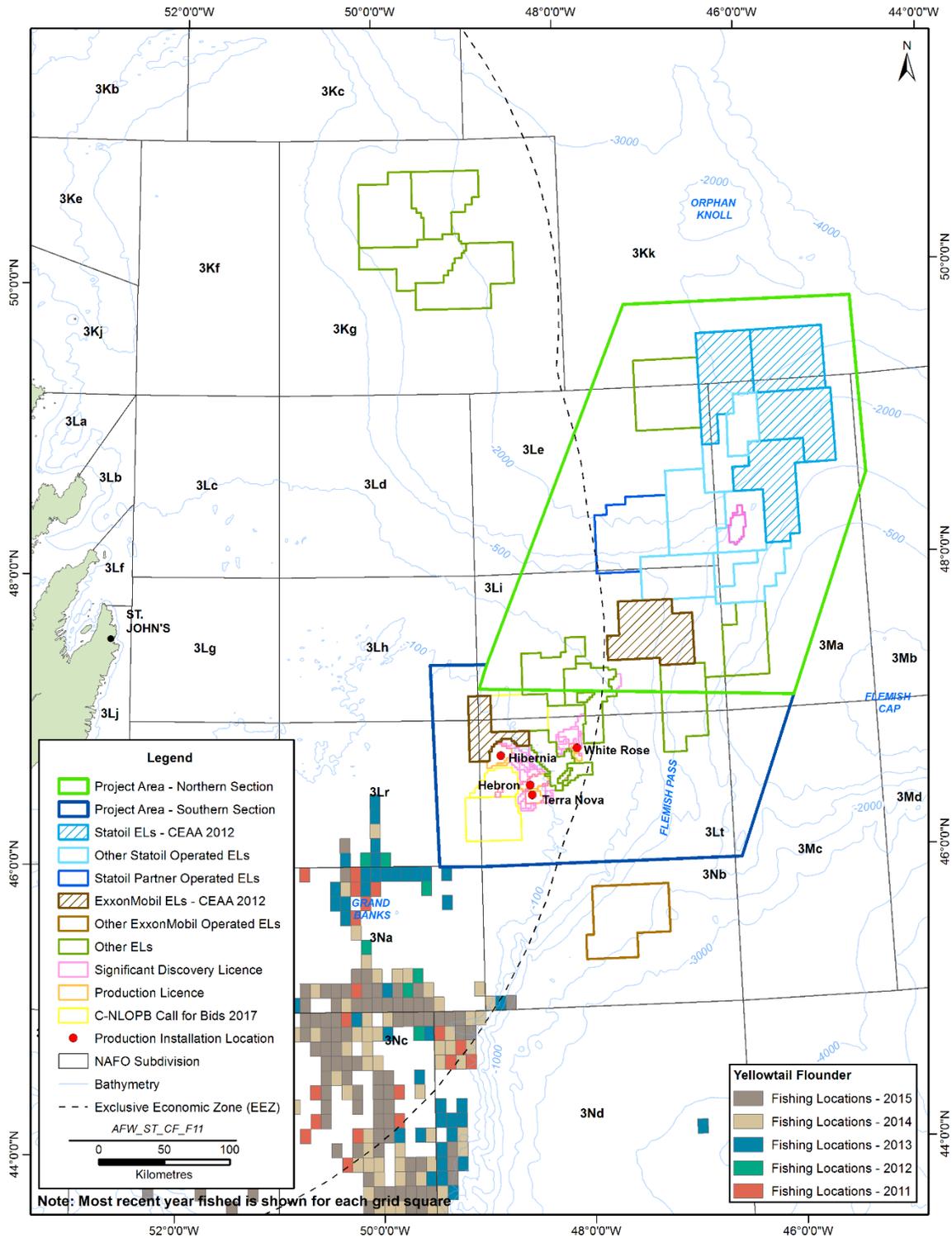
Internationally, groundfish species are the primary species managed by NAFO, and groundfish landings have comprised a larger portion of landings internationally (see Figure 7-10). NAFO manages groundfish stocks using a similar quota system to that used by DFO, allocating portions of quotas and TACs to member nations, including Canada.

Domestic harvesting locations for yellowtail flounder, witch flounder, Atlantic cod, American plaice, redfish, Atlantic halibut, and Greenland halibut / turbot for the 2011 to 2015 period are shown in Figures 7-19 to 7-25. Most recorded groundfish harvesting locations are confined to the northern and southern portions of the Grand Banks outside of the Project Area. There has, however, also been some activity around the Flemish Cap and within the Project Area - Northern Section for deep-water fish such as halibut.

Figure 7-26 summarizes the timing of groundfish harvests for 2015. While fisheries for shrimp and crab are generally confined to the summer months, groundfish harvesting effort is spread out throughout the year.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

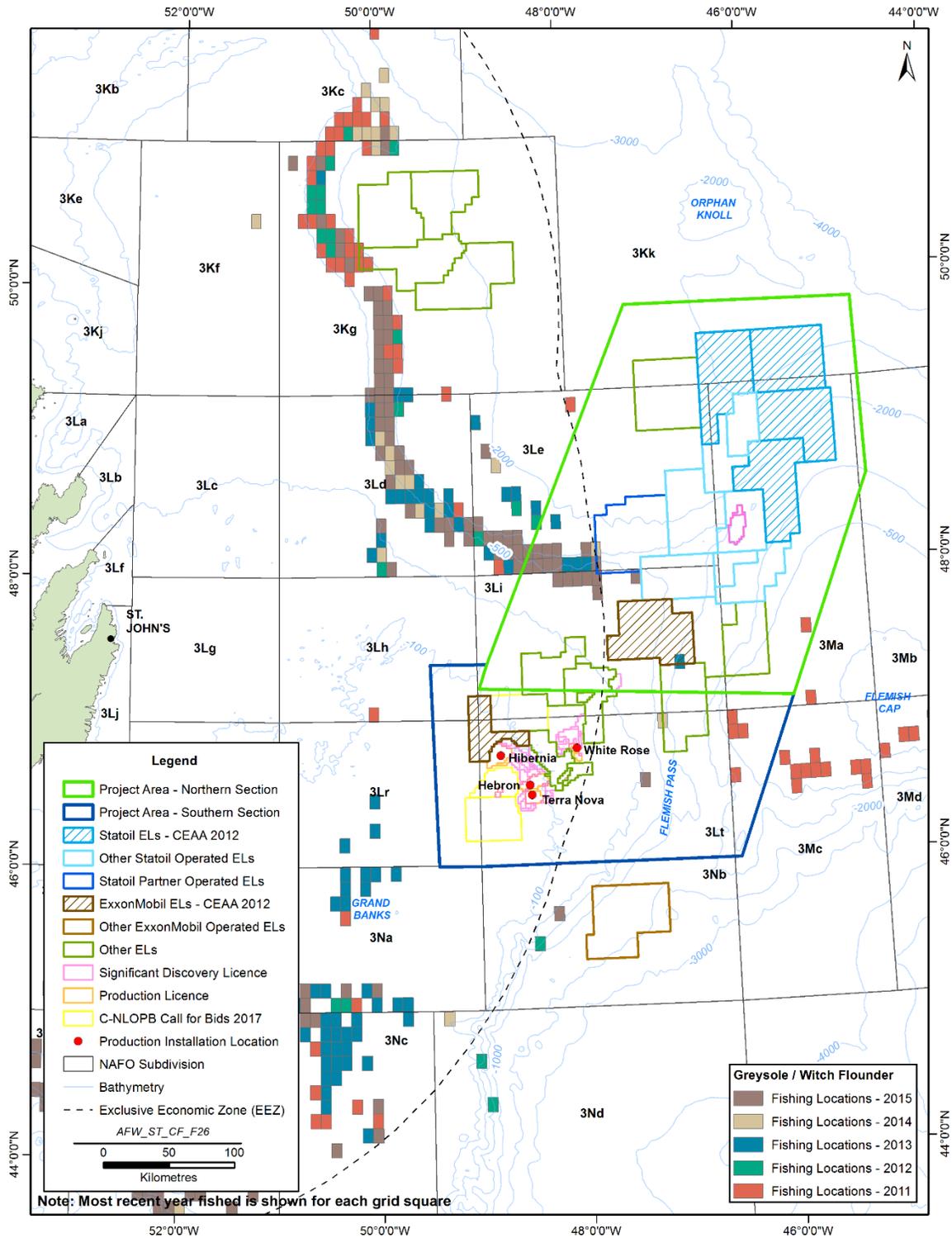


Source: DFO (2016a)

Figure 7-19 Domestic Harvesting Locations, Yellowtail Flounder, 2011 – 2015

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

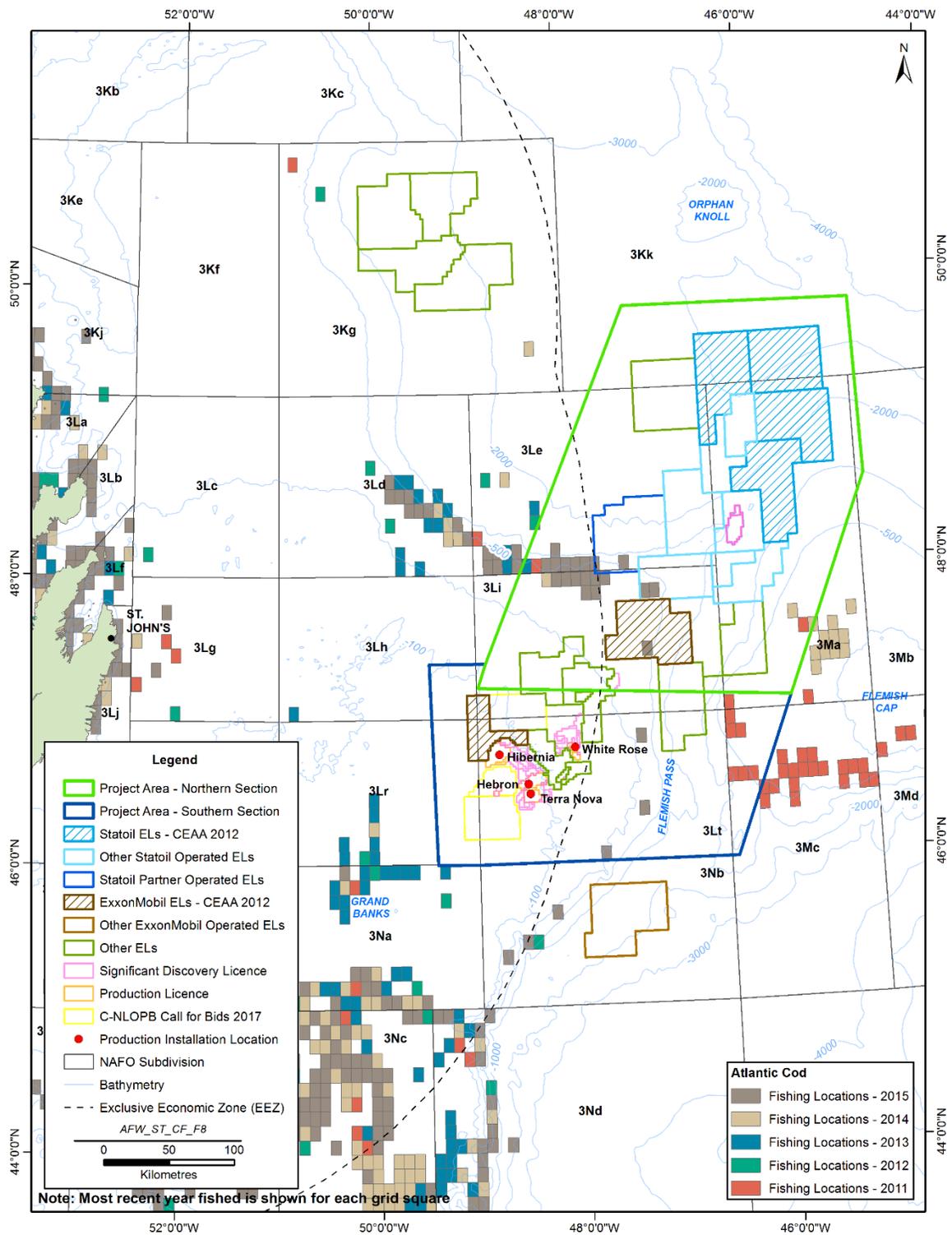


Source: DFO (2016a)

Figure 7-20 Domestic Harvesting Locations, Greysole / Witch Flounder, 2011-2015

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

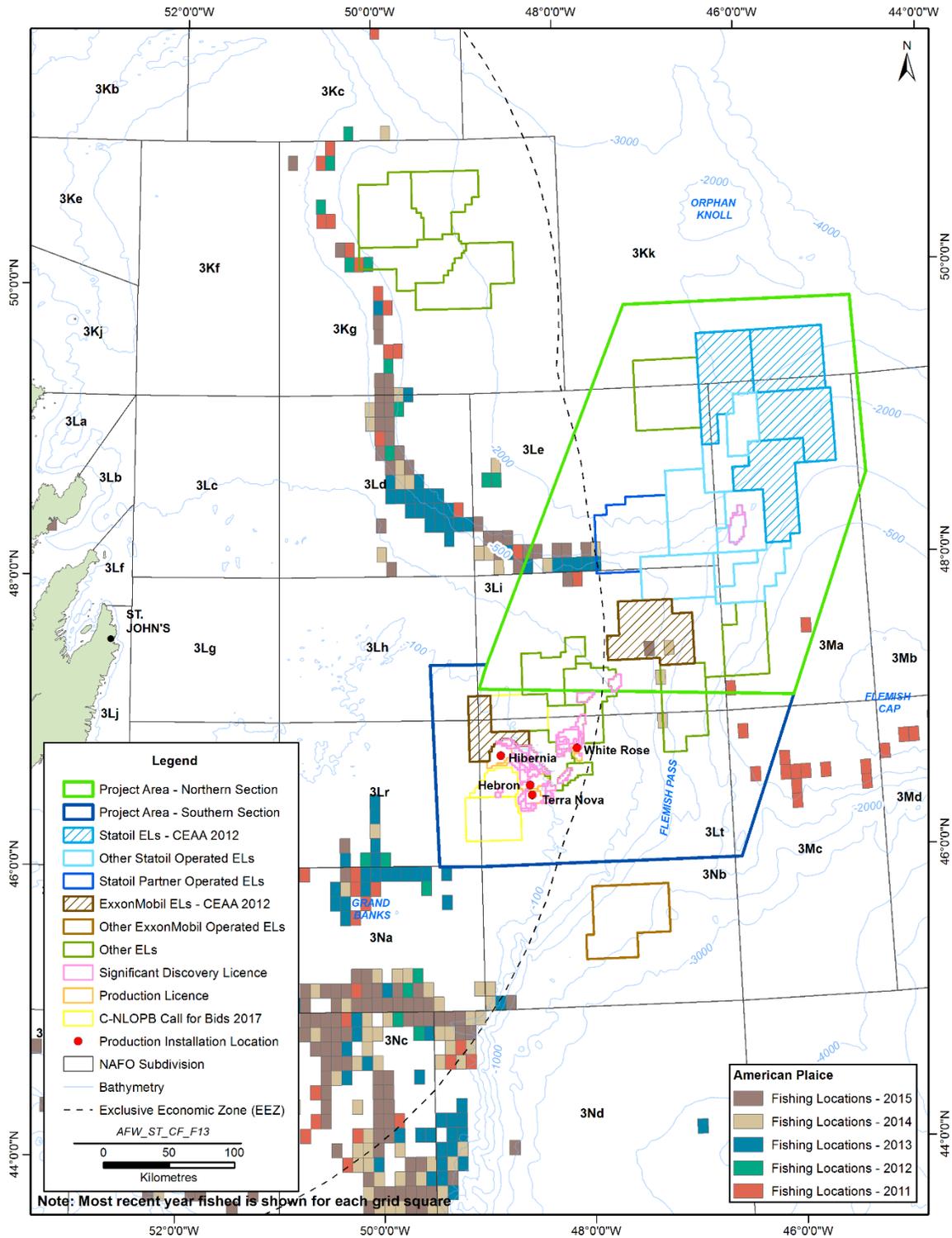


Source: DFO (2016a)

Figure 7-21 Domestic Harvesting Locations, Atlantic Cod, 2011 – 2015

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

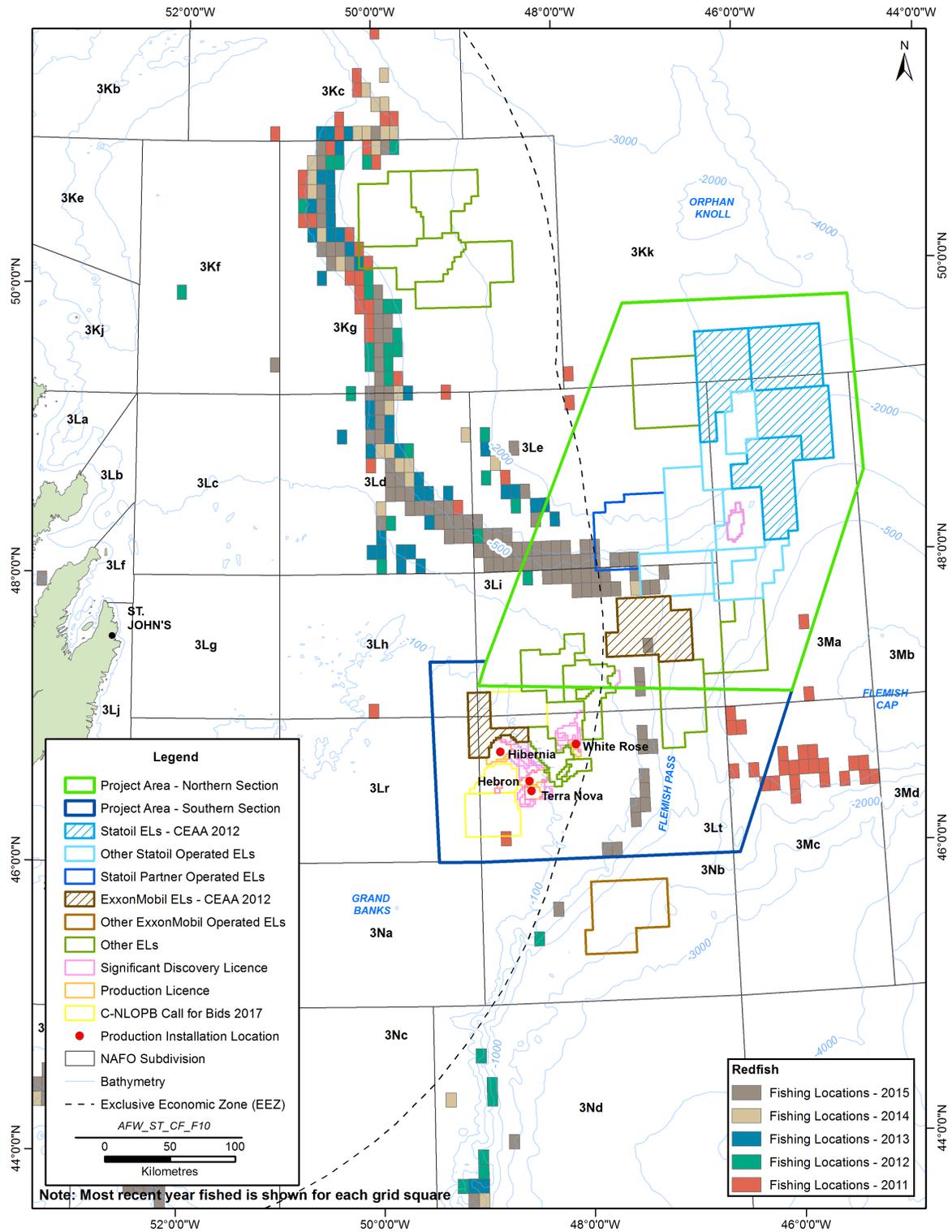


Source: DFO (2016a)

Figure 7-22 Domestic Harvesting Locations, American Plaice, 2011-2015

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

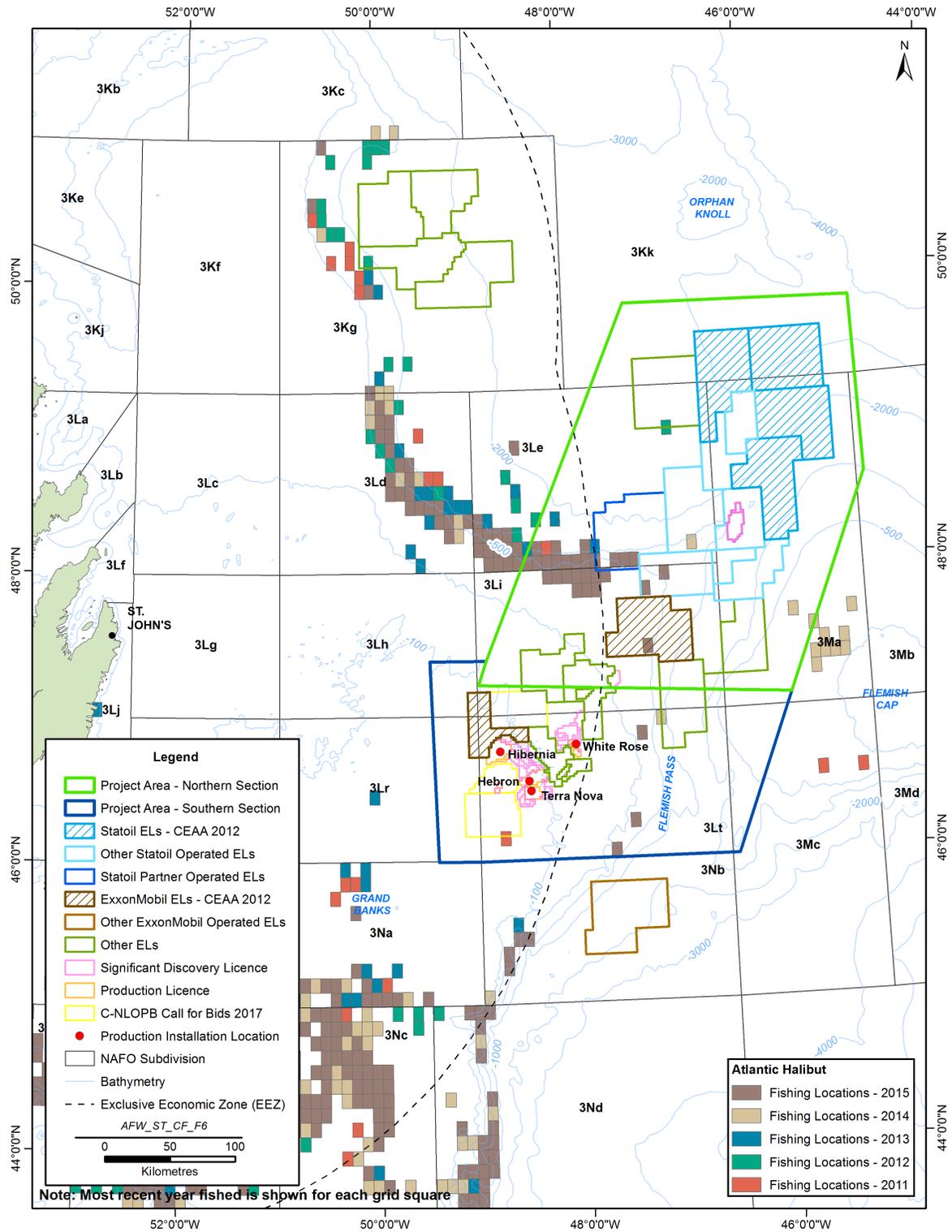


Source: DFO (2016a)

Figure 7-23 Domestic Harvesting Locations, Redfish, 2011 – 2015

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017



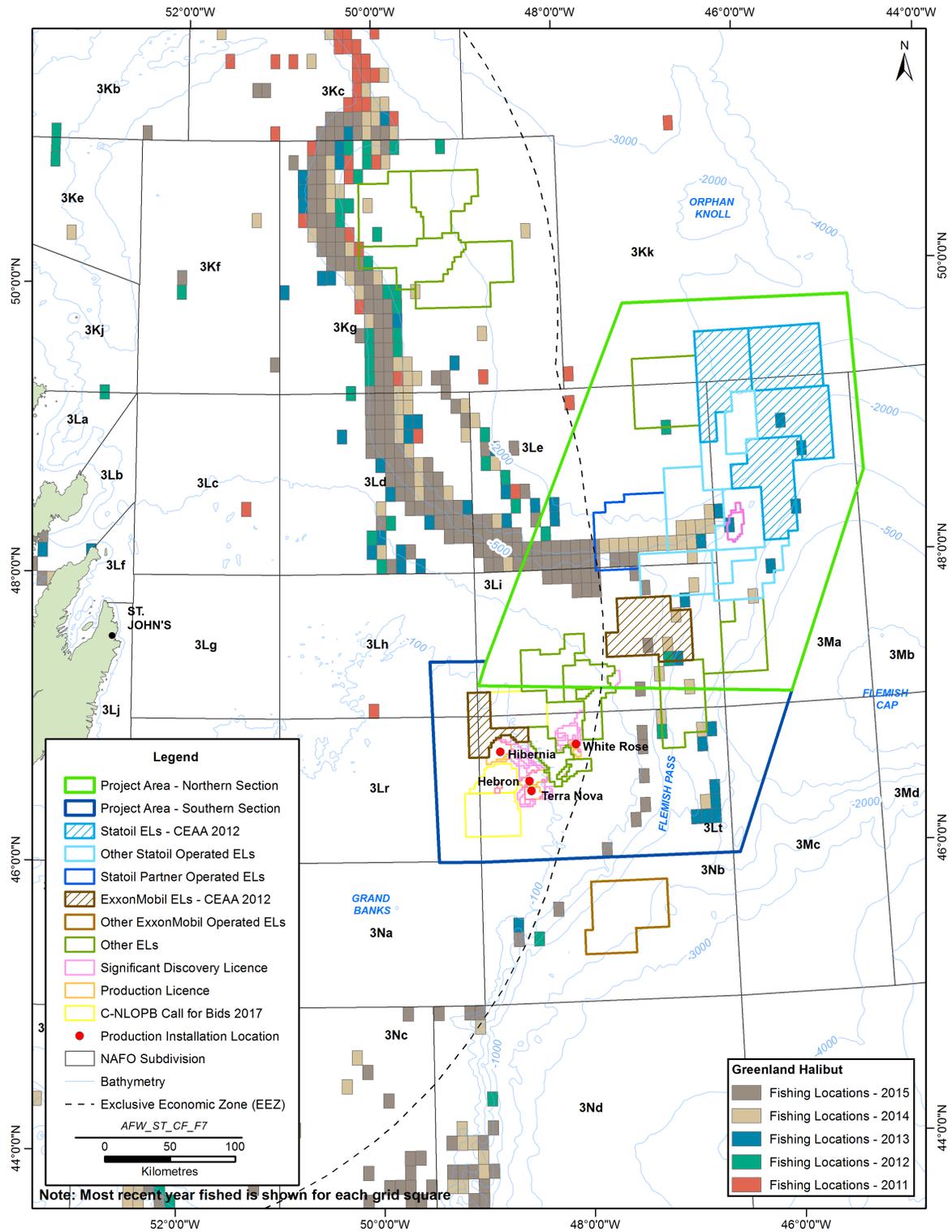
Source: DFO (2016a)

Figure 7-24 Domestic Harvesting Locations, Atlantic Halibut, 2011 – 2015



Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

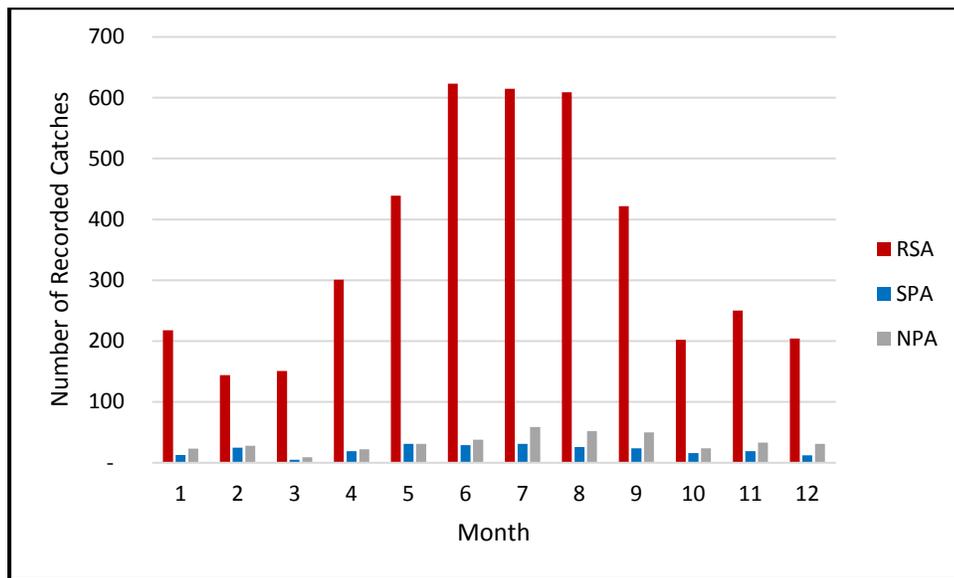


Source: DFO (2016a)

Figure 7-25 Domestic Harvesting Locations, Greenland Halibut, 2011 – 2015

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017



Source: DFO (2016a)

Figure 7-26 Groundfish Harvest by Month, Area, All Species 2011 to 2015

The NAFO Division 3LNO yellowtail flounder stock is managed by NAFO, and is considered a straddling stock because it occurs both within and outside Canada's EEZ and the NRA. NAFO's most recent stock assessment in 2015 determined that there is a low probability that the 3LNO stock will exceed its fishing limit, and it is projected to maintain a high population moving forward (NAFO 2015). The geospatial locations for yellowtail flounder show that landings occur south of the Project Area (see Figure 7-19).

Witch flounder are managed by NAFO and they are comprised of two separate stocks, one stock in subdivisions 3NO, and one widely distributed stock in subdivisions 2J3KL. A moratorium was placed on both witch flounder stocks in 1995 due to low catch numbers, and landings of witch flounder have primarily been as bycatch in other fisheries. The moratorium was lifted for witch flounder in 3NO in 2015, with an initial quota of 1,000 t. The latest stock assessment for 3NO witch flounder by NAFO was in 2015, and indicated that catch levels for the 2016 and 2017 fishing seasons should not exceed 2,172 t and 2,225 t, respectively (NAFO 2015). The most recent stock assessment for witch flounder in 2J3KL have recommended that the moratorium remain in place for a commercial witch flounder fishery (NAFO 2015).

Atlantic cod have been under a moratorium in Canada since the collapse of the groundfish stocks in the early 1990s. The most recent assessment of NAFO Divisions 2J3KL Atlantic cod stock by DFO indicates that while the stock has increased over the past decade, it remains within the critical recovery zone (DFO 2016e). There is still uncertainty surrounding the stock recovery and whether a commercial fishery will be reinstated for the species. This is discussed further in Section 7.1.8. Internationally, NAFO manages Atlantic cod for NAFO Divisions 3M and 3NO. The latest assessment of cod in 3M (2015) resulted in a TAC of 13,931 t for 2017, with Canada retaining 0.8% of the TAC

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

(111 t) (NAFO 2015). The latest assessment of the 3NO cod stock (2015) indicated that the biomass is still too low for a directed fishery, and no directed fishery has been scheduled from 2016 to 2018 (NAFO 2015). Figure 7-21 shows a small amount of overlap of Atlantic cod fishing activity with the Project Area, but with little overlap with the ELs associated with the Project.

American plaice have also been under a moratorium on directed commercial fishing since the collapse of groundfish stocks in the 1990s. Domestically, there is no directed commercial fishery for the species, and catches of American plaice are typically recorded as bycatch from fishing activities for other groundfish species. NAFO manages American plaice stocks in Divisions 3M and 3LNO. The most recent stock assessment for American plaice in 3M, completed in 2014, indicated that there should be no directed fishery for the species between 2015 and 2017 (NAFO 2015). The most recent assessment for the 3LNO stock indicated that the population is still below levels that would warrant an opening of a commercial fishery, and recommended no directed fishery for 2017 and 2018 (NAFO 2015). Figure 7-22 illustrates a similar pattern to Atlantic cod. There is some overlap with the Project Area for American plaice harvesting, and a small amount of activity occurring on EL 1135 in 2014 and 2015. There does not appear to be additional activity around Project-related ELs.

Three species of redfish (Acadian, golden, and deepwater) occur in the waters of offshore Newfoundland and Labrador, and all three are managed together as a single unit in each management area (DFO n.d.). Redfish are typically located at water depths below 200 m, and are found along the northeast slope of the Grand Banks. NAFO collectively manages the stocks of all three species of redfish in Divisions 3KLMNO. The stock in Division 3K is jointly managed with the Northeast Atlantic Fisheries Commission (NAFO 2015). The commercial stock for redfish in 3LN was placed under moratorium in 1998 but re-opened in 2010. Catches for redfish in 3LMN reached 6,000 t in 2013, the highest level in 20 years. Stocks in 3M have remained relatively stable over the years, but there is still a high level of uncertainty regarding the health of the 3O stocks (NAFO 2015). Redfish harvesting appears to be concentrated around the continental shelf along the edge of the Grand Banks, occurring primarily outside the Project Area (see Figure 7-23). There is a small amount of overlap within the Project Area – Northern Section and the Project Area – Southern Section, but not within ELs associated with this Project.

Atlantic Halibut is managed by DFO as a single stock that spans the Scotian Shelf and Southern Grand Bank (3NOPs4VWX5Zc). The most recent stock assessment was carried out in 2014 by DFO, and showed that Atlantic halibut was in a healthy zone. Recovery of the stock over time has allowed for increased access by domestic and international fleets (DFO 2015c). NAFO does not manage Atlantic halibut stocks. Harvesting for Atlantic halibut appears to be primarily concentrated on the northern and southern portions of the Grand Banks, with a small amount occurring within the Project Area (see Figure 7-24). Aside from a small amount of activity on EL1135, there does not appear to be harvesting activity for Atlantic halibut on other ELs associated with the Project.

Greenland halibut is managed by NAFO for stocks in Divisions 3LMNO. In 2010, NAFO adopted a Management Strategy Evaluation for the fishery, which looked at a survey-based harvest control rule to set quotas for the species. This rule is based on multiple variables and science to determine the appropriate quota, which is assessed on an annual basis. The most recent TAC for 2017 was 10,966 t (NAFO 2017). Greenland halibut fishery appears to be the primary fishery where commercial activity overlapped with EL 1141 and 1142 (see Figure 7-25).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

7.1.6.3.1 Project Area - Northern Section

Based on Figures 7-19 to 7-25, which are solely based on Canadian catch data, groundfish harvesting is limited within the Project Area - Northern Section, with limited harvesting occurring in EIs 1135, 1141 and 1142. The southwest portions have some occurrences of harvesting for redfish, Atlantic halibut, American plaice, and Atlantic cod. Greenland halibut has a larger commercial fishing presence than most other groundfish species in the Flemish Pass.

7.1.6.3.2 Project Area - Southern Section

Within the Project Area - Southern Section, there is not a high level of commercial fishing activity for groundfish species. There is some commercial activity in parts of the Project Area that extend out into the Flemish Pass, and there were some recorded redfish harvests near EL 1137 in 2011. However, it appears that the Jeanne d’Arc Basin is currently not an active area for groundfish harvesting.

7.1.6.3.3 Potential Vessel and Aircraft Traffic Routes

Most commercial harvesting effort for groundfish is concentrated on both the north and south corners of the Grand Banks. Between the Project Area and the east coast of Newfoundland, there does not appear to be a large effort for groundfish harvesting. Inshore Newfoundland has some activity along the coast for groundfish, including Atlantic cod. Overall the level of fishing activity for groundfish is fairly low compared to that of shrimp and crab.

7.1.7 Fishing Gear

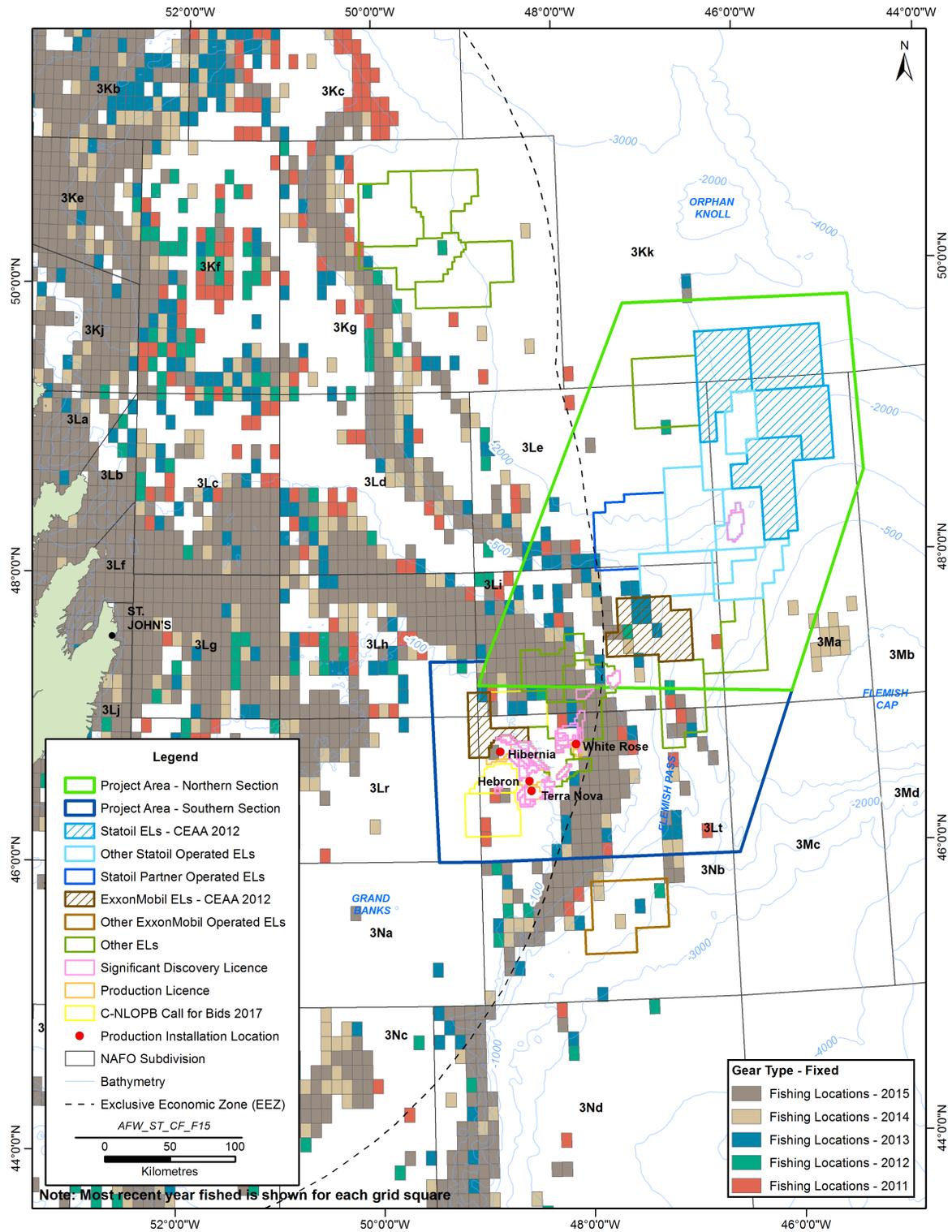
Various types of commercial fishing gear are used offshore Newfoundland and Labrador and is dependent on the species being harvested. The snow crab fishery uses fixed crab pots, the northern shrimp fishery employs shrimp trawls, and dredges are typically used for other shellfish fisheries. Groundfish are usually harvested via a combination of stern otter trawls and gillnets or longlines. Fisheries for large pelagic species such as tuna also incorporate the use of longlines or harpoons, while other pelagics can be harvested with dragnets or seines. The list of fixed and mobile gear used during offshore commercial fisheries in Newfoundland and Labrador is shown in Table 7.14, while the geospatial locations for domestic fixed and mobile gear fishing activity, based on Canadian catch data, is shown on Figures 7-27 and 7-28.

Table 7.14 Fixed and Mobile Gear Used in Offshore Newfoundland and Labrador

Fixed Gear	Mobile Gear
<ul style="list-style-type: none">• Crab pots• Gillnets	<ul style="list-style-type: none">• Longlines• Shrimp Trawls• Dragnets• Seines• Stern Otter Trawl• Dredge

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017



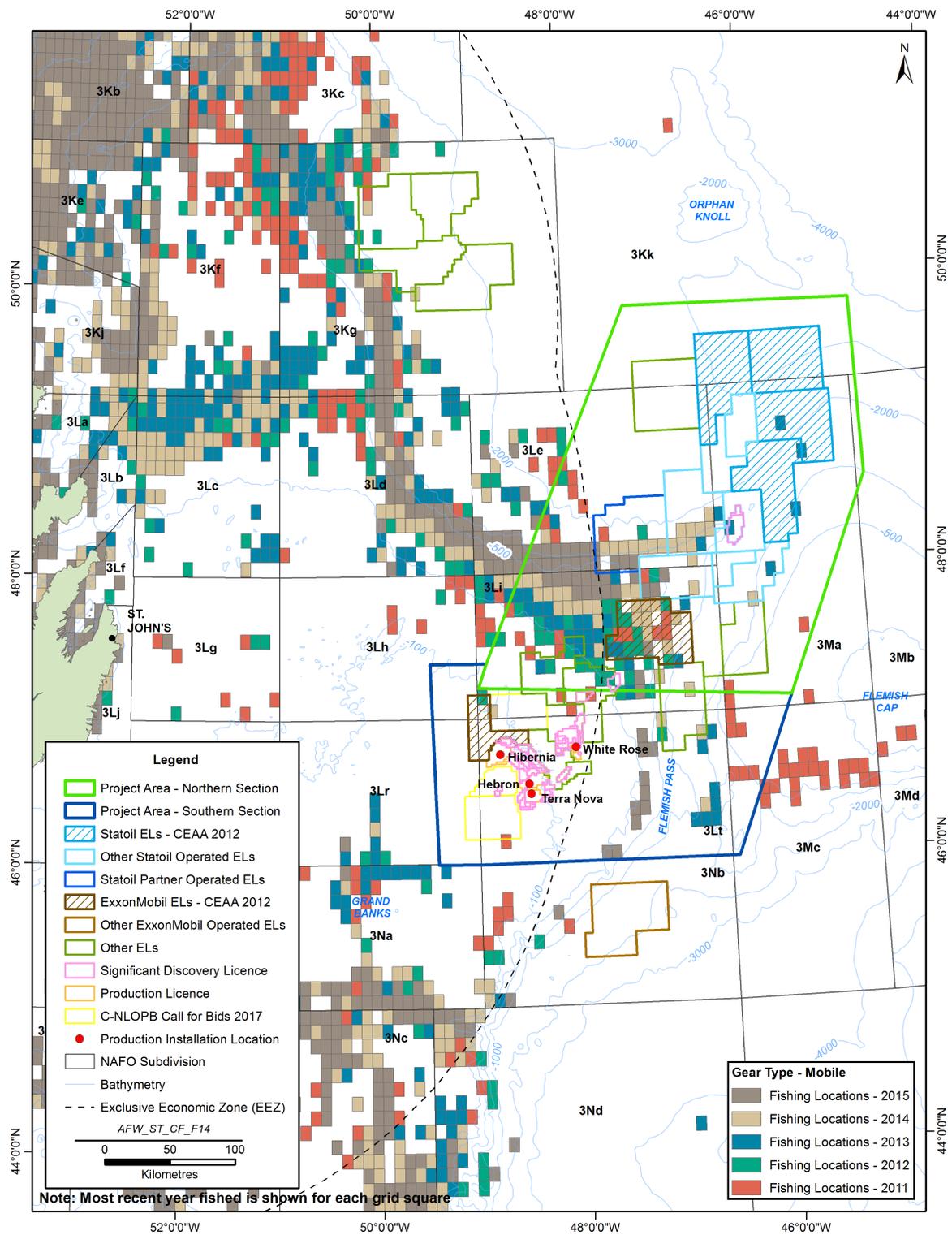
Source: DFO (2016a)

Figure 7-27 Fixed Gear Domestic Harvesting Locations, All Species, 2011 – 2015



Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017



Source: DFO (2016a)

Figure 7-28 Mobile Gear Domestic Harvesting Locations, All Species, 2011 – 2015

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

7.1.7.1 Project Area - Northern Section

As illustrated in Figures 7-27 and 7-28, mobile gear use is more common throughout the northern portions of the Project Area - Northern Section, where harvesting for groundfish species dominates, although general fishing activity is lower.

7.1.7.2 Project Area - Southern Section

As illustrated in Figures 7-27 and 7-28 fisheries in the Jeanne d'Arc Basin primarily rely on fixed gear use, such as crab pots. This is due to snow crab being the primary species harvested in the Jeanne d'Arc Basin (see Figure 7-17). Mobile gear use is primarily limited to the northern and eastern portions of the Project Area - Southern Section.

7.1.7.3 Potential Vessel and Aircraft Traffic Routes

Potential vessel and aircraft traffic routes will pass through the areas primarily fished using fixed gear. While there may be a mix of both mobile and fixed gear as vessels get closer to the Grand Banks and the continental shelf break, the primary fishing gear used throughout the midshore area between the Project Area and the supply base is fixed gear.

7.1.8 Potential Commercial Fisheries

The most likely new fishery that may occur during the life of the Project is the return of groundfish harvesting for species such as Atlantic cod and American plaice, halibut and flounder. While these species have been speculated as returning to pre-moratoria levels, the timing is not known. While the latest stock assessment for Atlantic cod in NAFO Divisions 2J3KL found that the stock has increased considerably over the last decade, the species still remains below pre-moratoria levels, and is still within the critical recovery zone (DFO 2016e). Industry representatives are also cautious about the return of a commercial fishery for Atlantic cod, indicating that while the stock has increased, the species still needs further recovery before consideration can be given for a commercial fishery (CBC 2016). DFO has recently announced that it will begin annual full stock assessments of Atlantic cod, beginning in 2018 (DFO 2017a). These assessments will continue annually for five years, in an effort to more closely monitor the recovery and status of the species and determine whether a future commercial fishery for the species is viable.

The American plaice stock in 3LNO is managed by NAFO, which directs commercial fishing activity for the species. American plaice was placed under a moratorium in 1993 after the collapse of groundfish stocks and has not been lifted. The recent assessment by NAFO of the 3LNO American plaice stock has recommended that no directed commercial fishery take place during 2017 and 2018. Although the stock is still below the threshold to re-open a commercial fishery for the species, the species has been increasing since 2007 (NAFO 2015).

Greenland Halibut (turbot) was identified in Section 3.4, through consultations with industry stakeholders, as a species that has the potential to continue to grow commercially. As a result, commercial fishing activity for Greenland halibut could increase over the life of the Project. This

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

includes in areas of the Flemish Pass, where commercial harvesting activity for Greenland halibut is more common.

7.1.9 Aquaculture

Aquaculture is a growing industry in Newfoundland and Labrador and an important contributor to the province's fisheries sector and economy. The industry experienced growth in 2015, and saw a total production of 22,815 t, an increase of 9,240 t from 2014. The total value of aquaculture production in the province for 2015 was \$161 million, an increase of 172 percent from 2014 (NL DFA 2016). The majority of species farmed in the province are salmonids, including Atlantic salmon and steelhead trout. Blue mussels are the most common shellfish species produced in the province. Aquaculture operations on the east coast of Newfoundland include farms for blue mussels, Atlantic cod, rainbow trout, and oysters, and a tilapia farm on the Avalon Peninsula (Table 7.15). There are no registered aquaculture operations in or near the Project Area or within St. John's Harbour.

Table 7.15 Eastern Newfoundland Aquaculture Operations

Operator	Location	Species Farmed
Keating, Joseph (Baie Sea Farms Limited)	Crawley Island	Blue mussels
Nfld. Game Fish Protection Society Ltd.	Murray's Pond	Rainbow trout
Seward, Claude	Ship Cove, Heart's Ease Inlet, Trinity Bay	Atlantic cod
Merasheen Mussel Farms Inc.	Merasheen Island, Placentia Bay	Blue mussels
Shells & Fins Incorporated	Cap Cove, Lockston, Trinity Bay	Blue mussels
Keating, Joseph (Baie Sea Farms Limited)	Crawley Island, Long Harbour, Placentia Bay	Blue mussels
Merasheen Mussel Farms Inc.	Big South West Cove, Merasheen Island	Blue mussels
Shells & Fins Incorporated	Northwest Arm, Trinity Bay	Blue mussels
Norman, Bernard	Jerseyman Island, Placentia Bay	Atlantic cod
Sapphire Sea Farms Ltd	Bay Bulls	Atlantic cod
Seward, Claude	Square Cliff, Heart's Ease Inlet	Atlantic cod
HSF Ocean Products Ltd	O'Donnell's	Oysters
Lester Farms Inc	92 Pearltown Road, Mount Pearl	Tilapia
Source: T. Budgell, pers comm. (2016)		

7.1.10 Recreational Fishing

Recreational fisheries in Newfoundland and Labrador may occur in coastal and inland waters around the province during specified times of the year. During the designated times in summer and fall, residents and non-residents of Newfoundland and Labrador may participate in a recreational fishery for Atlantic cod. Licenses or tags are not a requirement for this fishery, but commercial fishing operations are not allowed to participate and the catch from the recreational fishery is not permitted

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

to be sold (DFO 2016g). The 2016 Eastern Newfoundland recreational groundfish fishery is summarized in Table 7.16.

Table 7.16 Eastern Newfoundland Recreational Groundfish Fishery, 2016

Species	Season	Individual Retention Limit	Vessel Retention Limit
Groundfish (excluding some species)	Summer: July 01 – September 05, 2016 Fall: September 24 – October 02, 2016	5 groundfish per fisher per day	15 groundfish when 3 or more persons are fishing on the vessel (including tour boats).
Source: DFO (2016g)			

Angling for smelt in coastal waters is permitted in Newfoundland and Labrador year-round, and unlike the recreational fishery for groundfish, there is no bag limit applied for smelt. Angling for salmon, char, and trout in Newfoundland and Labrador is also permitted during certain times of the year, and follow specific regulations pertaining to each species (DFO 2016g). Newfoundland and Labrador has approximately 186 scheduled salmon rivers, divided into different categories or zones. These different zones have specific fishing regulations and requirements associated with them, including bag limits and fishing seasons (DFO 2016g). Currently, there are no known recreational fishing activities undertaken within or near the Project Area. There may be some recreational fishing activity near St. John's Harbour for Atlantic cod during the summer months, when the recreational fishery is active. Currently, there are no commercial or recreational outfitting operations that take place in or near the Project Area – Northern Section or Project Area – Southern Section, as it is over 300 km from the shoreline.

7.2 Other Human Components and Activities

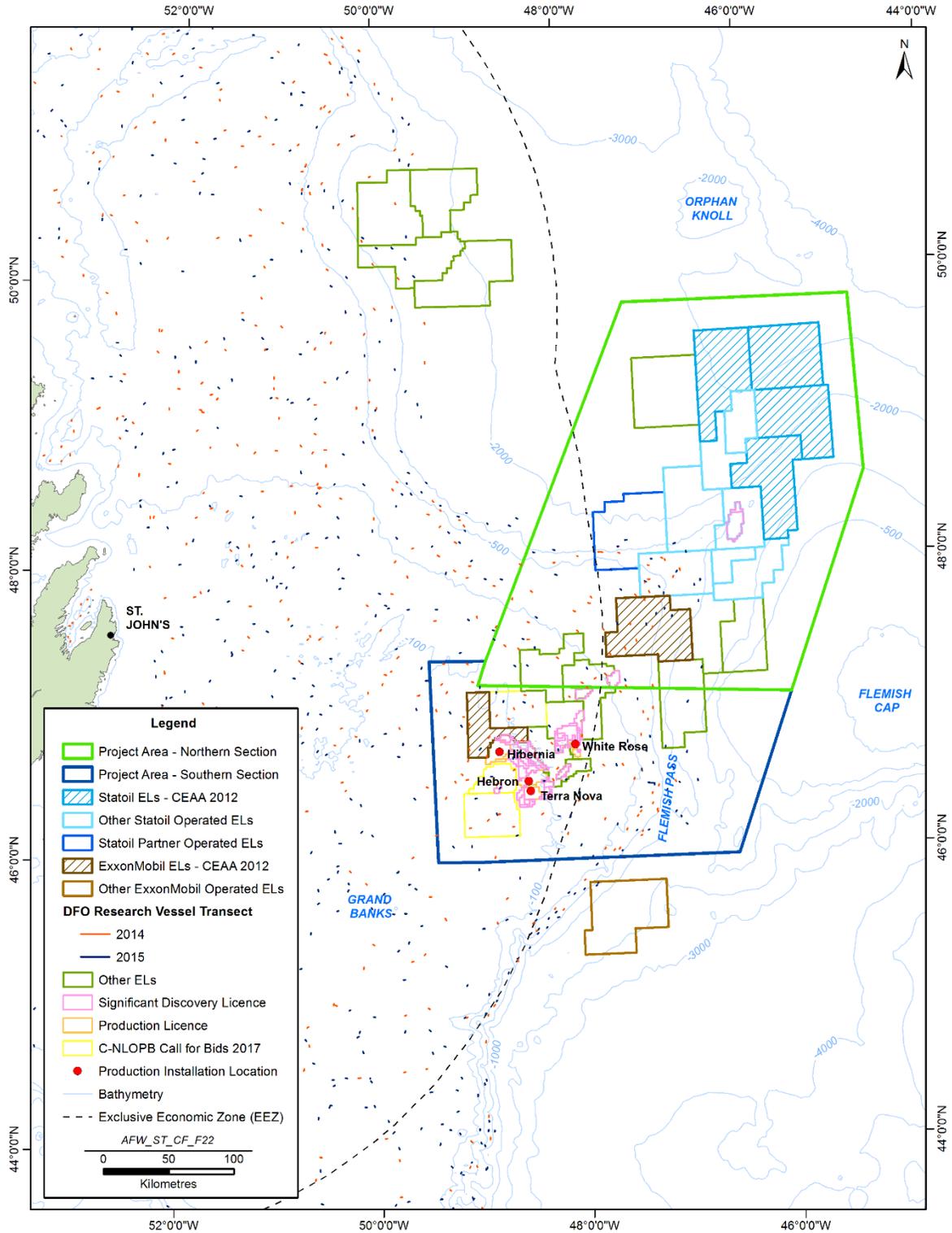
A number of other anthropogenic activities take place in the navigable water of offshore Newfoundland and Labrador that have the potential for interaction with the Project. This section provides an overview of a number of these activities, based on information obtained from relevant government departments and agencies, such as Statistics Canada, DFO, the Canadian Coast Guard, Transport Canada and the Department of National Defence (DND). Websites from various other agencies and groups were also used to obtain data on human activities taking place offshore.

7.2.1 Marine Research

DFO and industry organizations undertake a number of regular research initiatives offshore Newfoundland and Labrador, up to the extent of the 200 nautical mile EEZ. DFO's Atlantic Zone Monitoring Program and the RAPID Climate Change Program study involve bottom trawl surveys to collect information on the marine environment, including commercial fish species, that is also used to inform decisions on the management and monitoring of resources in offshore Newfoundland and Labrador. The spring surveys occur primarily between May and June, while the fall surveys run from early October into December. Along with those surveys, annual DFO research surveys are conducted within NAFO Divisions 3KLNO, and overlap with portions of the Project Area and RSA (see Figure 7-29). The 2017 schedule for DFO research vessel surveys is shown in Table 7.17.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017



Source: DFO (2016f)

Figure 7-29 Locations of DFO Research Vessel Transects, 2014 and 2015

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

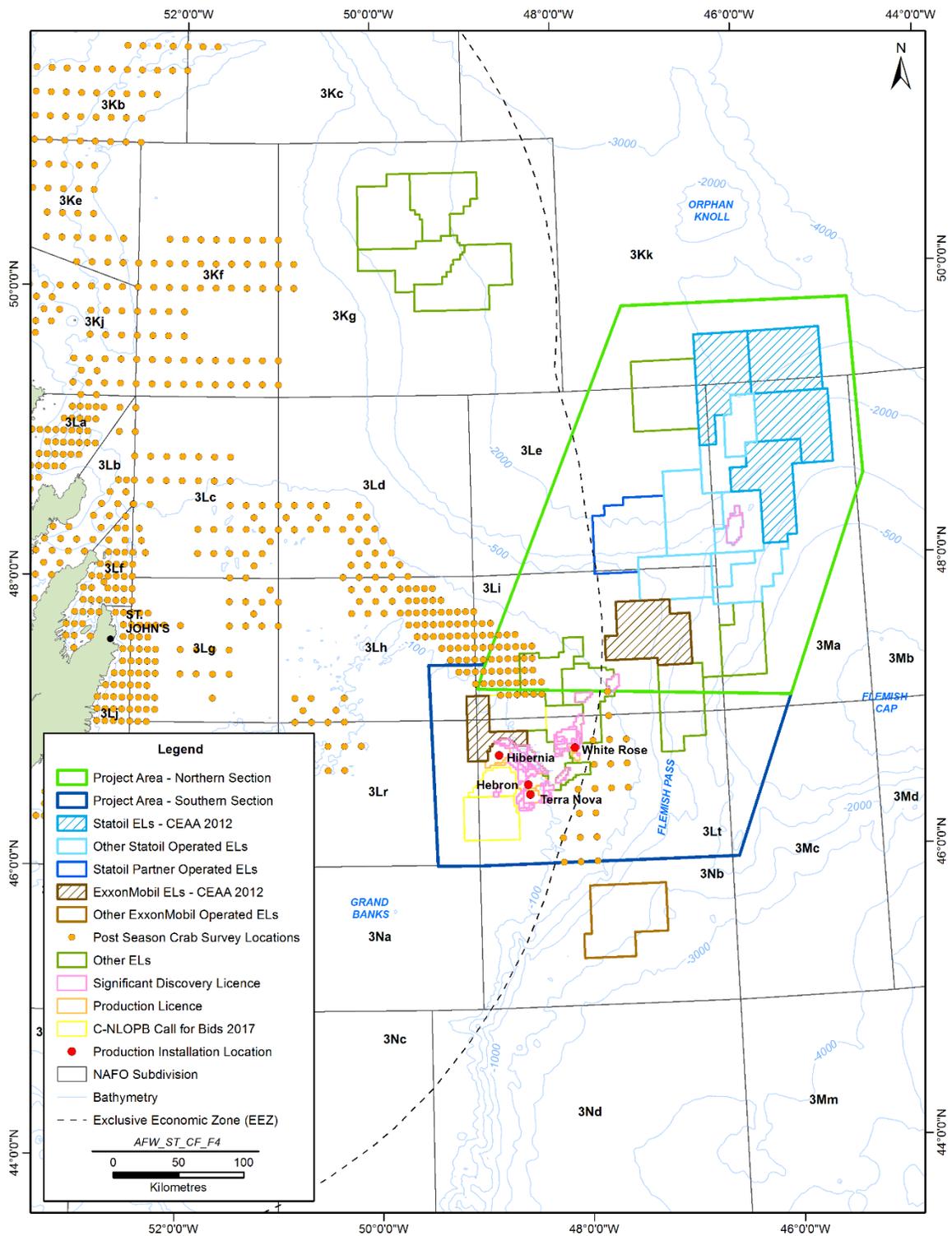
Table 7.17 Schedule of DFO Research Vessel Surveys, 2017

Vessel	Activity	NAFO Division(s)	Planned Start Date	Planned End Date
<i>CCGS Needler</i>	NL Spring Survey	3P	March 31	April 11
		3P	April 12	April 25
		3PO	April 26	May 9
		3ON	May 09	May 23
		3LN	May 24	June 10
	NL Fall Survey	3O	September 13	September 26
		3ON	September 26	October 10
		3NL	October 11	October 24
		3L	October 24	November 7
		3KL	November 8	November 21
<i>CCGS Teleost</i>	NL Spring AZMP	3L	April 4	April 25
	Calibrations	3P+3KLMNO	April 26	May 1
	Capelin Survey	3KL	May 2	May 23
	NL Fall Survey	2H	October 5	October 10
		2H+2J	Oct 11	Oct 24
		2J+3K	October 24	November 7
		3K	November 8	November 21
		3K+3L Deep	November 21	December 5
Source: DFO (2016f)				

DFO, in partnership with the Fish Food and Allied Workers-Unifor (FFAW), undertakes a collaborative annual Post-Season Crab Survey in NAFO Divisions 2J3KLOP4R after the commercial fishery has closed. The survey involves setting fixed gear (crab pots) at various locations in offshore Newfoundland and Labrador. Stations are sampled annually in all CMAs (see Figure 7- 30) to collect scientific data on snow crab, which is then used in developing a biomass index of the species and incorporated into the assessment and management of the species. Each year approximately 1,500 stations are sampled in all CMAs. The survey covers a broad portion of the Grand Banks, including areas near offshore installations and offshore supply vessel traffic routes.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017



Source: Amec (2014)

Figure 7-30 DFO-Fishing Industry Post-season Crab Survey Locations

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

7.2.1.1 Project Area - Northern Section

As illustrated in Figure 7-29 and 7-30, and in Table 7.17, the majority of marine research efforts in the region are directed on the Grand Banks, outside of the Project Area - Northern Section. The research that does exist in the Project Area - Northern Section occurs in the southwestern portion.

7.2.1.2 Project Area - Southern Section

Figures 7-29 and 7-30, and Table 7.17 illustrate a greater density of marine research efforts in the Project Area - Southern Section, particularly with regard to crab survey locations. However, the majority of the research effort is directed in other parts of the area, on the Grand Banks and closer to shore.

7.2.1.3 Potential Vessel and Aircraft Traffic Routes

Potential vessel and aircraft traffic routes intersect with areas known to support marine research efforts in the region on the Grand Banks and approaches to St. John's harbour.

7.2.2 Marine Shipping

In 2011, there were approximately 698 international shipping movements out of or into Eastern Newfoundland ports that handled some 16,654 t of cargo. During that same year, there were approximately 3,044 domestic movements, which moved approximately 27,248 t of cargo (Amec 2014). St. John's Harbour is one of the busiest ports in Newfoundland and Labrador, and has the most industrial infrastructure. It has also been recognized as a port with domestic and international shipping importance, and is managed by the St. John's Port Authority (Amec 2014). In 2015, St. John's Harbour had approximately 1,358 vessel arrivals, of which approximately 57 percent were related to the offshore energy industry (B. McCarthy, pers comm 2016). Identified and established shipping lanes in the navigable water of offshore Newfoundland and Labrador are shown in Figure 7-31. Shipping lanes transect through both the Project Area and the larger RSA, and could be used by international shipping not bound for ports in Newfoundland.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

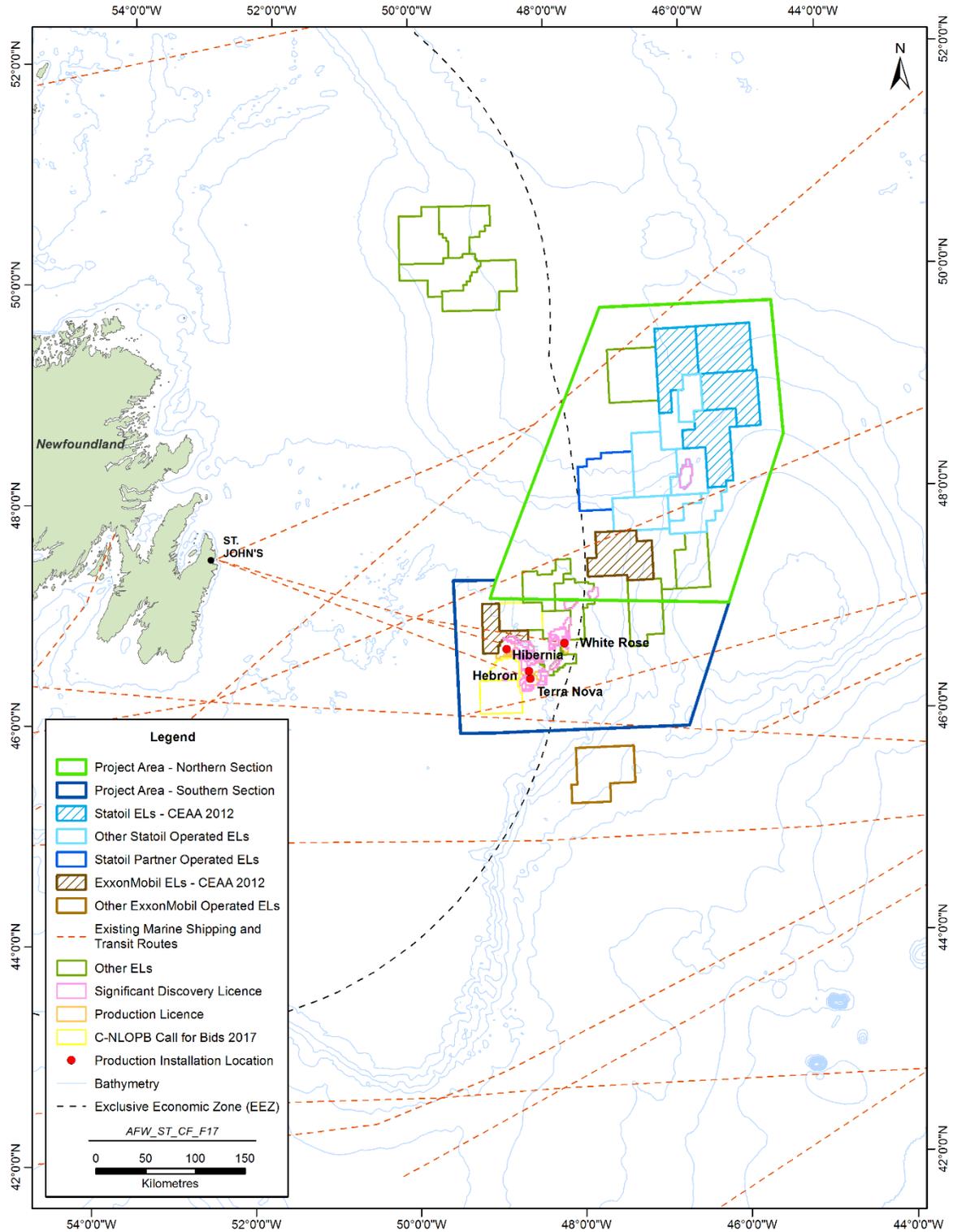


Figure 7-31 Existing Marine Shipping Lanes and Transit Routes

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

7.2.3 Other Offshore Oil and Gas Activity

Oil and gas exploration and development is an established industry in offshore Newfoundland and Labrador. Production activities for oil and gas have been occurring in the region since 1997, with activities related to exploration since 1963.

Oil and gas exploration activities have been high since exploration on the Grand Banks began. More than 420 wells have been drilled, including over 165 exploration wells, over 55 delineation wells and 200 development wells (Figure 7-32). This has led to more than 50 Significant Discovery Licenses (SDL), and 11 Production Licenses (PL) being issued in offshore Newfoundland and Labrador.

7.2.3.1 Project Area - Northern Section

Within the Project Area - Northern Section there are no current production licenses. As of October 22, 2017, there are 2 SDLs (operated by Statoil), along with 16 other ELs. Out of the 16 ELs in the Project Area, Statoil holds interest in 12 ELs and ExxonMobil holds interest in 5. Statoil has drilled more than 15 exploration and / or delineation wells in this area. In addition, numerous geophysical surveys have occurred in the area. Of the 5 ELs in this area ExxonMobil is the operator of 1 EL. There are 49 SDLs in the area, of which ExxonMobil and Statoil hold interest in 23 and 27, respectively. Exploration drilling and production activities are ongoing in this area along with the collection of geophysical data.

7.2.3.2 Project Area – Southern Section

The Jeanne d’Arc Basin is currently host to three producing oil fields in offshore Newfoundland and Labrador: Hibernia (Hibernia Management and Development Company), Terra Nova (Suncor Energy Inc.), and White Rose (Husky Energy Inc.). Hebron (ExxonMobil Canada Properties), the newest production field within the Jeanne d’Arc Basin, has commenced operations and is expecting to produce first oil in 2017.

7.2.3.3 Potential Vessel and Aircraft Traffic Routes

There are no current production or exploration licences along the potential vessel and aircraft traffic routes. However, due to the ongoing and planned activity in the Project Area - Southern Section and Project Area - Northern Section, there is vessel and helicopter traffic servicing the oil and gas industry in this area.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

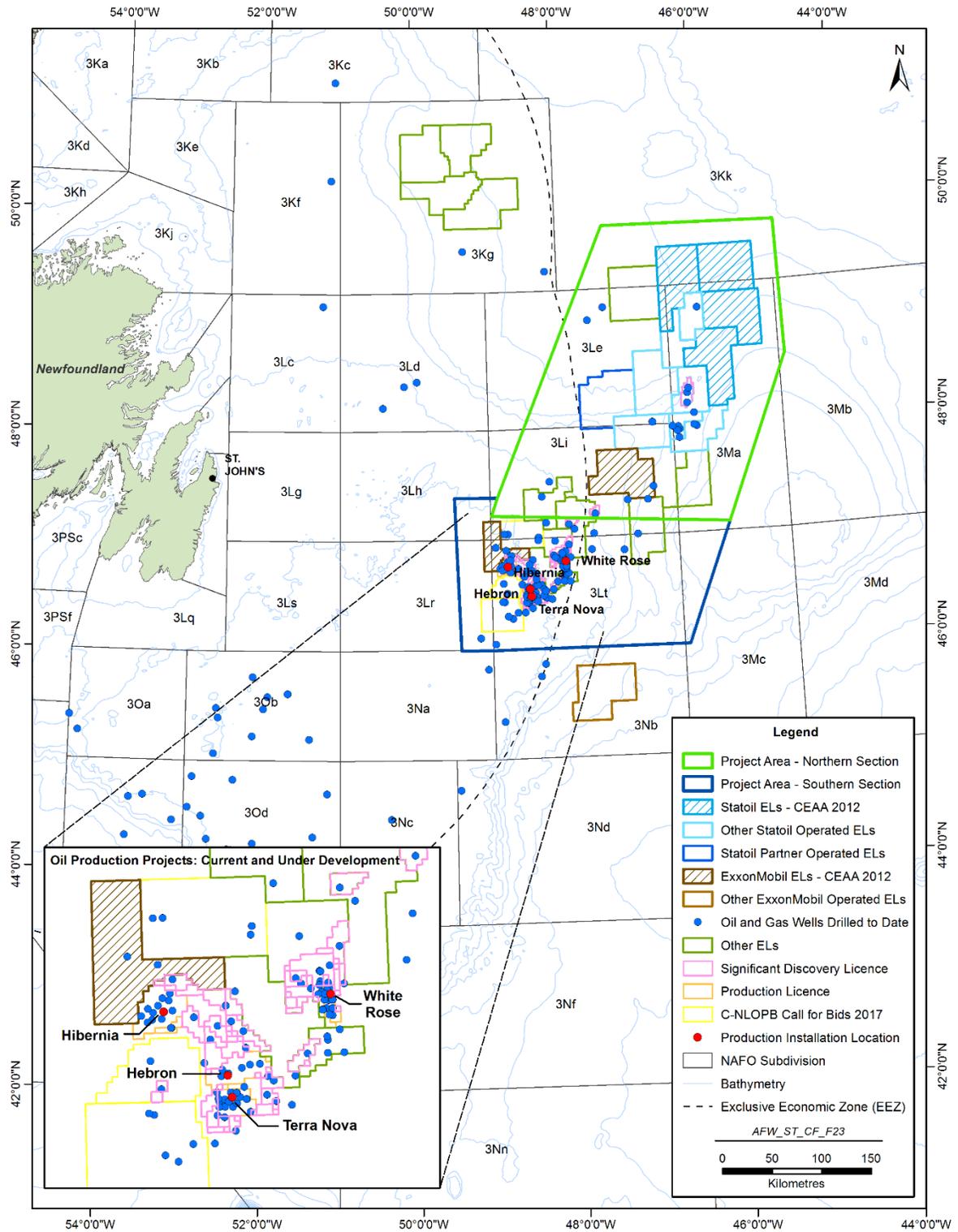


Figure 7-32 Oil and Gas Wells Drilled Offshore Eastern Newfoundland

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

7.2.4 Military Operations

The Department of National Defence (DND) is responsible for the national security of Canada, including the defence and protection of waters under Canada's jurisdiction. As a result, the Royal Canadian Navy and Air Force routinely conduct training exercises and surveillance operations throughout Atlantic Canada, including the waters offshore Newfoundland and Labrador. These operations include the use of marine patrols and aircraft off eastern Newfoundland, and potentially the Project Area. On occasion, military vessels will support research initiatives or fishery patrols by DFO (Amec 2014).

In the past, many sites across Canada have been used for military training and weapons testing by DND. Legacy sites exist across Canada's coastline where unexploded ordnance (UXO) may remain, and there are 1,100 known UXO sites off Canada's east coast (Amec 2014). Figure 7-33 depicts shipwreck and legacy sites off Newfoundland and Labrador, relevant to the Project Area and RSA. Currently, there are no identified shipwrecks or legacy sites within the Project Area. There is a legacy site that exists just north of the Project Area - Northern Section, near the Orphan Knoll (DCC 2016).

7.2.5 Other Marine Infrastructure

Marine subsea cables are known to be present within the RSA (Amec 2014), but the majority are inactive or abandoned. A map showing the location of subsea cables in the region is presented in Figure 7-34.

7.2.5.1 Project Area - Northern Section

As illustrated, 13 subsea cables are located within the Project Area - Northern Section, including two active cables (Table 7.18).

7.2.5.2 Project Area - Southern Section

There is only one subsea cable within the Project Area - Southern Section: the abandoned 2HO telegraph cable (see Table 7.18) which also runs through the Project Area - Northern Section. There is an active fibre optic cable running from the Avalon peninsula to Hibernia and Hebron.

7.2.5.3 Potential Vessel and Aircraft Traffic Routes

Figure 7-34 shows the locations of several abandoned subsea cables intersecting the potential vessel and aircraft traffic routes, most of which also intersect the Project Area - Northern Section (see Table 7.18). There are no active subsea cables in this area.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

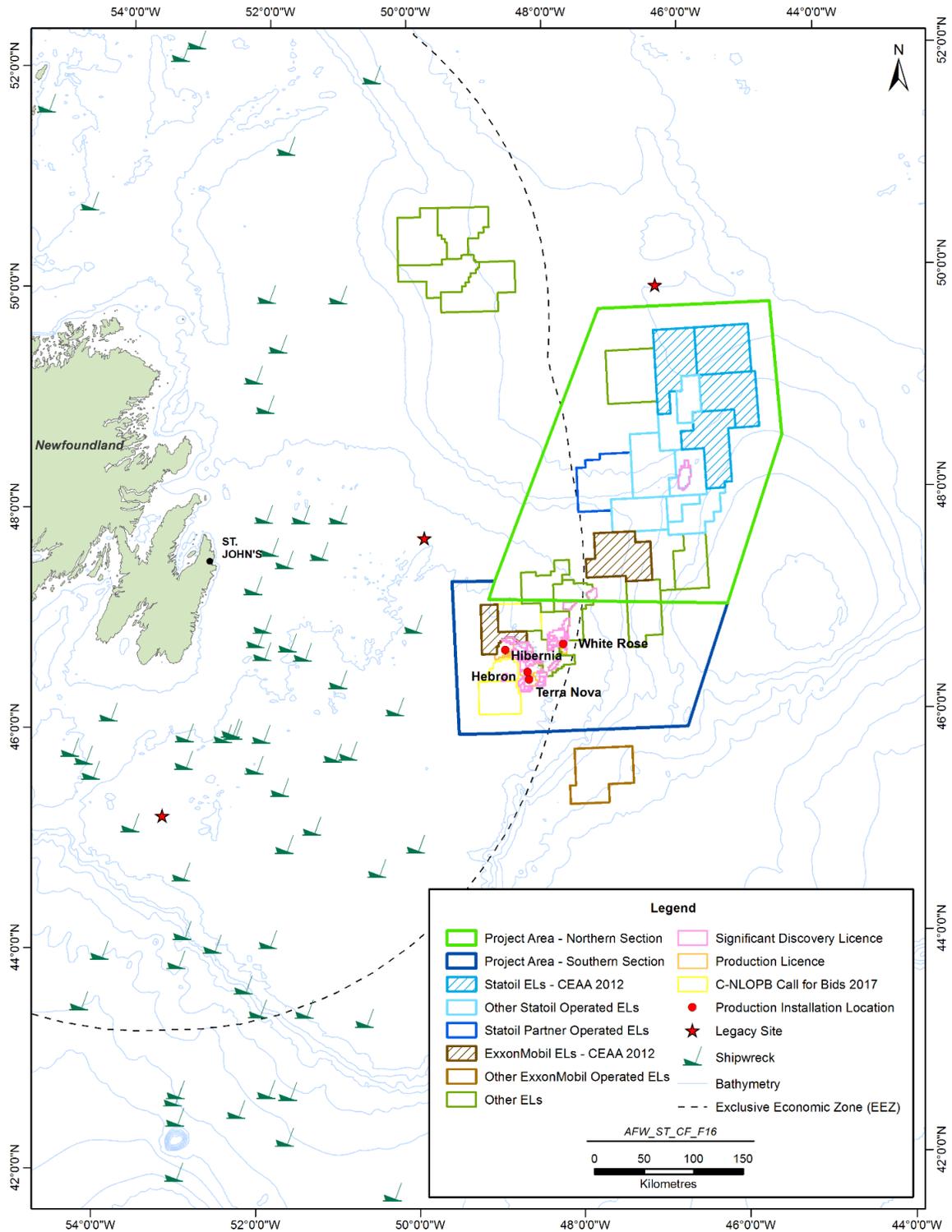
Existing Human Environment
December 2017

Table 7.18 Subsea Cables Within the Project Area - Northern Section

Name	Type	Status	Connecting
1PZ	Telegraph	Abandoned	Beach Cove East to Penzance
2HO	Telegraph	Abandoned	Bay Roberts to Horta
2VA	Telegraph	Abandoned	Hearts Content to Valencia
3PZ	Telegraph	Abandoned	Beach Cove East to Penzance
4PZ	Telegraph	Abandoned	Beach Cove to Sennen Cove
4VA	Telegraph	Abandoned	Hearts Content to Valencia
NFLD-1	Telegraph	Abandoned	N/A
NFLD-3	Telegraph	Abandoned	N/A
SP-EUR	Telegraph	Abandoned	St. Pierre et Miquelon to Europe
TAT-2	Telephone	Abandoned	Penmarch to Clarenville
TAT-2	Telephone	Abandoned	Penmarch to Clarenville
CE Hebron-BU2 RPL 0-02 110506	Communications	Active	Hibernia/Hebron Platform
Hibernia Canada Express Cable Issue 11	Communications	Active	Herring Cove (NS) to Europe
Note: This dataset was compiled by DFO, using information obtained from various sources.			
Source: DFO (2015b)			

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017



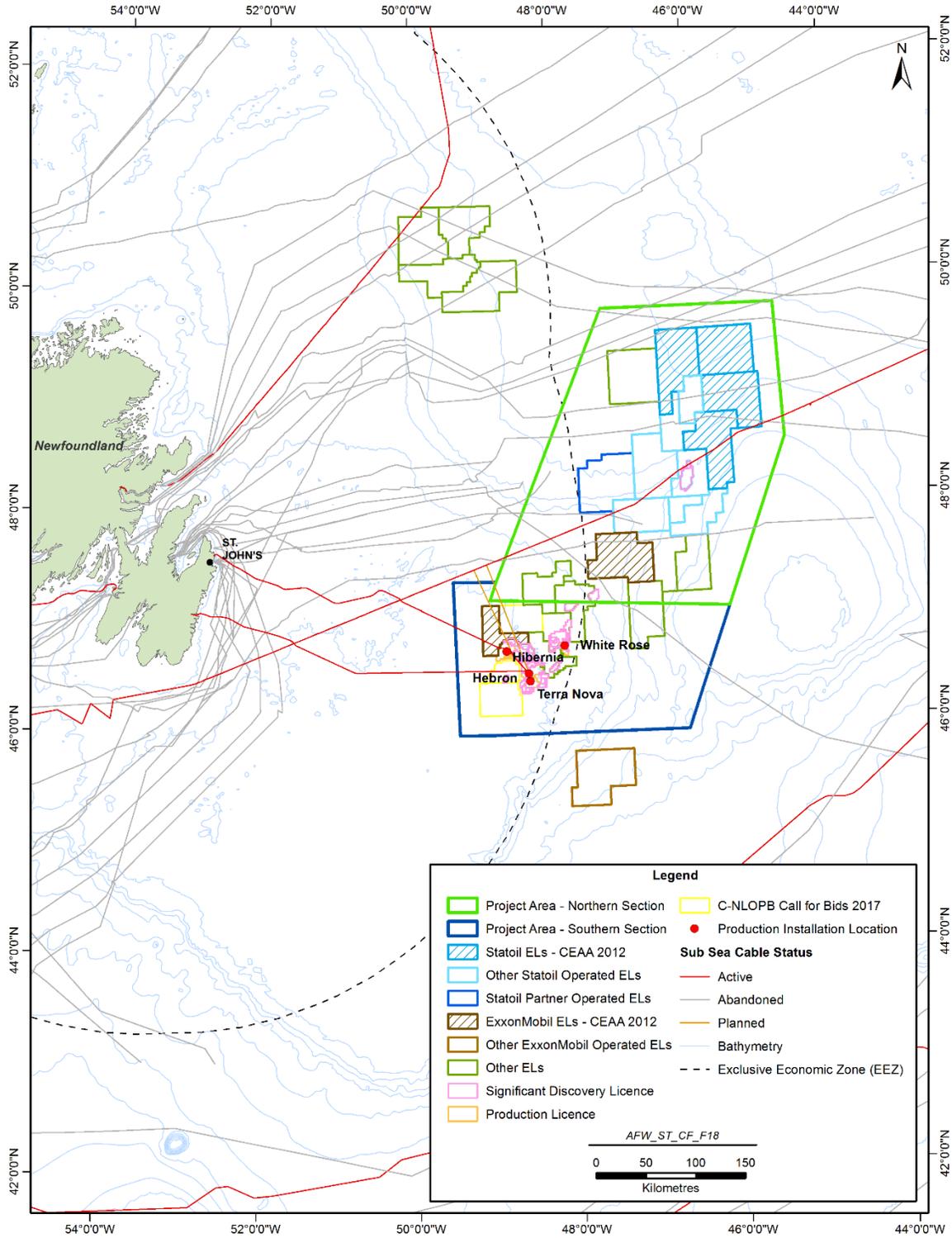
Source: DCC (2016)

Figure 7-33 Known Shipwreck and Legacy Sites in Offshore Newfoundland and Labrador



Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017



Source: DFO (2015b)

Figure 7-34 Subsea Cable Locations Offshore Newfoundland and Labrador

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

7.3 Indigenous Communities and Activities

This section provides general information related to Indigenous groups in Newfoundland and Labrador (NL), Nova Scotia (NS), New Brunswick (NB), Prince Edward Island (PEI), and Quebec (QC). In accordance with Section 6.1.8 of the EIS Guidelines, this section provides an overview of the Indigenous groups and their activities.

A key focus of this analysis is on assessing and evaluating the potential for the Project, and the various changes to the environment that may be associated with it, to interact with and affect Indigenous Peoples, including each of the socio-cultural aspects identified in Section 5(1)(c) of CEEA 2012, and summarized in this section. As illustrated in Chapter 2 and throughout this section of the EIS, the Project components and activities will be located at a considerable distance from the Indigenous communities, their activities, and other known interests associated with each of the Indigenous communities. Due to the fact that the Project activities and Indigenous communities' activities are unlikely to directly geographically overlap, the assessment focuses on marine migratory species that are of interest to Indigenous communities that may have the potential to interact with the Project.

A variety of sources were considered in order to understand and describe the Indigenous peoples and communities, including: personal meetings, phone conversations, correspondence, publicly available land claims documentation, government documents and community websites. In addition to these sources, the Operators also reviewed publicly available reports and studies, including traditional use information, completed for other resource development projects and their EAs applicable to the Project.

Traditional Knowledge pertaining to the Project has been acquired through existing publicly available information and engagement with communities. Given the extensive distance of the Project Area from identified Indigenous Groups, Traditional Knowledge that has been shared or gathered to date pertains primarily to migrating marine fish and mammal species of importance to Indigenous communities (i.e., Atlantic salmon, American Eel, North Atlantic right whale, seals) that may travel through or near the Project Area and subsequently which may or may not be harvested by the community (as outlined in Chapter 3). In terms of potential impacts from the Project on these species, communities have expressed concerns related to operational impacts and possible accidental events and/or spills. The potential for impacts to migratory species from normal drilling operations are predicted to be low due to the following factors (as identified in Chapters 8-13):

- The localized nature of operational activities
- The associated short duration of these activities
- The low probability of species interaction with operational discharges and emissions due to their migratory nature
- The limited potential for biological effects if individuals were exposed to drilling discharges

Regarding accidental events, as detailed in Chapter 15 of the EIS, the likelihood of a significant accidental event taking place is extremely unlikely. The potential for impacts to migratory marine fish

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

and mammal species from an accidental event are predicted to be very low due to the following factors

- The extremely low probability of a large spill occurring
- The low likelihood of biological effects due to the transitory nature of migratory fish and mammals and their general avoidance behaviour
- The Operator's spill response measures, in the event of a spill, further reduces potential for effects

In addressing concerns related to potential spills within the EIS (Chapter 15), the Operator has defined its comprehensive approach to spill prevention, mitigation and response. In addition, the Operator has made a commitment to develop an Indigenous Communities Fisheries Communication Plan (see Chapter 12.5), of which a component will address communication in the unlikely event of a spill or accidental event. The Plan will be developed in collaboration with Indigenous groups. As also noted previously, the Operator is committed to continuing to engage with Indigenous groups to seek further input, recognizing the nature and overall scope of the Project.

Community statistics are provided for each First Nation, Innu, Inuit and Metis communities. It should be noted that Indigenous populations reported by Indigenous and Northern Affairs Canada (INAC) differ from those reported by Statistics Canada. This is because population data reported by INAC include the total number of Registered members of the community, while community populations reported by Statistics Canada include the total number of Indigenous and non-Indigenous people living on Reserve. In addition, limited data have been released from the 2016 Census and some data from the National Household Survey 2011 are suppressed for confidentiality due to the small populations involved. Where limited information was available on particular aspects, such as community health or land and resource use in the Indigenous communities, more general information has been provided at the regional or provincial level.

The sub-sections that follow provide a brief overview of the history and current socioeconomic conditions of each Indigenous community, while focusing on those aspects that may have potential to interact with the Project and / or which are otherwise specified in the EIS Guidelines. For example, given the Project is in the marine environment, the description of current land and resource use for traditional purposes focuses on marine-associated migratory species. This includes a discussion of food, social and ceremonial (FSC) fishing and commercial-communal fishing.

The 1990 Sparrow judgment of the Supreme Court of Canada (SCC) determined that Indigenous groups have the right to fish for Food, Social and Ceremonial (FSC) purposes, independent of any treaty, provided that certain criteria are met. That right has priority over other fishing practices, but it is subject to conservation policies related to species and habitat conservation. In response, DFO created the Aboriginal Fisheries Strategy (AFS) in 1992 to provide a co-management framework for fishing by Indigenous groups, under which communal fishing licences for FSC purposes are issued. A component of the AFS is the Allocation Transfer Program, whereby commercial fisheries quotas are transferred to Indigenous groups (DFO 2012). Following a review of the AFS, DFO created the Indigenous Aquatic Resource and Oceans Management (AAROM) program in 2003, which provides funding to Indigenous organizations to develop administrative, scientific and technical expertise for aquatic resource and oceans management (Charest et al. 2012).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

The 1999 Marshall decision of the Supreme Court of Canada (SCC) recognized the treaty rights of the 34 Mi'kmaq and Maliseet communities in Nova Scotia, PEI, New Brunswick and the Gaspé region to harvest and sell fish in a manner that ensures a moderate livelihood, and noted that those rights are communal (INAC 2010). In response, DFO created the Marshall Response Initiative (2000) to finance increased Indigenous participation in commercial fisheries; and then the Atlantic Integrated Commercial Fisheries Initiative (AICFI) (2007), which provides mentoring and training to build commercial fisheries capacity in Mi'kmaq and Maliseet communities in New Brunswick, Prince Edward Island, Nova Scotia and the Gaspé region (UInooweg Development Group (UDG) 2016).

Each community described below hold either FSC, commercial-communal and/or regular commercial fishing licences. Currently, there are no known FSC fisheries that occur within the Project Area. Where treaty-based commercial-communal licences to fish have been granted to a community by DFO, a right to fish exists, regardless of whether that right is exercised.

7.3.1 Newfoundland and Labrador

Indigenous groups that reside in Newfoundland and Labrador include (Figures 7-35 and 36):

- Labrador Inuit (Nunatsiavut Government)
- Labrador Innu (Innu Nation)
- NunatuKavut Community Council (NCC)
- Qalipu Mi'kmaq First Nation
- Miawpukek First Nation

Community profiles are provided for each Indigenous community in the following sections.

7.3.1.1 Labrador Inuit

General Overview

The Labrador Inuit, descendants of the pre-historic Thule people, occupy most of the Atlantic coast in Northern Labrador (Nunatsiavut Government 2017). Their traditional territory extends from Cape Chidley in the north, to south of Groswater Bay and west to the Labrador-Quebec border (Figure 7-35) (Nalcor Energy 2011).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

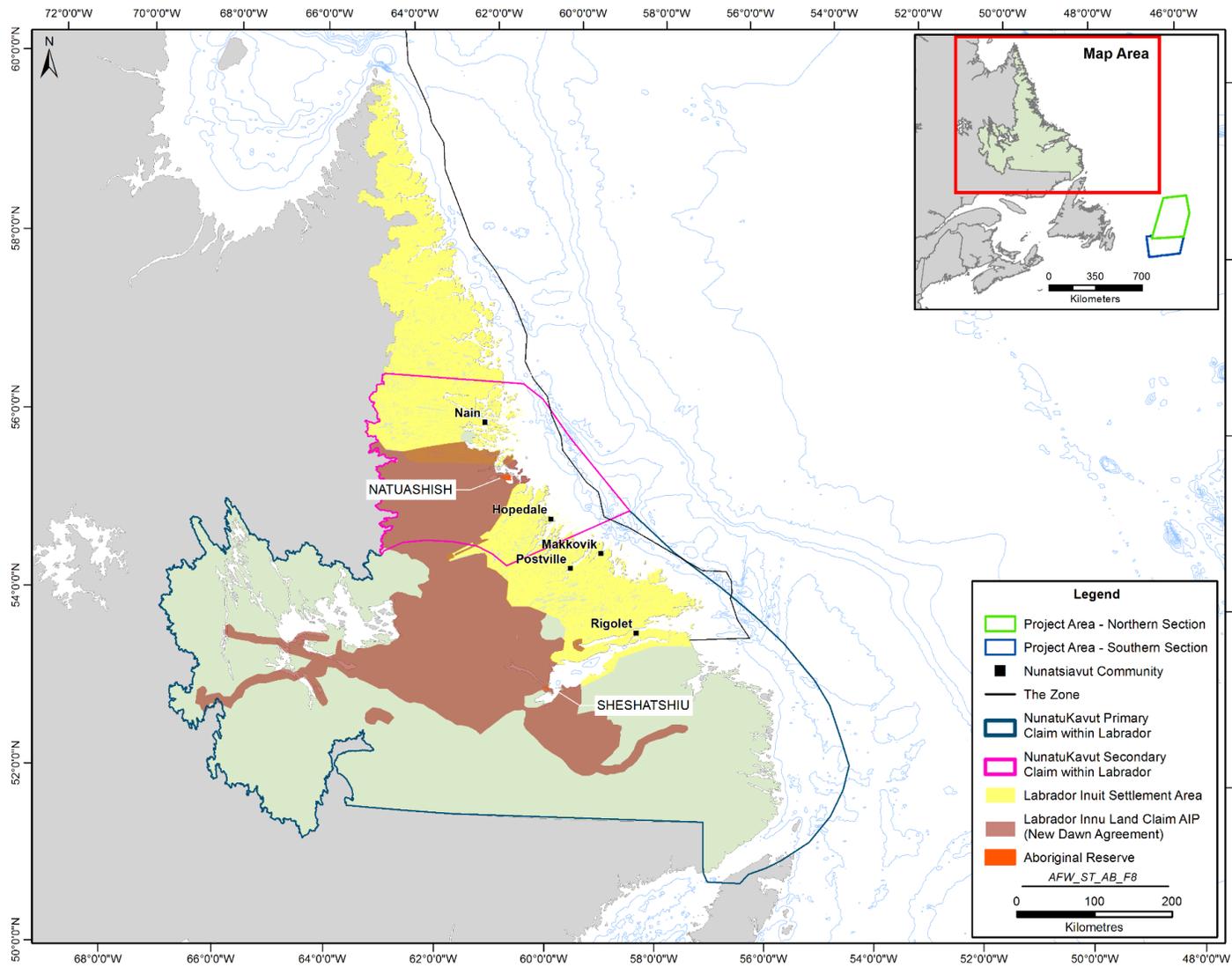


Figure 7-35 Indigenous Communities and Lands in Labrador

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

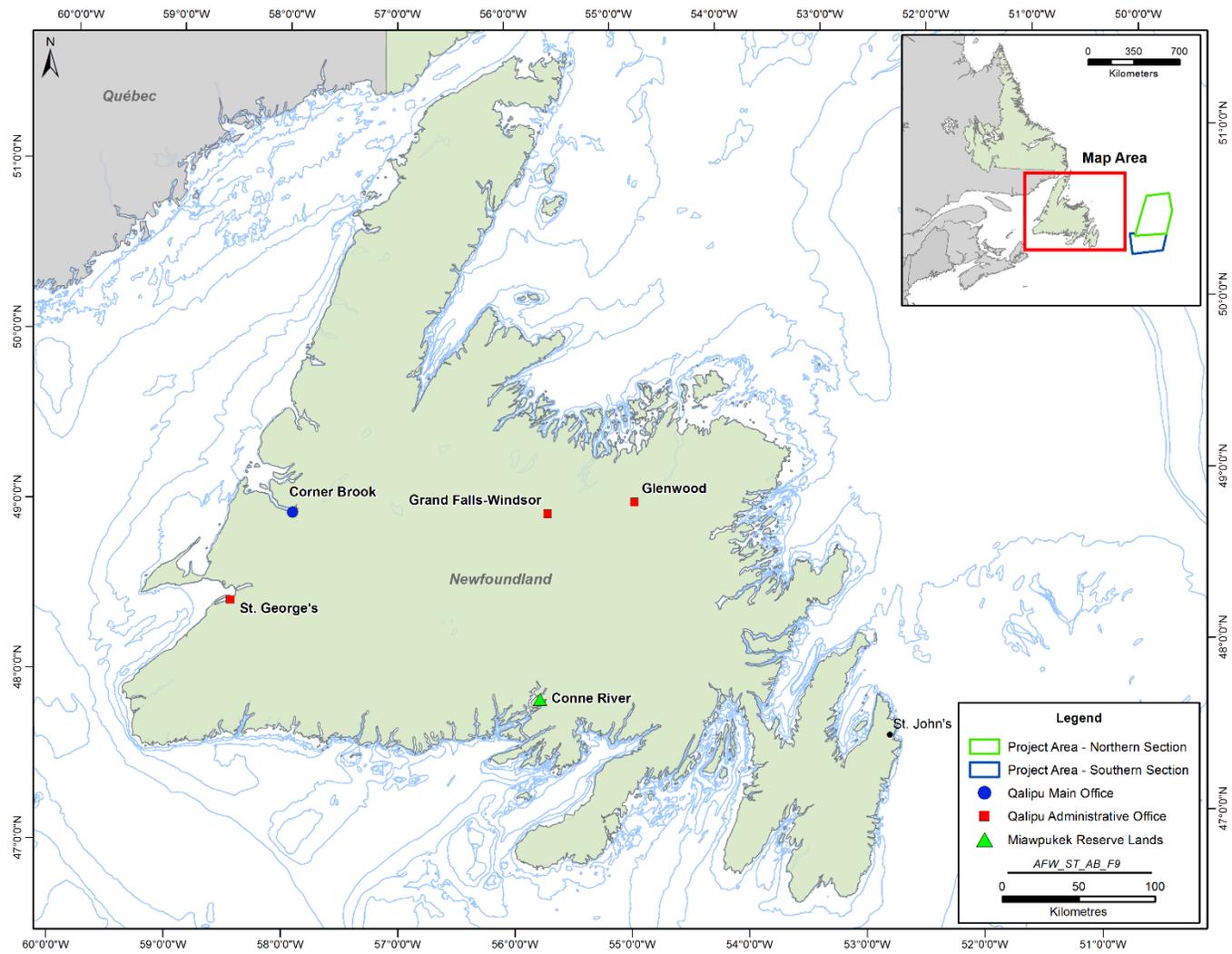


Figure 7-36 Indigenous Communities and Lands in Newfoundland

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

The Nunatsiavut Government, an Inuit regional self-government, was established following three decades of land claims negotiations between the Labrador Inuit Association (LIA) and the Governments of Canada and Newfoundland and Labrador. The *Labrador Inuit Land Claims Agreement* (LILCA) came into effect on December 1, 2005 and sets out the details of land ownership, resource-sharing and self-government within the established Labrador Inuit Settlement Area (LISA), and provides for harvesting rights in and outside the LISA. The LILCA is a treaty and a land claims agreement within the meaning of sections 25 and 35 of the *Constitution Act*, 1982. As per the LILCA, Nunatsiavut Government power and authorities include the administration and control of Labrador Inuit Lands, and the development, conservation, and management of these lands. The LISA (Figure 7-34) is comprised of approximately 72,500 km² of land in northern Labrador, of which 48,690 km² is within the Labrador Sea (Nalcor Energy 2011). Labrador Inuit Lands are approximately 15,799 km² in area, within the LISA boundary. The Project does not overlap with any of the lands covered by this treaty.

The Nunatsiavut Government represents over 6,000 beneficiaries and is comprised of five Inuit community governments representing the Inuit communities of Nunainguk (Nain), Aqviuq (Hopedale), Marruuvik (Makkovik), Qipuqqaq (Postville) and Kikiak (Rigolet) (Nunatsiavut Government 2017; Sikimiut Environment Management Ltd. 2011). These communities originated as either a trading post or station for Moravian Missionaries in the late 18th and early 19th centuries (Nalcor Energy 2011). Population estimates for the five communities are provided in Table 7.19. Two of the communities have seen an increase in population from 2011 to 2016 including Hopedale and Makkovik whose populations increased 3.2 and 4.4 percent, respectively. Nain, Postville, and Rigolet saw decreases of 5.3, 14.1, and 0.3 percent, respectively (Statistics Canada undated(a) [based on 2016 census data]). The population of Labrador Inuit is relatively young with the median age ranging from 28 to 35 years of age (Statistics Canada undated(b) [based on 2011 census data]).

Table 7.19 Labrador Inuit Population Overview, 2016

Community	Location	Population
Hopedale Inuit Community Government	Hopedale, NL	574
Makkovik Inuit Community Government	Makkovik, NL	377
Nain Inuit Community Government	Nain, NL	1,125
Postville Inuit Community Government	Postville, NL	177
Rigolet Inuit Community Government	Rigolet, NL	305
Source: Statistics Canada undated(a)		

The Nunatsiavut Government includes two Inuit Community Corporations, whose chairpersons represent their constituents in the Nunatsiavut Assembly in order to facilitate the participation of Inuit living outside of the LISA's. These are the NunaKatiget Inuit Community Corporation serving beneficiaries residing in Happy Valley-Goose Bay (HVGB) and Mud Lake, and the Sivunivut Inuit Community Corporation serving beneficiaries residing in North West River and Sheshatshiu (Nalcor Energy 2011).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Health and Socioeconomic Conditions

Infrastructure and Services

The Labrador Inuit communities are accessible for most of the year by air and sea, and accessible by snowmobile in the winter. Coastal communities are serviced by ferries operated by the Government of Newfoundland and Labrador in the ice-free season. Regional airlines, such as Air Borealis and Provincial Airlines (PAL), service several Labrador Inuit communities.

Based on 2011 census data (Statistics Canada undated(b)), there are a total of 810 dwellings within the five communities, approximately 40 percent of which are in Nain. Housing characteristics for each community is provided below in Table 7.20.

Table 7.20 Housing Characteristics by Community, 2011

Community	Number of Dwellings			Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented			
Hopedale	170	125	35	70	\$62,026	4.8
Makkovik	125	110	20	75	\$68,135	5.6
Nain	330	185	145	130	\$79,017	5.7
Postville	70	45	30	40	\$73,591	5.5
Rigolet	115	90	25	55	\$74,958	5.3

Source: Statistics Canada undated(b)
Note: The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

The Labrador School Board provides primary and secondary education to children in Inuit communities. There is a school in each of the five communities, four of which offer kindergarten to grade 12 and one that offers grades 4 to 12 (Nalcor Energy 2011).

There are Royal Canadian Mounted Police (RCMP) detachments and volunteer fire brigades in Nain, Rigolet, Makkovik and Hopedale (Nalcor Energy 2011). Recreational activities take place in the school gymnasiums in most of the communities. Recreational activities also occur in the Nain Husky Centre, including an indoor arena for hockey, skating and broomball, and the Native Spirit Youth Centre in Rigolet (Nalcor Energy 2011).

The Department of Health and Social Development, one of seven departments of the Nunatsiavut Government, is responsible for the health and social development needs of the people (Nunatsiavut Government, Department of Health and Social Development 2013). There are several health services provided to the Inuit communities, including home care, health promotion, healing services and mental health services, and public health nurses provided by the Nunatsiavut Government. There is a medical clinic, operated by Labrador-Grenfell Health, in each community visited by a physician every four to six weeks; dentist visits to the communities are periodic. Patients in all these

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

communities may be transferred to a referral centre by air ambulance in an emergency (Nalcor Energy 2011).

Community Health

A health survey conducted in Nunatsiavut in 2008 (Egeland 2010) indicated that 70% of participants considered their health to be good, very good, or excellent (Egeland 2010). Common health problems included heart disease, diabetes, high blood pressure, cancer, and high cholesterol (Egeland 2010). A Regional Health Plan (2013-2018) was developed to improve the health and quality of life for Labrador Inuit. The plan was developed to guide the employees, programs and services for the Department of Health and Social Development. The department emphasizes the importance of physical, mental, social, and spiritual well-being within the context of a strong Inuit cultural system, and aims to provide programs that are designed to build upon these strengths (Nunatsiavut Government, Department of Health and Social Development 2013).

Economy

Economic indicators for 2011 for the five Labrador Inuit communities are presented in Table 7.21. In 2011, the participation rates (the total labour force, comprised of those who are employed and unemployed combined, relative to the size of the working-age population) ranged from 57.3 to 70.8 percent (Statistics Canada undated(b)). Employment and unemployment rates ranged from 37.5 to 46.9 percent and 26.3 to 44.1 percent, respectively.

Table 7.21 Economic Indicators for the Labrador Inuit Communities, 2011

Indicator	Hopedale	Makkovik	Nain	Postville	Rigolet
Participation Rate (%)	60.9	68.4	57.3	59.4	70.8
Employment Rate (%)	41.4	43.9	42.1	46.9	37.5
Unemployment Rate (%)	32.1	35.9	26.5	26.3	44.1
Average Individual Income (\$)	28,958	32,107	27,837	-	27,784

Source: Statistics Canada undated(b)
Note: '-' means data not available

The Labrador Inuit hold commercial-communal licences as described in detail below. There is a fishery operations base in Nain, used for the processing of char and turbot and employs 20 to 60 workers seasonally (Fugman 2010, in Nalcor Energy 2011). In Hopedale, the Torngat Fisheries provide employment opportunities in the scallop, snow crab, shrimp, whelk, and seal harvests and are looking at opportunities for a processing facility (Town of Hopedale 2005). In Postville, employment has been created through the crab, shrimp, and turbot fishery; however, there has been a slow economic growth due to the moratorium on the cod and other groundfish species (Town of Postville 2003).

The main other industries for the Labrador Inuit include public administration, health care and social assistance, mining, and tourism (Statistics Canada undated(b); Nalcor Energy 2011). Major employers are the Nunatsiavut Government, the Labrador Inuit Development Corporation, the Inuit

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Community Government of Nain, and the Voisey's Bay Mine/Mill (Nalcor Energy 2011). Economic opportunities include: new or expanded mining and quarrying operations, offshore oil and gas exploration, tourism opportunities with a growing number of visitors to Torngat Mountains and the proposed Mealy Mountains National Parks, cruise ships, individualized boat and snowmobile tours and sportspersons using outfitters (LISA Regional Planning authority 2010, in Nalcor Energy 2011).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

The Labrador Inuit are culturally and linguistically part of the Inuit peoples who occupy the Arctic and parts of the sub-Arctic, from Alaska east across northern Canada, Greenland, and the Arctic edges of the former Soviet Union, and represent the most southerly expansion of this culture (VBNC 1997). The Labrador Inuit are descendants of the prehistoric Thule, hunters drawn to Labrador for the large number of whales and wildlife (Nunatsiavut Government 2017). The earliest ancestors lived primarily along the north coast and travelled all over northern Labrador to harvest resources from the land and sea (Nunatsiavut Government 2017). For the Inuit culture, "land" includes adjacent sea ice and the relationship with the marine environment is complex, unique, and crucial to their way of life as land and sea are often barely distinguishable in winter, and landfast ice is as much a part of Inuit life and heritage as the land itself (VBNC 1997).

The pre-contact Inuit lifestyle consisted of harvesting during all seasons for food, clothing, shelter and tools and movements that followed the seasons and migratory movements of the animals (Nalcor Energy 2011). Following European activity and establishment of the Moravian missions, there were dramatic and lasting changes in traditional Inuit culture, settlement, and subsistence patterns (VBNC 1997). The Inuit became increasingly involved with a market economy and adapted new technologies in the late 19th century and early part of the 20th century to earn income from industries focused on trapping and seal hunting, as well as cod, char, and salmon fishing (Nalcor Energy 2011).

Following the establishment of a hospital, school, and boarding facilities for Inuit children, the Inuit began to permanently occupy North West River and Goose Bay areas around 1915 (Nalcor Energy 2011). In the 1950s, during federal government relocation projects, many Inuit moved to Nain. Most Labrador Inuit now live in Nain, Hopedale, and Makkovik, settlements founded by Moravian missionaries in 1771, 1782 and 1896, respectively (Canadian Encyclopedia 2016).

Under the LILCA, archaeological resources are recognized to be "...of ethnological, spiritual, cultural, historic, religious and educational importance to Inuit" (Torngasok 2013). There are approximately 1,800 known archaeological sites within the land claim area (Torngasok 2013). There are no known sites in or near the Project Area.

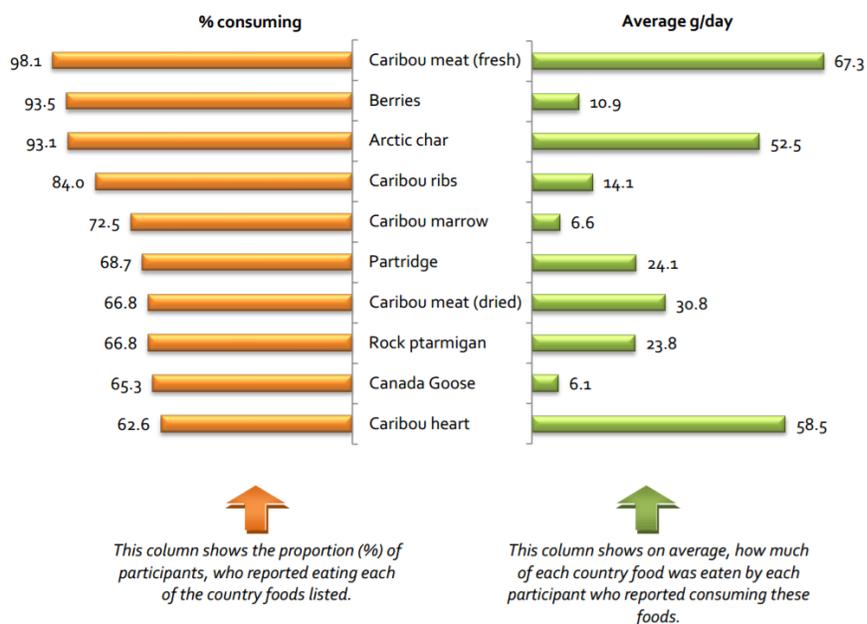
Labrador Inuit continue to practice their heritage and culture within Nunatsiavut and elsewhere, harvesting fish and wildlife for traditional purposes and sharing with the community (see Current Use of Lands and Resources for Traditional Purposes, below). Labrador Inuit cultural practices and resources are focused on the lands and waters of Labrador (650 km from the Project Area), and are not anticipated to interact with Project activities and components.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Current Use of Lands and Resources for Traditional Purposes

The Labrador Inuit largely focus their current land and resource use activities on their traditional lands within the LISA, which include activities such as hunting for birds, seals, rabbits, caribou, moose, fishing, and trapping (Nalcor Energy 2011). Country food has important value for the Inuit that cannot be replaced or substituted and cannot be measured by market criteria, because the cultural, social, and nutritional qualities of country food are an integral part of the Inuit lifestyle (Usher 1976, in VBNC 1997). According to the 2008 health survey, more than 75 percent of the respondents had an active hunter in the home and 80 percent shared their country food with others in the community (Egeland 2010). Approximately 25 percent of households preferred mainly country foods, while the remainder preferred a mix between country food and store-bought foods. The Labrador Inuit prefer to eat country food, although there are some challenges in obtaining it. Seventy-five percent reported that they would prefer to eat more country food than they could get (i.e., do not have a hunter in the home, not having a snowmobile or boat, and high cost of supplies) (Egeland 2010). Figure 7-37 shows the most commonly consumed country foods in Nunatsiavut.



Source: Egeland 2010

Figure 7-37 Commonly Consumed Country Foods in Nunatsiavut

Recreational and subsistence land use and harvesting activities include: hunting for seals, birds, rabbits, caribou, and moose; fishing; ice fishing; trapping; travelling by boat, snowmobile, snowshoes, dog team, foot, truck, plane, and helicopter; berry-picking; prospecting; and gathering firewood (Sikumiut Environmental Management Ltd. 2009). Given the Project is located offshore Eastern Newfoundland, approximately 650 km from the Labrador coast, the following discussion of traditional activity is focused on fishing and hunting of migratory marine-associated species. The Project is not likely to interact with Labrador Inuit use of land or resources, including travel corridors, for traditional purposes.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

FSC Fishing

Through FSC licences provided by DFO, the Nunatsiavut Government fishes in the LISA for trout, Atlantic salmon, Arctic char and smelt for FSC purposes (D. Ball, DFO, pers. comm. 2017). There is a separate FSC licence for Upper Lake Melville communities, which also includes trout, Atlantic salmon, and Arctic char. Fishing is generally restricted to the marine zone of the LISA, inside the 12-nautical mile limit. As per the LILCA (Chapter 13 – Fisheries Chapter of the Agreement), all Beneficiaries have the right to harvest at all times of the year throughout the LISA for any species or stock of fish or aquatic plant, up to the quantity needed for their food, social and ceremonial purposes (D. Ball, DFO pers. comm. 2017).

As part of the collection of information for the Labrador Shelf Offshore Area SEA (Sikumiut Environmental Management Ltd. 2008), it was noted that the Labrador Shelf area is extensively fished for crab, rock cod, cod, Arctic char, sculpins, mussels, clams, wrinkle, and sea urchins. Fishing activity was noted as being well dispersed throughout the Labrador Shelf Area. Capelin is harvested for food within coastal waters around Hopedale, Postville, Sandy Beach, and Rapid Point area (Brice-Bennett 1977, in Sikumiut Environmental Management Ltd. 2008).

Despite the commercial salmon fishery being closed in Labrador, there is still an Indigenous traditional fishery for Atlantic salmon. In 2012, approximately 14,200 salmon (36 t) were harvested by Labrador Indigenous groups in the Labrador Indigenous and subsistence fisheries (DFO 2015d).

Commercial-Communal Fishing

Nunatsiavut Government has three inshore groundfish enterprises that are licenced to operate in 3KL. They include, but are not limited to, snow crab, turbot, and shrimp (Nunatsiavut Government website undated). They also hold two seal licences that permit access in Seal Fishing Areas 4-33 (Atlantic-wide).

Bird Harvesting

Migratory birds that are traditionally harvested by the Inuit include eider and black ducks, ptarmigan / grouse, Canada goose, murre, mergansers, scoters, and loons (Sikumiut Environmental Management Ltd. 2008). Along the north coast of Labrador, important areas for migratory birds include: areas north of Hopedale to Davis Inlet; Island Harbour Bay; Tunungayualok Island; Mugford Tickle to Cape Kiglapait; Okak Bay; Tasiuyuk Bay; Napartok Bay to Kangalaksiorvik Fjord; Kaipokok Bay; White Bear Island; Hare Islands; Windsor Harbour south the Byron's Bay; Turnavik Islands area; Ailik Islands; Cape Makkovik; Island Harbour Bay; Dunn's Island; Adlavik and Ironbound Islands; Jako's Bight; Makkovik Bay; Jeanette Bay; Groswater Bay; and Back Bay (Brice-Bennett 1977 in Sikumiut Environmental Management Ltd. 2008).

Other important bird areas and surrounding waters used by the Inuit of Labrador as part of their traditional hunting areas including the waters and islands of the Backway, Table Bay, and St. Peter's Bay, which are used for sea duck hunting, and the waters of Point Amour, which are used for sea duck and turr hunting (Intervale Associates Inc. 2012).

Hunting of migratory birds by the Nunatsiavut Inuit communities is an important part of their harvest, recording a total of 5,468 birds harvested in 2006-2007, including Canada goose, black duck,

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

common eider, surf scoter, black scoter, and white-winged scoter (Natcher et al. 2011). These species are considered the most abundant and most extensively harvested by Inuit hunters. Also during this time, a total of 9,346 eggs were harvested, with common eider eggs representing 36 percent of the total harvest, followed by gulls (32 percent), tern (20 percent), and common guillemot (12 percent) (Natcher et al. 2012). A perceived decline in the availability of migratory bird eggs was noted during the survey, attributed to the relative absence of capelin, cod, sculpin, and other species that the migratory birds depend on (Natcher et al. 2012).

Marine Mammals

The Northwest Atlantic harp seal is harvested for subsistence purposes by Inuit in Labrador, Arctic Canada, and Greenland (DFO 2014). Approximately 80,000 seals are harvested annually for subsistence, with the majority being harvested from Greenland, where the harp seal migrates for the summer (DFO 2014). The Labrador Inuit harvest seals within Hamilton Inlet and Lake Melville (Brice-Bennett 1977, in Nalcor Energy 2011), and in Back Bay, Head of Groswater Bay, Black Island, Island Harbour Bay, Jako's Bight, Makkovik Bay, Adlavik Bay, Saglek Fjord, and Kanairiktok Bay (Brice-Bennett 1977 in Sikumiut Environmental Management Ltd. 2008).

Ringed seals are hunted for subsistence purposes in the early spring as the seals bask on the ice at their breathing holes or in the open water. Important harvesting areas include areas from Hare's Ears and The Highlands to Back Bay; Groswater Bay in The Channel area; Double Mer; areas around Drunken Harbour Point and the Advalik Islands; Napartok Bay; Hebron Fjord; Saglek Fjord; Kangalaksiorvik Fjord; Okak Bay; Tasiuyak Bay; Mugford Bay; Anchorstock Bight; Aulatsivik Island area; Tunungayualok Island; Nain Bay; Voisey's Bay; Tikkoatokak Bay; Webb Bay; Anaktalak Bay; areas around Hopedale; Flowers Bay to Island Harbour Bay; and the Turnavik Islands (Brice-Bennett 1977, in Sikumiut Environmental Management Ltd. 2008).

Following the ice break-up in spring, the Inuit hunt or net harp seals as well as ringed, harbour, grey and bearded seals in the outer island areas and in the bays as the seals move with the tide (VBNC 1997). Important harbour seal hunting areas include: Tunungayualok Island and area; Shoal Tickle; Big Bay; Flowers Bay; Kikkektak and Ivjogiktok Islands; Okak Bay; Tasiuyak Bay; Amitok Island; Illuviktalik Island; Iglusuaktaliak Island; Tikvigaksuk Peninsula; Napartok Bay; Seal Bight; Cod Bag Harbour; Shark Gut Harbour; Saglek Fjord; Kaipokok Bay; Big Brook; Jeanette Bay (including Sandy Cove); and Jako's Bight (Brice-Bennett 1977, in Sikumiut Environmental Management Ltd. 2008). Grey seal hunting occurs in areas around Tunungayualok Island and near Tasiuyak Bay (Brice-Bennet 1977, in Sikumiut Environmental Management Ltd. 2008).

As noted above, the Labrador Inuit also hold two commercial-communal licences to harvest seal in Seal Fishing Areas 4-33 (Atlantic-wide).

7.3.1.2 Labrador Innu (Innu Nation)

General Overview

The current population of the Innu of Labrador is approximately 2,500, who reside primarily in two communities – Sheshatshiu in Central Labrador and Natuashish on the North Coast. Small numbers of Innu also reside in Happy-Valley Goose Bay, Labrador. The Sheshatshiu Innu and the Mushuau

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Innu of Natuashish comprise individual reserves. Innu Nation represents both communities in land claims negotiations and on other matters of common interest.

The Labrador Innu claim Aboriginal rights and title to much of Labrador (and parts of Quebec) (Figure 7-35). In September 2008, the Government of Newfoundland and Labrador and Innu Nation announced the signing of the *Tshash Petapen* (which translates as “New Dawn”) Agreement, which resolved key issues relating to matters between the Province and Innu Nation surrounding the Innu land claim, as well as impacts and benefits related to past and proposed hydroelectric developments in western and central Labrador. Since that time, the provincial and federal governments and Innu Nation have completed detailed agreements on these matters, including a tripartite Labrador Innu Land Rights Agreement-in-Principle (AIP), which was signed by the three parties in 2011 (Labrador and Aboriginal Affairs Office, undated). The Project does not overlap with lands claimed by the Labrador Innu (Figure 7-35).

The population for the two primary Innu communities is summarized in Table 7.22. The community of Natuashish had a population increase of 31.9 percent from 2006 to 2011 and 0.5 percent from 2011 to 2016 and Sheshatshiu saw an increase in 24.7 percent from 2006 to 2011 and a decrease from 2011 to 2016 of 22.1 percent (Statistics Canada undated(a)(b)). The 2011 median ages for Natuashish and Sheshatshiu are 20.3 years of age and 21.8, respectively (Statistics Canada undated(b)).

Table 7.22 Labrador Innu General Overview, 2016

Community	Location	Population
Natuashish	Natuashish, NL	936
Sheshatshiu	North West River, NL	671

Source: Statistics Canada undated(a)

Health and Socioeconomic Conditions

Infrastructure and Services

Sheshatshiu

Sheshatshiu, located on the south bank of North West River, formed part of the community of North West River until 1979, at which time the Innu formed a separate community which is now a Reserve with an elected Chief and Band Council. In Sheshatshiu, there are 290 dwellings (110 owned, 10 rented and 170 band-owned) of which 110 were built prior to 1991; there is an average of 5.7 rooms per dwelling (Statistics Canada undated(b)).

Within the community there is a school accommodating 400 students from kindergarten to grade 12 (Innu Education 2014), and a modern arena which has a gym, rink, and community rooms. Sheshatshiu is policed by the RCMP, who have collaborated with Health Canada to establish a Sheshatshiu Crisis Intervention Team that supports members of the community in times of crisis (Nalcor Energy 2011). The Labrador Grenfell Regional Health Authority and the Sheshatshiu Innu Health Commission operate a community health clinic with basic trauma and resuscitation equipment. Health services are provided by nurses, nurse practitioners, and other health service

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

providers (Labrador-Grenfell Regional Health Authority 2007(a)). In the event of an emergency, patients are transported to HVGB by ambulance.

Natuashish

Founded in 2002, the community of Natuashish is 300 km north of HVGB and is only accessible via plane or boat (Natuashish website undated). The community was formed following the Innu's relocation from the previous community at Utshimassit (Davis Inlet), and is a Reserve with an elected Chief and Band Council. In 2011, there were 215 dwellings in Natuashish, 10 of which were rented and the remainder band-owned; all had been built since 2001 (Statistics Canada undated(b)). There were an average 5.1 rooms per dwelling.

The community has one school, the Mushuau Innu Natuashish School, administered by the Innu School Board (Innu Education 2014). The Natuashish Recreation Committee runs indoor activities in the school gym and indoor arena (SCI 2007, in Nalcor Energy 2011). The RCMP is responsible for policing in Natuashish with the assistance of Tribal Police Officers and constables working in the community (Nalcor Energy 2011). There is also a fire hall with two fire fighting vehicles (Nalcor Energy 2011).

The Labrador Grenfell Regional Health Authority, in partnership with the Mushua Innu Health Commission, operates a community health clinic with one emergency room bed, basic trauma and resuscitation equipment, and a defibrillator (Labrador-Grenfell Regional Health Authority 2007(b)). In the event of an emergency, patients are transported by medevac to the appropriate referral centre. Health services are provided by nurses, personal care attendants and other health service providers.

Community Health

Health issues in the Innu communities include diabetes, youth mortality, teenage pregnancy, and learning difficulties consistent with Fetal Alcohol Spectrum Disorder (Nalcor Energy 2011). To help address common health issues, the Innu of Sheshatshiu and Natuashish jointly developed the Innu Healing Strategy in 2014 to identify the Innu peoples' view of the healing efforts needed to address Innu healing priorities. The strategy identifies 14 priority areas for which goals and actions are proposed to support healing.

Economy

Economic indicators for the Labrador Innu communities are presented in Table 7.23.

Table 7.23 Economic Indicators for the Labrador Innu Communities, 2011

Indicator	Natuashish	Sheshatshiu
Participation Rate (%)	71.6	53.6
Employment Rate (%)	52.6	39.2
Unemployment Rate (%)	25.3	27.0
Average Individual Income (\$)	27,338	23,874
Source: Statistics Canada undated(b)		

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

An Innu Business Development Centre was created to help businesses get established and contribute to Innu communities (Innu Nation 2011, in Nalcor Energy 2011). Innu Nation is invested in a diverse range of businesses as shown in their 2016 business registry including: accommodation and food services, aircraft services, arts, entertainment, recreation, automotive, construction, engineering, waste management, forestry, geotechnical, industrial, technology and communications, and tourism (Innu Nation 2011 in Nalcor Energy 2011). Construction and industry supply are the industries with the largest number of businesses (SCI 2007, in Nalcor Energy 2011).

Sheshatshiu Innu First Nation Band Council is the major employer in Sheshatshiu. Employers in Natuashish include the Mushuau Innu First Nation Band Council, Mushuau Innu Health Commission, Mushuau Innu General Store, and Natuashish Hotel (Nalcor Energy 2011).

The Labrador Innu hold commercial-communal fishing licences as described below (under Current Use of Lands and Resources for Traditional Purposes).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

The Innu are indigenous inhabitants of much of the Labrador-Quebec peninsula, an area they refer to as Nitassinan. In terms of culture and language, the Innu are the easternmost group of a very widespread people commonly known as the Cree, and inhabit the boreal forest and share a broadly similar cultural tradition (Heritage Newfoundland and Labrador 2017). Innu culture and heritage is focused on their relationship to game animals, a relationship which has both pragmatic and spiritual aspects and which is, in fact, the focus of their philosophical and religious beliefs (Heritage Newfoundland and Labrador 2017). Historically, Innu were nomadic throughout interior areas of the Labrador-Quebec peninsula, following the migrations of game animals. For most of the year it was the tradition of the Innu to live in groups of several families, each in their tent with a bark or caribou skin cover (later replaced by canvas), moving into one communal building in mid-winter (Heritage Newfoundland and Labrador 2017). The Innu harvested a variety of terrestrial and marine species for food and clothing, including caribou, beaver, porcupine, fox, hare, marten, migratory birds, seals, Atlantic salmon, pike, whitefish, suckers, and sturgeon (Nalcor Energy 2011; VBNC 1997).

Beginning in the early nineteenth century, Innu gathered seasonally at various Hudson's Bay Company trading posts and at preferred hunting locations. Between 1900 and 1930, many Innu spent most of the year in the area south of the Mealy Mountains (Tanner 1977). Typically, families from the Lake Melville area would travel south in August along the Kenamau River and move north into the Mealy Mountains to hunt caribou in the fall. In the spring, they fished and hunted waterfowl throughout the region and then traveled to Hamilton Inlet, where they remained for the summer. North West River was used as a summer campsite only until the late 1950s, after which it began to be settled more permanently.

Armitage (2010) (in Alderon Iron Ore Corp. 2012) identified and described cultural / spiritual sites, including birth, burial, death and gathering places, places of religious and historical significance, and shaking tent ceremony locations, generally inland central and south Labrador. Archaeological sites have been identified throughout the areas traditionally used by Labrador Innu in Labrador, including the Churchill River valley. Based on publicly available information, historical, archaeological,

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

paleontological or architectural areas associated with the Labrador Innu do not overlap with the Project Area.

Labrador Innu cultural practices and resources are focused on the lands and waters of Labrador (650 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

Following settlement in the 1960s with government housing and children attending school, traditional land use and harvesting of the Sheshatshiu Innu changed dramatically as women and children remained in the community for most of the year and men spent less time on the land hunting and trapping (Nalcor Energy 2011). The Sheshatshiu Innu harvested a range of resources including caribou, black bear, small game, and fish, in a relatively wide-ranging area not necessarily restricted to the lands and waterways surrounding the community (MacLaren Plansearch 1994, in Nalcor Energy 2011).

An Outpost Program began in the 1970s to help finance travel by Innu families to and from camps in the interior of Labrador and to enable Innu to travel into the country as an educational community activity and to live their traditional ways (VBNC 1997).

As indicated in Innu Nation (1997), approximately 42 percent of the Innu Nation population participated in the country-based harvest year-round, with the spring being the most popular season, with 48 percent of participants spending at least one week in the country hunting, fishing, and gathering wild foods (Nalcor Energy 2011).

The core areas traditionally used by Labrador Innu are located within Labrador (headwaters of Eagle River; the area bounded by Winnokapau Lake, Smallwood Reservoir, Seal Lake, and Nipishish Lake; Shipiskan Lake, Snegamook Lake, and Shapio Lake) and parts of Quebec. More recently, Labrador Innu have also harvested along the Trans Labrador Highway between HVGB and western Labrador. Road, snowmobile, walking, canoe, and motorboat travel routes used by Labrador Innu have been recorded in southern Labrador, with a relatively high number of travel routes near the Trans Labrador Highway between Churchill Falls and HVGB, and near Lake Melville (Armitage 2010, in Alderon Iron Ore Corp. 2012). Given its location, the Project is not likely to interact with Labrador Innu use of land or resources, including travel corridors, for traditional purposes.

FSC Fishing

The Natuashish FSC licence includes Atlantic salmon, trout, and Arctic char (D. Ball, DFO, pers. comm. 2017). It includes all tidal waters of Labrador extending north and east from Cape Harrigan (55.86°N 60.35°W) inclusive of Big Bay, and south and east of Anaktalik Bay (56.34°N 61.69°W) inclusive of Anaktalik and Anaktalik Bays and the inland waters of Sango Pond and Big Sango Lake but is restricted to these areas and within the 12-nautical mile limit.

The Sheshatshiu FSC licence includes Atlantic salmon, trout, and Arctic char (D. Ball, DFO, pers. comm. 2017). The fishing area includes all tidal waters of Labrador extending from Fish Cove Point, north to Cape Harrison, including Lake Melville and the inland waters of Little Lake and Grand Lake in Upper Lake Melville but is restricted to these areas and within the 12-nautical mile limit.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Despite the commercial salmon fishery being closed in Labrador, there is still an Indigenous traditional fishery for Atlantic salmon and during 2012, approximately 14,200 salmon (36 t) were harvested by Labrador Indigenous groups in the Labrador Indigenous and subsistence fisheries, with large salmon representing 34 percent of the catch by weight and 21 percent by number (DFO 2015d).

Commercial-Communal Fishing

The Labrador Innu has a mid-shore enterprise with a groundfish license permitting access to a variety of areas (Atlantic-wide) including 3KLMN. They also have an SFA 6 (3K) shrimp license attached to this enterprise and hold an inshore enterprise with a mobile gear and fixed gear groundfish license that can operate in 3KL.

Bird Harvesting

The Innu hunt goose and duck near the Trans Labrador Highway west of Churchill Falls, along the Churchill River, and near Dominion Lake (Armitage 2010 and MacLaren Plansearch 1994, in Alderon Iron Ore Corp. 2012). Migratory waterfowl have been hunted around Crooks Lake and Parke Lake in southeastern Labrador, the shoreline of Lake Melville, along several roads between HVGB and Sheshatshiu, on the south side of the Churchill River at Gull island, the Eagle River plateau, the Mud Lake / Upper Lake Melville area, and near Sheshatshiu and North West River (Armitage and Stopp 2003; Armitage 2010 and MacLaren Plansearch 1994, in Alderon Iron Ore Corp. 2012).

Important bird areas and surrounding waters are known to be used by the Labrador Innu as part of their traditional hunting areas and include the waters and islands of the Backway, Table Bay, and St. Peter's Bay which are used for sea duck hunting, and the waters of Point Amour which are used for sea duck and turr hunting (Intervale Associates Inc. 2012). Harvesting eider ducks, turrs and other species around the Labrador Shelf is an important source of food for Indigenous people (Sikumiut Environmental Management Ltd. 2008).

Marine Mammals

Although there is limited publicly available information, it is understood that Innu hunt seals in the spring, summer, and fall (VBNC 1997).

7.3.1.3 NunatuKavut Community Council

General Overview

The NunatuKavut Community Council (NCC, formerly the Labrador Metis Nation) reports a membership of over 6,000 who reside primarily in Southern and Central Labrador. Originally established as the Labrador Metis Association in 1985, the NCC has asserted a land claim that covers much of Central and Southeastern Labrador (see Figure 7-35) (NCC 2013). NCC members reside in southern and central Labrador, particularly along the southeast coast, in Cartwright, Paradise River, Charlottetown, Pinsent's Arm, William's Harbour, Black Tickle / Domino, Norman Bay, Port Hope Simpson, St. Lewis, Mary's Harbour and Lodge Bay (Martin et al. 2012). The population for these communities range from 15 (Paradise River) to 572 (Cartwright), with five communities (Paradise River, Pinsent's Arm, William's Harbour, Norman Bay and Lodge Bay) having fewer than 100 people (Martin et al. 2012).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Census data are not available specifically for NCC members themselves, and, in many cases, are not available for the individual communities where NunatuKavut members reside. Table 7.24 presents the census data that are available for communities on the southeast coast of Labrador.

Table 7.24 Population Characteristics for Southern Labrador Communities, 2016

Community	Location	Population
Cartwright	eastern side of the entrance to Sandwich Bay, along the southern coast of Labrador	427
Charlottetown	Labrador coast	290
Mary's Harbour	southeast Atlantic coast of Labrador	341
Port Hope Simpson	southeastern Labrador coast, 215 km from the Quebec/Labrador border	412
St. Lewis	mouth of St. Lewis Bay, Labrador coast	194
L'Anse au Clair	3 km from the Quebec-Labrador border	216
Pinware	Southern Labrador, between Forteau and Red Bay	88
Red Bay	southern coast of Labrador	169
Division 10, Subdivision A (Capstan Island)	Capstan Island	61
Division 10, Subdivision B (Black Trickle / Domino, Lodge Bay, Pinsent's Arm, William's Harbour, Norman's Bay, Paradise River)	Black Tickle / Domino, Lodge Bay, Pinsent's Arm, William's Harbour, Norman's Bay, Paradise River	369
Source: Statistics Canada undated(a)		

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Health and Socioeconomic Conditions

Infrastructure and Services

Housing characteristics for each community are provided below in Table 7.25. Based on 2011 data, there was a total of 1,015 dwellings within the communities, most which (88 percent) were owned. The average number of rooms per dwelling ranged from 5.6 to 9.9 (Statistics Canada undated(b)).

Table 7.25 Housing Characteristics by Community, Southern Labrador Communities, 2011

Community	Number of Dwellings			Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented			
Cartwright	230	170	55	150	\$51,177	5.6
Charlottetown	110	95	15	55	\$135,340	7.5
Mary's Harbour	135	115	20	80	\$59,952	6.7
Port Hope Simpson	150	130	20	85	\$62,270	7.7
St. Lewis	75	70	0	45	\$69,255	7.3
L'Anse au Clair	95	90	0	75	\$92,799	9.4
Pinware	25	30	0	20	\$113,104	8.8
Red Bay	40	35	0	30	\$58,897	9.9
Division 10, Subdivision A (Capstan Island)	30	30	0	20	\$92,742	6.3
Division 10, Subdivision B (Black Tickle / Domino, Lodge Bay, Pinsent's Arm, William's Harbour, Norman's Bay, Paradise River)	125	125	0	75	\$88,853	7.2

Source: Statistics Canada undated(b)

Note: The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

The Trans Labrador Highway serves the southeast coast of Labrador, from its terminus in Blanc Sablon, Quebec in the southeast extending to central and then western Labrador. The availability of community infrastructure within each of these communities is variable. For example, some communities have road access, airstrips, basic municipal services (i.e., waste removal and water supply), and nursing clinics, while others lack these services and residents must travel to other communities to access them (Martin et al. 2012). Health, policing, and education services also vary among the communities, as summarized in Table 7.26.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.26 Services Provided within Select Southern Labrador Communities

Community	Health Services	Policing	Education
Cartwright	1 Regional Nurse II, 1 Regional Nurse I, 1 Public Health Nurse who travels to Black Tickle as well, 1 full and 1 half-time Personal Care Attendant, 1 Child Youth and Family Services Social Worker. A physician visits every 6 weeks. A dentist travels to the clinic periodically.	RCMP (with policing to the community of Black Tickle periodically) with three officers	Henry Gordon Academy
Paradise River	Labrador Grenfell Health serves Paradise residents through the community of Cartwright.	RCMP Detachment located in Cartwright, with three officers	There are no schools in the community.
Black Tickle / Domino	Community Clinic (Labrador Grenfell Health) Staff: 1 Regional Nurse, 1 Personal Care Attendant, 1 Maintenance Repair Worker; Public Health Nurse visits from Cartwright every 6 weeks. Dentist visits periodically.	RCMP (traveling from Cartwright (with 3 officers) periodically)	St. Peter's School (all grades).
Norman Bay	A community building is used for periodic visits by the community clinic nurse from Charlotte, Charlottetown. Most medical services are provided in Charlottetown.	There is no police presence in Norman Bay. Nearest RCMP station is in Mary's Harbour.	Raymond Ward Memorial
Charlottetown	Community Clinic Staff: 2.5 Regional nurses / Nurse Practitioners. Clinic equipped with an emergency room (with basic trauma, cardiac monitoring, and resuscitation equipment), dental suite, public health office, 2 holding beds, and a basic pharmacy. Physician visits every 6 weeks. Regular visits from dentists, public health nurses, behavior management specialists, and addictions counsellors.	RCMP travel from Mary's Harbour.	William Gillett Academy
Pinsent's Arm	Pinsent's Arm residents travel to Charlottetown.	RCMP travel from Mary's Harbour.	Students from Pinsent's Arm travel 25 km to Charlottetown to attend school.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.26 Services Provided within Select Southern Labrador Communities

Community	Health Services	Policing	Education
William's Harbour	Community clinic nurse visits from Port Hope Simpson periodically. Residents must travel to the clinic in Port Hope Simpson for medical emergencies, to visit dentists, public health nurses, behavior management specialists, and addictions counselors.	RCMP travel from Mary's Harbour.	William's Harbour School was shut down June 2010
Port Hope Simpson	Community Clinic (Labrador Grenfell Health) Staff: 3 Regional nurses / nurse practitioners, 1 public health nurse, 1 behavior management specialist, and 1 social worker (CYFS). Clinic equipped with an emergency room (with basic trauma, cardiac monitoring, and resuscitation equipment), dental suite, public health office, 2 holding beds, and a basic pharmacy. Labrador South Ambulance Service. A dentist visits the community every 6 weeks. A doctor travels in periodically.	RCMP travel from Mary's Harbour.	DC Young School
St. Lewis	Community Clinic (Labrador Grenfell Health) Staff: 2 regional nurses / nurse practitioners, 1 personal care attendant, 1 maintenance person. Dental services: regular visits throughout the year.	Policing: RCMP travel from Mary's Harbour.	St. Lewis Academy
Mary's Harbour	Community Clinic (Labrador Grenfell Health) Staff: 3 nurse practitioners, 1 regional nurse, 1 social worker (who also serves other surrounding communities), 1 personal care attendant, 1 maintenance worker. Addiction & mental health counsellor A physician visits every 6 weeks. A dentist travels to the clinic every 6 weeks.	RCMP Detachment (With policing to the surrounding communities periodically)	St. Mary's All Grade School

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.26 Services Provided within Select Southern Labrador Communities

Community	Health Services	Policing	Education
Lodge Bay	Labrador Grenfell Health: nearest community clinic located 7 km away in Mary's Harbour.	RCMP detachment located in Mary's Harbour	Students attend St. Mary's All Grade School in Mary's Harbour, traveling 7km by bus.
Source: Martin et al. 2012			

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Community Health

A NunatuKavut Community Health Needs Assessment was completed in 2012 which included background research, key informant interviews, community surveys and community meetings. Common health concerns included high blood pressure, allergies, high cholesterol, arthritis, asthma, and diabetes (Martin et al. 2012). Many recommendations were made, including recommendations related to health care service provision and management of disease, health promotion and disease prevention, healthy environments, and future research directions.

Economy

Economic indicators for the communities in Southern Labrador in 2011 are presented in Table 7.27.

Table 7.27 Economic Indicators for the Southern Labrador Communities, 2011

Community	Participation Rate (%)	Employment Rate (%)	Unemployment Rate (%)	Average Individual Income (\$)
Cartwright	59.8	31.0	46.2	27,014
Charlottetown	49.0	23.5	56.0	30,533
Mary's Harbour	53.3	31.7	40.6	30,956
Port Hope Simpson	60.0	35.7	38.1	27,908
St. Lewis	62.9	28.6	50.0	-
L'Anse au Clair	61.1	50.0	13.6	-
Pinware	58.3	33.3	42.9	-
Red Bay	52.9	41.2	-	-
Division 10, Subdivision A (Capstan Island)	45.5	-	-	-
Division 10, Subdivision B (Black Tickle-Domino, Lodge Bay, Pinsent's Arm, William's Harbour, Norman's Bay, Paradise River)	44.4	22.2	53.6	22,635

Source: Statistics Canada undated(b)
Notes: "-" means no data available

The major employer in the southern Labrador communities is the fishery. NCC holds commercial-communal fishing licences that are described below. The Labrador Fisherman's Union Shrimp Company has processing facilities in Cartwright, Charlottetown, Pinsent's Arm, Mary's Harbour, and L'Anse au Loup, employing hundreds of persons (Labrador Shrimp Company 2014). NDC Fisheries Limited acquired its first licence in 2005 after securing funding from DFO under the Allocation Transfer Program of the Aboriginal Fisheries Strategy. NDC Fisheries Limited holds quotas for 450,000 lbs of snow crab as well as shrimp quotas (Nunacor website 2017). NDC Fisheries Limited is required to hire NunatuKavut members as crew and a portion of the profits are reinvested to grow opportunities for employment in the fishing industry (Nunacor website 2017). In addition to the fishing

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

industry, there are seasonal and year-round businesses within the region, including hotels, motels, bed and breakfasts, convenience stores, and gas bars (Martin et al. 2012).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

In the 17th Century, contact was made between the Labrador Inuit and Europeans, with the nature of these interactions being quite different in northern and southern Labrador (Kennedy 1995; Hanrahan 2003, in Nalcor Energy 2010). Contact in northern Labrador largely involved Moravian Missionaries who established themselves in Nain, Okak, and Hopedale (Nalcor Energy 2010). In southern Labrador, the interaction between the two groups was based on the trade with seasonal fishers and whalers (Nalcor Energy 2010). The first European trading post was established in 1743-1744 in North West River. Intermarriages occurred between the Labrador Inuit and European fur traders and the first generation of people of mixed descent were referred to as Kablunangajuit and appeared as early as 1775 (Martin 2009, in Nalcor Energy 2010); more recently, these persons have been referred to as Southern Inuit (NCC 2013). Over time the population grew, and settlements were established throughout central and southern Labrador (Nalcor Energy 2010).

The ancestors of NCC members maintained a seasonal migration lifestyle (Stopp 2002 in Martin et al. 2012). Into the 20th century, harvesting would begin in the spring as families moved to fishing berth locations on the coast to harvest seals and codfish and in the summer, cod fishing occurred along with the salmon runs and berry picking (Martin et al. 2012). Birds, seals, and caribou were hunted in the fall, at which time families would move to the inner bays to prepare for a winter of trapping (Jackson 1982 in Martin et al. 2012). Many people in the area continue to follow these patterns and keep as many as four different homes to accommodate the various harvests.

The NCC members have noted their cultural reliance on resources, including fish, sea mammals, birds, caribou, forests, mineral and other natural resources throughout southern Labrador, inland, on the coasts and at sea (Martin et al. 2012).

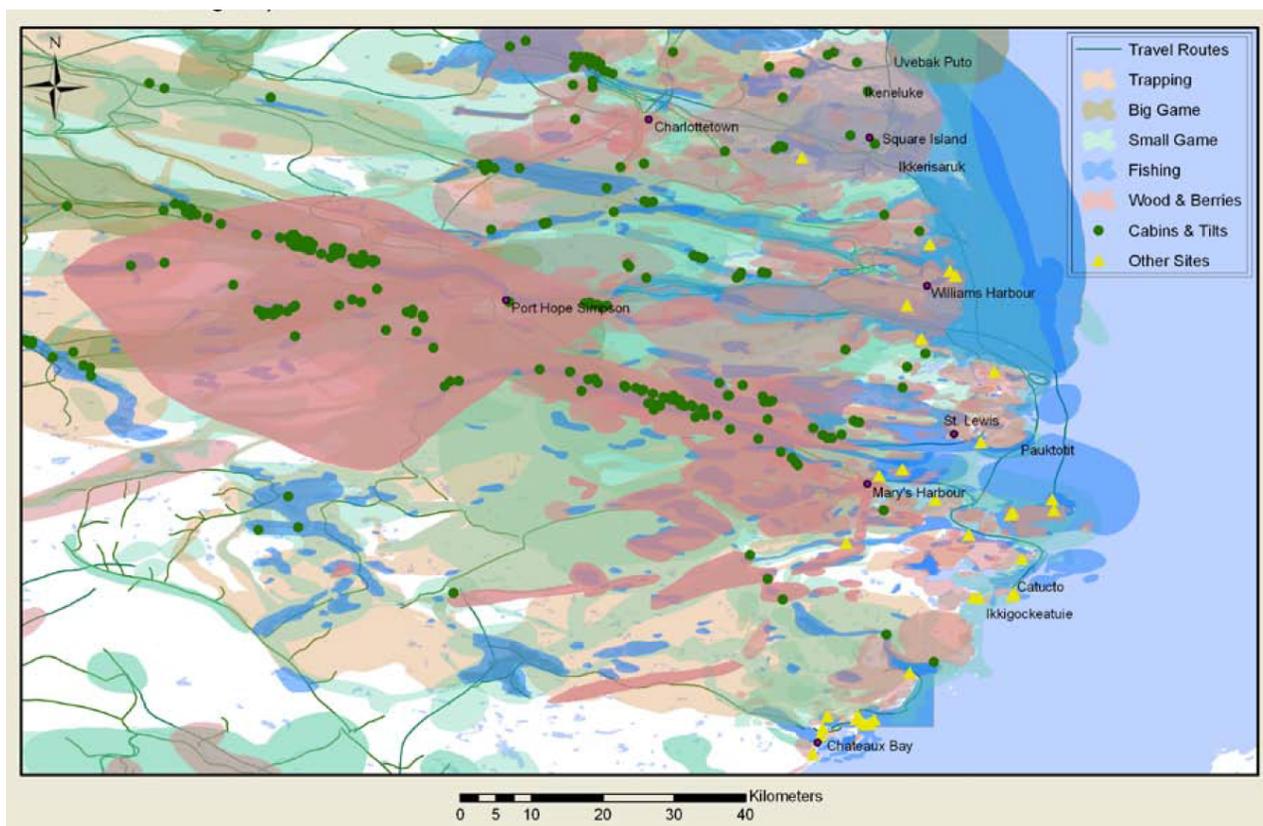
NCC cultural practices and resources are focused on the lands and waters of Labrador (650 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

Members of the NCC place a high importance on traditional foods, both in terms of their nutritional value and their importance for cultural wellbeing and concern (Martin et al. 2012). NCC members continue to rely upon the resources of the land, water, and sea, and are known to undertake land and resource use activities throughout southern Labrador. They use the land in several ways as expressed through their movement along the overland and aquatic travel corridors, meeting in community gathering places, the establishment of habitation sites, trapper tilts, and seasonal and permanent settlements (NCC 2010, in Nalcor Energy 2011). A summary of current land use locations in southern Labrador is provided in Figure 7-38.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017



Source: Clark and Mitchell 2010

Figure 7-38 Current Land Use and Important Sites used by the NunatuKavut Community Council

FSC Fishing

Fishing locations are shown in Figure 7-38 and include the harvesting of fish and marine mammals throughout both salt and freshwater areas and up to approximately 20 km out to sea (Clark and Mitchell 2010).

FSC fisheries conducted between Fish Cove Point and Cape Charles in Labrador include licences for trout, Atlantic salmon, Arctic char, Atlantic cod, rock cod, herring, scallop, whelk, smelt, and seal (D. Ball, DFO, pers. comm. 2017). There is a separate FSC licence for Upper Lake Melville, with licences for trout, Atlantic salmon, and Arctic char (D. Ball, DFO, pers. comm. 2017). A geographic location is identified for each species (e.g., the Atlantic cod licence states that the fishing area is the coastal portion 1 of NAFO Division 2J from Fish Cove Point to Cape Charles, located on the southern coast of Labrador); however, fishing is not permitted in the waters outside Canada's Territorial Sea (the 12-nautical mile limit).

Although the Atlantic salmon fishery has changed from the past (netting of salmon became regulated), it remains an integral part of the way of life (Martin 2009, in Alderon Iron Ore Corp. 2012). NCC members have been documented as fishing throughout central and southeastern Labrador, including Happy Valley-Goose Bay, Grand Lake and its tributaries, Sebaskachu Bay and

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Sebaskachu River, Mud Lake, Traversspine River, the mouths of Caroline Brook, McKenzie River, and lakes south of the Churchill River, including Minipi Lake and Dominion Lake (NCC 2010, in Alderon Iron Ore Corp 2012). Despite the commercial salmon fishery being closed in Labrador, there is still a traditional fishery for Atlantic salmon. During 2012, approximately 14,200 salmon (36 t) were harvested by the Labrador Indigenous Groups in the Indigenous and subsistence fisheries, with large salmon representing 34 percent of the catch by weight and 21 percent by number (DFO 2015, in Sikumiut Environmental Management Ltd. 2008).

Commercial-Communal Fishing

NNCC has nine inshore enterprises with access to 3KL groundfish. Two of these enterprises also have an SFA 6 (3K) shrimp license. They also hold two seal licences permitting access in Seal Fishing Areas 4-33 (Atlantic-wide).

Bird / Egg Harvesting

Important bird areas and surrounding waters are known to be used by the people of Labrador as part of their traditional hunting areas. The waters and islands of the Backway, Table Bay, and St. Peter's Bay are used for sea duck hunting, and the waters of Point Amour are used for sea duck and turr hunting (Intervale Associates Inc. 2012).

The NCC develops annual Spring Bird / Egg Harvest and Conservation Guidelines, which specify the opening and closing dates, the seasonal take of birds and gull eggs that may be harvested per household and any associated restrictions (NCC 2013). Members of NCC hunt a variety of birds, including geese and migratory birds such as black ducks (Martin 2009, in Alderon Iron Ore Corp. 2012).

Marine Mammal Harvesting

Members of NCC harvest marine mammals (NCC 2010), with seals providing income and meat (Martin 2009, in Alderon Iron Ore Corp. 2012). The NCC has a FSC licence for seals, which are harvested on the coast from Fish Cove Point to Cape Charles.

7.3.1.4 Qalipu Mi'kmaq First Nation

General Overview

In 1972, the Federation of Newfoundland Indians (FNI) was formed with the primary goal of obtaining recognition of Mi'kmaq (also spelled Micmac, Mi'kmaw, Mi'gmaq or Mi'gmaw depending on content or province) and application under the federal *Indian Act* (Qalipu First Nation 2016). In 2008, the Government of Canada and FNI signed the Agreement for the Recognition of the Qalipu Mi'kmaq Indian Band to establish a landless band for the Mi'kmaq of Newfoundland (Indigenous and Northern Affairs Canada (INAC) 2017). The Agreement is not a treaty within the meaning of section 35 of the *Constitution Act, 1982*. Nothing within the Agreement takes away from any existing treaty right or Aboriginal right of other Indigenous peoples of Canada under Section 35 of the Act. The signed Agreement initiated the enrolment process, with approximately 25,000 applications received within the first year (Qalipu First Nation 2016). The Qalipu Mi'kmaq First Nation was established recently, and did not sign treaties with the Crown. Also, there is no land base associated with the Qalipu First

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Nation. In September 2011, the Qalipu was established as an Indian band under the *Indian Act* (specifically, the *Qalipu Mi'kmaq First Nation Act*) and 23,877 members were found eligible and registered as founding members (Qalipu First Nation 2016). In June 2014, the *Qalipu Mi'kmaq First Nation Act* received Royal Assent (Qalipu First Nation 2016). In January 2017, the federal government (INAC) ruled on the over 100,000 applications for Qalipu membership. A total of only 18,000 were accepted, with no right of appeal (CBC News 2017). Although Qalipu has no reserve land, member live in sixty-six communities on the island, with satellite administrative offices located in Glenwood, Grand Falls-Windsor, and St. George's. Its central administrative office is in Corner Brook (Qalipu First Nation 2016) (Figure 7-36).

Health and Socioeconomic Conditions

Infrastructure and Services, Economic Indicators, and Community Health

Because members live in over 60 communities throughout Newfoundland, consolidated information on infrastructure and services, economic conditions, and community health is not readily available. Members access provincially provided services in communities where they are offered.

Economic Initiatives

The Qalipu Business Trust Committee leads economic and corporate development initiatives (Qalipu First Nation undated). Priority initiatives include the development of an equity fund to support a future independent economic development corporation, the development of a plan to establish central Newfoundland as economic development headquarters for the Qalipu, and the establishment of a Qalipu pharmacy (Qalipu First Nation undated).

Business partnerships have been negotiated and implemented between Qalipu and several construction firms. For example, Marine Contractors Incorporated Qalipu was created as a partnership between Qalipu and Marine Construction to enable Qalipu to bid on civil construction opportunities from Emera NL and its many contractors. In 2014, the partnership was awarded a major contract to perform the civil site preparation work for Emera NL (Qalipu Mi'kmaq First Nation 2015). Other business entities include Qalipu Project Support Services (created to bid on work camps for the Maritime Link Project), Qalipu Safety and Industrial Supply (the Band and MWG Apparel united to supply contractors with safety, industrial and fire suppression related materials), and Eastern Door Logistics (a partnership with Velogistix to engage in opportunities to supply and transport supplies for Emera NL and its primary contractors) (Qalipu Mi'kmaq First Nation 2015). The 2014-2015 Annual Report indicated that the Band earned revenues (including government grants and contributions) of \$9.1 million and had total expenditures of \$8.3 million, resulting in a surplus of \$777,552 (Qalipu Mi'kmaq First Nation 2015).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

The Mi'kmaq have occupied parts of the Maritime Provinces for more than 13,000 years. Between 1600 and 1700, Mi'kmaq families hunted, fished, and trapped from Newfoundland's southwest coast to Placentia Bay, travelling back and forth between Cape Breton and Newfoundland (Pastore 1998). In the early 19th century, Mi'kmaq hunters expanded their range to include much of the interior of the main portion of Newfoundland, with camps found in St. George's Bay and Codroy River in the

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

southwest, White Bear Bay and Bay d’Espoir on the island’s south coast and Bonavista Bay, Gander Bay, and the Bay of Exploits in the northeast (Pastore 1998). The Newfoundland Mi’kmaq ranged throughout the interior of the island for hunting and trapping purposes (Pastore 1998).

Similar to other First Nations, the Mi’kmaq have a long and rich heritage consisting of unique cultural, social, political, and spiritual traditions (Qalipu First Nation 2016). Mi’kmaq spirituality has been traditionally holistic, believing that all living things, plants, animals, and humans have a spirit and all living things are interdependent (Qalipu First Nation 2016). As a recently formed band, Qalipu is working to create teachings and new ceremonial ways which integrate the core heritage values of the ancestral Mi’kmaq spirituality in the modern world (Qalipu First Nation 2016).

Although limited information is publicly available on historic and cultural Qalipu sites, at least one has been identified (seal rocks near the Town of St. George’s on the west coast (St. George’s Indian Band 2017)), and as the community continues to plan and progress, others will likely be identified. There are currently 21 known Mi’kmaq archaeological sites in interior and coastal Newfoundland, between the Port au Port peninsula and Clarenville (Inside Newfoundland and Labrador Archaeology 2013).

Qalipu First Nation cultural practices and resources are focused on the lands and waters of the Island of Newfoundland (over 300 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

The Mi’kmaq continue to use the land and resources for hunting, trapping, and fishing for subsistence purposes, using extensive areas of land, sea, and water (Emera Newfoundland and Labrador 2013). Important sources of traditional food include moose, caribou, partridge, snowshoe hares, salmon, trout, eels, shellfish and wild berries, with migratory birds, seals and groundfish of lesser importance but still harvested (Emera Newfoundland and Labrador 2013). The Qalipu have been undertaking studies to understand and monitor specific species, including the Arctic hare, woodland caribou, elver and glass eel, commercial eel, Atlantic salmon, eelgrass, golden star tunicate and the European green crab (Qalipu First Nation 2016). The harvesting of groundfish, pelagic fish, shellfish, and seals are also of importance to the Mi’kmaq on the west coast (Emera Newfoundland and Labrador 2013).

The Qalipu Mi’kmaq First Nation holds one inshore enterprise with a groundfish commercial-communal license permitting access to 3K and a shrimp license for SFA 6 (3K), as well as pelagic fishery access (herring, mackerel, and capelin) which occurs close to shore in 3KL. They also hold a commercial-communal licence for snow crab in Area 4 (NAFO Division 3K).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

7.3.1.5 Miawpukek First Nation

General Overview

The Miawpukek Mi'kamaway Mawi'omi First Nation Reserve is located at the mouth of the Conne River on the south coast of the island of Newfoundland (Figure 7-36). The on-reserve population was 956 in 2016, an increase in 3.9 percent since 2011 (Statistics Canada undated(a)). The median age of the community is 34.9 years of age, with 78.2 percent of the population over 15 years of age.

According to traditional oral history, the Miawpukek Reserve was established in 1870 and was officially designated as Samiajij Miawpukek Indian Reserve under the *Indian Act* in 1987 (Miawpukek First Nation website 2017). In 2013, Miawpukek First Nation signed a Self-Government Agreement-in-Principle with the governments of Canada and Newfoundland and Labrador which gives them the opportunity to govern their internal affairs and assume greater responsibility and control over decisions that affect their community (INAC 2012(b)). This Agreement-in-Principle is not a treaty or a land claims agreement within the meaning of sections 25 and 35 of the *Constitution Act*, 1982 and does not create, recognize, or affirm any right under s.35 of the *Constitution Act*, 1982. The Agreement was an important component to self-government and the planning and management of economic opportunities and sets out jurisdictions, rights, and limitations for the Miawpukek First Nation (Government of Newfoundland and Labrador 2013). Subject areas included in the Agreement-in-Principle include culture and language, education, health, child and family services, land management, resource management, licensing, regulation and operation of business, and administration of justice (Government of Newfoundland and Labrador 2013).

Health and Socioeconomic Conditions

Following establishment of a reserve in 1987, Miawpukek has gone from a relatively poor, isolated community with almost 90 percent unemployment to a strong vibrant community with nearly 100 percent full-time / part-time employment and reports that it is one of the fastest growing communities in the province (Miawpukek First Nation website 2017). The Miawpukek First Nation community has initiated economic self-sufficiency with small businesses such as Christmas tree farms, hunt camps and small fisheries, and has now expanded into retail businesses (e.g., Miawpukek Gas Bar and Convenience store) (INAC 2012(b)). The Miawpukek First Nation also owns and operates the Jipuijij'kuei Kuespem Nature Park providing camping, kayak / canoe rentals, walking trails and float plane charters (Explore Newfoundland and Labrador 2010). The community provides medical services (including medical clinic, wellness centre, youth centre and nutrition centre), ambulance services, on-call nurses, and schools (INAC 2012(b)). Conne River Health and Social Services is responsible for health and social needs of the Miawpukek community with a mandate to ensure all community members have access to daily clinical nursing services to deal with health conditions and issues (CRHSS 2008).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

Cultural and traditional values, heritage and languages are important to Miawpukek First Nation and all policy-making is centered around them (INAC 2012(b)). As indicated above, there are currently 21 known Mi'kmaq archaeological sites located in interior and coastal Newfoundland, between the Port au Port Peninsula and Clarenville (Inside Newfoundland and Labrador Archaeology 2013).

Miawpukek First Nation cultural practices and resources are focused on the lands and waters of the island of Newfoundland (over 300 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

The Miawpukek First Nation has a FSC licence in a portion of 3P, south coast to Bay d'Espoir, for scallop, lobster, mackerel, herring, rainbow trout, brook trout, cod, eels, smelt, capelin, seals (harp, grey, and harbour), snow crab, whelk, and redfish (D. Ball, DFO, pers. comm. 2017).

Miawpukek First Nation holds nine enterprises that permit access to 3KL. They hold three tuna commercial-communal licences that permit access to 3LN. They also hold one seal commercial-communal license that permits access in Seal Fishing Areas 4-33 (Atlantic-wide).

7.3.2 Mi'kmaq of the Maritime Provinces

Historical Context/Summary:

The current day provinces of Nova Scotia, New Brunswick, PEI and Quebec are founded on land occupied by the ancestors of the Mi'kmaq. The earliest evidence of Indigenous peoples in the Maritimes Region of Canada shows that the ancestors of the Mi'kmaq have existed on the land for more than 11,000 years (Nova Scotia Office of Aboriginal Affairs (OAA) website, 2017). They remain the predominant Indigenous group within the Province of Nova Scotia today, as well as Prince Edward Island, and have a significant presence in New Brunswick, parts of Northern Maine and Northeastern Quebec. Figure 7-39 illustrates the locations of First Nation Communities in Nova Scotia and Prince Edward Island.

The first European contact with the Mi'kmaq occurred in the 16th and 17th centuries and at that time, the traditional Mi'kmaq territory (known as Mi'kma'ki) stretched from the southern portions of the Gaspé Peninsula eastward to most of modern-day NB, and all of NS and PEI (OAA website 2015). Mi'kma'ki was divided into seven political districts: Unimaki (Cape Breton Island), Esgigeoag (Canso-Sheet Harbour), Sipenknkatik (Sheet Harbour-LaHave), Kespukwitk (Southern NS), Pittukewwaq (PEI), Aqq Epekwik (Shediac to Canso Strait), Kespekewaq (Chaleur Bay to Gaspé, NB) and Sikniktewaq (Chaleur Bay to Shediac) (MGS, 2016).

The Mi'kmaq were part of a confederacy of nations belonging to the broader Wabanaki Confederacy that included other eastern Indigenous nations such as the Passamaquoddy, Penobscot, Abenaki and Wolastoqiyik (MGS, 2016).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

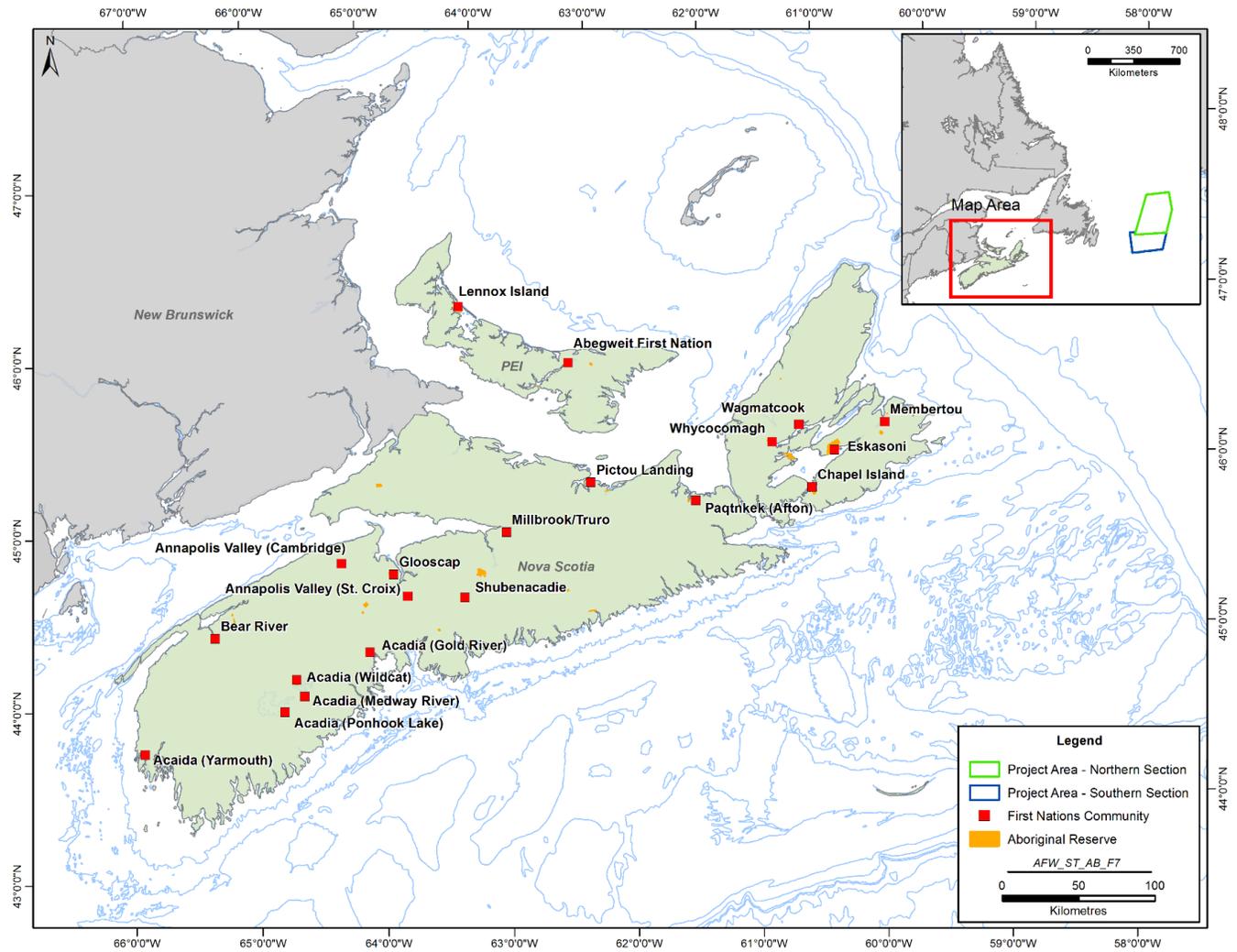


Figure 7-39 Location of First Nation Communities in Nova Scotia and Prince Edward Island

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

With knowledge of the ecology of the land, the lives of Indigenous peoples in what are today referred to as the Maritime provinces considered the seasonal cycles of the local vegetation, animals and fish; and, they lived a traditional life as fishers, hunters, and gatherers throughout their territory (MGS, 2016). The Mi'kmaq have a deep connection to land, plants, animals and water and their interconnection. As with most nations with Algonquin ties, Wolastoqiyik had similar worldviews as the Mi'kmaq with deep connections to the land and waters. (Wolastoqiyik, 2016).

The Mi'kmaq generally lived in semi-permanent and permanent settlements at resource-rich locations with summer villages typically located by a navigable body of water (Mi'kma'ki All Points Services, 2013). In the summer, areas around the coastal camps provided fish, shellfish, fowl, and eggs (MGS 2016). During the colder months, the Mi'kmaq did most of their game hunting moving inland from their summer camps (Speck 1922 in MGS 2016; Denys 1993 in MGS 2016). When resources such as fish, game and plants became scarce near the proximity of an encampment, the Mi'kmaq moved the encampment to a new location with the women being the ones responsible for breaking camp, transporting and setting up the new camp (Robertson 1969 in MGS 2016; Speck 1922 in MGS 2016).

Following European contact, the Mi'kmaq participated in the fur and other internal trade, and were historically tied with French colonial forces against the British. Conflict between the British and the French, and therefore the Mi'kmaq, led to the signing of treaties between the Mi'kmaq and the British in 1726, 1749, 1752 and 1760-61, known as the Peace and Friendship Treaties.

Today, existing Aboriginal and Treaty rights, such as the Peace and Friendship Treaties, are recognized as constitutionally protected rights under Section 35 of the federal *Constitution Act, 1982*. As affirmed by recent Supreme Court of Canada (SCC) decisions, including the *Sparrow Decision* (SCC, 1990) and *Marshall Decision* (SCC, 1999), these treaties guarantee Aboriginal rights to hunt and fish throughout the region; and, to maintain a moderate livelihood.

Fisheries Context for Nova Scotia, New Brunswick, PEI and Quebec Mi'kmaq, Wolastoqik of New Brunswick, and Passamaquoddy:

The 1999 SCC Marshall decision recognized the treaty rights of the Mi'kmaq, Maliseet and Passamaquoddy (acknowledged to be the modern-day beneficiaries of the Peace and Friendship Treaties) to harvest and sell fish in a manner that provides a moderate livelihood, and noted that those rights are communal (INAC 2010). In response, DFO created the Marshall Response Initiative (MRI) from 2000-2007, which was then replaced by the Atlantic Integrated Commercial Fisheries Initiative (AICFI) in 2007. The two initiatives transferred considerable commercial fishing capacity to Indigenous communities in the Maritimes. In addition to providing access to licences and equipment, the programs provide mentoring and training to build commercial fisheries capacity in Mi'kmaq and Maliseet communities in New Brunswick, Prince Edward Island, Nova Scotia and the Gaspé region (UDG 2016).

Fishing is one of most important cultural and economic activities to Indigenous groups in the Maritime provinces. In some cases, up to 90% of sole source community income is generated from fishing activity (on and offshore). It also provides a significant source of country food for communities and is essential to diet and good health. The MRI and AICFI initiatives have supported the development of

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

a professional Indigenous fishery, however not all communities carry the same capacity. A number of Indigenous organizations work with the Mi'kmaq and Maliseet First Nations to develop fisheries capacity. For example, the UInooweg Development Group (UDG) was established in 1986 to provide loans and business services to Indigenous entrepreneurs in Atlantic Canada. UDG works in collaboration with the Atlantic Policy Congress (APC) of First Nations Chiefs Secretariat and DFO to advance First Nations fisheries in Atlantic Canada (UDG 2016). UDG's Business Development Team acts as a service provider to Indigenous communities wanting to establish sustainable businesses in the Atlantic commercial fishery (Johnstone 2014).

7.3.2.1 The Mi'kmaq of Nova Scotia

Following the 1999 Marshal Decision, the Mi'kmaq, Nova Scotia and federal governments signed an Umbrella Agreement in 2002 to establish a "Made-in-Nova Scotia" negotiation process to resolve outstanding issues related to Mi'kmaq Treaty and Aboriginal rights. This includes the interests of the Mi'kmaq of Nova Scotia in land, resource management and environmental protection, among other issues. A Framework Agreement was signed on February 23, 2007 between the three parties to set out the process to promote efficient, effective, orderly, and timely negotiations towards a resolution of issues respecting Mi'kmaq rights and title (NS Office of Aboriginal Affairs website 2017).

On August 31, 2010, after a three-year pilot period, the thirteen Mi'kmaq communities through the Assembly of Nova Scotia Mi'kmaq Chiefs signed an historic agreement with the Governments of Canada and Nova Scotia. The Mi'kmaq-Nova Scotia-Canada Consultation Terms of Reference lays out a consultation process for the parties to follow when governments are making decisions that have the potential to adversely impact asserted Mi'kmaq Aboriginal and treaty rights. The Terms of Reference was developed under the 2002 Umbrella Agreement.

There are 13 Nova Scotia Mi'kmaq First Nation communities with elected Chiefs and Councils, and eleven of those communities are currently represented by the Assembly of Nova Scotia Mi'kmaq Chiefs (ANSMC). The Kwilmu'kw Maw-klusuaqn Negotiation Office (KMKNO) is the administrative office of the Assembly that coordinates treaty negotiations, and consultation on decisions/actions that may impact Mi'kmaq Aboriginal or treaty rights.

The 13 Mi'kmaq communities in NS are:

- Acadia First Nation
- Annapolis Valley First Nation
- Bear River First Nation
- Eskasoni First Nation
- Glooscap First Nation
- Membertou First Nation
- Paq'tnkek Mi'kmaw Nation
- Pictou Landing First Nation
- Potlotek First Nation
- Wagmatcook First Nation
- We'koqma'q First Nation

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

- Sipekne'katik First Nation
- Millbrook First Nation

In 2013 and 2016, respectively, Sipekne'katik and Millbrook First Nations chose to withdraw from the ANSMC and represent themselves in consultation. The Sipekne'katik First Nation and Millbrook First Nation assert the same rights as the other Mi'kmaq communities.

All thirteen Mi'kmaq communities located in Nova Scotia are discussed in further detail below.

The locations of Mi'kmaq reserves in Nova Scotia are provided in Figure 7-39. The NS Mi'kmaq have established Aboriginal and Treaty rights, and assert title to all of Nova Scotia and the offshore. The Mi'kmaq used the land and waters around NS for travel corridors, land hunting and harvesting, and fishing for traditional and commercial purposes²¹. However, given that the Project components and activities will be located at a considerable distance from the Indigenous communities (850 km from NS), the discussion of current use of lands and resources for traditional purposes in the EIS is focused on activities occurring in the marine environment and species of cultural importance and interest to Indigenous groups that may migrate through the marine environment in or near the Project Area. The current use of lands and resources section therefore includes a discussion of FSC harvesting and commercial-communal fishing for each community.

7.3.2.1.1 Acadia First Nation

General Overview

The Acadia First Nation reserve was created in 1976. Acadia First Nation encompasses five reserves: Yarmouth 33 located 3.2 km east of Yarmouth with an area of 27.7 ha, Ponhook Lake 10 located 115.2 km southwest of Halifax with an area of 101.8 ha, Medway River 11 located 108.8 km southwest of Halifax with an area of 4.7 ha, Wildcat 12 located 11 km southwest of Halifax with an area of 465.4 ha, and Gold River 21 located 60.8 km west of Halifax with an area of 270.2 ha (INAC website undated). Acadia First Nation is a member of the ANSMC. According to 2016 census data, the current on-reserve population at the Yarmouth reserve was 157, Ponhook Lake was 15, Wildcat was 29 and Gold River was 95 (Statistics Canada undated(a)). Population data are not available for Medway River.

Health and Socioeconomic Conditions

Infrastructure and Services

Acadia First Nation has experienced infrastructure growth in the past decade, including housing and roads (Acadia First Nation website undated). Acadia First Nation has undertaken several responsibilities including planning and promoting new developments within their community.

²¹ The Marshall decision recognized the Mi'kmaq have a treaty right to fish for a "moderate livelihood". Although discussions regarding the extent and nature of that term is still underway between the federal, provincial and Mi'kmaq governments, it is assumed that some commercial interpretation is involved.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

According to 2011 census data, there were 90 dwellings within the communities, all of which is band housing (Statistics Canada undated(b)). Housing characteristics for each community are provided in Table 7.28.

Table 7.28 Housing Characteristics by Community, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Yarmouth	60	0	0	60	35	-	5.8
Ponhook	-	-	-	-	-	-	-
Medway	-	-	-	-	-	-	-
Wildcat	-	-	-	-	-	-	-
Gold River	30	0	0	25	0	-	4.5
Total	90			85	35		

Source: Statistics Canada undated(b)
Notes: '-' means not available
The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

Recent development has included an administrative building, two health centres, six gaming facilities, including the Acadia First Nation Entertainment Centre which opened in 2013, and offices in Halifax and Milton to serve the off-reserve population (KMKNO website undated). There is also an Acadia Youth Centre / Day Care within the community.

The health centres are located in Yarmouth and Gold River. The Yarmouth Health Centre includes a dentist, Victorian Order of Nurses (VON), clinic nursing, foot care clinics, and wellness and health promotion clinics (Acadia First Nation website undated). The Gold River Health Centre provides VON, clinic nursing, wellness and health-promotion clinics, afterschool program, and parent and tot group. In Wildcat, the VON is available once a month at the Wildcat Office (Acadia First Nation website undated).

Economy

Economic indicators for the Acadian First Nation are presented in Table 7.29.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.29 Economic Indicators for the Acadia First Nation, 2011

Indicator	Yarmouth	Ponhook	Medway	Wildcat	Gold River
Participation Rate (%)	52.2	-	-	-	45.5
Employment Rate (%)	47.8	-	-	-	27.3
Unemployment Rate (%)	0.0	-	-	-	40.0
Average Individual Income (\$)	-	-	-	-	-
Source: Statistics Canada undated(b)					
Note: '-' means data not available					

Infrastructure developments within the communities, such as the administrative buildings, health centres and gaming facilities, provide employment for the community members (KMKNO website undated). A fisheries company, Acadia First Nation Kespuwick Resources, was established in 2001. It includes the area between Yarmouth and Lunenburg Counties with the main onshore facilities in Yarmouth (Acadia First Nation website undated). Kespuwick has 50 harvesting licences across 15 species, focused on lobster within Lobster Fishing Area (LFA) 33 and 34 as well as Atlantic blue fin, tuna, snow crab, scallops, gaspereau and swordfish (Acadia First Nation website undated).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NS Mi'kmaq is provided in the preface to Section 7.3.2.1. The Acadia First Nation were centred in today's Queen's County with artifacts found along the Mersey River (KMKNO website undated). An interpretive centre is being developed to display archaeological and cultural history of the community. Acadia First Nation cultural practices and resources are focused on the lands and waters of NS (850 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.1, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by the Acadia First Nation.

FSC Fishing

Acadia First Nation hold FSC fishing licences issued by DFO for 28 species. Within the inland and tidal waters of NS, Acadia First Nation harvest 17 species. Acadia First Nation also hold a FSC license to fish for several other species in defined NAFO Units in and around NS, including groundfish, lobster and crab (other than snow crab). There are no location restrictions on the fishing of eel, shad and smelt. Additionally, the Agency identified Acadia First Nation as having an Aboriginal right to fish for Atlantic salmon for FSC purposes. FSC species and licence locations are described below in Table 7.30.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.30 FSC Licence Locations for Acadia First Nation

Species	FSC Licence Location
Blue Shark	The tidal waters adjacent to the Province of NS
Blueback Herring	Inland waters of Antigonish, Pictou, Colchester, and Cumberland Counties Inland waters of Digby, Yarmouth, and Shelburne Counties Inland waters of Inverness County and Victoria County flowing into the Gulf of St. Lawrence west of Cape North Inland Waters of Kings County and that portion of Hants County west of the West Hants municipal boundary Inland waters of Lunenburg County Inland waters of Queens County Inland waters of the Margaree River, the Northeast Margaree River, and the Southwest Margaree River downstream from the Highway 19 bridge at Southwest Margaree Southwest Margaree River, from the Highway 19 bridge at Southwest Margaree upstream to Lake Ainslie Tidal waters of Digby, Yarmouth, and Shelburne Counties Tidal waters of Inverness County and that portion of Victoria County west of Cape North that borders on the Gulf of St. Lawrence Tidal waters of Kings County and that portion of Hants County west of the West Hants municipal boundary Tidal waters of Queens and Lunenburg Counties Tidal waters of those portions of the Counties of Antigonish, Colchester, Cumberland, and Pictou that border on Northumberland Strait
Brook Trout	Inland and tidal waters of the Province of NS
Catfish	Division 4X
Cod	Division 4X
Crab (other than snow crab)	LFA 33, 34, LFA 35 (within NS)
Eel	No restrictions
Gaspereau	Inland waters of Antigonish, Pictou, Colchester, and Cumberland Counties Inland waters of Digby, Yarmouth, and Shelburne Counties Inland waters of Inverness County and Victoria County flowing into the Gulf of St. Lawrence west of Cape North Inland Waters of Kings County and that portion of Hants County west of the West Hants municipal boundary Inland waters of Lunenburg County Inland waters of Queens County Inland waters of the Margaree River, the Northeast Margaree River, and the Southwest Margaree River downstream from the Highway 19 bridge at Southwest Margaree Southwest Margaree River, from the Highway 19 bridge at Southwest Margaree upstream to Lake Ainslie Tidal waters of Digby, Yarmouth, and Shelburne Counties Tidal waters of Inverness County and that portion of Victoria County west of Cape North that borders on the Gulf of St. Lawrence

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.30 FSC Licence Locations for Acadia First Nation

Species	FSC Licence Location
	Tidal waters of Kings County and that portion of Hants County west of the West Hants municipal boundary Tidal waters of Queens and Lunenburg Counties Tidal waters of those portions of the Counties of Antigonish, Colchester, Cumberland, and Pictou that border on Northumberland Strait
Haddock	Division 4X
Halibut	Division 4X
Herring	The tidal waters adjacent to the Province of NS
Lobster	LFA 33 LFA 34 LFA 35
Mackerel	The tidal waters adjacent to the Province of NS
Mussel	Inland and tidal waters of the Province of NS
Periwinkle	The tidal waters adjacent to the Province of NS
Pollock	Division 4X
Quahaug	Inland and tidal waters of the Province of NS
Rainbow Trout	Inland and tidal waters of the Province of NS
Razor Clams	Inland and tidal waters of the Province of NS
Scallop	SFA 28A SFA 29 SFA 29A (in negotiations) SFA 29B (in negotiations) SFA 29C (in negotiations) SFA 29D (in negotiations) SFA 29E (in negotiations)
Seals	The tidal waters adjacent to the Province of NS
Shad	No restrictions
Smallmouth Bass	Inland and tidal waters of the Province of NS
Smelt	No restrictions
Soft-shell Clams	Inland and tidal waters of the Province of NS
Squid	The tidal waters adjacent to the Province of NS
Striped Bass	In all tidal waters In inland waters
Tomcod	Tidal waters of NS
Source: Data provided courtesy of DFO	

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Commercial-Communal Fishing

Acadia First Nation hold several commercial-communal licences, including for gaspereau, clams, crab, eel, groundfish, herring, lobster, mackerel, sea scallop, swordfish, and tuna, issued by DFO. One licence, for swordfish overlaps the Project Area. DFO landings data (2011-2015) indicates no landings originating from the Project Area.

7.3.2.1.2 Annapolis Valley First Nation

General Overview

Annapolis Valley First Nation is comprised of two land reserves: Annapolis Valley (Cambridge) located 88 km northwest of Halifax with an area of 59 ha and St. Croix 34 located 46.6 km northwest of Halifax with an area of 126.2 ha. The Annapolis Valley First Nation is a member of the ANSMC. According to 2016 census data, the on-reserve population was 140 (Statistics Canada undated(a)).

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were a total of 55 dwellings within the community of Cambridge, all of which is band housing (Statistics Canada undated(b)). Census information is not available for St. Croix. Housing characteristics for Annapolis Valley First Nation are provided in Table 7.31.

Table 7.31 Housing Characteristics for Annapolis Valley First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Cambridge	55	0	0	50	15	-	5.8
St. Croix	-	-	-	-	-	-	-

Source: Statistics Canada undated(b)

Notes: ‘-’ means data not available

The numbers shown in the tables have been subject to a confidentiality procedure called ‘random rounding’ to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

There is no police detachment or fire hall in the communities (INAC website 2012(a)).

Economy

Economic indicators for 2011 for the Annapolis Valley First Nation are presented in Table 7.32.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.32 Economic Indicators for the Annapolis Valley First Nation, 2011

Indicator	Cambridge	St. Croix
Participation Rate (%)	50.0	-
Employment Rate (%)	40.0	-
Unemployment Rate (%)	20.0	-
Average Individual Income (\$)	-	-
Source: Statistics Canada undated(b) Note: '-' means data not available		

Annapolis Valley holds commercial-communal licences and operates the Annapolis Valley Commercial Fisheries enterprise which operates one lobster fishing boat. Other enterprises include Annapolis Valley First Nation Gaming, Annapolis Valley First Nation Smoke Shop, and Annapolis Valley First Nations Gas Bar (Annapolis Valley First Nation website undated).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NS Mi'kmaq is provided in the preface to Section 7.3.2.1. In Annapolis Royal and surrounding areas specifically, there is a long history of Mi'kmaq presence and archeologists have identified several settlement patterns (Annapolis Royal website 2017). The Mi'kmaq lived in Annapolis Valley when the Europeans arrived in the area, with lifestyles heavily influenced by the land and ecosystems and a strong tradition of innovation connected to the homelands. Annapolis Valley First Nation cultural practices and resources are focused on the lands and waters of NS (850 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.1, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by the Annapolis Valley First Nation.

FSC Fishing

Annapolis Valley First Nation hold FSC fishing licenses issued by DFO for 16 species including several fish and shellfish species within the tidal waters of NS, such as some species of trout, mussels, clams, mackerel, and herring. Annapolis First Nation also hold a FSC licence to fish for other species in defined NAFO units in and around NS, including groundfish, lobster and scallop. Additionally, the CEA Agency identified Annapolis Valley First Nation as having an Aboriginal right to fish for Atlantic salmon for FSC purposes. FSC species and licence locations are listed below in Table 7.33.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.33 FSC Licence Locations for Annapolis Valley First Nation

Species	FSC License Location
Brown Trout	Inland and tidal waters of the province of NS
Clams	Inland and tidal waters of the province of NS
Eel	Bay of Fundy
Flounder	Bay of Fundy
Gaspereau	River system along the upper Bay of Fundy and the south coast of NS (mainly Kings and Lunenburg counties)
Halibut	Bay of Fundy
Herring	The tidal waters adjacent to the Province of NS
Lobster	LFA35
Mackerel	The tidal waters adjacent to the Province of NS
Mussels	Inland and tidal waters of the province of NS
Pollock	Bay of Fundy
Rainbow Trout	Inland and tidal waters of the province of NS
Scallop	SFA 28A; SFA 29; SFA 29B, 29C, 29D, 29E
Shad	River system along the upper Bay of Fundy and the south coast of NS (mainly Kings and Lunenburg counties)
Smelt	No restrictions
Speckled Trout	Inland and tidal waters of the province of NS
Source: Data provided courtesy of DFO	

Commercial-Communal Fishing

Annapolis Valley First Nation hold several commercial-communal licences, such as for gaspereau, crab, groundfish, herring, lobster, and sea scallop, issued by DFO. These licences do not overlap with the Project Area.

7.3.2.1.3 Bear River First Nation

General Overview

Bear River First Nation (also known as L'sitkuk) is located in the Annapolis Valley between the towns of Annapolis Royal and Digby (KMKNO website undated). Bear River First Nation is comprised of three reserves: Bear River 6 located 17.7 km southeast of Digby with an area of 633.8 ha, Bear River 6A (known as Lequille) located 9.6 km southeast of Annapolis Valley with an area of 31.2 ha, and Bear River 6B (known as Graywood) located 6.4 km southeast of Annapolis Valley with an area of 24.3 ha (INAC website undated). Bear River First Nation is a member of the ANSMC. Bear River 6 is the main land base where most of the population live. According to 2016 census data, the on-reserve population in Bear River 6 is 138, Bear River 6A is 0 and Bear River 6B was 16 (Statistics Canada undated(a)).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were a total of 45 dwellings within Bear River, most (78 percent) which are band owned (Statistics Canada undated(b)). Housing characteristics for Bear River First Nation are provided in Table 7.34.

Table 7.34 Housing Characteristics for Bear River First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Bear River	45	10	10	35	25	-	5.0

Source: Statistics Canada undated(b)
Notes: '-' means data not available
The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

Other infrastructure includes Treaty Gas bar, a seasonal Heritage and Cultural Centre, a Learning Centre which provides space for educational activities, and a Health Centre (KMKNO website undated). There is an RCMP satellite office which recently opened in the community, and there are plans for a Fitness Centre (KMKNO website undated).

Economy

Economic indicators for Bear River First Nation are presented in Table 7.35.

Table 7.35 Economic Indicators for the Bear River First Nation, 2011

Indicator	Bear River
Participation Rate (%)	62.5
Employment Rate (%)	50.0
Unemployment Rate (%)	20.0
Average Individual Income (\$)	-

Source: Statistics Canada undated(b)
Note: '-' means data not available

Revenue for Bear River First Nation is predominantly generated through the operation of the Treaty Gas Bar and the Heritage and Cultural Centre (KMKNO undated).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NS Mi'kmaq is provided in the preface to Section 7.3.2.1. The Bear River reserve came into existence in 1801, with 1,000 acres set aside for the Mi'kmaq in the County of Annapolis with an additional 600 acres requested at the forks of the river (Mainland Mi'kmaq Development Inc. 2016). Bear River appeared to have been a capital village for the southwestern bands and central meeting place for the Mi'kmaq due to the location on old water routes (KMKNO website undated). For thousand of years, the Bear River Mi'kmaq have lived and travelled in what is now known as Digby and Annapolis counties (Mainland Mi'kmaq Development Inc. 2016). The traditional economy was based on hunting, fishing, and gathering, with people travelling a great deal in search of game. The community was well known for their artwork including embroidering porcupine quills on birchbark, leatherwork, and basketry (Mainland Mi'kmaq Development Inc. 2016; KMKNO website undated). This continues today by the community's craftspeople and woodworkers. There is a strong tradition as hunting and fishing guides for non-native sports (Mainland Mi'kmaq Development Inc. 2016). Traditional values include respecting elders, sharing and striving to live happy and peaceful lives.

The Mi'kmaq have been recorded as early as 1612 to 1614 as harvesting resources in the Annapolis River and French Bay (Bay of Fundy) (Mainland Mi'kmaq Development Inc. 2016). Traditionally, during the fall and winter, families would disperse to hunt big game (moose, deer, caribou, and bear) and smaller animals (beaver, some bird species and rabbit). Then in the spring families settled along the coast and in the summer they harvested shellfish (clam, mussel and scallop) and several fish species (cod, salmon, trout, eel, herring, and bass) (Mainland Mi'kmaq Development Inc. 2016). Lobster were also caught at low tide using fish spears. Seal, walrus, and porpoise were also taken and berries and plants were. Bear River First Nation cultural practices and resources are focused on the lands and waters of NS (850 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.1, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by the Bear River First Nation.

FSC Fishing

Bear River First Nation hold FSC fishing licenses issued by DFO. These include licenses to harvest nine species within the inland and tidal waters of NS province. Bear River hold a license to fish for other species in defined NAFO units in and around NS, including groundfish, lobster and crab (other than snow crab). There are no restrictions on the fishing of eel, shad and smelt. Additionally, the Agency identified Bear River First Nation as having an Aboriginal right to fish for Atlantic salmon for FSC purposes. FSC species and licence locations are listed in Table 7.36.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.36 FSC Licence Locations for Bear River First Nation

Species	FSC License Location
Bar Clams	Inland and tidal waters of the Province of NS
Crab (other than snow crab)	LFA 34; 35 (within NS)
Eel	No restrictions
Gaspereau	Inland and tidal waters of Antigonish, Pictou, Colchester, and Cumberland Counties Inland and tidal waters of Digby, Yarmouth, and Shelburne Counties Inland and tidal waters of Inverness County & Victoria County flowing into the Gulf of St. Lawrence west of Cape North Inland and tidal waters of Kings County and that portion of Hants County west of the West Hants municipal boundary Inland waters of Inverness County & Victoria County flowing into the Gulf of St. Lawrence west of Cape North Inland waters of Lunenburg County Other inland and tidal waters of NS Inland and tidal waters of Queens County Inland waters of the Margaree River, the Northeast Margaree River, and the Southwest Margaree River downstream from the Highway 19 bridge at Southwest Margaree
Groundfish	NAFO Division 4X
Herring	The tidal waters adjacent to the Province of NS
Landlocked Salmon	Inland and tidal waters of the Province of NS
Lobster	LFA 33; 34; 35 (within NS)
Mackerel	The tidal waters adjacent to the Province of NS
Mussels	Inland and tidal waters of the Province of NS
Quahaug	Inland and tidal waters of the Province of NS
Razor Clams	Inland and tidal waters of the Province of NS
Scallop	SFA 28 A, SFA 29
Seals	The tidal waters adjacent to the Province of NS
Shad	No restrictions
Smallmouth Bass	Inland and tidal waters of the Province of NS
Smelt	No restrictions
Soft-shell Clams	Inland and tidal waters of the Province of NS
Striped Bass	Inland and tidal waters of the Province of NS
Trout	Inland and tidal waters of the Province of NS
Source: Data provided courtesy of DFO	

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Commercial-Communal Fishing

Bear River First Nation hold several commercial-communal licences, such as licences for clams, lobster and tuna, issued by DFO; however, these licences do not overlap with the Project Area.

7.3.2.1.4 Eskasoni First Nation

General Overview

Eskasoni First Nation is located along the shore of the Bras d'Or Lakes and is the largest Indigenous community in Atlantic Canada (KMKNO website undated). Eskasoni First Nation consists of three reserves: Eskasoni 3 located 40 km southwest of Sydney with an area of 3,504.6 ha, Eskasoni 3A located 40 km southwest of Sydney with an area 28.5 ha and Malagawatch 4 located 62 km southwest of Sydney with an area of 661.3 ha (INAC undated). Eskasoni First Nation is a member of the ANSMC. According to 2016 census data, the on-reserve population was 3,422 (Statistics Canada undated(a)).

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were a total of 905 dwellings within the community, 565 (62 percent) of which are band-owned (Statistics Canada undated(b)). Housing characteristics for Eskasoni are provided in Table 7.37.

Table 7.37 Housing Characteristics for Eskasoni First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Eskasoni	905	170	160	565	455	-	6.1

Source: Statistics Canada undated(b)

Notes: '-' means data not available

The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

Within Eskasoni there is a community-operated school from kindergarten to grade 12, supermarket, community rink, and several large and small businesses (KMKNO website undated). There is a fire department, the Eskasoni Fire Department, within the community that has 4 career firefighters and 20 volunteer firefighters (Eskasoni website undated).

Economy

Economic indicators for 2011 are presented in Table 7.38.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.38 Economic Indicators for Eskasoni First Nation, 2011

Indicator	Eskasoni
Participation Rate (%)	47.9
Employment Rate (%)	31.4
Unemployment Rate (%)	34.4
Average Individual Income (\$)	\$16,429
Source: Statistics Canada undated(b)	
Note: '-' means data not available	

The community operates Crane Cove Seafoods, which has 13 vessels ranging from 30 ft. to 65 ft. Eskasoni fishes throughout NS from Ingonish to Yarmouth. Over 100 community members are employed by Crane Cove Seafoods with an additional 35 community members working in their processing plant (Eskasoni website undated).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NS Mi'kmaq is provided in the preface to Section 7.3.2.1. Eskasoni First Nation was first chartered in 1832 and became an official reserve in 1834. From 1845 to 1851 much of Cape Breton suffered from an island wide famine (MGS 2012). At this time, the Mi'kmaq were also in transition into more stationary people, finding other opportunities to provide labour which included for the Eskasoni Mi'kmaq, travelling to Sydney to work and sell wares (MGS 2012). The population of Eskasoni grew in the 1940s because of the Department of Indian Affairs new policy to centralize Indigenous People (Eskasoni website undated). In the 1950s, Eskasoni began the process of controlling their own affairs and a Band Council was established in 1958 (Eskasoni website undated). Eskasoni First Nation cultural practices and resources are focused on the lands and waters of NS (850 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.1, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by the Eskasoni First Nation.

FSC Fishing

Eskasoni First Nation hold FSC fishing licenses issued by DFO. These include licenses to harvest 11 species within the inland and tidal waters of Cape Breton. Eskasoni hold a FSC license to fish for several other species in defined NAFO units in and around NS, including groundfish and lobster. Additionally, the CEA Agency identified Eskasoni First Nation as having an Aboriginal right to fish for Atlantic salmon for FSC purposes. FSC species and licence locations are listed in Table 7.39.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.39 FSC Licence Locations for Eskasoni First Nation

Species	FSC Licence Location
Clams	Tidal waters of Cape Breton
Cod	Tidal waters of Cape Breton
Eel	Tidal and Inland waters of Cape Breton and Antigonish Harbour
Flounder	Tidal waters of Cape Breton
Haddock	Tidal waters of Cape Breton
Herring	Herring fishing Area 17, 18, 19
Lobster	LFA 27, 28, 29, 30
Mackerel	Mackerel Fishing Area 17, 18, 19
Mussels	Tidal waters of Cape Breton
Quahaug	Tidal waters of Cape Breton
Salmon	SFA 18 – Margaree River North East and Main Margaree River (including Southwest Margaree River) up to and including Hatchery Pool North River
Scallop	Tidal waters of Cape Breton
Shad	Tidal waters of NS
Smelt	Tidal and Inland waters of Cape Breton
Trout	Tidal and Inland waters of Cape Breton
Source: Data provided courtesy of DFO	

Commercial-Communal Fishing

Eskasoni First Nation hold several commercial-communal licences, such as licences for gaspereau, crab, eel, groundfish, herring, lobster, mackerel, and shrimp; however, these licences do not overlap with the Project Area.

7.3.2.1.5 Glooscap First Nation

General Overview

Glooscap First Nation consists of one reserve: Glooscap 35 located 68.8 km northwest of Halifax with an area of 171.1 ha (INAC website undated). Glooscap First Nation is a member of the ANSMC. According to 2016 census data, the on-reserve population was 81 (Statistics Canada undated(a)).

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were 25 dwellings within the Glooscap First Nation, all owned by the band (Statistics Canada undated(b)). Housing characteristics for the Glooscap community are provided in Table 7.40.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.40 Housing Characteristics for Glooscap First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Glooscap	25	0	0	25	0	-	5.0

Source: Statistics Canada undated(b)

Notes: ‘-’ means data not available

The numbers shown in the tables have been subject to a confidentiality procedure called ‘random rounding’ to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

Although there are no schools on-reserve, the Glooscap community has appointed an education director that oversees primary and secondary education for on-reserve members, including meeting regularly with the principals of the local schools that the on-reserve members attend (Glooscap website 2017).

Health care services are provided through an on-reserve health and healing centre (Glooscap website 2017). The Health Centre provides a variety of programs and services focused on six components, including education, health promotion, culture and language, nutrition, social support, and parent / family involvement (Glooscap website 2017).

Economy

Economic indicators for 2011 are presented in Table 7.41.

Table 7.41 Economic Indicators for Glooscap First Nation, 2011

Indicator	Glooscap
Participation Rate (%)	55.6
Employment Rate (%)	55.6
Unemployment Rate (%)	0
Average Individual Income (\$)	-

Source: Statistics Canada undated(b)
Note: ‘-’ means data not available

In 2014, Glooscap Ventures was created as the economic department for the community to further develop business opportunities that will deliver revenue and employment to the Glooscap First Nation (Glooscap website 2017). Glooscap Ventures is currently responsible for on-reserve businesses including the variety store / gas bar, gaming facility, and commercial fisheries. They are in the process of developing a 27-acre parcel of land, Glooscap Landing, along Highway 101 for retail purposes (Glooscap website 2017). Other initiatives by Glooscap Ventures include the expansion of the commercial fisheries and pursuing opportunities in renewable energy.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NS Mi'kmaq is provided in the preface to Section 7.3.2.1. Glooscap First Nation, named after the legendary figure of the Mi'kmaq, is located near Hantsport NS. Glooscap First Nation was created from the separation of two communities, Annapolis Valley and Glooscap that were 30 km apart (KMKNO website undated). In June 1984, Glooscap became the thirteenth Mi'kmaq band in NS (KMKNO website undated). Glooscap First Nation was originally known as Horton, but changed to Glooscap in 2001 (KMKNO website undated). Glooscap First Nation cultural practices and resources are focused on the lands and waters of NS (850 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.1, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by the Glooscap First Nation.

FSC Fishing

Glooscap First Nation hold FSC fishing licenses issued by DFO. These include FSC licenses to harvest 13 species within the inland and tidal waters of NS. Glooscap hold a FSC license to fish for several other species in defined NAFO units in and around NS, including groundfish and lobster. There are no restrictions on the fishing of eel, shad and smelt. Additionally, the CEA Agency identified Glooscap First Nation as having an Aboriginal right to fish for Atlantic salmon for FSC purposes. FSC species and licence locations are listed in Table 7.42.

Table 7.42 FSC Licence Locations for Glooscap First Nation

Species	FSC Licence Location
Brown Bullhead	Inland waters of NS
Chain Pickerel	Inland waters of NS
Cod	Division 4X – Bay of Fundy
Eel	No restrictions
Flounder	Division 4X – Bay of Fundy
Gaspereau	Inland and tidal waters of Antigonish, Pictou, Colchester, and Cumberland Counties. Inland and tidal waters of Digby, Yarmouth, and Shelburne Counties Inland and tidal waters of Inverness County and Victoria County flowing into the Gulf of St. Lawrence west of Cape North Inland and tidal waters of Kings County and that portion of Hants County west of the West Hants municipal boundary Inland waters of Lunenburg County Inland and tidal waters of NS Inland waters of the Margaree River, the Northeast Margaree River, and the Southwest Margaree River downstream from the Highway 19 bridge at Southwest Margaree Inland and tidal waters of Queens County

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.42 FSC Licence Locations for Glooscap First Nation

Species	FSC Licence Location
	Southwest Margaree River, from the Highway 19 bridge at Southwest Margaree upstream to Lake Ainslie
Haddock	Division 4X – Bay of Fundy
Halibut	Division 4X – Bay of Fundy
Lake Whitefish	Inland waters of NS
Lobster	LFA 33, 34, 35 (within NS)
Mackerel	Bay of Fundy
Mackerel	The coastal waters of Lunenburg, Queens, Shelburne, Kings, Annapolis, and Hants Counties
Mussels	Bay of Fundy Coastal waters adjacent to Lunenburg, Queens, Shelburne, Kings, Annapolis, and Hants Counties
Pollock	Division 4X – Bay of Fundy
Scallop	SFA 28A, 29
Shad	No restrictions
Smallmouth Bas	Inland and Tidal waters of the Province of NS
Smelt	No restrictions
Soft-shell Clams	Bay of Fundy Coastal waters adjacent to Lunenburg, Queens, Shelburne, Kings, Annapolis, and Hants Counties
Striped Bass	Inland and tidal waters of NS which border on the Bay of Fundy and Atlantic Coast. No fishing for striped bass in waters that empty into the Gulf of St. Lawrence.
Trout	Inland and tidal waters of the Province of NS
White perch	Inland waters of NS
White Sucker Fish	Inland waters of NS
Yellow Perch	Inland waters of NS
Source: Data provided courtesy of DFO	

Commercial-Communal Fishing

Glooscap First Nation hold several commercial-communal licences, such as licences for gaspereau, groundfish, herring, lobster, mackerel, swordfish, and tuna, issued by DFO. One licence, for swordfish, overlaps with the Project Area. However, DFO landings data (2011-2015) indicates no landings originating from the Project Area.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

7.3.2.1.6 Membertou First Nation

General Overview

Membertou First Nation consists of four reserves: Membertou 28B located 1.6 km south of Sydney with an area of 100.1 ha, Sydney 28A located 1.6 km northeast of Sydney with an area of 5.1 ha, Caribou Marsh 29 located 8 km southwest of Sydney with an area of 219.0 ha, and Malagawatch 4 located 62 km southwest of Sydney with an area of 661.3 ha (INAC website undated). Membertou First Nation is a member of the ANSMC. According to 2016 census data, the on-reserve population was 1,015 (Statistics Canada undated(a)).

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were 300 dwellings within Membertou First Nation, most (75 percent) which are owned by the band (Statistics Canada undated(b)). Housing characteristics for the Membertou community are provided in Table 7.43.

Table 7.43 Housing Characteristics for Membertou First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Membertou	300	55	20	225	125	-	6.9

Source: Statistics Canada undated(b)

Note: '-' means data not available

The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

Membertou has a gas station, church, medical clinic, community centre, band office and boxing gym (Membertou website undated). Within the community there is business park which includes the Membertou Trade and Convention Centre, Membertou Heritage Park and Petroglyphs Gift Shop, hotel, Kiju's Restaurant, Membertou Entertainment Centre, and private businesses.

There is one school located within Membertou, Maupeltuewey Kina'matno'kuom, which provides kindergarten to grade 6 (Membertou website undated). There is a local Cape Breton Regional Police detachment within Membertou (Membertou website undated). The Membertou Wellness Home works to address the health issues facing the community and delivers a variety of programs (Membertou website undated). The community recently built the Membertou Sport and Wellness Centre with two ice surfaces, an indoor walking track and the YMCA (Membertou Sport and Wellness Centre website).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Economy

Economic indicators for 2011 are presented in Table 7.44.

Table 7.44 Economic Indicators for Membertou First Nation, 2011

Indicator	Membertou
Participation Rate (%)	64.6
Employment Rate (%)	47.2
Unemployment Rate (%)	25.6
Average Individual Income (\$)	23,113
Source: Statistics Canada undated(b)	
Note: ‘-’ means data not available	

In addition to the businesses mentioned above, Membertou First Nation owns and operates a seafood company based in Membertou called First Fishermen Seafoods. First Fishermen Seafoods uses six fleet vessels, harvesting a variety of groundfish, shell fish, and large pelagic including tuna and swordfish (Membertou website undated).

The community has made considerable efforts to build infrastructure and services within Membertou and over the last decade or more, Membertou has an operating budget of \$122 million with up to 550 employees in the peak season (Membertou website undated). In 2016, the community revenue from non-governmental sources was approximately \$41 million including \$3 million from fisheries (Grant Thornton 2016).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NS Mi'kmaq is provided in the preface to Section 7.3.2.1. Membertou, once known as the Kings Road Reserve, was once located along the banks of Sydney Harbour. In 1916, the Exchequer Court of Canada ordered the relocation of the community and in 1926 it was officially moved to its present location (Membertou website undated). In the early 1900's as an urban Indigenous community, few families solely relied on hunting, fishing, and gathering to earn their living, with men working as plasterers, builders and excavators and women employed as office workers and general cleaners (Membertou website undated). Membertou First Nation cultural practices and resources are focused on the lands and waters of NS (850 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.1, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by the Membertou First Nation.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

FSC Fishing

Membertou First Nation hold FSC fishing licenses issued by DFO. These include FSC licenses to harvest 17 species within the tidal waters of Cape Breton and the Bras d'Or Lakes. Membertou hold a FSC license to fish for other species in defined NAFO units in and around NS, including lobster scallop. Additionally, the Agency identified Membertou First Nation as having an Aboriginal right to fish for Atlantic salmon for FSC purposes. FSC species and licence locations are described in Table 7.45.

Table 7.45 FSC Licence Locations for Membertou First Nation

Species	FSC Licence Location
Clams	Bras d'Or Lakes Tidal waters of the Atlantic Ocean
Cod	Tidal waters of Cape Breton
Crabs	Bras d'Or Lakes Tidal waters of the Atlantic Ocean
Eel	Tidal waters of Cape Breton
Flounder	Tidal waters of Cape Breton
Haddock	Tidal waters of Cape Breton
Halibut	Tidal waters of Cape Breton
Lobster	LFA 27, 28, 29
Mackerel	Mackerel Fishing Area 17, 18, 19
Mussels	Bras d'Or Lakes Tidal waters of the Atlantic Ocean
Oysters	Bras d'Or Lakes Tidal waters of the Atlantic Ocean
Pollock	Tidal waters of Cape Breton
Quahaugs	Bras d'Or Lakes Tidal waters of the Atlantic Ocean
Salmon	SFA 18 – Margaree River Margaree River and estuary
Salmon (prohibited)	East River, Sheet Harbour, North River
Scallop	SFA 29B, C, D, E
Smelt	Tidal waters and tributaries of Cape Breton
Striped Bass	Bras d'Or Lakes Mira River
Source: Data provided courtesy of DFO	

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Commercial-Communal Fishing

Membertou First Nation hold several commercial-communal licenses, such as licences for gaspereau, crab, eel, groundfish, herring, lobster, mackerel, sea scallop, sea urchins, shrimp and tuna, issued by DFO; however, these licences do not overlap with the Project Area.

7.3.2.1.7 Paq'tnkek Mi'kmaw Nation

General Overview

Paq'tnkek Mi'kmaw Nation is comprised of three reserves: Franklin Manor 22 located 32 km southeast of Amherst with an area of 212.5 ha, Paq'tnkek-Niktuek 23 located 24 km east of Antigonish with an area of 218.1 ha, and Welnek 38 located 18 km east of Antigonish with an area of 43.4 ha (INAC website undated). Paq'tnkek Mi'kmaw Nation is a member of the ANSMC. According to 2016 census data, which is reported for the Pomquet and Afton census sub-division, the on-reserve population was 353 (Statistics Canada undated(a)).

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were 125 dwellings within the Paq'tnkek First Nation, most (84 percent) of which were owned by the band (Statistics Canada undated(b)). Housing characteristics for the Paq'tnkek community are provided in Table 7.46.

Table 7.46 Housing Characteristics for Paq'tnkek First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Pomquet and Afton	125	10	15	105	80		6.1

Source: Statistics Canada undated(b)

Notes: '-' means data not available

The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

Paq'tnkek Mi'kmaw Nation has a Department of Housing and Infrastructure which is focused on the design, construction and maintenance of all band-operated buildings and band housing units. This department also manages water and sewer development and maintenance, snow removal, grounds maintenance, and roadway construction and maintenance, and participates in emergency management organization activities (Paq'tnkek Mi'kmaw Nation website undated).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

On-reserve, there is the Paq'tnkek Pre-School, which has been in operation since the early 1980s (Paq'tnkek Mi'kmaw Nation website undated). The nearest RCMP detachment is in Antigonish, NS. The Paq'tnkek Health Centre, which opened in 2008, supports a variety of community health promotion, education, and prevention programming (Paq'tnkek Mi'kmaw Nation website undated). The centre is a multi-purpose facility that delivers health programs to the community, as well as a boardroom, classrooms, and private functions (Paq'tnkek Mi'kmaw Nation website undated).

Economy

Economic indicators for 2011 are presented in Table 7.47.

Table 7.47 Economic Indicators for Paq'tnkek Mi'kmaw Nation, 2011

Indicator	Pomquet and Afton
Participation Rate (%)	55.3
Employment Rate (%)	42.6
Unemployment Rate (%)	23.1
Average Individual Income (\$)	15,533
Source: Statistics Canada undated(b) Note: '-' means data not available	

Paq'tnkek Mi'kmaw Nation has established an Economic Development Department which manages all development projects in the community. Economic development focuses on long-term sustainability with the vision "to create an economically self-sustaining community with financially independent members through the effective use of economic tools that maximize the available resources" (Paq'tnkek Mi'kmaw Nation website undated).

Paq'tnkek has an important role in infrastructure development related to the highway development project and the commercial opportunities for community members and increasing housing construction (Paq'tnkek Mi'kmaw Nation website undated).

Paq'tnkek First Nation hold commercial-communal licences as described below, under Current Use of Lands and Resources for Traditional Purposes. The Paq'tnkek Fisheries Enterprise maintains Paq'tnkek's cultural heritage by employing community members in a richly traditional activity (Paq'tnkek Mi'kmaw Nation website undated). The company employs 20 community members who fish for lobster, snow crab, and herring from a fleet of 5 communally-held vessels. Licences for lobster are located at Bayfield Wharf and snow crab licenses are located at the Port of Cheticamp, 160 km north of the community (Paq'tnkek Mi'kmaw Nation website undated).

Paq'tnkek First Nation operates the Paq'tnkek Entertainment Centre with revenue derived from its operations re-invested into the community through social and economic development projects (Paq'tnkek Mi'kmaw Nation website undated). Other on-reserve businesses include the Paq'tnkek Gas Bar and the Paq'tnkek Smoke Shop (Paq'tnkek Mi'kmaw Nation website undated).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NS Mi'kmaq is provided in the preface to Section 7.3.2.1. Paq'tnkek, meaning “by the bay”, was established in March 1820 in Antigonish County, approximately 24 km east of Antigonish, NS (Paq'tnkek Mi'kmaw Nation website undated). Paq'tnkek has been a traditional stopping point for Mi'kmaq travelling to and from Unama'ki and a location at which Chiefs would meet given its central location (Paq'tnkek Mi'kmaw Nation website undated).

Cultures and traditional practices, such as spearing eels and salmon, and snaring salmon and rabbits, are strong and protected in the Paq'tnkek community and the community continues to grow traditional knowledge (Paq'tnkek Mi'kmaw Nation website undated). Paq'tnkek First Nation cultural practices and resources are focused on the lands and waters of NS (850 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.1, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by the Paq'tnkek First Nation.

FSC Fishing

Paq'tnkek harvest marine fish and shellfish resources along the coast, including along the southern Chedabucto coastline where the waters generally do not freeze, offering unimpeded fishing during the winter months (Mi'kma'ki All Points Service 2013). Marine resources harvested in the Chedabucto coastline include mackerel, herring, cod, haddock, urchins, mussels, oysters, clams, and snow crab in the deeper waters (Mi'kma'ki All Points Service 2013). Freshwater species include salmon, trout, and eel (Mi'kma'ki All Points Service 2013). The Agency identified Paq'tnkek First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes.

Commercial-Communal Fishing

Paq'tnkek First Nation hold commercial-communal licences, such as licences for sea urchins and swordfish. One licence, for swordfish, overlaps with the Project Area. DFO landings data (2011-2015), indicate no landings originate from the Project Area.

7.3.2.1.8 Pictou Landing First Nation

General Overview

Pictou Landing First Nation is located on the south shore of the Northumberland Strait in Pictou County, NS. Pictou Landing consists of five reserves: Franklin Manor 22 (also affiliated with Paq'tnkek Mi'kmaw Nation) located 32 km southeast of Amherst with an area of 212.5 ha, Fisher's Grant 24 located 10 km north of New Glasgow with an area of 142.7 ha, Boat Harbour West 37 located 8 km north of New Glasgow with an area of 98.2 ha, Fisher's Grant 24G located 3.2 km southeast of Pictou Landing with an area of 60.0 ha, and Merigomish Harbour 31 located 12.8 km

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

east of New Glasgow with an area of 14.2 ha (INAC undated). Pictou Landing First Nation is a member of the ANSMC. Fisher's Grant 24 is the main reserve and had a population of 485 in 2016 (Statistics Canada undated(a)).

Health and Socioeconomic Conditions

According to 2011 census data, there are 145 dwellings within the Pictou Landing First Nation, most of which are owned by the band (Statistics Canada undated(b)). Housing characteristics for the Pictou Landing community are provided in Table 7.48.

Table 7.48 Housing Characteristics for Pictou Landing First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Fisher's Grant	145	10	0	130	50	-	6.0

Source: Statistics Canada undated(b)

Notes: '-' means data not available

The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

The community has a church, gas bar, health center, and Primary to grade 6 elementary school, Pictou Landing First Nation School (KMKNO website undated). There is no police detachment or fire hall within the community (INAC website 2012(a)).

Economy

Economic indicators for 2011 are presented in Table 7.49.

Table 7.49 Economic Indicators for Pictou Land First Nation, 2011

Indicator	Fisher's Grant
Participation Rate (%)	53.1
Employment Rate (%)	46.9
Unemployment Rate (%)	11.8
Average Individual Income (\$)	16,923

Source: Statistics Canada undated(b)

Note: '-' means data not available

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Pictou Landing's main industry is fishing, which employs close to 100 people (full / part time) each year with community / core licenses in lobster, rock crab, snow crab, mackerel, herring and tuna (KMKNO website undated). Pictou Landing has a fleet of 12 vessels and owns two houses and an annex in Cheticamp (KMKNO website undated).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NS Mi'kmaq is provided in the preface to Section 7.3.2.1. The Pictou Landing First Nation lived on a seasonal basis in and around a small tidal estuary connected by a narrow channel to the Northumberland Strait (Pictou Landing First Nation website undated). The area provided a variety of resources including fish, eels, crustaceans, and shellfish as well as areas for hunting and trapping near the shores (Pictou Landing First Nation website). Pictou Landing First Nation cultural practices and resources are focused on the lands and waters of NS (850 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.1, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by the Pictou Landing First Nation.

FSC Fishing

Pictou Landing hold FSC licences for lobster, salmon, striped bass, and trout. The Agency identified Pictou Landing First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes.

Commercial-Communal Fishing

Pictou Landing First Nation hold several commercial-communal licences, such as licences for swordfish and tuna, issued by DFO. One licence, for swordfish, overlaps with the Project Area. DFO landings data (2011-2015) indicates no landings originating from the Project Area.

7.3.2.1.9 Potlotek First Nation

General Overview

Potlotek First Nation consists of two reserves: Chapel Island 5 located 69 km southwest of Sydney with an area of 595.5 ha and Malagawatch 4 located 62 km southwest of Sydney with an area of 661.3 ha (INAC website undated). Potlotek First Nation is a member of the ANSMC. According to 2016 census data, the on-reserve population was 506 (Statistics Canada undated(a)).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were 155 dwellings within the Potlotek First Nation, most (71 percent) of which were owned by the band (Statistics Canada undated(b)). Housing characteristics for the Potlotek community are provided in Table 7.50.

Table 7.50 Housing Characteristics for Potlotek First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Potlotek	155	30	15	110	60		6.8

Source: Statistics Canada undated(b)
Note: '-' means data not available
The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

Within the Potlotek community there is the Potlotek Day Care, Potlotek Headstart, and Mi'kmawey School (Potlotek First Nation website 2016). The Mi'kmawey School opened in 1998 and is home to the Potlotek Headstart program as well as grades primary to six (Potlotek First Nation website 2016).

Other buildings within the community include the Chapel Island Community Hall / Kateri Chapel; Youth Centre; RCMP Building; Medical Centre; Fisheries with its Oyster Plant and Fishery Building; and Chapel Island Fire Hall (KMKNO website undated). The Potlotek Volunteer Fire Department has approximately 14 active members (KMKNO website undated).

Economy

Economic indicators for 2011 are presented in Table 7.51.

Table 7.51 Economic Indicators for Potlotek First Nation, 2011

Indicator	Potlotek
Participation Rate (%)	53.8
Employment Rate (%)	33.8
Unemployment Rate (%)	34.3
Average Individual Income (\$)	21,494

Source: Statistics Canada undated(b)
Note: '-' means data not available

Fisheries is a key industry in the community, particularly oyster cultivation. Apaqtukewaq Fisheries Co-op was formed in 1995 (Potlotek First Nation website 2016). There are four members in the co-

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

op and during the peak season, May to September, it employs seven people (Potlotek First Nation website 2016). An oyster plant was opened outside the community. The Apaqtukewaq also manages lobster, snow crab, and tuna fishing. The Co-op operates two fishing vessels, one which fishes for lobster in Glace Bay and the other fishes for snow crab in Arichat (Potlotek First Nation website 2016).

Recent economic development initiatives include the construction and completion of the new store-gas bar which houses Robins Donuts, a Rite Stop, Esso and video lottery terminals which has provided a valuable resource of revenue and employment opportunities for community residents (KMKNO website undated).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NS Mi'kmaq is provided in Section 7.3.2.1. Potlotek First Nation has been a meeting place from time immemorial for the Mi'kmaq in the Maritimes and is one of the oldest reserves in Cape Breton (Potlotek First Nation website undated). The Chapel Island Reserve, formerly called Barra Head, formally became a reserve in 1834, following the receipt their land grant (Potlotek First Nation website undated). Potlotek First Nation cultural practices and resources are focused on the lands and waters of NS (850 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.1, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion of FSC and commercial-communal fishing by the Potlotek First Nation.

FSC Fishing

Potlotek First Nation hold FSC fishing licenses issued by DFO. These include FSC licenses to harvest 18 species within the inland and tidal waters of mainland NS and Cape Breton. Potlotek hold a FSC license to fish for several other species in defined NAFO units in and around NS, including lobster and scallop. Additionally, the Agency identified Potlotek First Nation as having an Aboriginal right to fish for Atlantic salmon for FSC purposes. FSC species and licence locations are listed in Table 7.52.

Table 7.52 FSC Licence Locations for Potlotek First Nation

Species	FSC Licence Location
Capelin	Tidal waters of Cape Breton
Cod	Tidal waters of Cape Breton
Eel	Antigonish Harbour Bras d'Or Lakes
Flounder	Tidal waters of Cape Breton
Haddock	Tidal waters of Cape Breton

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.52 FSC Licence Locations for Potlotek First Nation

Species	FSC Licence Location
Herring	Tidal and Inland waters of Cape Breton
Lobster	LFA 28, 29, 30
Mackerel	Tidal and Inland waters of Cape Breton
Mussels	Tidal waters of Cape Breton
Pollock	Tidal waters of Cape Breton
Quahaug	Inland and Tidal waters of the Province of NS
Salmon	Magaree River and estuary North River
Salmon (prohibited)	Aspy Bay and River Bras d'Or Lakes Grand Ans River Judique River SFA 18 – Mabou River
Scallop	SFA 29
Shad	Tidal and Inland waters of Cape Breton
Smelt	Inland and Tidal waters of the Province of NS
Soft-shell clams	Inland and Tidal waters of the Province of NS
Striped Bass	Inland and tidal waters of NS which border in the Atlantic Coast. No fishing for striped bass in waters that empty into the Gulf of St. Lawrence
Trout	Tidal and Inland waters of Cape Breton
Source: Data provided courtesy of DFO	

Commercial-Communal Fishing

Potlotek First Nation hold several commercial-communal licences, such as licences for gaspereau, crab eel, groundfish, herring, lobster, sea urchins and shrimp; however, these licences do not overlap with the Project Area.

7.3.2.1.10 Wagmatcook First Nation

General Overview

Wagmatcook First Nation is located in the centre of Cape Breton Island. Wagmatcook First Nation consists of three reserves: Malagawatch 4 located 62 km southwest of Sydney with an area of 661.3 ha, Margaree 25 located 68.8 km northwest of Sydney with an area of 0.8 ha, and Wagmatcook 1 located 51 km west of Sydney with an area of 385.0 ha (INAC website undated). Wagmatcook First Nation is a member of the ANSMC. According to 2016 census data, the on-reserve population at Wagmatcook 1 was 537 (Statistics Canada undated(a)). Population data are not provided for Malagawatch 4 and Margaree 25.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were 155 dwellings within the Wagmatcook First Nation, most (90 percent) of which are owned by the band (Statistics Canada undated(b)). Housing characteristics for the Wagmatcook community are provided in Table 7.53.

Table 7.53 Housing Characteristics for Wagmatcook First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Wagmatcook	155	15	0	140	65		5.4
Source: Statistics Canada undated(b) Note: '-' means data not available The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.							

The first Indigenous secondary school in the Atlantic Region was started by Wagmatcook in 1986 and established the first NS Mi'kmaq Day Care Center on-reserve (KMKNO website undated). A new elementary-secondary education school, Wagmatcookewey School, is the first kindergarten to grade 12 Mi'kmaq First Nation school in NS (Wagmatcook First Nation website 2016).

Within the community there is a fire hall but no police detachment (INAC website 2012(a)). There is a cultural centre, the Wagmatcook Enterprise and Cultural Center, which houses the TD Canada Trust Agency bank, a Canada Post office, the Clean Wave Restaurant, an Alternate School for Youth, cultural demonstration projects and the second largest sound stage / venue on Cape Breton Island (KMKNO website undated). There is also a gas bar, grocery store, wharf, and warehouse (KMKNO website undated).

Economy

Economic indicators for 2011 are presented in Table 7.54.

Table 7.54 Economic Indicators for Wagmatcook First Nation, 2011

Indicator	Wagmatcook
Participation Rate (%)	33.8
Employment Rate (%)	29.6
Unemployment Rate (%)	12.5
Average Individual Income (\$)	14,339
Source: Statistics Canada undated(b) Note: '-' means data not available	

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

The commercial fishery is an important industry to the Wagmatcook First Nation. The Wagmatcook Commercial Fishery, opened in 1990, is communally owned by registered members of Wagmatcook Band and employs up to 41 people a season (Wagmatcook First Nation website 2016). Primary harvests include groundfish, palegics, shellfish, and shell ice (Wagmatcook First Nation website 2016). There are six lobster vessels and one groundfish vessel. There are two storage facilities and an ice processing facility which is equally owned by the Wagmatcook Band and Novas Finest Seafood (Wagmatcook First Nation website 2016).

Other businesses in the community include the Ultramar Gas Station, Cultural and Heritage Centre, CleanWave Restaurant, Post Office and Wagmatcook Community Cable Television (WCCTV) Network (Wagmatcook First Nation website 2016).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NS Mi'kmaq is provided in the preface to Section 7.3.2.1. Publicly available information of the history and culture of the Wagmatcook First Nation could not be found. Wagmatcook First Nation cultural practices and resources are focused on the lands and waters of NS (850 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.1, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by the Wagmatcook First Nation.

FSC Fishing

Wagmatcook First Nation hold FSC fishing licenses issued by DFO. These include licenses to harvest 15 species within the tidal waters of Cape Breton. Wagmatcook holds licenses to harvest lobster around Cape Breton in LFA 27, 28, 29 and 30. Additionally, the Agency identified Wagmatcook First Nation as having an Aboriginal right to fish for Atlantic salmon for FSC purposes. FSC species and licence locations are listed in Table 7.55.

Table 7.55 FSC Licence Locations for Wagmatcook First Nation

Species	FSC License Location
Cod	Tidal waters of Cape Breton
Eel	Tidal and Inland waters of Cape Breton
Flounder	Tidal waters of Cape Breton
Haddock	Tidal waters of Cape Breton
Herring	Tidal waters of Cape Breton
Lobster	Lobster Fishing Area 27; 28; 29; 30
Mackerel	Tidal waters of Cape Breton
Mussels	Tidal waters of Cape Breton

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.55 FSC Licence Locations for Wagmatcook First Nation

Species	FSC License Location
Pollock	Tidal waters of Cape Breton
Salmon	Middle River North East and Main Margaree River (excluding Southwest Margaree River) up to, including, and above the Hatchery Pool. North River
Scallop	Tidal waters of Cape Breton
Shad	Tidal waters of Cape Breton
Smelt	Tidal and Inland waters of Cape Breton
Striped Bass	Bras D'Or Lakes
Trout	Tidal and Inland waters of Cape Breton
Source: Data provided courtesy of DFO	

Commercial-Communal Fishing

Wagmatcook First Nation hold several commercial-communal licences, such as licences for gaspereau, crab, eel, groundfish, herring, lobster, mackerel, sea urchins, seal, squid, and swordfish. One licence for swordfish overlaps with the Project Area. DFO landings data (2011-2015) indicate no landings originating from the Project Area.

7.3.2.1.11 We'ko'kmaq (Waycobah) First Nation

General Overview

Waycobah First Nation consists of two reserves: Malagawatch 4 located 62 km southwest of Sydney with an area of 661.3 ha and Whycocomagh 2 located 70 km west of Sydney with an area of 908 ha (INAC website undated). Waycobah First Nation is a member of the ANSMC. According to 2016 census data, the on-reserve population was 831 (Statistics Canada undated(a)).

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were 245 dwellings within the Waycobah First Nation, most (80 percent) of which were owned by the band (Statistics Canada undated(b)). Housing characteristics for the Waycobah community of Whycocomagh are provided in Table 7.56.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.56 Housing Characteristics for Waycobah First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Whycocomagh	245	45	0	195	75		7.1
Source: Statistics Canada undated(b) Notes: ‘-’ means data not available The numbers shown in the tables have been subject to a confidentiality procedure called ‘random rounding’ to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.							

Community infrastructure includes a new P-12 school and a new health centre. There is also an RCMP station, volunteer fire department, fitness centre, and a community-owned gas station (Waycobah First Nation website undated).

Economy

Economic indicators for 2011 are presented in Table 7.57.

Table 7.57 Economic Indicators for Waycobah First Nation, 2011

Indicator	Whycocomagh
Participation Rate (%)	48.5
Employment Rate (%)	33.7
Unemployment Rate (%)	32.7
Average Individual Income (\$)	17,097
Source: Statistics Canada undated(b) Note: ‘-’ means data not available	

The Waycobah First Nation has two lobster licenses, shrimp trap and trawl licenses, three crab quotas, groundfish quotas, and an active elver fishery, as well as inactive licenses for tuna, whelk, urchin, mackerel, and herring (Waycobah First Nation website undated). There are 35 community members employed in the commercial fishery and three members helping the community access their rights under the food, social and ceremonial agreement (Waycobah First Nation website undated). In 2011, a trout farm, owned by Cold Water Fisheries, was re-established in Waycobah. Most staff are Waycobah First Nation members (Waycobah First Nation website undated). Other businesses on-reserve includes Rod’s One Stop convenience store and gas bar, Waycobah Fitness Centre, and Waycobah Gaming (Waycobah First Nation website undated).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NS Mi'kmaq is provided in the preface to Section 7.3.2.1. Waycobah First Nation was first established in the early 1800s and was originally known as We'ko'kmaq (Waycobah First Nation website undated). In the 1940s, the community experienced a decline in population with many members moving to the community of Eskasoni under the federal government's centralization policy (Waycobah First Nation website undated). Waycobah First Nation cultural practices and resources are focused on the lands and waters of NS (850 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.1, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by the Waycobah First Nation.

FSC Fishing

Waycobah First Nation hold FSC fishing licenses issued by DFO. These include FSC licenses to harvest 16 species within the tidal waters of Cape Breton. Waycobah holds FSC licenses to harvest lobster around Cape Breton in LFA 27, 28, 29 and 30. Additionally, the Agency identified Waycobah First Nation as having an Aboriginal right to fish for Atlantic salmon for FSC purposes. FSC species and licence locations are listed in Table 7.58.

Table 7.58 FSC Licence Locations for Waycobah First Nation

Species	FSC License Location
Clams	Tidal waters of Cape Breton
Cod	Tidal waters of Cape Breton
Eel	Tidal and inland waters of Cape Breton
Flounder	Tidal waters of Cape Breton
Haddock	Tidal waters of Cape Breton
Herring	Herring Fishing Area 17, 18, 19
Lobster	LFA 27, 28, 29, 30
Mackerel	Mackerel Fishing Area 17, 18, 19
Mussels	Tidal waters of Cape Breton
Pollock	Tidal waters of Cape Breton
Quahaug	Tidal waters of Cape Breton
Salmon	Margaree River and estuary North River
Scallop	Tidal waters of Cape Breton
Shad	Tidal waters of NS
Smelt	Tidal and inland waters of Cape Breton

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.58 FSC Licence Locations for Waycobah First Nation

Species	FSC License Location
Trout	Tidal and inland waters of Cape Breton
Source: Data provided courtesy of DFO	

Commercial-Communal Fishing

Waycobah First Nation hold several commercial-communal licences, such as licences for crab, eel, groundfish, herring, lobster, mackerel, sea urchin, seal, shrimp, and swordfish. One licence, for swordfish, overlaps with the Project Area. DFO landings data (2011-2015) indicate no landings originate from the Project Area.

7.3.2.1.12 Millbrook First Nation

General Overview

Millbrook First Nation consists of seven reserves, of which four, Truro 27A, Truro 27B, Truro 27C and Millbrook 27, are located near the town of Truro, NS with a total area of 344.9 ha (INAC website undated). Millbrook First Nation also has three other reserves: Beaver Lake 17 located 78.4 km southeast of Halifax with an area of 49.4 ha, Sheet Harbour 36 91.2 km northeast of Halifax with an area of 32.7 ha, and Cole Harbour 30 located 9.6 km east of Halifax with an area of 18.6 ha (INAC website undated). Since 2016, the Millbrook First Nation has chosen to independently represent themselves in consultation, and is not currently a member of the ANSMC. Millbrook First Nation asserts the same rights as other Mi'kmaq communities in NS. According to 2016 census data, the population at the Millbrook reserve was 860 and the Sheet Harbour reserve was 25 (Statistics Canada undated(a)). Census data are not available for Cole Harbour and Beaver Lake reserves.

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were 380 dwellings within the Millbrook First Nation (Statistics Canada undated(b)). Within Cole Harbour, most (84 percent) of the dwellings were rental homes whereas in Millbrook, most (75 percent) of the dwellings were band owned (Statistics Canada undated(b)). Housing characteristics for the Millbrook community are provided in Table 7.59.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.59 Housing Characteristics for Millbrook First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Cole Harbour	95	0	80	15	10	-	4.3
Millbrook	285	50	15	215	135		6.0

Source: Statistics Canada undated(b)

Notes: '-' means data not available

The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

Buildings and services within Millbrook First Nation includes the Millbrook Band Office, Millbrook Community Hall, Millbrook Ballfield, Millbrook Fisheries, Millbrook Gym, Millbrook Early Education Centre, Millbrook Health Centre, Millbrook Senior's Centre, and Sacred Heart Mission Church (Millbrook First Nation website 2017).

Economy

Economic indicators for 2011 are presented in Table 7.60.

Table 7.60 Economic Indicators for Millbrook First Nation, 2011

Indicator	Cole Harbour	Millbrook
Participation Rate (%)	42.4	53.1
Employment Rate (%)	36.4	44.2
Unemployment Rate (%)	14.3	16.7
Average Individual Income (\$)	-	23,282

Source: Statistics Canada undated(b)

Note: '-' means data not available

Millbrook Fisheries is an important part of the local economy, controlling eight vessels, holding 52 commercial-communal licenses province-wide, and employing over 40 staff members throughout the year (Millbrook First Nation website 2017).

Millbrook has seen economic growth within their community given their location along the province's busiest highway (Millbrook First Nation website 2017). This includes a retail park, the Truro Power Centre, which has had approximately twelve tenants since it opened in 2001, including a multiplex theatre, sit-down and drive-through restaurants, two hotels, a recreational vehicle retailer, a service station, a furniture store, an aquaculture facility, and the Glooscap Heritage Centre (Millbrook First Nation website 2017).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

There has been development on the Cole Harbour Reserve, including apartment buildings, General Dynamics Building, and gaming centre. Millbrook invests \$1.4 million into the National Child Benefit Reinvestment and \$1.2 million a year into Trust Funds for band members who are under the age of 19 (Millbrook First Nation website 2017). The latest economic development in the community is the Hampton Inn. Annually, Millbrook spends over \$20 million on good and services, including \$7 million on salaries, \$6 million on suppliers, \$3-4 million on local and post-secondary education, and \$3 million in contributions to band members (Millbrook First Nation website 2017). Approximately 80% of these expenditures are made in the Colchester / Truro area; they do not include purchases by the community members (Millbrook First Nation website 2017).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NS Mi'kmaq is provided in the preface to Section 7.3.2.1. During the late 1700s and the early 1800s, the Mi'kmaq near Truro settled along the banks of the Salmon River; however, they were relocated to their current reserve at Millbrook (Millbrook First Nation website 2017). Millbrook First Nation cultural practices and resources are focused on the lands and waters of NS (850 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.1, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by the Millbrook First Nation.

FSC Fishing

Millbrook First Nation hold FSC fishing licenses issued by DFO. These include FSC licenses to harvest 17 species within the inland and tidal waters of NS, including the tidal water of the Bay of Fundy. Millbrook hold a FSC license to fish for several other species in defined NAFO units in and around NS, including herring, lobster, mackerel, ocean quahaug, oysters, and scallops. Additionally, the Agency identified Millbrook First Nation as having an Aboriginal right to fish for Atlantic salmon for FSC purposes. FSC species and licence locations are listed in Table 7.61.

Table 7.61 FSC Licence Locations for Millbrook First Nation

Species	FSC License Location
Brown Trout	Annapolis Shubenacadie, Stewiacke, and Musquodoboit Rivers Tidal waters of the Bay of Fundy
Chain Pickerel	Shorts Lake
Eel	NS
Grey Trout	Annapolis Shubenacadie, Stewiacke, and Musquodoboit Rivers Tidal waters of the Bay of Fundy
Herring	LFA 32, 33

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.61 FSC Licence Locations for Millbrook First Nation

Species	FSC License Location
Lake Trout	Annapolis Shubenacadie, Stewiacke, and Musquodoboit Rivers Tidal waters of the Bay of Fundy
Lobster	LFA 25, 26, 26A, 32, 33
Mackerel	LFA 32, 33
Ocean Quahaug	LFA 25, 26, 26A, 32, 33
Oysters	LFA 25, 26, 26A, 32, 33
Rainbow Trout	Annapolis Shubenacadie, Stewiacke, and Musquodoboit Rivers Tidal waters of the Bay of Fundy
Salmon	Margaree, SFA 18 - Pugwash River, SFA 18 - River Philip, SFA 18 –Shinimicas, SFA 18 – French River, SFA 18 – Wallace River, SFA 18 – Waugh River, SFA 18 – West River, Ant. Co., SFA 18 – West River, Pictou Co.
Scallop	LFA 25, 26, 26A, 32, 33
Smallmouth Bass	Shorts Lake
Smelt	NS
Speckled Trout	Inland and Tidal waters of the Annapolis Shubenacadie, Stewiacke, and Musquodoboit Rivers Tidal waters of the Bay of Fundy
Striped Bass	Inland and tidal waters of NS which border in the Atlantic Coast. No fishing for striped bass in waters that empty into the Gulf of St. Lawrence.
Source: Data provided courtesy of DFO	

Commercial-Communal Fishing

Millbrook First Nation hold several commercial-communal licences, such as licences for gaspereau, clams, crab, eel, groundfish, hagfish, herring, lobster, mackerel, sea urchins, seal, swordfish and tuna. One licence, for swordfish, overlaps with the Project Area. DFO landings data (2011-2015) indicate no landings originate from the Project Area.

7.3.2.1.13 Sipekne'katik First Nation

General Overview

Sipekne'katik First Nation (Indian Brook or Shubenacadie), was first established in 1820 and is located in Hants County, NS, near Shubenacadie. Sipekne'katik First Nation consists of five reserves: Indian Brook 14 located 29 km southwest of Truro with an area of 1,234.2 ha, Wallace Hills 14A with an area of 54.8 ha, Shubenacadie 13 located 32 km north of Halifax with an area of 412.0 ha, Pennal 19 located 67.2 km northwest of Halifax with an area of 43.5 ha, and New Ross 20 located 64 km northwest of Halifax with an area of 408.3 ha (INAC website undated). In 2013, the Sipekne'katik First Nation chose to independently represent themselves in consultation, and currently is not a member of the ANSMC. Sipekne'katik First Nation asserts the same rights as other

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Mi'kmaq communities in NS. According to 2016 census data, the on-reserve population at Indian Brook was 1,089 (Statistics Canada undated(a)). The population at Wallace Hills was 10 and Pennal was 27 (Statistics Canada undated(a)). Population data are not available for Shubenacadie and New Ross.

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were 365 dwellings within the Sipekne'katik First Nation, most (79 percent) of which were owned by the band (Statistics Canada undated(b)). Housing characteristics for the Sipekne'katik community are provided in Table 7.62.

Table 7.62 Housing Characteristics for Sipekne'katik First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Indian Brook	365	25	55	290	215		5.3

Source: Statistics Canada undated(b)
Note: '-' means data not available
The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

Local businesses within the community include the P-12 school, L'nu Sipuk Kina'muokuom, which offers primary to Grade 12 education, the community gas-bar, tobacco shop, gaming room and convenience store (Sipekne'katik First Nation website 2016). There is a multi-purpose centre, the Sipekne'katik Multipurpose Centre, for community meetings, events, and social gatherings (Sipekne'katik First Nation website 2016). There is also the Sipekne'katik Health Centre, which provides many programs to the community (Sipekne'katik First Nation website 2016).

Economy

Economic indicators for 2011 are presented in Table 7.63.

Table 7.63 Economic Indicators for Sipekne'katik First Nation, 2011

Indicator	Indian Brook
Participation Rate (%)	56.5
Employment Rate (%)	40.9
Unemployment Rate (%)	27.6
Average Individual Income (\$)	16,353

Source: Statistics Canada undated(b)
Note: '-' means data not available

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

The commercial-communal fishery is an important industry for the community. The Fisheries Department manages 33 fishing licenses for various species including lobster, snow crab, and groundfish (Sipekne'katik First Nation website 2016).

Sipekne'katik is in the process of developing the Sipekne'katik Economic Development Corporation to manage community-owned businesses and business interests (Sipekne'katik First Nation website 2016). There are several Sipekne'katik community-owned business ventures, including a gas bar, a tobacco store, and the Sipekne'katik Entertainment Centre (Sipekne'katik First Nation website 2016).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NS Mi'kmaq is provided in the preface to Section 7.3.2.1. One of the most significant Peace and Friendship Treaties (1752) was signed at Shubenacadie District (Sipekne'katik First Nation website 2016). The treaty dealt with lands, hunting fishing, trapping, gathering and trading. In 2002, a memorial was erected in honor of Chief Jean Baptiste Cope and the Treaty of 1752 Peace and Friendship Treaty (Sipekne'katik First Nation website 2016).

In 1820, Sipekne'katik was officially established as a reserve and given the name 'Indian Brook' (Sipekne'katik First Nation website 2016). According to Mi'kmaq oral history reports, this area may have been used for centuries prior as a sacred site to prepare for ceremonies and for hunting and fishing trips (Sipekne'katik First Nation website 2016). Sipekne'katik First Nation cultural practices and resources are focused on the lands and waters of NS (850 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.1, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by the Sipekne'katik First Nation.

FSC Fishing

Sipekne'katik First Nation hold FSC fishing licenses issued by DFO. These include FSC licenses to harvest 20 species within the inland and tidal waters of NS. Sipekne'katik hold a FSC license to fish for several other species in defined NAFO units in and around NS, including crab, lobster, scallops and unspecified groundfish. There are no restrictions on the fishing of eel, shad and smelt. Additionally, the Agency identified Sipekne'katik First Nation as having an Aboriginal right to fish for Atlantic salmon for FSC purposes. FSC species and licence locations are listed in Table 7.64.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.64 FSC Licence Locations for Sipekne'katik First Nation

Species	FSC License Location
Bar Clams	Inland and tidal waters of the province of NS
Crab (other than Snow Crab)	LFA 32, 33, 34, 35
Eel	No restrictions
Gaspereau	Inland waters of Antigonish, Pictou, Colchester, and Cumberland Counties; Inland waters of Inverness County and Victoria County flowing into the Gulf of St. Lawrence west of Cape North Inland Waters of Kings County and that portion of Hants County west of the West Hants municipal boundary Inland waters of Lunenburg County Inland waters of Queens County Inland waters of the Margaree River, the Northeast Margaree River, and the Southwest Margaree River downstream from the Highway 19 bridge at Southwest Margaree Other inland waters of NS
Herring	The tidal waters adjacent to the Province of NS
Landlocked Salmon	Inland and tidal waters of the province of NS
Lobster	LFA 32, 33, 34, 35
Mackerel	The tidal waters adjacent to the Province of NS
Mussels	Inland and tidal waters of the province of NS
Quahaugs	Inland and tidal waters of the province of NS
Razor Clams	Inland and tidal waters of the province of NS
Salmon	Margaree River, SFA 18
Scallop	SFA 28, 29
Seals	The tidal waters adjacent to the Province of NS
Shad	No restrictions
Smallmouth Bass	Inland and tidal waters of the province of NS
Smelt	No restrictions
Soft-shell Clams	Inland and tidal waters of the province of NS
Striped Bass	Inland and tidal waters of NS which border in the Atlantic Coast. Inland and tidal waters of NS that empty into the Gulf of St. Lawrence. Inland and tidal waters of the province of NS
Trout	Inland and tidal waters of the province of NS Musquodoboit River
Unspecified Groundfish	Division 4X; 4W
Source: data provided courtesy of DFO	

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Commercial-Communal Fishing

Sipekne'katik First Nation hold several commercial-communal licences, such as gaspereau, clams, crab, groundfish, herring, lobster, sea scallop, sea urchins, swordfish and tuna. One licence, for swordfish, overlaps with the Project Area. DFO landings data (2011-2015) indicates no landings originating from the Project Area.

7.3.2.2 Mi'kmaq of Prince Edward Island

There are two Mi'kmaq communities on Prince Edward Island – Abegweit and Lennox Island First Nations (see community descriptions below). They are represented in consultation and engagement by the Mi'kmaq Confederacy of Prince Edward Island (MCPEI). MCPEI was established in 2002 as a service delivery organization, but has expanded to include economic development, integrated resource management, government advisory services, and consultation and engagement on behalf of the two Mi'kmaq communities in PEI. (MCPEI, undated).

The Mi'kmaq federal and provincial governments signed a Partnership Agreement in 2007 to cover how the parties will work cooperatively on several matters of concern for First Nations, including health, education, economic development, justice and child and family services.

PEI's Aboriginal Affairs Secretariat was created in 2009 to coordinate government's response to Aboriginal matters within the province (MCPEI undated). On August 13, 2012, the Government of Canada and the Province, and the Mi'kmaq of PEI signed a tripartite consultation agreement, Mi'kmaq – Prince Edward Island – Canada Consultation Agreement (Abegweit First Nation 2015). The Agreement outlines a means for Canada and PEI to consult with the Mi'kmaq on proposed actions or decisions that may adversely impact asserted or established Aboriginal treaty rights (Abegweit First Nation 2015).

The PEI Mi'kmaq are known to occupy and use the land and waters around PEI including use for travel corridors, land hunting and harvesting, and fishing for traditional purposes. However, given the Project components and activities will be located at a considerable distance from the Indigenous communities (850 km from PEI), the discussion of current use of lands and resources for traditional purposes is focused on activities in the marine environment and species of interest to PEI Indigenous communities that may migrate through the marine environment. The current use of lands and resources section therefore includes a discussion of FSC and commercial-communal harvesting.

7.3.2.2.1 Abegweit First Nation

General Overview

Abegweit First Nation was established in 1972 (Abegweit First Nation 2015). Located along the eastern portion of the province, Abegweit First Nation encompasses three reserves: Morell Rear Reserve 2; Rocky Pont Reserve 3; and Scotchfort Reserve 4 (Abegweit First Nation 2015). Abegweit is governed by one Chief and two Councillors that are elected every four years. Abegweit First Nation is represented by the MCPEI in consultation and engagement. As of May 2017, the total registered population, including off-reserve, was 377 (Statistics Canada undated(a)).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were a total of 50 dwellings within the community (Statistics Canada undated(b)). Housing characteristics for Abegweit First Nation are provided in Table 7.65.

Table 7.65 Housing Characteristics for Abegweit First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Scotchfort	50	20	0	30	30	-	5.4
Source: Statistics Canada undated(b) Notes: ‘-’ means data not available The numbers shown in the tables have been subject to a confidentiality procedure called ‘random rounding’ to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.							

Although there are no schools on-reserve, Abegweit First Nations’ Education Program plays a significant role in the community. The Education Program covers Kindergarten through Grade 12 for students living on-reserve (Abegweit First Nation 2015). As of 2015, Abegweit First Nations’ students were enrolled in approximately 15 schools throughout the province (Abegweit First Nation 2015). Abegweit First Nations’ Education Program provides a wide range of education services including access to upgrading and GED programs on-reserve, after-school tutoring programs, and homework clubs (Abegweit First Nation 2015). Abegweit First Nation also administers a Post-Secondary Education Program for First Nations students living on and off-reserve (Abegweit First Nation 2015), and also runs a provincially licensed centre offering early childhood learning for children ages 0-5 years (Abegweit First Nation 2015).

Abegweit First Nation Mi’kmaq Wellness Centre promotes and delivers health care services where safety, cultural values, traditions, and beliefs of the community are respected. The Wellness Centre has an interdisciplinary team consisting of a registered nurse, licensed practical nurse, registered dietician, native alcohol and drug addiction counselor, and community health representative (Abegweit First Nation 2015). The Wellness Centre also has a clinical team which includes a doctor, registered nurse, licensed practical nurse, and registered dietician (Abegweit First Nation 2015).

Economy

Economic indicators for 2011 are presented in Table 7.66.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.66 Economic Indicators for Abegweit First Nation, 2011

Indicator	Abegweit
Participation Rate (%)	70.0
Employment Rate (%)	53.3
Unemployment Rate (%)	19.0
Average Individual Income (\$)	-
Source: Statistics Canada undated(b) Note:“-“ means data not available	

The Mi'kmaq Confederacy Employment Services operates under a contribution agreement between the Mi'kmaq Confederacy of PEI and the federal department of Human Resources and Skills Development Canada. Through the contribution agreement, it provides and administers employment-based programs and services to all Indigenous people living on PEI, including status and non-status First Nations, Métis and Inuit Peoples living on and off-reserve across the province.

The Community Economic Development Program helps the community with proposal development, community economic planning, finding employment for community members, community-owned and community member business development services, community land and resource development, access to opportunities from land and resources beyond community control, promoting investment in the community, and research and advocacy of new projects (Abegweit First Nation 2015).

Abegweit First Nation owns and operates several businesses based out of Scotchfort, including Epekwit Gas Bar, Redstone Truck and Marine, Commercial Fishery, and other initiatives including Epekwit Gardens and Preserves, Abegweit Biodiversity and Enhancement Hatchery, Stream Enhancement, and Forestry (Abegweit First Nation 2015).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the PEI Mi'kmaq is provided in the preface to Section 7.3.2.2. Abegweit First Nation was created following the separation of PEI Mi'kmaq bands in 1972 (Abegweit First Nation 2015). The first election for the Abegweit First Nation occurred in May 1972 (Abegweit First Nation 2015). Abegweit First Nation cultural practices and resources are focused on the lands and waters of PEI (850 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.2, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by Abegweit First Nation.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

FSC Fishing

Abegweit First Nation hold several FSC licences, including for clams, eel, gaspereau, herring, lobster, mackerel, mussels, oysters, quahaug, rock crab, salmon, scallops, seals, silversides, smelts, striped bass, toad crab and trout. The Agency identified Abegweit First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes.

Commercial-Communal Fishing

Abegweit First Nation hold commercial-communal licences for tuna and swordfish issued by DFO. One licence, for swordfish, overlaps with the Project Area. DFO landings data (2011-2015) indicates no landings originating from the Project Area.

7.3.2.2 Lennox Island First Nation

General Overview

Lennox Island First Nation consists of a single reserve occupying all of Lennox Island. Lennox Island is represented in consultation and engagement by the MCPEI. As of May 2017, the current total registered population, including off-reserve, was 963 (Statistics Canada undated(a)).

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were a total of 105 dwellings within the community (Statistics Canada undated(b)). Housing characteristics for Lennox First Nation are provided in Table 7.67.

Table 7.67 Housing Characteristics for Lennox First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Lennox	105	35	15	55	55	-	5.8

Source: Statistics Canada undated(b)

Note: '-' means data not available

The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

An on-reserve Mi'kmaq elementary school, John J. Sark Memorial has been opened since 1981 for students from kindergarten to grade 6 (Lennox Island 2013). Approximately 50 students attend the school each year and it employs ten individuals (Lennox Island 2013). Health care services are provided through the on-reserve Lennox Island Health Centre. It provides a variety of programs and services including basic health care, delivery of home support services, substance abuse counselling, access to fitness, and maternal health coordination. The Health Centre also includes the Eagle Nest Gym. There is also a fire department within the community.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Economy

Economic indicators for 2011 are presented in Table 7.68.

Table 7.68 Economic Indicators for Lennox Island First Nation, 2011

Indicator	Lennox Island
Participation Rate (%)	75.0
Employment Rate (%)	52.5
Unemployment Rate (%)	23.3
Average Individual Income (\$)	24, 792
Source: Statistics Canada 2017a	

Mi'kmaq Confederacy Employment Services operates under a contribution agreement between the Mi'kmaq Confederacy of PEI and the federal department of Human Resources and Skills Development Canada. It provides and administers employment-based programs and services to all Indigenous people living on PEI, including status and non-status First Nations, Métis and Inuit Peoples living on and off-reserve across the entire province.

Lennox Island First Nation created the Lennox Island Development Corporation to further the economic prosperity through the development and expansion of community businesses and resources. Fisherman's Pride Inc., is owned and operated by the Lennox Island First Nation. It is the primary resource harvester and seller of inshore seafood, operating on Lennox Island First Nation reserve (Lennox Island 2013). In 2013, it employed three shore-based personnel and 24 sea-going employees (Lennox Island 2013). The company has also invested in mentoring programs for its members, and administers all licences held by the Lennox Island First Nation.

Minigoo Fisheries was established in 2010 and is owned and operated by the Lennox Island First Nation (Lennox Island 2013). Minigoo Fisheries processes wild lobster of the Atlantic Coast for international markets. The workforce at Minigoo Fisheries includes Indigenous and non-Indigenous workers. The processing facility is located on Indigenous lands, operating under a Government of Canada processing licence.

Physical and Cultural Heritage (including archaeological, paleontological, historical and architectural sites)

A general description of the history and culture of the PEI Mi'kmaq is provided in the preface to Section 7.3.2.2. Publicly available information of the history and culture of the Lennox Island First Nation could not be found. Lennox Island First Nation cultural practices and resources are focused on the lands and waters of PEI (850 km from the Project), and are not anticipated to interact with Project activities and components.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.2, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine-associated species, particularly a discussion on FSC and commercial-communal fishing by the Lennox Island First Nation.

FSC Fishing

Lennox Island First Nation hold several FSC licences, including for clams, eel, gaspereau, groundfish, herring, lobster, mackerel, mussels, oysters, quahaug, rock crab, salmon, seals, smelt, and trout. The Agency identified Lennox Island First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes.

Commercial-Communal Fishing

Lennox Island First Nation hold commercial-communal licences for tuna, groundfish and swordfish issued by DFO. One licence, for swordfish, overlaps with the Project Area. DFO landings data (2011-2015) indicates no landings originating from the Project Area.

7.3.2.3 Mi'kmaq of New Brunswick

In New Brunswick (Figure 7-40), the Mi'kmaq are geographically focused in territory that covers the Eastern part of the province. As previously described in Section 7.3.2, the first European contact with the Mi'kmaq occurred in the 16th and 17th centuries.

The Mi'gmawé' Tplu'taqn Incorporated (MTI) represents eight of the nine Mi'kmaq communities in New Brunswick (the exception is Elipogtog First Nation). MTI was formed in late 2015, and is a not-for-profit organization established to manage consultation for eight of the nine Mi'kmaq Nations in New Brunswick; and, promote and support the recognition, affirmation, exercise and implementation of the inherent Aboriginal and Treaty Rights of its members. Elsipogtog First Nation conducts its own consultation and engagement, and in 2016 launched an Aboriginal title claim to the southeastern third of the province.

Mi'kmaq First Nations of New Brunswick:

- Elsipogtog First Nation
- Fort Folly First Nation
- Eel Ground First Nation
- Pabineau First Nation
- Esgenoôpetitj First Nation
- Indian Island First Nation
- Eel River First Nation
- Metepenagiag Mi'gmaq Nation
- Bouctouche First Nation

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

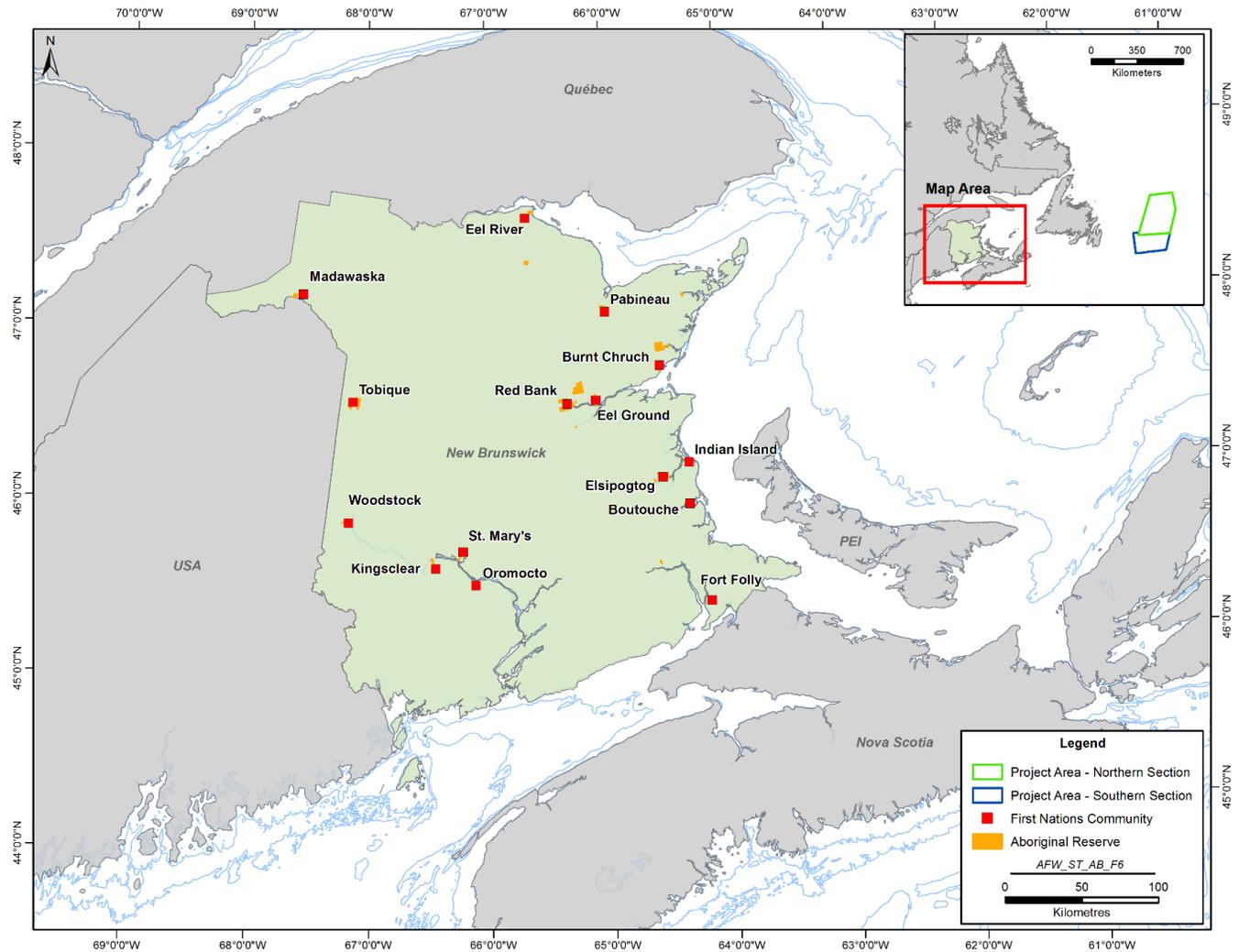


Figure 7-40 Location of First Nation Communities in New Brunswick

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

The Mi'kmaq of New Brunswick are known to occupy and use the land and waters around NB including use for travel corridors, land hunting and harvesting, and fishing for traditional purposes. However, given the Project components and activities will be located at a considerable distance from the Indigenous communities (1,100 km from NB), the discussion of current use of lands and resources for traditional purposes is focused on activities in the marine environment and species of interest to New Brunswick Indigenous communities that may migrate through the marine environment. The current use of lands and resources section therefore includes a discussion of FSC and commercial-communal harvesting.

Each of these communities are examined in more detail in the following sections.

7.3.2.3.1 Elsipogtog First Nation

General Overview

The Elsipogtog First Nation, formerly known as Big Cove Band, consists of two reserves, the Richibucto Reserve, located approximately 8 km southwest of Rexton with an area of 1,742.0 ha and the Soegao Reserve, located 5 km west of Moncton with an area of 105.0 ha (INAC website undated). Elsipogtog First Nation is a Mi'gmaq Nation affiliated with the MAWIW Council (governing body for Elsipogtog, Tobique and Burnt Church) (Energy East Pipeline Ltd. 2016). According to 2016 census data, the on-reserve population at the Richibucto Reserve was 1,937 (Statistics Canada undated(a)). Census data was not available for Soegao.

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were a total of 750 dwellings within the community, over half (56 percent) of which were band housing (Statistics Canada undated(b)). Housing characteristics for Elsipogtog First Nation are provided in Table 7.69.

Table 7.69 Housing Characteristics for Elsipogtog First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Richibucto	750	60	270	420	360	-	5.6

Source: Statistics Canada undated(b)

Notes: '-' means data not available

The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

Within the Richibucto reserve there is a police detachment and fire hall (INAC website 2012(a)). There is one school, Elsipogtog School, which has students from kindergarten to grade 8 (First Nation Education Initiative Inc. undated).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Economy

Economic indicators for 2011 for the Elsipogtog First Nation are presented in Table 7.70.

Table 7.70 Economic Indicators for the Elsipogtog First Nation, 2011

Indicator	Richibucto
Participation Rate (%)	45.7
Employment Rate (%)	28.9
Unemployment Rate (%)	36.7
Average Individual Income (\$)	16,703
Source: Statistics Canada undated(b) Note: '-' means data not available	

The two primary economic developments within the community are the River of Fire Market and Elsipogtog Pharmasave (Elsipogtog First Nation website undated).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NB Mi'gmaq is provided in the preface to Section 7.3.2.3. Publicly available information of the history and culture of the Elsipogtog First Nation could not be found. Elsipogtog First Nation cultural practices and resources are focused on the lands and waters of NB (1,100 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.3, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by Elsipogtog First Nation.

FSC Fishing

Elsipogtog First Nation hold several FSC licences including for clams, eel, gaspereau, herring, lobster, mackerel, mussels, oysters, quahaug, rock crab, salmon, scallops, seals, shad, smelts, striped bass, and trout. The Agency identified Elsipogtog First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes.

Commercial-Communal Fishing

Elsipogtog First Nation holds a commercial-communal licence for tuna; this licence does not overlap with the Project Area.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

7.3.2.3.2 Amalamgog (Fort Folly) First Nation

General Overview

Fort Folly First Nation has one reserve: Fort Folly 1 located 2 km southeast of Dorchester with an area of 56.0 ha (INAC website undated). Fort Folly First Nation is a Mi'gmaq Nation affiliated with the North Shore Micmac District Council. Fort Folly is represented in consultation and engagement by MTI. According to 2016 census data, the on-reserve population was 40 (Statistics Canada undated(a)).

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were a total of 20 dwellings within the community, over half of which were owned and the other half rented (Statistics Canada undated(b)). Housing characteristics for Fort Folly First Nation are provided in Table 7.71.

Table 7.71 Housing Characteristics for Fort Folly First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Fort Folly	20	10	10	0	20	-	6.2
Source: Statistics Canada undated(b) Notes: '-' means data not available The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.							

There is no police detachment or fire hall within the community (INAC website 2012(a)), but there is a pre-school, Fort Folly First Nation Pre-School, for kindergarten ages students (First Nation Education Initiative Inc. undated).

Economy

Economic indicators for 2011 for the Fort Folly First Nation are presented in Table 7.72.

Fort Folly First Nation supports economic development in the fishing industry, with two lobster boats, one of which that also carries a scallop licence (Fort Folly First Nation website undated).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.72 Economic Indicators for the Fort Folly First Nation, 2011

Indicator	Fort Folly
Participation Rate (%)	62.5
Employment Rate (%)	50.0
Unemployment Rate (%)	40.0
Average Individual Income (\$)	-
Source: Statistics Canada undated(b)	
Note: '-' means data not available	

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NB Mi'gmaq is provided in Section 7.3.2.3. In 1918, community members from the Fort Folly lands were relocated to the Robinson land outside of Richibucto (Fort Folly First Nation website undated). Fort Folly First Nation cultural practices and resources are focused on the lands and waters of NB (1,100 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.3, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by Fort Folly First Nation.

FSC Fishing

Fort Folly First Nation holds FSC fishing licences for LFA 35 (Bay of Fundy) issued by DFO for lobster (Table 7.73). Additionally, the CEA Agency identified Fort Folly First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes.

Table 7.73 FSC Licence Locations for Fort Folly First Nation

Species	FSC Licence Location
Lobster	LFA 35
Source: Data provided courtesy of DFO	

Commercial-Communal Fishing

Fort Folly First Nation hold several commercial-communal licences, such as licences for gaspereau, eel, groundfish, herring, lobster, sea scallop, swordfish and tuna. One licence, for swordfish, overlaps with the Project Area. DFO landings data (2011-2015) indicates no landings originating from the Project Area.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

7.3.2.3.3 Natoaganeg (Eel Ground) First Nation

General Overview

Eel Ground First Nation has three reserves: Big Hole Tract 8 located 21 km west of Newcastle with an area of 1,740.2 ha, Eel Ground 2 located 5 km west of Newcastle with an area of 1,072.8 ha, and Renous 12 located 27 km west of Newcastle with an area of 10.0 ha (INAC website undated). Eel Ground First Nation is a Mi'kmaq Nation affiliated with the North Shore Micmac District Council. Eel Ground is represented in consultation and engagement by MTI. According to 2016 census data, the on-reserve population for Eel Ground 2 was 532 (Statistics Canada undated(a)). Population data are not available for Big Hole Tract or Renous.

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were a total of 180 dwellings within the community, over half (56 percent) of which were band owned (Statistics Canada undated(b)). Housing characteristics for Eel Ground First Nation are provided in Table 7.74.

Table 7.74 Housing Characteristics for Eel Ground First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Eel Ground	180	70	10	100	90	-	6.6

Source: Statistics Canada undated(b)

Notes: '-' means data not available

The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

Within Eel Ground there is a health centre, Eel Ground Health and Wellness Centre, which provides several services to the community such as integration of cultural traditions, and information on good health and a sense of well-being (Eel Ground Health and Wellness Centre website 2017). The Eel Ground School was built in 1978 and housing grades kindergarten to grade eight (Eel Ground First Nation website undated). There is no police detachment or fire hall within the community (INAC website 2012(a)).

Economy

Economic indicators for 2011 for the Eel Ground First Nation are presented in Table 7.75.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.75 Economic Indicators for the Eel Ground First Nation, 2011

Indicator	Eel Ground
Participation Rate (%)	58.2
Employment Rate (%)	37.3
Unemployment Rate (%)	35.9
Average Individual Income (\$)	20,453
Source: Statistics Canada undated(b) Note: '-' means data not available	

The Eel Ground First Nation has a forestry program which includes the company Straight Arrow Specialized Lumber Products.

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NB Mi'gmaq is provided in the preface to Section 7.3.2.3. Publicly available information of the history and culture of the Eel Ground First Nation could not be found. Eel Ground First Nation cultural practices and resources are focused on the lands and waters of NB (1,100 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.3, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by Eel Ground First Nation.

FSC Fishing

Eel Ground First Nation hold several FSC licences including for clams, mussels, eel, gaspereau, herring, mackerel, oysters, quahaug, salmon, shad, smelts, striped bass, and brook trout. The Agency identified Eel Ground First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes.

Commercial-Communal Fishing

According to DFO data, Eel Ground First Nation do not hold commercial-communal licences.

7.3.2.3.4 Oinpegitjoig (Pabineau) First Nation

General Overview

Pabineau First Nation has one reserve, Pabineau 11, located approximately 8 km south of Bathurst with an area of 429.0 ha (INAC website undated). Pabineau First Nation is a Mi'kmaq Nation affiliated with the North Shore Micmac District Council (Energy East Pipeline Ltd. 2016). Pabineau is represented in consultation and engagement by MTI. According to 2016 census data, the on-reserve population was 134 (Statistics Canada undated(a)).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were a total of 60 dwellings within the community, most (83 percent) of which were owned, with some rental housing (Statistics Canada undated(b)). Housing characteristics for Pabineau First Nation are provided in Table 7.76.

Table 7.76 Housing Characteristics for Pabineau First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Pabineau	60	50	15	0	20	-	5.7
Source: Statistics Canada undated(b) Notes: '-' means data not available The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.							

There is a police detachment on-reserve but no fire hall or school (INAC website 2012(a); First Nation Education Initiative Inc. undated).

Economy

Economic indicators for 2011 for the Pabineau First Nation are presented in Table 7.77.

Table 7.77 Economic Indicators for the Pabineau First Nation, 2011

Indicator	Pabineau
Participation Rate (%)	81.8
Employment Rate (%)	45.5
Unemployment Rate (%)	38.9
Average Individual Income (\$)	-
Source: Statistics Canada undated(b) Note: '-' means data not available	

There is an Economic Development Officer within the community, working to secure opportunities for economic and business development and increase local employment (Pabineau First Nation website undated). In 2009, Pabineau First Nation's first community owned-and-operated business, the Pabineau Seafood Takeout, opened. In 2012, the community opened the Pabineau Smoke Shop followed by the Pabineau Gas Bar (Pabineau First Nation website undated).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NB Mi'gmaq is provided in the preface to Section 7.3.2.3. Publicly available information of the history and culture of the Pabineau First Nation could not be found. Pabineau First Nation cultural practices and resources are focused on the lands and waters of NB (1,100 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.3, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by Pabineau First Nation.

FSC Fishing

Pabineau First Nation hold several FSC licences including for clams, herring, mackerel, mussels, oysters, salmon, and trout. The Agency identified Pabineau First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes.

Commercial-Communal Fishing

Pabineau First Nation hold a commercial-communal licence for tuna issued by DFO; this licence does not overlap with the Project Area.

7.3.2.3.5 Esgenoôpetitj (Burnt Church) First Nation

General Overview

Esgenoôpetitj First Nation, formerly known as Burnt Church First Nation, has three reserves: Esgenoôpetitj Indian Reserve 14 located 32 km northeast of Chatham with an area of 985.4 ha, Pokemouche 13 located 64 km east of Bathurst with an area of 151.4 ha, and Tabusintac 9 located 40 km northeast of Chatham with an area of 3,268.7 ha (INAC website undated). Esgenoôpetitj First Nation is a Mi'kmaq Nation affiliated with the MAWIW Council (Energy East Pipeline Ltd. 2016). Esgenoôpetitj is represented in consultation and engagement by MTI. According to 2016 census data, the on-reserve population of Esgenoôpetitj Indian Reserve 14 was 1,179 and Tabusintac was 10 (Statistics Canada undated(a)).

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were a total of 340 dwellings within the community, most (61 percent) of which were band housing (Statistics Canada undated(b)). Housing characteristics for Esgenoôpetitj First Nation, reported as the Burnt Church census sub-division, are provided in Table 7.78.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.78 Housing Characteristics for Esgenoôpetitj First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Burnt Church	340	110	25	210	160	-	6.0

Source: Statistics Canada undated(b)

Notes: ' - ' means data not available

The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

There is a school in the community, Esgenoôpetitj School, for grades kindergarten to eight (First Nation Education Initiative Inc. undated). There is no police detachment within the community, but there is a fire hall (INAC website 2012(a)).

Economy

Economic indicators for 2011 for the Esgenoôpetitj First Nation are presented in Table 7.79.

Table 7.79 Economic Indicators for the Esgenoôpetitj First Nation, 2011

Indicator	Burnt Church
Participation Rate (%)	55.3
Employment Rate (%)	26.7
Unemployment Rate (%)	53.0
Average Individual Income (\$)	15,619

Source: Statistics Canada undated(b)

Note: ' - ' means data not available

Publicly available information on economic development for the Esgenoôpetitj First Nation could not be found.

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NB Mi'gmaq is provided in the preface to Section 7.3.2.3. Publicly available information of the history and culture of the Esgenoôpetitj First Nation could not be found. Esgenoôpetitj First Nation cultural practices and resources are focused on the lands and waters of NB (1,100 km from the Project), and are not anticipated to interact with Project activities and components.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.3, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by Esgenoôpetitj First Nation.

FSC Fishing

Esgenoôpetitj First Nation hold several FSC licences including for clams, quahaug, eel, herring, lobster, mackerel, mussels, oysters, salmon, smelts, striped bass, and brook trout. The Agency identified Esgenoôpetitj First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes.

Commercial-Communal Fishing

Esgenoôpetitj First Nation holds a commercial-communal licence for tuna issued by DFO; this licence does not overlap with the Project Area.

7.3.2.3.6 Tjipôgtôtjg (Bouctouche) First Nation

General Overview

Bouctouche First Nation has one reserve, Bouctouche 16, located 3.2 km southwest of Bouctouche with an area of 62.3 ha (INAC website undated). Bouctouche First Nation is a Mi'kmaq Nation affiliated with the North Shore Micmac District Council (Energy East Pipeline Ltd. 2016). Bouctouche is represented in consultation and engagement by MTI. According to 2016 census data, the on-reserve population is 96 (Statistics Canada undated(a)).

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were 40 dwellings within the community, all of which were band housing (Statistics Canada undated(b)). Housing characteristics for Bouctouche First Nation are provided in Table 7.80.

Table 7.80 Housing Characteristics for Bouctouche First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Bouctouche	40	0	0	40	10	-	5.5

Source: Statistics Canada undated(b)

Notes: '-' means data not available

The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Within the community, there is a kindergarten, Bouctouche First Nation Pre-school (First Nation Education Initiative Inc. undated), and a fire hall but no police detachment (INAC 2012(a)).

Economy

Economic indicators for 2011 for the Bouctouche First Nation are presented in Table 7.81.

Table 7.81 Economic Indicators for the Buctouche First Nation, 2011

Indicator	Buctouche
Participation Rate (%)	76.9
Employment Rate (%)	53.8
Unemployment Rate (%)	30.0
Average Individual Income (\$)	-
Source: Statistics Canada undated(b)	
Note: ‘-’ means data not available	

Bouctouche has an Economic Development program to enhance the quality of life for the community through the development of band-owned business opportunities (Bouctouche First Nation website undated). The program provides employment / training opportunities to the members of the Bouctouche community through the acquisition of skills and work experience required to be able to provide for themselves and their families (Bouctouche First Nation website undated). Bouctouche has commercial-communal fishing licences for snow crab and rock crab and is looking to expand the commercial fishery to include lobster and clams. In addition to the fishing industry, the community relies on forestry. The Bouctouche MicMac Band Forestry Department administers the distribution of the royalties that are received from the Band’s annual allocation by the Province of New Brunswick (Bouctouche First Nation website undated). Bouctouche First Nation also owns and operates the River of Little Fire Incorporated Gas Bar.

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NB Mi’gmaq is provided in the preface to Section 7.3.2.3. Bouctouche First Nation was established in 1810; however, was abandoned in 1924 until a family moved back to the reserve in 1958 (Bouctouche First Nation website undated). It was thought that the band’s fishing, trapping and hunting territories encompassed the western third of PEI, followed the coast of NB from Miramichi Bay along the Northumberland Strait, southeast between NS on the Bay of Fundy to the border of Maine; during winter months, this territory also stretched inland to Fredericton, Grand Lake, Moncton and Miramichi (Bouctouche First Nation website undated). Bouctouche First Nation cultural practices and resources are focused on the lands and waters of NB (1,100 km from the Project), and are not anticipated to interact with Project activities and components.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.3, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by Bouctouche First Nation.

FSC Fishing

Bouctouche First Nation hold several FSC licences including for clams, eel, mackerel, oysters, salmon, striped bass, and brook trout. The Agency identified Bouctouche First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes.

Commercial-Communal Fishing

Bouctouche First Nation holds a commercial-communal licence for tuna issued by DFO; this licence does not overlap with the Project Area.

7.3.2.3.7 L'nui Menikuk (Indian Island) First Nation

General Overview

Indian Island First Nation has one reserve, Indian Island 28, located 8 km northeast of Rexton with an area of 38.4 ha (INAC website undated). Indian Island First Nation is a Mi'kmaq Nation affiliated with the North Shore District Council (Energy East Pipeline Ltd. 2016). Indian Island is represented in consultation and engagement by the MTI. According to 2016 census data, the on-reserve population was 138 (Statistics Canada undated(a)).

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were a total of 50 dwellings within the community, all of which were band housing (Statistics Canada undated(b)). Housing characteristics for Indian Island First Nation are provided in Table 7.82.

Table 7.82 Housing Characteristics for Indian Island First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Indian Island	50	0	0	45	20	-	5.2

Source: Statistics Canada undated(b)

Notes: '-' means data not available

The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

There is no police detachment, fire hall or school within the community (INAC website 2012(a); First Nation Education Initiative Inc. undated).

Economy

Economic indicators for 2011 for the Indian Island First Nation are presented in Table 7.83.

Table 7.83 Economic Indicators for the Indian Island First Nation, 2011

Indicator	Indian Island
Participation Rate (%)	53.3
Employment Rate (%)	33.3
Unemployment Rate (%)	25.0
Average Individual Income (\$)	-
Source: Statistics Canada undated(b)	
Note: ‘-’ means data not available	

The Indian Island Aquaculture Development Corporation has been growing oysters since 2007 and currently there are approximately 2.6 million oysters on-site in various stages of growth. The oyster farm has four leases in total, three used as grow-out leases and one as overwintering (Indian Island First Nation website 2015). The company has over \$600K in assets (Indian Island First Nation 2015). The Development Corporation employs five seasonal employees with additional students in the summer; employees are community members (Indian Island First Nation 2015).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NB Mi'gmaq is provided in the preface to Section 7.3.2.3. Publicly available information of the history and culture of the Indian Island First Nation could not be found. Indian Island First Nation cultural practices and resources are focused on the lands and waters of NB (approximately 1,100 km from the Project), and are not anticipated to overlap with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.3, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by Indian Island First Nation.

FSC Fishing

Indian Island First Nation hold several FSC licences, including for clams, mussels, eels, gaspereau, herring, lobster, mackerel, oysters, quahaug, rock crab, salmon, smelts, striped bass, and trout. The Agency identified Indian Island First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Commercial-Communal Fishing

Indian Island First Nation holds a commercial-communal licence for tuna issued by DFO; this licence does not overlap with the Project Area.

7.3.2.3.8 Ugpi’ganjig (Eel River Bar) First Nation

General Overview

Eel River Bar First Nation has three reserves: Eel River 3 located 3 km south of Dalhousie with an area of 122.0 ha, Indian Ranch located 2 km south of Dalhousie with an area of 45.7 ha, and Moose Meadows 4 located 32 km south of Dalhousie with an area of 404.7 ha (INAC website undated). Eel River Bar First Nation is a Mi’kmaq Nation affiliated with the North Shore Micmac District (Energy East Pipeline Ltd. 2016). Eel River Bar is represented in consultation and engagement by the MTI. According to 2016 census data, the on-reserve population of Eel River 3 was 329 and Indian Ranch was 89 (Statistics Canada undated(a)). Census data are not available for Moose Meadows.

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were a total of 170 dwellings within the community, split between owned (53 percent), rented (27 percent), and band (20 percent) housing (Statistics Canada undated(b)). Housing characteristics for Eel River Bar First Nation are provided in Table 7.84.

Table 7.84 Housing Characteristics for Eel River Bar First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Eel River 3	145	80	40	30	65	-	5.9
Indian Ranch	25	10	0	10	0	-	5.6

Source: Statistics Canada undated(b)

Notes: ‘-’ means data not available

The numbers shown in the tables have been subject to a confidentiality procedure called ‘random rounding’ to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

Within Eel River, there is the Eel River Bar Pre-school (First Nation Education Initiative Inc. undated), but no police detachment or fire hall (INAC website 2012(a)).

Economy

Economic indicators for 2011 for the Eel River Bar First Nation are presented in Table 7.85.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.85 Economic Indicators for the Eel River Bar First Nation, 2011

Indicator	Eel River 3	Indian Ranch
Participation Rate (%)	58.9	70.0
Employment Rate (%)	46.4	60.0
Unemployment Rate (%)	18.2	0.0
Average Individual Income (\$)	21,516	-
Source: Statistics Canada undated(b) Note: '-' means data not available		

The community continues to make a living from traditional resourced industry jobs such as fishing and forestry, and non-traditional employment within the sectors of First Nation local government, housing construction, trades, small business, and band-based business operations (Eel River Bar First Nation website 2017).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NB Mi'gmaq is provided in the preface to Section 7.3.2.3. The area around Benjamin and Eel Rivers was an area where Mi'gmaq families would complete their annual migration and was a summer encampment. The Benjamin River was rich for farming and the Eel River provided a variety of fish (Eel River Bar First Nation website 2017). The area provided access to Heron Island, where it is thought traditional burials took place (Eel River Bar First Nation website 2017).

The Eel River Bar community believed there was equality between the people, the land and animals with the oceans, lakes, and rivers providing fresh fish, seals and shellfish, the rivers holding salmon and eels, and the forests home to moose, deer, bear, and a variety of other animals and birds. The community fished in the waters of the Bay of Chaleur that borders the community and dug for clams on the sandy shores of Eel River Bar. In 1963, however, the construction of a dam in Eel River put an end to the fishing and gathering of clams on the sandy shores (Eel River Bar First Nation website 2017). Eel River Bar First Nation cultural practices and resources are focused on the lands and waters of NB (1,100 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.3, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by Eel River First Nation.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

FSC Fishing

Eel River First Nation hold several FSC licences, including for soft-shell clams, herring, salmon, striped bass, lobster, and rock crab. The Agency identified Eel River First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes.

Commercial-Communal Fishing

Eel River First Nation holds a commercial-communal licence for tuna issued by DFO; this licence does not overlap with the Project Area.

7.3.2.3.9 Metepenagiag Mi'gmaq Nation

General Overview

Metepenagiag Mi'gmaq Nation has four reserves: Big Hole Tract 8 (North Half) located 21 km west of Newcastle with an area of 1,396.2 ha; Indian Point 1 located 19 km west of Newcastle with an area of 41.2 ha; Red Bank 4 located 23 km west of Newcastle with an area of 1,457.0 ha; and Red Bank 7 located 24 km west of Newcastle with an area of 1,011.7 ha (INAC website undated). Metepenagiag First Nation is a Mi'gmaq Nation affiliated with the North Shore Micmac District Council (Energy East Pipeline Ltd. 2016). Metepenagiag is represented in consultation and engagement by MTI. According to 2016 census data, the on-reserve population at Red Bank 4 was 309 (Statistics Canada undated(a)). Census data for the other reserves are not available.

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were a total of 155 dwellings within the community, most (68 percent) of which were band housing (Statistics Canada undated(b)). Housing characteristics for Metepenagiag Mi'gmaq Nation are provided in Table 7.86.

Table 7.86 Housing Characteristics for Metepenagiag Mi'gmaq Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Red Bank	155	30	15	105	80	-	6.1

Source: Statistics Canada undated(b)

Notes: '-' means data not available

The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

There is school within the community, Metepenagiag School, which serves students from kindergarten to grade 6 (First Nation Education Initiative Inc. undated), but no police detachment or fire hall (INAC website 2012(a)).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Economy

Economic indicators for 2011 for the Metepenagiag First Nation are presented in Table 7.87.

Table 7.87 Economic Indicators for the Metepenagiag Mi'gmaq Nation, 2011

Indicator	Red Bank
Participation Rate (%)	61.8
Employment Rate (%)	36.4
Unemployment Rate (%)	44.1
Average Individual Income (\$)	24,415
Source: Statistics Canada undated(b)	
Note: '-' means data not available	

Publicly available information on economic development for the for Metepenagiag First Nation could not be found.

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NB Mi'gmaq is provided in the preface to Section 7.3.2.3. Metepenagiag Mi'gmaq Nation has developed a heritage park which contains two of the most important Indigenous heritage archeological sites in eastern Canada: the Augustine Mound National Historic Site and Oxbow National Historic Site (Metepenagiag Mi'gmaq Nation website undated). Archeological findings at these sites prove that this location has been continuously inhabited by the Mi'gmaq people for over 3,000 years (Metepenagiag First Nation website 2017). Metepenagiag Mi'gmaq Nation cultural practices and resources are focused on the lands and waters of NB (1,100 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.2.3, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by Metepenagiag First Nation.

FSC Fishing

Metepenagiag First Nation hold several FSC licences, including for eel, salmon, shad, striped bass, and brook trout. The Agency identified Metepenagiag First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Commercial-Communal Fishing

According to DFO data, Metepenagiag First Nation do not hold commercial-communal licences issued by DFO.

7.3.3 Wolastoqiyik of New Brunswick (Maliseet)

The Wolastoqiyik Nation of New Brunswick are an Indigenous community of the Saint John River Valley and its tributaries. At the time of the first encounter with Europeans, the Wolastoqiyik were primarily an agricultural and forestry-based community, supplementing their diet with hunting, fishing, and gathering fruits, berries, and nuts (Madawaska Maliseet First Nation website, undated).

The Peace and Friendship Treaties were established between 1725 and 1779 between the Mi'kmaq, the Wolastoqiyik, the Peskotomuhkati, and British settlers, the terms of which were intended to assist in establishing peace and trade relations (AANDC 2013). As affirmed by recent Supreme Court decisions, these treaties guarantee rights to hunt and fish throughout the region and to maintain a moderate livelihood.

The Wolastoqiyik Nation of New Brunswick (WNNB) was established in 2016, and represents five of the six Wolastoqiyik Nations in consultation and engagement. The exception is Woodstock First Nation, which handles its own consultation and engagement. In the future, the Wolastoq may consider a title claim to the western part of New Brunswick (CBC, June 4, 2017).

The six Wolastoqiyik Nations of New Brunswick are:

- Kingsclear First Nation
- Madawaska Maliseet Nation
- Oromocto First Nation
- Tobique First Nation
- St. Mary's First Nation
- Woodstock First Nation

Each of these communities are examined in more detail below. The locations of Indigenous reserves are provided in Figure 7-40.

The Wolastoqiyik are known to occupy and use the land and waters around NB including use for travel corridors, land hunting and harvesting, and fishing for traditional purposes. However, given the Project activities will be located at a considerable distance from the Indigenous communities (1,100 km from NB), the discussion of current use of lands and resources for traditional purposes is focused on activities in the marine environment and species of interest to New Brunswick Indigenous communities that may migrate through the marine environment. The current use of lands and resources section therefore includes a discussion of FSC and commercial-communal harvesting.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

7.3.3.1 Kingsclear First Nation

General Overview

Kingsclear First Nation has two reserves: The Brothers 18 (also affiliated with Woodstock First Nation, Tobique First Nation, and Madawaska First Nation) located on two small islands in Kennebecasis Bay 3 km north of Saint John with an area of 4.0 ha; and Kingsclear 6 located 14 km west of Fredericton with an area of 374.7 ha (INAC website undated). Kingsclear First Nation is a Wolastoqiyik Nation (Energy East Pipeline Ltd. 2016). Kingsclear is represented in consultation through the WNNB. According to 2016 census data, the on-reserve population of Kingsclear 6 was 493 (Statistics Canada undated(a)).

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were a total of 180 dwellings within the community, most (83 percent) of which were band housing (Statistics Canada undated(b)). Housing characteristics for Kingsclear First Nation are provided in Table 7.88.

Table 7.88 Housing Characteristics for Kingsclear First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Kingsclear	180	30	0	150	70	-	6.4

Source: Statistics Canada undated(b)

Notes: '-' means data not available

The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

A health centre located within the community offers community health nursing, home and community care nursing program, mental wellness, addictions programs, dental, environmental health, and other services (Kingsclear First Nation website 2014). The Kingsclear Fire Department provides fire suppression, medical first response, and rescue services (Kingsclear First Nation website 2014). Kingsclear First Nation Education Program covers services for children from Kindergarten to Grade 12 and includes a Band Operated School - Wulastukw Elementary from K-5. Children then attend the George Street Middle School and then Fredericton High School for services from grades 6-12 (Kingsclear First Nation website 2014).

Economy

Economic indicators for 2011 for the Kingsclear First Nation are presented in Table 7.89.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.89 Economic Indicators for the Kingsclear First Nation, 2011

Indicator	Kingsclear
Participation Rate (%)	42.9
Employment Rate (%)	30.0
Unemployment Rate (%)	26.7
Average Individual Income (\$)	16,604
Source: Statistics Canada undated(b)	
Note: '-' means data not available	

Economic activity within the community includes the Wulastukw Convenience store. Kingsclear has been exploring opportunities to expand the fishing industry, including exploring opportunities in aquaculture and specializing in eel and sea urchin production. Consideration is also being given to whale watching tourism opportunities and guided tours along the Saint John River (Kingsclear First Nation website 2014). Kingsclear First Nation is also in the forestry industry, cutting the allocation under the Allowable Annual Cut arrangement with the province, generally cut by contractors under agreement with the band. This results in significant return without great expenditure (Kingsclear First Nation website 2014).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NB Wolastoqiyik is provided in the preface to Section 7.3.3. The community of Kingsclear began officially in 1795; however, the history of the Wolastoqiyik in this area goes back thousands of years as evidenced by the discovery of a fluted point approximately 11,000 years old (Kingsclear First Nation website 2014). Prior to settling at its current location, the Wolastoqiyik people lived in a village called Ekwpahak, located a few miles downriver from the current location. This area was occupied in the late spring and summer when they speared salmon, bass, and sturgeon, planted corn, and gathered medicines and foods such as fiddleheads, berries, butternut, grapes, and wild potatoes (Kingsclear First Nation website 2014). Kingsclear First Nation cultural practices and resources are focused on the lands and waters of NB (1,100 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.3, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by Kingsclear First Nation.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

FSC Fishing

Kingsclear First Nation hold FSC fishing licenses issued by DFO for striped bass and lobster. FSC species and licence locations are listed in Table 7.90. Harvesting of striped bass is limited to the portion of the Saint John River from head of the tide at McKinley Ferry to the Mactaquac Dam. Lobster harvesting occurs in LFA 36 and 38, located along the NB coastal area. Additionally, the CEA Agency identified Kingsclear First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes.

Table 7.90 FSC Licence Locations for Kingsclear First Nation

Species	FSC Licence Location
Striped Bass	The portion of the Saint John River from head of the tide at McKinley Ferry to the Mactaquac Dam Tidal waters of Saint John River and its tributaries.
Lobster	LFA 36, 38
Source: Data provided courtesy of DFO	

Commercial-Communal Fishing

Kingsclear First Nation hold commercial-communal licences, such as licences for crab, groundfish, herring, lobster, sea scallop, and sea urchins; however, these licences do not overlap with the Project Area.

7.3.3.2 Madawaska Maliseet First Nation

General Overview

Madawaska Maliseet First Nation is comprised on two reserves: St. Basile 10 located 2 km east of the town of Edmunston with an area of 340.3 ha; and The Brothers 18 (also affiliated with Kingsclear First Nation, Tobique First Nation, and Woodstock First Nation) located on two small islands in Kennebecasis Bay, 3 km north of Saint John with an area of 4.0 ha (AANDC 2014 in Energy East Pipeline 2016). Madawaska is represented in consultation through the WNNB. According to 2016 census data, the on-reserve population of St. Basile was 214 (Statistics Canada undated(a)).

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were a total of 90 dwellings within the community, most (72 percent) of which were owned (Statistics Canada undated(b)). Housing characteristics for Madawaska First Nation are provided in Table 7.91.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.91 Housing Characteristics for Madawaska First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
St. Basile	90	65	0	20	40	-	5.1
Source: Statistics Canada undated(b) Notes: ‘-’ means data not available The numbers shown in the tables have been subject to a confidentiality procedure called ‘random rounding’ to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.							

Within the community, there is a Health Centre, which is staffed by a doctor and a nurse, but no police detachment, fire hall, or school (INAC website 2012(a); First Nation Education Initiative Inc. undated).

Economy

Economic indicators for 2011 for the Madawaska First Nation are presented in Table 7.92.

Table 7.92 Economic Indicators for the Madawaska First Nation, 2011

Indicator	St. Basile
Participation Rate (%)	70.6
Employment Rate (%)	58.8
Unemployment Rate (%)	16.7
Average Individual Income (\$)	-
Source: Statistics Canada undated(b) Note: ‘-’ means data not available	

Madawaska First Nation has established the Madawaska Maliseet Economic Development Corporation, focused on business development, attracting new businesses, investment, attracting visitors to the area, and working with regional partners (MMEDC website 2017). Madawaska has businesses on the Reserve itself as well as the Grey Rock Power Centre along the Trans-Canada Highway, including gas stations, restaurants, car dealerships, and the Grey Rock Casino (MMEDC website 2017).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NB Wolastoqiyik is provided in the preface to Section 7.3.3. Publicly available information of the history and culture of the Madawaska First Nation could not be found. Madawaska First Nation cultural practices and resources are focused on the lands and waters of NB (1,100 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.3, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by Madawaska First Nation.

FSC Fishing

Madawaska First Nation hold several FSC licences, including for lobster, salmon, brook trout and lake trout. The Agency identified Madawaska First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes.

Commercial-Communal Fishing

According to DFO data, Madawaska First Nation does not hold commercial-communal licences issued by DFO.

7.3.3.3 Oromocto First Nation

General Overview

Oromocto First Nation has one reserve, Oromocto 26, located adjacent to Gagetown with an area of 32.0 ha (INAC website undated). Oromocto First Nation is a Wolastoqiyik Nation affiliated with the Saint John River Valley Tribal Council (Energy East Pipeline Ltd. 2016). Oromocto is represented in consultation through the WNNB. According to 2016 census data, the on-reserve population was 282 (Statistics Canada undated(a)).

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were a total of 95 dwellings within the community, all of which were band housing (Statistics Canada undated(b)). Housing characteristics for Oromocto First Nation are provided in Table 7.93.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.93 Housing Characteristics for Oromocto First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Oromocto	95	0	0	90	50	-	5.6
Source: Statistics Canada undated(b) Notes: ‘-’ means data not available The numbers shown in the tables have been subject to a confidentiality procedure called ‘random rounding’ to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.							

Within the community there is a health centre, the Oromocto First Nation Health Centre, and a pre-school, Oromocto First Nation Pre-school (First Nation Education Initiative Inc. undated), but no police detachment or fire hall (INAC website 2012(a)).

Economy

Economic indicators for 2011 for the Oromocto First Nation are presented in Table 7.94.

Table 7.94 Economic Indicators for the Oromocto First Nation, 2011

Indicator	Oromocto
Participation Rate (%)	74.4
Employment Rate (%)	41.9
Unemployment Rate (%)	43.8
Average Individual Income (\$)	19,563
Source: Statistics Canada undated(b) Note: ‘-’ means data not available	

Oromocto has fisheries and forestry departments; however, publicly available information on these departments could not be found.

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NB Wolastoqiyik is provided in the preface to Section 7.3.3. Publicly available information of the history and culture of the Oromocto First Nation could not be found. Oromocto First Nation cultural practices and resources are focused on the lands and waters of NB (1,100 km from the Project), and are not anticipated to interact with Project activities and components.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.3, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by Oromocto First Nation.

FSC Fishing

Oromocto First Nation hold FSC fishing licenses issued by DFO. These include licenses to harvest 20 species. FSC species and licence locations are listed in Table 7.95. Most of the species identified are harvested within inland and tidal areas in NB. Lobster are harvested in LFA 36, in the Inner Bay of Fundy. Additionally, the Agency identified Oromocto First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes.

Table 7.95 FSC Licence Locations for Oromocto First Nation

Species	FSC Licence Location
Burbot	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries
Catfish	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries
Chub	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries
Eel	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries
Gaspereau	Tidal waters of the Saint John River below the Princess Margaret Bridge in Fredericton
Lamprey	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries
Lobster	LFA 36
Muskellunge	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries
Perch (white and yellow)	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries
Pickereel	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.95 FSC Licence Locations for Oromocto First Nation

Species	FSC Licence Location
Pike	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries
Shad	Tidal waters of the Saint John River below the Princess Margaret Bridge in Fredericton
Smelt	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries
Striped Bass	The portion of the Saint John River from head of the tide at McKinley Ferry to the Mactaquac Dam
Striped Bass	Tidal waters of Saint John River and its tributaries
Sturgeon	Tidal waters of Saint John
Sucker Fish	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries
Sunfish	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries
Trout	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries
Whitefish	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries
Source: Data provided courtesy of DFO	

Commercial-Communal Fishing

Oromocto First Nation hold several commercial-communal licences, such as licences for gaspereau, groundfish, herring, lobster, sea scallop, sea urchins, shad and smelts; these licences do not overlap with the Project Area.

7.3.3.4 Tobique First Nation

General Overview

Tobique First Nation has two reserves: The Brothers 18 located on two small islands in Kennebecasis Bay, 3 km north of Saint John with an area of 4.0 ha, and Tobique 20 located 27 km south of Grand Falls with an area of 2,724.0 ha (INAC website undated). Tobique First Nation is a Wolastoqiyik Nation affiliated with MAWIW Council (Energy East Pipeline Ltd. 2016). Tobique is represented in consultation through the WNNB. According to 2016 census data, the on-reserve population was 968 (Statistics Canada undated(a)).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Health and Socioeconomic Conditions

Infrastructure and Services

Based on 2011 census data, there were a total of 355 dwellings within the community, most (61 percent) of which were band housing (Statistics Canada undated(b)). Housing characteristics for Tobique First Nation are provided in Table 7.96.

Table 7.96 Housing Characteristics for Tobique First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Tobique	355	105	30	215	205	-	6.7
Source: Statistics Canada undated(b) Notes: '-' means data not available The numbers shown in the tables have been subject to a confidentiality procedure called 'random rounding' to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.							

There is a wellness centre in the community, the Neqotkuk Health Centre, which promotes, educates and provides primary health care services (Tobique First Nation website 2015). There is also a school, Mah-Sos School, for students from kindergarten to grade 8 (First Nation Education Initiative Inc. undated). There is no police detachment, but there is a fire hall (INAC website 2012(a)).

Economy

Economic indicators for 2011 for the Tobique First Nation are presented in Table 7.97.

Table 7.97 Economic Indicators for the Tobique First Nation, 2011

Indicator	Tobique
Participation Rate (%)	50.3
Employment Rate (%)	31.5
Unemployment Rate (%)	37.5
Average Individual Income (\$)	17,084
Source: Statistics Canada undated(b) Note: '-' means data not available	

Community-owned enterprises include the Tobique Gaming Centre, Tobique Bingo, Two Rivers Restaurant, Tobique Youth Centre, and Tobique Convenience and Gas Bar. There are several other community businesses, including tobacco shops, take-out restaurants, and convenience stores (Tobique First Nation website 2015).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NB Wolastoqiyik is provided in the preface to Section 7.3.3. Publicly available information of the history and culture of the Tobique First Nation could not be found. Tobique First Nation cultural practices and resources are focused on the lands and waters of NB (1,100 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.3, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC fishing by Tobique First Nation.

FSC Fishing

Tobique First Nation hold FSC licences for smallmouth bass. Additionally, the Agency identified Tobique First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes.

Commercial-Communal Fishing

Tobique First Nation hold commercial-communal licences, such as licences for crab, groundfish, herring, lobster, mackerel, sea scallop, and sea urchin; these licences do not overlap with the Project Area.

7.3.3.5 St. Mary's First Nation

General Overview

St. Mary's First Nation is comprised of two reserves: Devon 30 located 6 km east of Fredericton with an area of 125.9 ha; and St. Mary's 24 located 6 km east of Fredericton with an area of 1.0 ha (INAC website 2012(a)). St. Mary's First Nation is a Wolastoqiyik Nation affiliated with the Saint John River Valley Tribal Council (Energy East Pipeline Ltd. 2016). St. Mary's is represented in consultation through the WNNB. According to 2016 census data, the on-reserve population was 1,038 (Statistics Canada undated(a)).

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were a total of 270 dwellings within the community, all of it band housing (Statistics Canada undated(b)). Housing characteristics for St. Mary's First Nation are provided in Table 7.98.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.98 Housing Characteristics for St. Mary’s First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Devon 30	270	0	0	260	120	-	6.8

Source: Statistics Canada undated(b)

Notes: ‘-’ means data not available

The numbers shown in the tables have been subject to a confidentiality procedure called ‘random rounding’ to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.

There is no police detachment or fire hall within the community (INAC website 2012(a)). However, there is an elementary school, Chief Harold Sappier Memorial Elementary, for students from kindergarten to grade 5 (First Nation Education Initiative Inc. undated).

Economy

Economic indicators for 2011 for the St. Mary’s First Nation are presented in Table 7.99.

Table 7.99 Economic Indicators for the St. Mary’s First Nation, 2011

Indicator	Devon
Participation Rate (%)	55.1
Employment Rate (%)	45.7
Unemployment Rate (%)	17.1
Average Individual Income (\$)	18,093

Source: Statistics Canada undated(b)

Note: ‘-’ means data not available

Businesses within St. Mary’s include the St. Mary’s Entertainment Centre, St. Mary’s Retail Sales and St. Mary’s Tree Service. The entertainment centre is located in Fredericton and has one of the largest bingo facilities in Atlantic Canada (St. Mary’s First Nation website undated). The retail sales include the Kchikhusis commercial centre, super market and gas bar (St. Mary’s First Nation website undated).

St. Mary’s First Nation currently owns six active commercial fishing vessels and harvests the following species under commercial-communal licences issued by DFO: lobster, Full Bay scallop, Upper Bay scallop, sea urchin, shrimp, swordfish, gaspereau, tuna, and herring (St. Mary’s First Nation website undated). Lobster fishing generally occurs within LFA 36. Tuna, scallop, swordfish, and shrimp have their own designated areas that includes DFO Gulf region (St. Mary’s First Nation website undated). St. Mary’s is not equipped to fish tuna, swordfish, and shrimp and often these licences are leased out to others for a percentage of the catch (St. Mary’s First Nation website undated). St. Mary’s also has a logging program that started in 1998. The program is self-sufficient

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

and has sustained itself on the royalties that the program generates (St. Mary's First Nation website undated).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NB Wolastoqiyik is provided in the preface to Section 7.3.3. Although the St. Mary's community was not officially recognized until 1867, the first painting of a wigwam on the site was dated 1818. The site was thought to be of regular use as a campground since the 1800s (St. Mary's First Nation website undated). Most of the Wolastoqiyik people at St. Mary's maintained the migratory aspects of their traditional lifestyle by hunting, fishing and trapping when they could, and by traveling each summer downriver to make and sell their wares (St. Mary's First Nation website undated). St. Mary's First Nation cultural practices and resources are focused on the lands and waters of NB (1,100 km from the Project), and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.3, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine-associated species, particularly a discussion on FSC and commercial-communal fishing by St. Mary's First Nation.

FSC Fishing

St. Mary's First Nation hold FSC fishing licenses issued by DFO. These include licenses to harvest 11 species. FSC species and licence locations are listed in Table 7.100. Additionally, the Agency identified St. Mary's First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes.

Table 7.100 FSC Licence Locations for St. Mary's First Nation

Species	FSC Licence Location
Eels	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries
Gaspereau	Tidal water of the Saint John River below the Princess Margaret Bridge in Fredericton
Groundfish	Bay of Fundy
Lobster	LFA 36, 38
Scallop	LFA 36
Shad	Waters of the Saint John River below the Princess Margaret Bridge in Fredericton
Smallmouth Bass	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.100 FSC Licence Locations for St. Mary’s First Nation

Species	FSC Licence Location
Soft-shell Clams	Tidal waters of Charlotte, Saint John, and Albert counties in the Province of NB where there is no closure in effect
Striped Bass	The portion of the Saint John River from head of the tide at McKinley Ferry to the Mactaquac Dam
Striped Bass	Tidal waters of Saint John River and its tributaries
Trout	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries
Source: Data provided courtesy of DFO	

Commercial-Communal Fishing

St. Mary’s First Nation hold several commercial-communal licences, such as licences for gaspereau, herring, lobster, sea scallop, sea urchin, shad, shrimp, and swordfish. One licence, for swordfish, overlaps with the Project Area. DFO landings data (2011-2015) indicates no landings originating from the Project Area.

7.3.3.6 Woodstock First Nation

General Overview

Woodstock First Nation is comprised of two reserves: The Brothers 18 (also affiliated with Kingsclear, Tobique and Madawaska Maliseet First Nation communities) located on two small islands in Kennebecasis Bay, 3 km north of Saint John with an area of 4.0 ha, and Woodstock 23 located 5 km south of the Town of Woodstock with an area of 159.8 ha (INAC website undated). Woodstock First Nation is a Wolastoqiyik Nation affiliated with the Saint John River Valley Tribal Council (Energy East Pipeline Ltd. 2016). Woodstock represents itself in consultation and engagement. According to 2016 census data, the on-reserve population was 327 (Statistics Canada undated(a)).

Health and Socioeconomic Conditions

Infrastructure and Services

According to 2011 census data, there were a total of 125 dwellings within the community, most (68 percent) of which is band housing (Statistics Canada undated(b)). Housing characteristics for Woodstock First Nation are provided in Table 7.101.

There is no police detachment or fire hall within the community (INAC website undated(b)). However, there is a pre-school, Woodstock First Nation Pre-School (First Nation Education Initiative Inc. undated).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.101 Housing Characteristics for Woodstock First Nation, 2011

Community	Number of Dwellings				Built Prior to 1991	Average Value of the Dwellings	Average Number of Rooms per Dwelling
	Total	Owned	Rented	Band Housing			
Woodstock	125	40	0	85	45	-	6.6
Source: Statistics Canada undated(b) Notes: ‘-’ means data not available The numbers shown in the tables have been subject to a confidentiality procedure called ‘random rounding’ to prevent the possibility of associating statistical data with any identifiable individual. All numbers, except for averages, are randomly rounded either up or down to a multiple of five or ten; and therefore, the totals do not always add up.							

Economy

Economic indicators for 2011 for the Woodstock First Nation are presented in Table 7.102.

Table 7.102 Economic Indicators for the Woodstock First Nation, 2011

Indicator	Woodstock
Participation Rate (%)	69.2
Employment Rate (%)	61.5
Unemployment Rate (%)	11.1
Average Individual Income (\$)	22,786
Source: Statistics Canada undated(b) Note: ‘-’ means data not available	

The fishing industry has been an important source of revenue and employment for the Woodstock First Nation. With commercial operations beginning in 1996, the community has expanded into a multi-faceted enterprise of harvesting scallop, lobster, sea urchins, swordfish, and tuna (Woodstock First Nation website undated). The community owns four commercial fishing vessels. Other economic enterprises within the community includes three gas stations / convenience stores, Eagle’s Nest Gaming Palace, and Woodstock First Nation Logging (Woodstock First Nation website undated).

Physical and Cultural Heritage (including archaeological, paleontological, historical or architectural sites)

A general description of the history and culture of the NB Wolastoqiyik is provided in the preface to Section 7.3.3. The Woodstock First Nation community are the descendants of the Wulustukwiak (Maliseet) people who have traditionally occupied southwestern NB along the St. John River to Kittery Maine, USA (Woodstock First Nation website undated). Woodstock First Nation cultural practices and resources are focused on the lands and waters of NB (1,100 km from the Project), and are not anticipated to interact with Project activities and components.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Current Use of Lands and Resources for Traditional Purposes

As noted in Section 7.3.3, given the distance to the Project, the discussion of traditional activity is focused on harvesting of migratory marine associated species, particularly a discussion on FSC and commercial-communal fishing by Woodstock First Nation.

FSC Fishing

Woodstock First Nation hold FSC fishing licenses issued by DFO. These include FSC licenses to harvest seven species within inland and tidal areas in various locations within NB. Woodstock First Nation hold a FSC license to fish for several other species in defined NAFO units in and around NB, including lobster and scallop. Additionally, the Agency identified Woodstock First Nation as having an Aboriginal right to fish for Atlantic salmon (outer Bay of Fundy population) for FSC purposes. FSC species and licence locations are listed in Table 7.103.

Table 7.103 FSC Licence Locations for Woodstock First Nation

Species	FSC Licence Location
Eels	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries
Gaspereau	Tidal waters of the Saint John River below the Princess Margaret Bridge in Fredericton
Lobster	LFA 36, 38
Scallop	LFA 36, 38
Smallmouth Bass	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries.
Smelt	Lakes within Saint John, Kings, Queens, Sunbury, York, Carleton, Victoria, and Madawaska counties in the Province of NB Saint John River and its tributaries
Striped Bass	The portion of the Saint John River from head of the tide at McKinley Ferry to the Mactaquac Tidal waters of Saint John River and its tributaries
Trout	Crown open waters of the Saint John River System and its tributaries
Source: Data provided courtesy of DFO	

Commercial-Communal Fishing

Woodstock First Nation hold several commercial-communal licences, such as licences for groundfish, herring, lobster, sea scallop, sea urchins, swordfish, and tuna. One licence, for swordfish, overlaps with the Project Area. DFO landings data (2011-2015) indicates no landings originating from the Project Area.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

7.3.4 Peskotomuhkati Nation (Passamaquoddy)

The third First Nation group in New Brunswick is the Peskotomuhkati Nation (Passamaquoddy), located in St. Andrews where they assert title to territories along the Maine and New Brunswick border, with most of the members currently living on the US side of the border. The Passamaquoddy were part of the Wabanaki Confederacy. The Passamaquoddy are specifically named in the Marshall Decision based on the *Peace and Friendship Treaties* which provides them the Treaty right to fish. The Passamaquoddy have submitted a claim to the federal government which has currently been accepted for review. The Agency identified Passamaquoddy as having an Aboriginal right to fish for Atlantic salmon for FSC purposes.

7.3.5 Mi'kmaq and Innu of Québec

The CEA Agency identified the following Mi'kmaq and Innu groups as potentially being affected by Project activities and components. These groups, summarized in Table 7.104, reside in the North Shore and Gaspé Peninsula areas of Québec (Figure 7-41).

Table 7.104 Québec First Nations Communities

Indigenous Group	Reserve	Band Council	Tribal Council
Micmacs de Gesgapegiag	Gesgapegiag	Conseil de bande des Micmacs de Gesgapegiag	Mi'gmawei Mawiomi Secretariat
La Nation Micmac de Gespeg	No land base	Conseil de la Nation Micmac de Gespeg	
Listuguj Mi'gmaq	Listuguj	Conseil de la Nation Listuguj Mi'gmaq	
Innu de Ekuanitshit	Mingan	Conseil des Innu de Ekuanitshit	Regroupement Mamit Innuat
Montagnais de Natashquan	Nutashquan	Conseil des Montagnais de Natashquan	
Source: APNQL (2008); INAC (2017); RP (2017)			

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

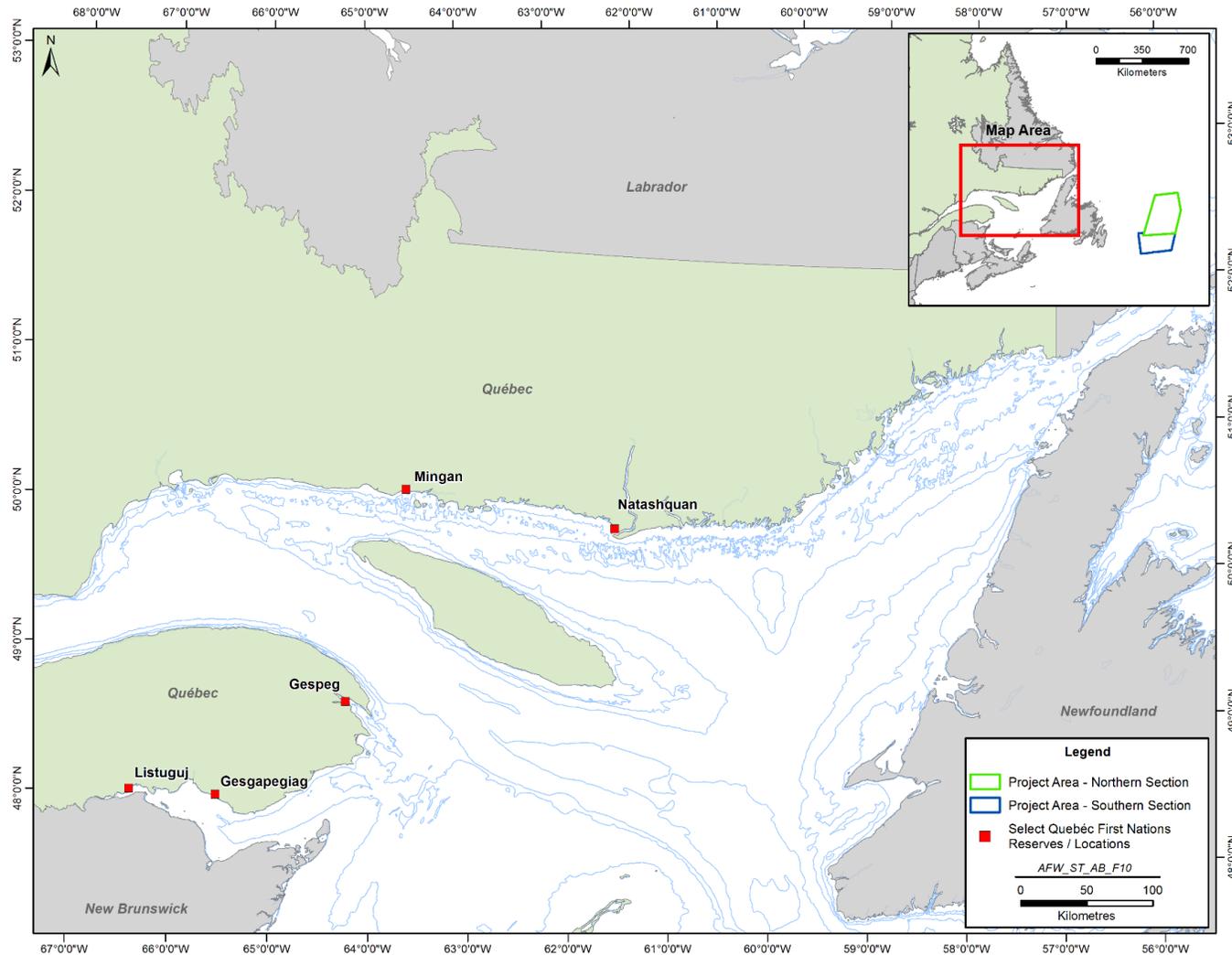


Figure 7-41 Selected Québec First Nations Reserves

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

The following sections present an overview description of these five Indigenous groups, including information on each of the socio-cultural aspects identified in Section 5(1)c of CEEA 2012 (namely, health and socioeconomic conditions, physical and cultural heritage, the current use of lands and resources for traditional purposes, and any structures, sites or things of historical, archaeological, paleontological or architectural significance). This overview is based on existing and available information, with a variety of sources having been identified, reviewed and used as indicated and referenced throughout.

7.3.5.1 Mi'kmaq of Québec

As previously outlined in section 7.3.2 above, the traditional territory of the Mi'kmaq people encompasses all or parts of (including coastal and marine waters) the provinces of Nova Scotia, Prince Edward Island, New Brunswick and Québec. Among the districts of the traditional Mi'gma'gi (Mi'kmaq) territory is the Seventh District, Gespe'gewa'gi (Gesgapegiag), which includes north and north-central New Brunswick, the Gaspé Peninsula, parts of the mainland of Québec, as well as the islands and surrounding waters. This District includes the Mi'kmaq First Nations of Gesgapegiag, Gespeg and Listuguj on the Gaspé Peninsula in Eastern Québec (MMS 2017).

In 1999, the Nation Micmac de Gespeg, which is recognized as a Band with no Reserve lands, signed a tripartite Framework Agreement with the governments of Canada and Québec for the conduct of self-government negotiations. The three parties amended the Framework Agreement in 2006 to allow for the continuation of negotiations (SAA 2017). These negotiations, however, ceased in 2014 (AANDC 2016).

In 2000, the Mi'kmaq First Nation communities of Gespeg, Gesgapegiag and Listuguj formed the Mi'gmawei Mawiomi via a Political Accord, following which the Mi'gmawei Mawiomi Secretariat was created to represent the Mi'gma'gi of Gespe'gewa'gi (Seventh District) in land claims negotiations with the Governments of Canada and Québec. The Mi'gmawei Mawiomi formally submitted a statement of claim in 2007. The Mi'kmaq, Québec and Canada formally agreed to pursue land claims negotiations in 2008, and signed a framework agreement and a consultation agreement in 2012. The three parties are currently negotiating an agreement-in-principle (AIP) that should eventually lead to a final agreement (AANDC 2014, 2016; MMS 2017).

The primary land claim area includes, but is not limited to, all the territory of the Seventh District of the Mi'kmaq Nation. It covers the entire Gaspé Peninsula and extends westward along the St. Lawrence River past Rimouski, Québec. It also includes Anticosti Island and an area north and north-east of Edmundston, New Brunswick. A potential “secondary claim” has been identified but is not being pursued at present (MMS 2017).

The Conseil de la Nation Listuguj Mi'gmaq signed, in 2001, a Framework Agreement with the Government of Québec to encourage the conclusion of sectoral agreements in areas of common interest. The Micmacs of Gesgapegiag signed a similar agreement with the Government of Québec in 1999 (SAA 2017).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

The Mi'kmaq of Québec are known to occupy and use the land and waters around the Gaspésie including use for travel corridors, land hunting and harvesting and fishing for traditional purposes. However, given the Project components and activities will be located at a considerable distance from these Indigenous communities (1,100 km from Québec), the discussion of current use of lands and resources for traditional purposes is focused on activities in the marine environment and species of interest (to Québec Mi'kmaq Indigenous communities) that may migrate through the marine environment. The current use of lands and resources section therefore includes a discussion of FSC and commercial-communal harvesting where this information is available.

The Gesgapegiag Reserve is located on the south shore of the Gaspé Peninsula, Québec, at the intersection of the Gesgapegiag River estuary and the Baie des Chaleurs. The Reserve, which measures 221 ha in area, is approximately 45 km west of Bonaventure. The First Nation has a registered population of 1,510, of whom 692 (approximately 46 percent) live on the Gesgapegiag Reserve (Table 7.105). The Conseil de bande des Micmacs de Gesgapegiag has a Chief and eight Councillors and is represented by the Mi'gmawei Mawiomi Secretariat Tribal Council in land claims negotiations and consultation/engagement (INAC 2017b; Micmacs de Gesgapegiag (MOG) 2017).

Table 7.105 Registered First Nations Population, May 2017

Residency	Micmacs of Gesgapegiag	Nation Micmac de Gespeg	Listuguj Mi'gmaq Government
Registered Males on Own Reserve	364	0	1,056
Registered Females on Own Reserve	328	0	1,011
Registered Males on Other Reserves	8	0	17
Registered Females on Other Reserves	9	0	17
Registered Males on Own Crown Land	0	0	0
Registered Females on Own Crown Land	0	0	0
Registered Males on Other Band Crown Land	0	0	0
Registered Females on Other Band Crown Land	0	0	0
Registered Males on No Band Crown Land	0	0	0
Registered Females on No Band Crown Land	0	0	0
Registered Males Off Reserve	365	382	862
Registered Females Off Reserve	436	408	1,072
Total Registered Population	1,510	790	4,035
Source: INAC (2017)			

The Nation Micmac de Gespeg has no land base. Its 790 Registered members live throughout the Gaspé Peninsula and in other areas (Table 7.105). The First Nation is governed by a Chief and eight Councillors, and is also represented by the Mi'gmawei Mawiomi Secretariat Tribal Council in matters relating to land claims, negotiations and consultation/engagement (INAC 2015; INAC 2017b).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

The Listuguj Reserve is located in the southwestern area of the Gaspé Peninsula. This First Nation has a registered population of 4,035 of whom 2,067 (just over 50 percent) live on the 4,344 ha Listuguj Reserve (Table 7.105). The Band Council has a Chief and eight Councillors and is also represented by the Mi'gmawei Mawioimi Secretariat Tribal Council in land claims negotiations and consultation/engagement (INAC 2017b).

7.3.5.1.1 Micmacs de Gesgapegiag

General Overview

To date, limited data have been released from the 2016 Census of Canada. The available data show that the population of the Gesgapegiag Reserve decreased between 2011 and 2016 (Table 7.106). Decreases could be a result of a lower birth rate or possibly out-migration as approximately half of the registered population of Gesgapegiag presently live off Reserve. During the same census period, the population of Québec grew by 3.3 percent. The population of the Reserve is younger than that of the Province of Québec as a whole (41.9 years for the latter) by approximately 10 years. The proportion of the Reserve population 15 years of age and under in 2016 was higher than that of the Québec population (16.3 percent) (Statistics Canada 2017a).

Table 7.106 Population Characteristics, 2016

Reserve	Population		Change (5 years)	Average Age	Population under 15 years of age
	2011	2016			
Gesgapegiag	688	653	-5.1%	31.5	27.7%

Source: Statistics Canada (2017a)

The population of the Gesgapegiag Reserve is predominately Indigenous and Mi'kmaq was the only Indigenous language identified as being spoken by residents (Table 7.107). The Micmacs de Gesgapegiag has a small non-Indigenous population (Statistics Canada 2015).

Table 7.107 Indigenous Identity and Language, 2011

Reserve	Aboriginal Identity		First Nations (North American Indian)		Non-Aboriginal		Mi'kmaq Language	
	Number	%	Number	%	Number	%	Number	%
Gesgapegiag	670	97%	665	97%	35	5%	450	65%

Source: Statistics Canada (2015)

Health and Socioeconomic Conditions

The following paragraphs describe health and socioeconomic conditions on the Gesgapegiag Reserve. The discussion includes infrastructure and services, community health and economy but in some cases, there is limited publicly available information.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Infrastructure and Services

The Conseil de bande des Micmacs de Gesgapegiag provides education, health care, social services, public security (fire and police), public works, economic development (e.g., forestry and commercial fisheries) and employment through community improvement projects. The Wejgwapniag School provides primary and secondary education. Gesgapegiag Health and Community Services (GHCS) delivers services through a medical centre, healing lodge and youth centre (MOG 2017). In addition, the Mawiomi Treatment Centre in Gesgapegiag specializes in the treatment of substance, drug and alcohol abuse (GOC 2017). The Walgwan Treatment Centre, also located in Gesgapegiag, is one of a network of nine First Nation treatment centres in Canada that provide culturally-based treatment services for dependence on solvents and other substances, as well as addictive behaviour, to First Nations and Inuit youth (YSAC, undated).

Community Health

Health care priorities in Gesgapegiag include mental well-being, physical wellness through nutrition and exercise and improving community connections and social cohesion (MOG 2017). Programs have been developed to address diabetes, which affects nearly 100 community members. These include nutritional counselling, physical activity and public education on healthy eating. A telehealth diabetes monitoring program has been developed with the Listuguj Reserve. Various programs have been developed to address issues such as mental health and addictions, bullying and use of drugs, alcohol and prescription drugs. Preventative programs and services are also provided for pre-natal care, early childhood development, dental hygiene and home care (GHCS 2016).

Economy

Currently, the principal economic activities of the Québec Mi'kmaq are commercial fisheries, which are described below, along with forestry, construction, tourism, handicraft production and outfitting services for sport fishing and hunting (CDPDJ 2009). The Conseil de bande des Micmacs de Gesgapegiag harvests softwood, which it provides to a local sawmill, and employs 25 to 30 individuals, mainly on a seasonal basis (MOG 2017).

The Mi'gmaq Maliseet Aboriginal Fisheries Management Association (MMAFMA) was established in 2012. In partnership with the Québec School of Fisheries and Aquaculture, the MMAFMA assists three Indigenous communities: la Nation Micmac de Gespeg, Conseil de bande des Micmacs de Gesgapegiag and Maliseet of Viger. The MMAFMA has purchased a commercial fishing vessel and launched a training project for fishing mackerel, herring and bluefin tuna, pelagic species for which it holds commercial-communal licenses. The boat will also be used for training in groundfish (e.g., Atlantic halibut, Greenland halibut, redfish) fisheries through a program with Québec School of Fisheries and Aquaculture. The three First Nations are also engaged in a joint aquaculture initiative to grow and process kelp products. The operation is managed by the Conseil de bande des Micmacs de Gesgapegiag and the products are marketed at local events and within the Mi'kmaq network (MMAFMA 2013).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

The Gesgapegiag Fisheries Department (GFD) manages the Band's participation in commercial seafood harvesting to generate income and employment in the community. The GFD employs 48 Registered First Nations members and nine non-Indigenous people seasonally in the fishing industry and related businesses. Fishers harvest lobster, shrimp and crab off the coast of the Gaspé Peninsula and other individuals are employed in lobster wholesale and trucking operations as well as a seafood retail store. Other community members are employed in recreational outfitting (mainly salmon angling), forestry, electricity generation, local construction, traditional crafts and entertainment (MMNN 2016; MOG 2017). The Conseil de bande des Micmacs de Gesgapegiag co-manages sport salmon fishing in the Cascapédia River through Société Cascapédia inc. (Saumon Québec 2017). Société Cascapédia regularly captured more than 500 salmon (in some cases over 1,000) annually in the Cascapédia River from 1984 to 1999. The annual catches fell to between 263 and 330 salmon from 2000 to 2004, between 54 and 203 salmon from 2005 and 2011, and between six and 19 salmon from 2012 to 2016. Those data exclude catch and release (MFFP 2017a).

The largest employer on the Gesgapegiag Reserve in 2011 was Public Administration, which employed approximately 42 percent of the workforce. It is likely that a number of people work for the Band Council and Tribal Council, which provide services to the community. In Gesgapegiag a combined total of 230 out of the 315 persons in the 2011 workforce were employed in three sectors: Public Administration, Administrative and Support; Waste Management and Remediation Services; and Health Care and Social Assistance (Statistics Canada 2015). The Micmacs of Gesgapegiag Band Administration Directorate, which delivers programs and services, reports employing approximately 80 full-time and temporary staff, and seasonal work and projects may provide work for as many as 250 workers annually (MOG 2017).

Physical and Cultural Heritage (Including Archaeological, Paleontological, Historical or Architectural Sites)

The Mi'kmaq traditionally lived by hunting, fishing and gathering throughout their ancestral territory, which covered the southeastern portion of the Gaspé Peninsula, Nova Scotia, Prince Edward Island, much of New Brunswick and southern Newfoundland. Mi'kmaq hunters and fishers also journeyed to Anticosti Island and occasionally the shore of the North Coast and the Magdalen Islands (CDPDJ 2009).

The traditional camps of the Québec Mi'kmaq were located on the shores of the St. Lawrence River estuary. Beginning in the 18th century, settlement progressively restricted hunting grounds of the Mi'kmaq, who became less nomadic and focused on other activities (e.g., handicraft production, forestry work) (CDPDJ 2009). Gesgapegiag Reserve cultural practices and resources are focused on the lands and waters of Québec, and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

For Indigenous peoples residing in Canada, traditional foods have socio-cultural importance because consumption of these foods is deeply rooted in the social and cultural elements of a First Nation's way of life. The events leading up to, and participation in, traditional ceremonies are linked to cultural

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

identity and spirituality. Traditional ecological knowledge, including traditional food species, is passed on to the younger generation through oral teachings, storytelling and experiences on the land (AFN 2007).

As previously discussed, the Mi'gmawei Mawiomi occupy the lands and waters of Gespe'gewa'gi or the Seventh District of Mi'gma'gi. The heart of the district is the Gaspé Peninsula, including rivers and surrounding waters and islands, and particularly the Gulf of St. Lawrence and the Baie des Chaleurs. The Mi'kmaq have traditionally made intense use of marine resources, harvesting on the coasts of the Gulf of St. Lawrence during the warm seasons between March and October before they travelled to the interior for the winter months (CIE 2014).

The fishing season began in the spring with the break-up of shore and river ice, when the Mi'kmaq moved to coastal areas and river mouths such as the estuaries of the Restigouche and Cascapédia Rivers that flow into the Baie des Chaleurs. Fishing began with shallow water fish species exposed by the melting ice, the most important of which was winter flounder. The next fishing period included spawning runs of fish that were migrating from fresh water to the sea or the reverse. These species included smelt in March, alewife in April and sturgeon in May. Typically, salmon were harvested in May as well as July and August, eel in September and Atlantic tomcod as late as December (CIE 2014).

Fish spawning seasons were accompanied by the spring migration of sea-bird species that nested in the same areas. Eggs were also collected from offshore islands. Sea-bird hunting took place in early fall during the migrations south. During spring and summer, the Mi'kmaq harvested marine shellfish including oysters, scallops, quahogs, clams, American lobster and northern crab. Oysters harvested from the southern Gulf of Saint Lawrence were used for food and the shells were used for wampum. During whelping season, the Mi'kmaq also harvested such marine mammals as walrus and seal (CIE 2014).

The rights of the Mi'kmaq to harvest these species were affirmed in treaties with the British Crown beginning as early as 1725. In the contemporary period, the Mi'kmaq people continue to harvest these species and are concerned for the survival of traditionally harvested species. At a workshop about salmon held by the Gespe'gewaq Mi'gmaq Resource Council (a non-profit organization focused on understanding better the aquatic issues that affect its member communities) with Mi'kmaq Elders, many participants expressed concerns about contaminants in the water, declining stocks and the need for management plans to address the threats to salmon habitat. In the case of some species, such as eel, harvesting by the Mi'kmaq has declined due to pollution in the waters of the Restigouche River and Baie des Chaleurs and Mi'kmaq believed the fish was no longer safe to eat (CIE 2014; GMRC 2015).

The Micmacs de Gesgapegiag traditionally used Atlantic salmon for barter, spiritual or ceremonial practices, bait (salmon skin) and crafts. Salmon fishing methods evolved from harpoons to gill nets and cages for communal fishing and fly-fishing rods for recreational fishing. Fishing occurred from late May to early November. Members of Gesgapegiag have caught salmon in the mouth of the Cascapédia River and upstream, as well as in neighbouring rivers (Petite rivière Cascapédia, Bonaventure, Nouvelle and Hall) (MMAFMA 2017).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

The Micmacs de Gesgapegiag participate in communal fishing for FSC purposes. The First Nation also has an agreement with the Government of Québec for communal fishing, which occurs principally in the Cascapédia River mouth but also in the Petite rivière Cascapédia and its mouth (MMAFMA 2017).

Annual subsistence harvests of salmon by the Micmacs de Gesgapegiag in the Cascapédia River were reported for the 1984-2008 period. Gesgapegiag has not taken any salmon in the Cascapédia River since 2009 pursuant to an agreement with the Government of Québec to cease fishing salmon in return for monetary compensation.

Eel harvesting is a traditional Mi'kmaq activity. It begins in May and ends when the ice cover forms. According to members of the Micmacs de Gesgapegiag, eel is mostly taken in the mouth and estuary of the Cascapédia River. Harvesting sites extend along the coast from Carleton to Bonaventure, including the Nouvelle area.

Other species have been used for commercial and/or recreational purposes. Cod fishing has been important to the economic and cultural landscape of the Gaspé Peninsula, but is now restricted because of low cod stocks. Consequently, most cod that is harvested is by-catch in the commercial fishery or through recreational fishing and mainly in summer. Members of Gesgapegiag have reported catching cod in the Cascapédia River estuary in recent years. Commercial and recreational fishers catch cod in the Baie des Chaleurs, all along the coast, between Bonaventure and New Richmond, as well as in the vicinity of Miguasha. Also, it appears that cod is frequently taken in the two snow crab fishing zones, east of the point of the Gaspé Peninsula and south of New Brunswick.

Members of the Micmacs de Gesgapegiag have reported that striped bass is mostly captured as by-catch in the Cascapédia River estuary and along the shoreline near Carleton and New Richmond. Striped bass is generally harvested between May and October and consumed or used as bait to catch smelt. The species is often a by-catch when using gill nets (salmon), spinning rods (trout or mackerel) or fly rods (recreational fishing) (MMAFMA 2017). The marine area of the Banc des Américains is of economic, ecological and cultural importance for the Mi'kmaq communities. The area and its periphery are used to harvest crab, lobster, mackerel, herring, cod and waterfowl. Many members of the Micmacs de Gesgapegiag also travel to the area for whale-watching (MMAFMA 2017).

7.3.5.1.2 Listuguj Mi'gmaq

General Overview

The available 2016 Census data show that the population of the Listuguj Reserve decreased between 2011 and 2016 (Table 7.108). Decreases could be a result of a lower birth rate or out-migration because approximately half of the registered population of Listuguj lives off Reserve. During the same census period, the population of Québec grew by 3.3 percent. The population of the Listuguj Reserve is younger than that of the Province of Québec as a whole (41.9 years for the latter) by approximately five years. The proportion of the Reserve population 15 years of age and

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

under in 2016 was higher than that of the Québec population (16.3 percent) (Statistics Canada 2017a).

Table 7.108 Population Characteristics, 2016

Reserve	Population		Change (5 years)	Average Age	Population under 15 years of age
	2011	2016			
Listuguj	1,865	1,241	-33.5%	36.3	25.4%
Source: Statistics Canada (2017a)					

The population of the Listuguj Mi'gmaq is predominately Indigenous. Mi'kmaq was the only Indigenous language identified as being spoken by residents of this community (Table 7.109). Listuguj First Nation has a small non-Indigenous population (Statistics Canada 2015).

Table 7.109 Indigenous Identity and Language, 2011

Reserve	Aboriginal Identity		First Nations (North American Indian)		Non-Aboriginal		Mi'kmaq Language	
	Number	%	Number	%	Number	%	Number	%
Listuguj	1,615	87%	1,570	84%	100	5%	495	27%
Source: Statistics Canada (2015)								

Health and Socioeconomic Conditions

The following paragraphs describe health and socioeconomic conditions on the Listuguj Reserve. The discussion includes infrastructure and services, community health and economy but in some cases, there is limited publicly available information.

Infrastructure and Services

The Listuguj Mi'gmaq Government (LMG) provides facilities and programs to meet community needs in housing, education, community and social services, health, community health, fire safety, policing, restorative justice, drinking water, wastewater management, solid waste management, roads and natural resource management. The Band Council provides educational support through the Alaqsitew Gitpu School, the Post-Secondary Student Support Program, Mi'kmaq language and culture programs, transportation and other services and programs. Listuguj Community Health Services (LCHS) facilities include the Listuguj Health Centre, women's shelter, a long-term care facility for the elderly, and a youth group home. Programs have been organized for families and youth, and to increase physical activity. The organization also works collaboratively with other health care and wellness organizations in the community as well as with external organizations (LMG 2016).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Community Health

Listuguj Community Health Services (LCHS) provides services and programs to address chronic illness, mental health and addictions. A telehealth diabetes monitoring program has been developed with the Gesgapegiag Reserve. Detailed information is not available on health care status but, based on the types of programs and services offered, it is likely that Listuguj Reserve Community Social Services is addressing a variety of issues including foster care, care of the elderly, physical inactivity and family issues (LMG 2016).

Economy

The LMG is engaged in natural resource industries, namely commercial fisheries and forestry. The Band Council holds commercial-communal fishing licences for snow crab, shrimp, lobster, mussels, turbot and cod. Listuguj Fisheries directly employs community members and profits from fisheries activities are diverted to community programs, including employment initiatives, language preservation and post-secondary education. Listuguj Fisheries, which owns 13 fishing vessels, is involved in fisheries training, employment and policy development (Listuguj Fisheries 2014). Residents are also employed in LMG silvicultural and forestry operations and as independent loggers (LMG 2016).

The largest employer in the Listuguj community in 2011 was Public Administration, which employed approximately 31 percent of the workforce. It is likely that a number of people work for the Band Council and Tribal Council, which provide services to the community.

Physical and Cultural Heritage (Including Archaeological, Paleontological, Historical or Architectural Sites)

No specific information was available for the Listuguj Mi'gmaq. As discussed, Québec Mi'kmaq traditional camps were located on the shores of the St. Lawrence River estuary and rivers flowing into it. Listuguj Mi'gmaq cultural practices and resources are focused on the lands and waters of Québec, and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As previously discussed, the Mi'kmaq have traditionally relied upon marine resources. The Listuguj Mi'gmaq participate in communal fishing for FSC purposes with licences to harvest salmon and lobster (DFO 2017b). The Listuguj Mi'gmaq have taken approximately 1,000 salmon annually in the Ristigouche River for subsistence since 1984. Eel harvesting is a traditional Mi'kmaq activity that begins in May and ends when the ice cover forms.

7.3.5.1.3 La Nation Micmac de Gespeg

General Overview

To date, limited data have been released from the 2016 Census of Canada and no census information is available specifically for la Nation Micmac de Gespeg.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Health and Socioeconomic Conditions

Public information was not available to describe the health and socioeconomic conditions of la Nation Micmac de Gespeg.

Physical and Cultural Heritage (Including Archaeological, Paleontological, Historical or Architectural Sites)

No specific information was available of the physical and cultural heritage of la Nation Micmac de Gespeg. As discussed, traditional Mi'kmaq camps were located on the shores of the St. Lawrence River estuary and the various rivers connected to it. Gespeg Reserve cultural practices and resources are focused on the lands and waters of Québec, and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

The people of La Nation Micmac de Gespeg traditionally used Atlantic salmon for barter, spiritual or ceremonial practices, bait (salmon skin) and crafts. Salmon fishing methods evolved from harpoons to gill nets and cages for communal fishing and fly-fishing rods for recreational fishing. Fishing occurred from late May to early November. Members of Gespeg took salmon in the Saint-Jean, Dartmouth, York, and Malbaie Rivers, and in the mouth of the Dartmouth River (MMAFMA 2017).

The Conseil de la Nation Micmac de Gespeg participates in communal fishing for FSC purposes and has an agreement with the Government of Québec for harvesting salmon on the Saint-Jean, Dartmouth and York Rivers. Gill nets are used in June in the river mouths and fishing continues later upstream in river pools using seines, small nets and rods. A total of 258 salmon were captured between 2010 and 2015. Most of the harvested salmon is distributed to Elders. Individual sport fishing by members of Gespeg First Nation yielded a total catch of 110 salmon between 2010 and 2015 (MMAFMA 2017). Eel harvesting sites reported by the Gespeg First Nation include the shoreline between Gaspé and Percé. Incidental by-catches are frequent in Gaspé Bay (MMAFMA 2017).

According to some members of la Nation Micmac de Gespeg, cod is often taken in the Gaspé Bay, in particular at the northern extremity, as well as along the southern part, along the Sandy Beach pier. Other fishing areas identified by the community include Rivière-au-Renard, the Malbaie River estuary, Percé and the Banc des Américains. Cod is captured with jigs as part of recreational fishing. It is sometimes harvested as by-catch with spinning rods, dragnets or gill nets (when fishing for salmon) or lobster traps (MMAFMA 2017).

Members of la Nation Micmac de Gespeg harvest striped bass at locations between Gaspé and the Malbaie River estuary generally between May and October. Eel, which is consumed or used as bait to catch smelt, is often a by-catch when using gill nets (salmon), spinning rods (trout or mackerel) or fly rods (recreational fishing) (MMAFMA 2017). (MMAFMA 2017).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

7.3.5.2 Québec Innu

The Innu people were traditionally nomadic and depended on the products of hunting (mainly barren-ground caribou, moose and small game), fishing and gathering activities for their subsistence. Their ancestral territory covers the entire region between Québec City and Labrador and extends north of Schefferville. At the end of the 19th century, participation in the fur trade, settlement and expansion of the forestry and mining industries led to establishment of permanent Innu communities, mainly in the south of their territory. In northern parts of the territory, the process of settlement began in the 20th century, and in some cases not until after 1950 (CDPDJ 2009). Labrador Innu are described in Section 7.3.1.2.

Québec Innu land claim negotiations were first initiated in 1979 by the Atikamekw and Montagnais Council, which was established in 1975 to represent nine Québec Innu Nations and three Atikamekw Nations. Due to differences of opinion, mainly with respect to recognition of Aboriginal rights and certainty, the Atikamekw and Montagnais Council was dissolved. In 2004, the Mamuitun mak Nutashkuan Tribal Council completed negotiations and an AIP was signed by the Chiefs of the Essipit First Nation, Mashteuiatsh First Nation, Nutashkuan First Nation and Pessamit First Nation and the governments of Québec and Canada (Tremblay 2011). The land claims AIP is considered to be significant in that the Innu First Nations would not surrender title over their traditional territory and would no longer be subject to the *Indian Act* (NP 2016). Instead, a form of self-government would be determined. The area over which the Nutashkuan First Nation claims ancestral rights includes the waters between the shoreline on which the community located and Anticosti Island; it also covers part of the Island (RP 2017). Negotiations towards a Final Agreement are still underway (INAC 2016). The Pessamit First Nation no longer participates in the negotiations and the Regroupement Petapan now represents the other three First Nations (RP 2017).

The Regroupement Mamit Innuat Tribal Council (MICT) was formed in 1982 as an advisory body to create a common development structure for the four "Montagnais" Innu First Nations of the Lower North Shore (i.e., Ekuanitshit, Nutashkuan, Unamen Shipu and Pakua Shipu). The MICT represents the interests of the First Nations in public, provincial, national and international initiatives (MICT 2011). The following sections describe the Innu of Ekuanitshit and Nutashkuan.

The Mingan Reserve is located at the confluence of the Mingan River and the Gulf of St. Lawrence, approximately 28 km west of Havre-Saint-Pierre. The Reserve faces the Mingan Archipelago, an area used by the Innu for seal hunting and other activities. The 3,838 hectare Mingan Reserve was established in 1963 for the Innu de Ekuanitshit and settled mainly by Innu families who traditionally travelled the Magpie, Saint-Jean and Romaine Rivers (MRCN 2010; INAC 2017b).

The Registered First Nation population of the Conseil des Innu de Ekuanitshit is 637 of whom 94 percent live on the Mingan Reserve (Table 7.110). The Reserve is governed by a Band Council with a Chief and four Councillors. The Conseil des Innus de Ekuanitshit is represented by Regroupement Mamit Innuat Tribal Council (INAC 2017b).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.110 Registered Population, May 2017

Residency	Conseil des Innu de Ekuanitshit	Conseil des Montagnais de Natashquan
Registered Males on Own Reserve	281	533
Registered Females on Own Reserve	315	488
Registered Males on Other Reserves	5	5
Registered Females on Other Reserves	3	5
Registered Males on Own Band Crown Land	0	0
Registered Females on Own Band Crown Land	0	0
Registered Males on Other Band Crown Land	0	1
Registered Females on Other Band Crown Land	0	0
Registered Males on No Band Crown Land	0	0
Registered Females on No Band Crown Land	0	0
Registered Males Off Reserve	17	34
Registered Females Off Reserve	16	61
Total Registered Population	637	1,127
Source: INAC (2017)		

The 118.90 ha Nutashkuan Reserve is located at the mouth of the Natashquan River in the Gulf of St. Lawrence, 336 km east of Sept-Îles. The Reserve was established by the federal government in 1952. Approximately 91 percent of the Registered First Nation population lives on the Nutashkuan Reserve. Nutashkuan First Nation is governed by the Conseil des Montagnais de Natashquan with a Chief and four Councillors. The Band Council is also represented by Regroupement Mamit Innuat Tribal Council (INAC 2017b).

7.3.5.2.1 Innu de Ekuanitshit

General Overview

The population of the Mingan Reserve has increased (Table 7.111). The average age of the population is at least 10 years younger than the average age of the Québec population (41.9 years). The percentages of population under 15 years of age is also higher than that of the general Québec population (i.e., 16.3 percent).

Table 7.111 Population Characteristics, 2016

Reserve	Population		Change (5 years)	Average Age	Population under 15 years of age
	2011	2016			
Mingan	453	552	21.9%	28.5	34.2%
Source: Statistics Canada (2017)					

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

The population of the Mingan Reserve is wholly Indigenous of North American Indian origin and the majority speak the Innu/Montagnais language (Innu-aimun) (Table 7.112).

Table 7.112 Aboriginal Identity, 2011

Reserve	Aboriginal Identity	First Nations (North American Indian)	Non-Aboriginal	Innu / Montagnais Language
Mingan	450	450	0	445
Source: Statistics Canada (2015)				

Health and Socioeconomic Conditions

The following sections discuss health and socioeconomic conditions of the Innu of Ekuanitshit. Again, limited published information is available on certain topics.

Infrastructure and Services

The Mingan Reserve is a small community that provides some services and infrastructure and more extensive government and commercial services are available in regional service centres. The École Teueikan provides pre-Kindergarten to Secondary 4 education to local students. The Band Council provides medical care, fire protection as well as policing services through an Indigenous police force (MRCN 2010). The MCIT is currently the delivery authority for social development, finance and administration, patient services, social services, technical services and advisory services and the Band Council delivers health services (MICT 2011).

Community Health

The Council of the Ekuanitshit First Nation manage health services, as this responsibility was transferred by Health Canada. The community has a health centre that offers front-line, emergency and preventive as well as community health services. Patients requiring hospitalization are transferred to other centres (OIIQ 2004). Five nurses work on the Reserve, and a nutritionist, a psychologist and a dentist visit at regular intervals (HQP 2007).

The most preoccupying chronic disease for the Ekuanitshit Innu is type 2 diabetes, which affects a higher proportion of the population compared to Québec as a whole and slightly more than the First Nations of Québec and Labrador in general. According to public health officials, dietary habits and a sedentary lifestyle are the main factors for the prevalence of diabetes (HQP 2007).

Economy

The Innu communities in the eastern portion of the St. Lawrence River are developing tourism and natural resource management industries (e.g., salmon fishing) in their territory. The Innu Mukutan Economic Development Corporation is responsible for economic development programs for the four Innu communities under its jurisdiction (MICT 2011). The local economy of Mingan is based on arts and handicrafts, fishing, outfitting, tourism, trapping and service businesses. There is a small number of businesses on the Reserve, most of which provide goods to the local community (MRCN 2010).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

In 2011, the majority (42 percent) of employed people on the Mingan Reserve worked in Public Administration. Employment was also strong in Health Care and Social Assistance, Educational Services, and Construction on both Reserves (Statistics Canada 2015). Many are likely to work for the Band Council.

Various tourism products and services have been developed, including cultural interpretation and outfitting businesses that offer salmon and/or trout fishing (QAT 2017). The Conseil des Innu de Ekuanitshit manages the Pourvoirie Rivière Mingan outfitting operation, which offers salmon fishing excursions on the Mingan River (CMM 2017). The Pourvoirie annual harvests were between 64 and 78 salmon from 1992 to 1995 and between 108 and 116 salmon from 1996 to 2000 (no data were reported in 1999). From 2001 to 2015, between 20 and 84 salmon were captured annually, the average being 52 salmon (no data were reported for 2004, 2008 and 2011-2013). The Ekuanitshit Innu also offer sport fishing of ouananiche and brook trout at Allard Lake (Charest et al. 2012; MFFP 2017a).

The community has commercial fishing enterprises, but limited information is publicly available. Ekuanitshit co-manages Pêcheries Shipek with the Pakua Shipi Innu First Nation. Pêcheries Shipek commercially harvests scallops, crab, halibut, sea cucumber and whelk, and sells its products to three fish stores. Ekuanitshit operates six boats and its commercial fishing activities employ some 40 persons on a full- or part-time basis (AMIK 2016d). The Innu communities of Nutashkuan, Ekuanitshit, Pakua Shipi and Unamen Shipu are planning to develop a fish processing plant (AMIK 2016b, 2016c). Commercial salmon fishing in the North Shore rivers has been banned since 2000 (Charest et al. 2012).

Physical and Cultural Heritage (Including Archaeological, Paleontological, Historical or Architectural Sites)

Of the approximately 8,000 archaeological sites discovered in the province of Québec, more than 1,600, or 20 percent, are in the Côte-Nord region and various archaeological programs have been executed in traditional Innu territory. During a nine-year research program (1991-1998) related to a hydroelectric dam development, archaeologists documented ancient and contemporary Innu presence in the valley of the Sainte-Marguerite River, which meets the Gulf of St. Lawrence approximately 20 km west of Sept-Îles. In this area, 67 sites were discovered, 12 of which were excavated and a 13th was the subject of an intensive study. The resulting analysis, which incorporated data from 10 prehistoric sites and 16 modern sites discovered on the shores neighbouring Lake Gras and the Pékan River, shows that the basin was occupied 4,000 years ago and up to the mid-20th century (MRCN 2010).

Two important Innu sites were discovered during these studies. The first is approximately 60 km from the coast, on the northern shore of Lake Jourdain, and was used as a staging area for lengthy portages because it allowed travelers to avoid a long section of river rapids. The second site, which is on the shore of the Jean-Pierre River, demonstrates Innu relationships with groups to the West, North-West and North (MRCN 2010). These archaeological sites are located along the shores of lakes and rivers that were used as encampment areas and travel routes for the Innu, and it can be assumed that fishing activities took place near encampments and travel routes. None are located

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

within or near the Project Area. No specific information was available for the Innu de Ekuanitshit. Innu of Québec cultural practices and resources are focused on the lands and waters of Québec, and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

As discussed previously, the nomadic Innu culture and heritage is based on the relationship with game and fish and the seasonal migrations and locations of various species, particularly caribou and salmon. The Innu people travelled all over a vast territory encompassing the entire St. Lawrence catchment area between the Saguenay-Lac-Saint-Jean and Labrador. Families also occasionally crossed the St. Lawrence Estuary to hunt in the Bas-du-Fleuve area (MRCN 2010; Verreault et al. 2013).

The Innu traditionally spent the winter months in the interior of the Labrador plateau pursuing caribou herds or fishing on the lakes of the Québec-Labrador Peninsula. When caribou were scarce, they hunted small game such as partridge, porcupine or hare. The Innu people would return to coastal areas of the St. Lawrence River in spring to coincide with migrations of important species. In May, thousands of Canada geese landed on shores and lakes during their migration towards the Canadian Arctic. When migratory ducks returned to the north shore of the St. Lawrence in large numbers each May, Innu camps could be found all over the Mingan Archipelago for the purposes of hunting ducks for food and gathering down. In this location, Innu also accessed the upstream migration of Atlantic salmon in June. Summer camps, which were mostly at the mouths of the large Côte-Nord rivers that flow into the estuary and the Gulf of St. Lawrence, were important for social and cultural reasons and sometimes housed hundreds of individuals. In the fall, bands of families left their summer camps beginning the long journey up the larger rivers (MRCN 2010).

Traditional summer activities on the shore of the St. Lawrence included fishing in the mouth of tributary rivers and hunting marine mammals and waterfowl in coastal areas, including the islands in the estuary and the Gulf of St. Lawrence. Fishing has played an important role in the Innu's activities generally, especially those who used the North Shore salmon rivers, including the Moisie, Romaine, St. Augustin, Mingan, Manitou and Natashquan Rivers. Each family generally had their own traditional fishing sites and the catch was shared with family members and friends and sometimes traded for supplies. Smoked salmon also provided food for the journey to the winter hunting grounds (Charest et al. 2012; Verreault et al. 2013; CIE 2014).

The Innu continue to use the resources of the St. Lawrence for food and communal purposes. Activities include fishing for Atlantic salmon, herring and brook trout; collecting goose eggs in the peat bogs between the River and its tributaries; collecting eggs of other bird species on the islands; hunting waterfowl (e.g., goose and black guillemot); gathering edible plants (e.g., black crowberry and small cranberries) that grow along the River banks and in the peat bogs; fishing for lobster and scallops with harpoons; and collecting other shellfish along the coast (AMIK 2016b; CIE 2014).

The following paragraphs describe contemporary land use of the Innu de Ekuanitshit. The information provided is mainly based on a 1983 study by the Conseil des Atikamekws et des Montagnais (CAM). The report, called the *Étude sur l'occupation et l'utilisation du territoire par les Montagnais de Saint-*

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Augustin, documents land and resource of the Innu communities of Québec and Labrador from 1951 to 1982 (CAM 1983). Information from Hydro-Québec Production’s environmental impact study for the Complexe de la Romaine Project (HQP 2007) was also accessed. Additional sources of information are a publication (Charest et al. 2012) on Indigenous fisheries in eastern Québec and an overview of salmon fishing in Québec in 2016 (MFFP 2017a).

Various records show that the traditional travel routes of the Innu de Ekuanitshit covered a large territory. In the second half of the 19th century, the connections between the Innu de Ekuanitshit and those of Central Labrador were especially strong, with frequent long-distance travel between the two areas most notably during the time when the Hudson’s Bay Company (HBC) operated trading posts in the region. Historically, the Innu of Ekuanitshit would leave the community in August or September and travel towards the interior of Labrador, returning to the south again in the spring (CAM 1983).

Records of the contemporary period (1951 to 1982) show that the locations of camp sites were concentrated south of the Labrador-Québec border near the community itself and along the coast of the St. Lawrence River, at the mouths of inflowing rivers, and contemporary travel routes sometimes extended more than 100 km into Labrador during this period. The Romaine River basin was used for hunting (including for migratory birds), trapping, salmon fishing and community or family reunions (CAM 1983; HQP 2007). Due to their greater accessibility, the basins of the Puyjalon, Bat-Le-Diable, Allard and Au Foin Rivers in the southern portion of the area are frequently used by the Innu de Ekuanitshit. In addition, the Innu de Ekuanitshit use the shoreline intensely and own at least 16 hunting chalets located on the coast where hunters of migratory birds and small game (particularly porcupine) gather (HQP 2007).

During the fall, trapping was prevalent and hunting was focused on porcupine, hare and caribou (Table 7.113). Though trapping continued as winter progressed, subsistence hunting for caribou and small game became of greater importance. From mid-February to the end of April, beaver trapping was a focus, particularly when men traveled without their families, though women and children often joined the hunters on weekends if the camp was near the Mingan Reserve. In the spring, as the rivers became ice-free, beaver, otter and muskrat were trapped and subsistence activities shifted to migratory bird hunting, which continued from spring through summer. Salmon fishing began towards the end of May and continued to be a common activity throughout the summer. Summer was a time of gathering with Innu from other communities and included festivals and the annual pilgrimage to Sainte-Anne-de-Beaupré in August (CAM 1983).

Table 7.113 Species Harvested by the Innu of Ekuanitshit (1951-1982)

Resource	Journey North	Fall	Winter	Winter/Spring	Spring
Mammals					
Porcupine	x	x	x	x	x
Caribou	x	x	x	x	x
Beaver	x	x	x	x	x
Hare	x	x	x	x	x
Otter	x	x	x	x	x
Mink		x	x	x	

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.113 Species Harvested by the Innu of Ekuanitshit (1951-1982)

Resource	Journey North	Fall	Winter	Winter/Spring	Spring
Muskrat	x	x	x		x
Fox		x	x		x
Moose		x	x		x
Weasel		x	x		x
Lynx		x	x		x
Marten		x		x	x
Wolf			x	x	
Marmot					x
Bear					x
Squirrel		x			
Seal					x
Birds					
Partridge	x	x	x	x	x
Duck	x	x		x	x
Goose	x	x		x	x
Willow ptarmigan		x	x		
Merganser	x				x
Loon					x
Bird's eggs					x
Fish					
Trout	x	x	x	x	x
Pike	x	x			x
Carp	x	x			x
Lake trout	x	x		x	
Ouananiche		x	x		x
Whitefish		x			x
Salmon	x				
Burbot		x			
Source: CAM 1983					

On the Romaine River, immediately downstream of Grande Chute, hunting is practiced by the Innu de Ekuanitshit in a long corridor using motorized canoe and snowmobile. Trapping focuses on beaver and certain other furbearers (e.g., otter, muskrat). Canada geese, small game and salmon are also harvested. Various species of ducks are hunted, particularly in the Grande Hermine Bay, west of Baie-Johan-Beetz, and in the mouths of the Romaine and Mingan Rivers (HQP 2007).

As previously stated, fishing, particularly for Atlantic salmon, traditionally played and continues to play an important role in Innu life on the North Shore of the St. Lawrence River and estuary. The

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Innu de Ekuanitshit have identified 35 harvesting areas and 21 camps for salmon fishing along the Romaine River and its main tributary, the Puyjalon River. They also take salmon in the Jupitagon, Magpie, Saint-Jean, Mingan and Manitou Rivers (HQP 2007). Harpoons and fishing rods are used to take salmon in the Manitou River, while nets were used in the Romaine River (Charest et al. 2012). Salmon fishing (subsistence and sport) in the Romaine River is now closed because of the scarcity of the population (MFFP 2017b).

In the 1970s, the Innu de Ekuanitshit mobilized to regain control of salmon fishing in the Mingan and Manitou Rivers, which had been lost to non-native sport fishing. As a result, they became the managers of those rivers in the early 1980s. In summer 1984, the Innu de Ekuanitshit mandated biologists to study the salmon population in both rivers. As the studies revealed the precarity of the population, the Innu decided to prohibit fishing in those rivers, including for subsistence purposes, for a five-year period. They resumed subsistence salmon fishing in the summer of 1989 in the Mingan and Manitou Rivers, and began to experiment with sport fishing in the Mingan River. In 1992, the Innu de Ekuanitshit created the Société de gestion des rivières Manitou et Mingan (SGRMM) for the management of subsistence and sport salmon fishing. The SGRMM is governed by a board of directors (composed principally of Elders) that provides recommendations to the Band Council. In the past, the Conseil des Innu de Ekuanitshit fixed a global yearly quota of 160 salmon for both rivers (subsistence and sport fishing combined). The SGRMM also proposes monitoring programs; for example, salmon-counting fences were installed on the Mingan River to monitor the restoration of the population. In summer 2001, the SGRMM employed 17 Innu (Charest et al. 2012). No subsistence salmon fishing has been reported for the Mingan River since 2001. The fishing policy for the Innu de Ekuanitshit now permits taking salmon in the Mingan River only through the community's outfitting services, and netting for subsistence purposes is not foreseen. Nonetheless, it appears that some community members fish through the outfitter and that their captures are integrated into the outfitter's data. It also appears that the community organizes a traditional salmon fishing activity, using harpoons, at the end of the outfitting season (MFFP 2017a, 2017c).

The salmon fishing management measures enacted forth by the Conseil des Innu de Ekuanitshit for the Romaine River, the Puyjalon River (one of the Romaine's main tributaries) and the tributaries of both rivers included the following: each Innu fisher is allowed to use one fly rod, one harpoon and two gill nets (each no longer than 75 feet); the quota is 10 salmon per day for the entire fishing season (Charest et al. 2012). Annual subsistence salmon harvests in the Romaine River (mainly associated with the Innu de Ekuanitshit, although Nutashkuan Innu also use the River) were estimated for the 1999-2010 period; the annual catches were 325 for 1999 and 2000, 50 from 2001 and 2009 and 45 in 2010 (MFFP 2017 a, 2017b).

Salmon fishing appears to be more valued by the Innu de Ekuanitshit for social and cultural reasons than economic ones, although the latter should not be under-estimated because salmon remains an important source of high-quality food (HQP 2007). A 2013 study of fishing and community management of salmon by the Innu of Ekuanitshit concluded that, for those who took part, the most important values were sharing and respect, shown through conservation and avoiding waste (CIE 2014).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

The records of land and resource use by the Innu de Ekuanitshit show that activities have occurred between the Mingan Reserve area along the coast of the St. Lawrence River and northward to Central Labrador, although in the contemporary period, activities have tended to occur closer to the community. The available records indicate that travel routes, camp sites or land and resources use activities have not occurred within or near the Project Area.

7.3.5.2.2 Montagnais de Natashquan

General Overview

The population of the Nutashkuan Reserve had a slight population decline in the 2016 Census (Table 7.114). The average age of the population of the Reserve is at least 10 years younger than the average age of the Québec population (41.9 years). The percentage of population under 15 years of age is also higher than that of the general Québec population (i.e., 16.3 percent).

Table 7.114 Population Characteristics, 2016

Reserve	Population		Change (5 years)	Average Age	Population under 15 years of age
	2011	2016			
Natashquan	841	835	-0.7%	30.4	27.5%
Source: Statistics Canada (2017)					

The Nutashkuan Reserve has a small non-Indigenous population (Table 7.115). The 2011 National Household survey shows that a high percentage of the population of the Reserve spoke Innu-aimun.

Table 7.115 Aboriginal Identity, 2011

Reserve	Aboriginal Identity	First Nations (North American Indian)	Non-Aboriginal	Innu/Montagnais Language
Natashquan	865	860	10	865
Source: Statistics Canada (2015)				

Health and Socioeconomic Conditions

The following sections discuss health and socioeconomic conditions of the Montagnais de Natashquan. Again, limited published information is available on certain topics.

Infrastructure and Services

The Nutashkuan Reserve is a small community that provides various services and infrastructure to the community and regional service centres provide more extensive government and commercial services. Natashquan has one school, École Uauitshitun, which provides education for students from Pre-Kindergarten to Secondary 5. The Band Council provides medical care, fire protection as well as policing services through an Indigenous police force (MRCN 2010). The MCIT is currently the delivery authority for social development, finance and administration, patient services, social

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

services, technical services and advisory services on the Natashquan Reserve and the Band Council delivers health services (MICT 2011).

Community Health

The Conseil des Montagnais de Natashquan manages health services, as this responsibility has been transferred by Health Canada. The community has a health centre that offers front-line, emergency and preventive health services, as well as and community health services. Patients requiring hospitalization are transferred to other centres (OIIQ 2004). Five nurses work on the Reserve, and a nutritionist, a psychologist and a dentist visit at regular intervals (HQP 2007).

Statistics specific to the health of the Montagnais de Natashquan were not found. Based on general observations by health officials, the prevalence of type 2 diabetes in the community appears to be similar to that in other Innu communities on the North Shore and Indigenous communities in Québec. Obesity is also a problem on the Reserve, and drug and alcohol abuse is a concern (HQP 2007).

Economy

As discussed, the Innu communities in the eastern portion of the St. Lawrence River are developing tourism and natural resource management industries (e.g., salmon fishing). The Innu Mukutan Economic Development Corporation is responsible for economic development programs for four Innu communities (MICT 2011). The current local economy of Nutashkuan Reserve is mainly based on arts and handicraft production, trapping, tourism, construction, transportation, outfitting and commercial fishing. Approximately 20 businesses on the Reserve provide goods and services mainly to the local communities (MRCN 2010).

In 2011, 31 percent of working people on the Nutashkuan Reserve worked in Public Administration. Employment was also strong in Health Care and Social Assistance, Educational Services, and Construction (Statistics Canada 2015). Many are likely to work for the Band Council.

Various tourism products and services have been developed, including cultural interpretation and outfitting businesses that offer salmon and/or trout fishing (QAT 2017). The Conseil des Montagnais de Natashquan has provided salmon fishing outfitting services on the Natashquan River through Hipou since 1999 (AMIK 2016b, 2016c; Charest et al. 2012). According to government statistics the fishing success rate is among the highest in Québec. From 1985 to 2016, the annual outfitting harvest in the Natashquan River regularly exceeded 600 salmon, the average being 744 salmon (MFFP 2017a). Hipou provides approximately 30 summer jobs, in addition to creating indirect employment (Charest et al. 2012).

The community has commercial fishing enterprises, but limited information is publicly available. The Conseil des Montagnais de Natashquan commercially fish crab, clams, lobster and groundfish and owns two fishing vessels (AMIK 2016b). Pêcheries Commerciales Nutashkuan, which was established by the Band Council in 1994, employs between six and 25 individuals (FNQLEDC 2010). The Conseil des Montagnais de Natashquan is planning to develop a fish processing plant in cooperation with Ekuanitshit, Pakua Shipi and Unamen Shipu (AMIK 2016b, 2016c).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Physical and Cultural Heritage (Including Archaeological, Paleontological, Historical or Architectural Sites)

As discussed, archaeological studies have identified two important ancient Innu sites in the valley of the Sainte-Marguerite River, which show that the basin was occupied 4,000 years ago and up to the mid-20th century. These archaeological sites are located along the shores of lakes and rivers that were used as encampment areas and travel routes for the Innu. None are located within or near the Project Area. No specific information was available for the Montagnais de Natashquan. Innu of Québec cultural practices and resources are focused on the lands and waters of Québec, and are not anticipated to interact with Project activities and components.

Current Use of Lands and Resources for Traditional Purposes

The following paragraphs describe contemporary land use of the Montagnais de Natashquan. The information provided is also based on the 1983 CAM study, a 2007 Hydro-Québec Production study, a 2012 publication on Indigenous fisheries and a 2016 study of salmon fishing in Québec.

The Montagnais de Natashquan are also traditionally nomadic and have an ancestral history of travelling as far north as Central Labrador. Contemporary land use activities are based on a long history and tradition of nomadic hunting, fishing, travel, gathering and use of encampments over a large territory. During the contemporary period (1951-1982), harvesting activities were seasonal throughout the year, but women and children were more likely to remain in the community during the winter months (CAM 1983).

Harvesting activities in the contemporary period included catching a variety of mammals, birds and fish (Table 7.116). During the northern overland journey in late summer, the Montagnais de Natashquan harvested small game and fish and established caches for the return trip. The winter hunt focused on caribou, moose and hare at camps generally located within 65 km of the community. In late winter the Montagnais returned nearer to the Reserve from where they trapped, mainly by snowmobile. In spring, when the rivers became ice free and the spring migration occurred, harvesting activities included hunting birds and collecting eggs near the Reserve. Hunting waterfowl, picking berries and collecting plants were important activities during the summer months. Fishing activities were most common during spring and summer. Trout fishing occurred in spring, mainly within a day's travel of the community by snowmobile. In late spring, once the rivers were ice-free, fishing for salmon and sea trout dominated harvesting efforts (CAM 1983).

Table 7.116 Species Harvested by the Innu of Nutashkuan (1951-1982)

Resource	Journey North	Fall	Journey South	Winter	Winter/Spring	Spring	Summer
Mammals							
Porcupine	x	x	x	x		x	
Caribou	x	x	x	x		x	
Beaver	x	x	x		x	x	
Hare		x	x	x	x		

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Table 7.116 Species Harvested by the Innu of Nutashkuan (1951-1982)

Resource	Journey North	Fall	Journey South	Winter	Winter/Spring	Spring	Summer
Mink		x	x		x	x	
Muskrat	x	x			x	x	
Bear	x	x				x	
Otter		x	x			x	
Bobcat		x	x		x		
Fox		x	x		x		
Squirrel		x			x		
Marten		x			x		
Wolf		x					
Ermine		x					
Deer					x		
Marmot					x		
Canadian lynx					x		
Weasel					x		
Birds							
Partridge	x	x	x	x	x		
Willow ptarmigan	x	x	x	x	x		
Merganser	x	x			x	x	x
Duck	x	x			x	x	x
Goose	x	x			x	x	x
Loon		x			x	x	x
Owl		x			x		
Bird's eggs					x	x	
Fish							
Trout	x	x	x	x	x	x	
Salmon	x				x	x	x
Lake trout	x	x	x		x		
Burbot	x	x			x	x	
Sucker	x					x	
Whitefish	x	x					
Pike	x						
Sea trout					x		
Ouananiche					x		
Source: CAM 1983							

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

The waterways contemporarily used by the Montagnais de Natashquan include the Natashquan, Romaine, De la Corneille, Piashti, Quetachou, Nabisipi and Aguanish Rivers. The southern portion of the land use area extends from the coast to Wakeham, Forgues, Pauline and Métivier Lakes. Trapping and small game hunting in that portion is facilitated by good transportation routes (Route 138 and many snowmobile trails) and fairly even terrain. Along the shore, west of Baie-Johan-Beetz, harvesting activities occur up to the Havre-Saint-Pierre region. Lobster and scallops are taken from Nickerson Bay. Canada geese and eider are hunted from the shoreline or by motorized boat, and waterfowl are hunted along the shore. Many hunting areas and encampments are located at the Grande Hermine and Nickerson Bays, as well as on the coastal plain of the Romaine River, particularly on either side of Route 138. Beaver trapping and gathering of small fruit occur on the Romaine coastal plain. Porcupine is often hunted near the shore along Route 138 and other roads leading north. The contemporary land use model of the Montagnais de Natashquan is similar to that of the Innu de Ekuanitshit. In effect, members from both communities at times harvest together or relay one another (HQP 2007).

The Montagnais de Natashquan signed an agreement with the Government of Québec in 1984 to manage subsistence salmon fishing in the Natashquan River. The agreement was revised in 1999 to expand its scope to the management of salmon fishing outfitting services. The Montagnais thus have exclusive rights on a portion of the Natashquan River for subsistence and sport salmon fishing. Nets are allowed for subsistence fishing (one net per house), while only rods are allowed for sport fishing. The reported catches for subsistence purposes fall below the established yearly maximum of 15,000 pounds (Charest et al. 2012). Annual subsistence salmon harvests in the Natashquan River have been reported since 1984, with a few exceptions; they range from 350 to 1,479 salmon (MFFP 2017a, 2017b).

Fishing activity occurs mostly in the first kilometres of the Natashquan River; the catchment area thus harbours high-quality reproductive sites. According to government officials and academics, the health of the salmon population in the Natashquan River is of concern. The Montagnais de Natashquan have a more nuanced view in this matter. The Natashquan River valley is a proposed biodiversity reserve for which a conservation plan is in place (Charest et al. 2012).

The Montagnais de Natashquan have continued to be mobile and still cover a large territory but travels are not as expansive as they have been historically. During the contemporary period, the Montagnais have practiced their traditional activities in the southern portion of the territory closer to the Reserve and along the coast of the St. Lawrence River and at the mouths of other rivers that drain into it (CAM 1983). Thus, their activities do not occur within or near the Project Area.

7.4 Other Aspects of the Human Environment

7.4.1 Rural and Urban Setting

The following section provides an overview of the rural and urban setting of the Project Area and RSA. This includes an overview of the socioeconomic environment of the Northeastern Avalon Peninsula and its communities, which includes St. John's, and the proximity of the Project to any residences, which have the potential to interact with Project components or activities.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

The Project Area is over 300 km away from St. John's, Newfoundland and Labrador, which is the closest community to the Project. There are no known permanent, seasonal, or temporary residences in the vicinity of the Project Area; the nearest permanent residence is within the City of St. John's. The only residences that would be associated with the Project are the temporary living accommodations on Drilling Installations and supply vessels.

St. John's is the capital city of Newfoundland and Labrador, with a population of approximately 205,955 individuals (Statistics Canada 2017b). The population of the St. John's metropolitan area represents approximately 40% of the total population of Newfoundland and Labrador (Statistics Canada 2017b). As of July 2016, the province's population was estimated at 530,128. Since 2011, the population of the province has increased by 1%. However, this increase was concentrated in older age groups with the senior population (ages 65 or above) offsetting a decrease in the core labour force population (ages 20 to 64) and youth populations (ages 19 and below). The median age of Newfoundland and Labrador was 45.3 years in 2016, which is the highest of any province in the country (NL Department of Finance 2017).

In addition to the City of St. John's, the Northeastern Avalon Region comprises 14 other municipalities including the city of Mount Pearl and several towns. In 2011, the population of the Northeast Avalon Region was approximately 201,766. This represents an 8.5% population increase since 2006, with the communities of Bay Bulls, Flatrock, Paradise, and Torbay showing the highest growth in this period (Stantec et al.2017).

In the past two decades, the economy of Newfoundland and Labrador experienced considerable growth largely due to development of the oil industry and expansion of the mining industry. However, since 2014, the economy has contracted due to a transition from major project construction to production and a decline in commodity prices. In 2016, Newfoundland and Labrador's real GDP is estimated to have declined by 0.7% due primarily to lower capital investment. The unemployment rate averaged 13.4%, an increase of 0.6 percentage points compared to 2015 (NL Department of Finance 2017). In 2016, service sector industries accounted for approximately 78% of employment with goods-producing sectors accounting for the remaining 22%.

The oil and gas industry was the largest contributor to Gross Domestic Product (GDP) in the province in 2015, accounting for nearly 17% of the nominal GDP in 2015. Plans for commissioning and expansion of existing offshore oil developments as well as proposed exploration programs such as this Project indicate that oil and gas industry will continue to play an important role in the provincial economy. The construction sector accounted for approximately 11% of the nominal GDP, with mining contributing approximately 5% and fishing, hunting, trapping and manufacturing of fish products accounting for approximately 3% of nominal GDP (NL Department of Finance 2017).

In 2017, the province is forecasted to experience a decrease in real GDP by 3.8% with capital investment predicted to decline by 7.8% and the rate of unemployment expected to increase by 0.5% to average 13.9% ((NL Department of Finance 2017).

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

7.4.2 Human Health

The Project is not expected to affect human health conditions for Indigenous or non-Indigenous persons living in Newfoundland and Labrador or elsewhere. The following information is provided to provide a general understanding of human health and well-being in the province as well as mechanisms in place to protect human health in the unlikely event of an accidental event.

The Air Quality Health Index (AQHI) considers current and predicted levels for ground level ozone, fine particulate matter and nitrogen dioxide values associated with an AQHI location and uses a scale to show health risk associated with air pollution to help users determine if there may be a health risk associated with local air quality. In Newfoundland and Labrador, the AQHI is reported for five locations, with St. John's being the closest to the RSA. Newfoundland and Labrador generally experiences "good" air quality, with the AQHI usually being in the "low" range for the province (MAE 2017). Atmospheric air and noise emissions from the Project are not predicted to interact with onshore human receptors. As indicated in Section 5.4, the existing ambient air quality within the Project Area (which is already subject to emissions from marine vessels, helicopter traffic, and existing oil production platforms) is considered good therefore there are no predicted effects on human health for persons working in the offshore environment.

Under the Management of Contaminated Fisheries Regulations of the *Fisheries Act*, DFO has the authority to close recreational and commercial fishing areas when the presence of biotoxins, bacteria, chemical compounds or other substances in fish habitat may pose a risk to human health (DFO 2014). In addition, the Canadian Shellfish Sanitation Program is a federal food safety program led by the Canadian Food Inspection Agency in collaboration with Environment and Climate Change Canada (ECCC) and DFO intended to protect Canadians from health risks associated with the consumption of contaminated bivalve molluscan shellfish. In the unlikely event of an accidental spill, there are mechanisms in place to protect against effects on human health due to harvesting and consumption of potentially contaminated food sources.

7.4.3 Physical and Cultural Heritage

The only known sites occurring in offshore Newfoundland and Labrador that would be considered to contain physical and/or cultural heritage are limited to shipwrecks that may be present in the Project Area and RSA. Locations of shipwrecks within the Project Area and RSA are shown on Figure 7-33. There are no other known structures, sites, or things of known historical, archaeological, paleontological, or architectural significance, within the Project Area. The Project is not predicted to interact with onshore archaeological resources or heritage areas.

7.5 References

Abegweit First Nation. 2015. Available at: <http://www.abegweit.ca/index.php>. Accessed June 2017.

Acadia First Nation. Undated. Acadia First Nation website. Available at: <http://acadiafirstnation.ca/community/>. Accessed June 2017.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

- AFN (Assembly of First Nations). 2007. Assembly of First Nations Environmental Stewardship Unit. Traditional Foods: Are they Safe for First Nations Consumption? Retrieved June 23, 2017 from http://www.afn.ca/uploads/files/env/traditional_foods_safety_paper_final.pdf.
- Alderon Iron Ore Corp. 2012. Kami Iron Ore Mine and Rail Infrastructure, Labrador Environmental Impact Statement.
- Amec Environment and Infrastructure. 2014. Eastern Newfoundland Strategic Environmental Assessment. Final Report, 2014. Available at: <http://www.cnlopb.ca/sea/eastern.php>. Accessed March 16, 2016.
- AMIK (Agence Mamu Innu Kaikusseht). 2016a. Communautés membres. Retrieved August 9, 2017 from <http://l-amik.ca/amik/communautes-membres/>.
- AMIK (Agence Mamu Innu Kaikusseht) 2016b. Nutashkuan. Activités de pêche et de transformation. Retrieved July 17, 2017 from <http://l-amik.ca/amik/communautes-membres/nutashkuan/>.
- AMIK (Agence Mamu Innu Kaikusseht) 2016c. Le Développement des Hydrocarbures au Québec. Évaluation environnementale stratégique (ÉES) globale sur les hydrocarbures et propre à Anticosti. Mémoire déposé au Comité directeur de l'ÉES.
- AMIK (Agence Mamu Innu Kaikusseht) 2016d. Ekuanitshit. Activités de pêche et de transformation. Retrieved July 17, 2017 from <http://l-amik.ca/amik/communautes-membres/ekuanitshit/>.
- Annapolis Royal. 2017. Annapolis Royal website. Available at: <https://annapolisroyal.com/visitors/first-nations/>. Accessed June 2017.
- Annapolis Valley First Nation. Undated. Enterprises. Available at: <http://avfn.ca/community-information/annapolis-valley-first-nation-enterprises/>. Accessed July 2017.
- APNQL (Le Réseau Jeunesse de L'APNQL. 2008. First Nations of Québec and Labrador Youth Network). Retrieved June 12, 2017 from http://www.reseaujeunessepn.com/nations_communautes_liste.php?no=38&langue=en.
- Armitage, P. and M. Stopp. 2003. Labrador Innu Land Use in Relation to the Proposed Trans Labrador Highway, Cartwright Junction to Happy Valley-Goose Bay, and Assessment of Highway Effects on Innu Land Use. Submitted by Innu Environmental Limited Partnership to Department of Works, Services and Transportation.
- Armitage, P. 2010. Innu of Labrador Contemporary Land Use Study. Report submitted to Innu Nation.
- Ball, D., Fisheries and Oceans, Personal communication. 2017.
- Brice-Bennett, C. 1977. Our Footprints are Everywhere. Inuit Land Use and Occupancy in Labrador. Labrador Inuit Association. Nain, NL.
- Buctouche First Nation. Undated. Buctouche First Nation website. Available at: <http://buctouchemicmacband.ca/>. Accessed June 2017.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Budgell, T. 2016. Manager, Aquaculture Licensing, Newfoundland and Labrador Department of Fisheries and Aquaculture.

Canadian Encyclopedia. 2016. Labrador Inuit (Labradormiut). Available at: <http://www.thecanadianencyclopedia.ca/en/article/labrador-inuit/>. Accessed June 2017.

Canadian Encyclopedia. 2017. Mi'kmaq. Available at: <http://www.thecanadianencyclopedia.ca/en/article/micmac-mikmaq/>. Accessed June 2017.

CBC (Canadian Broadcasting Company). 2016. Cod Returning, but long way to go for Successful Fishery, Plant CEO Says. Available at: <http://www.cbc.ca/news/canada/newfoundland-labrador/cod-returning-but-long-way-to-go-for-successful-fishery-plant-ceos-say-1.3765913>. Accessed December 11, 2016.

CBC News. 2017. 18,044 applicants eligible for Qalipu First Nation Band. Available at: <http://www.cbc.ca/news/canada/newfoundland-labrador/qalipu-first-nation-numbers-1.3970137>. Accessed July 2017.

CAM (Conseil des Atikamekws et des Montagnais). 1983. Étude sur l'occupation et l'utilisation du territoire par les Montagnais de Saint-Augustin.

CDPDJ (Commission des droits de la personne et des droits de la Jeunesse). 2009. Aboriginal Peoples Fact and Fiction 2nd Edition. Retrieved June 23, 2017 from https://www.autochtones.gouv.qc.ca/publications_documentation/publications/mythes-realites-autochtones-en.pdf.

Charest, Paul, Camil Girard and Thierry Rodon. 2012. Les Pêches des Premières Nations dans l'Est du Québec. Innus, Malécites et Micmacs. Les Presses de l'Université Laval.

CIE (Conseil des Innu de Ekuanitshit and Mi'gmawei Mawiomi Secretariat). 2014. Environmental Assessment of the project Corridor Resources Inc. Drilling of an exploration well on the Old Harry prospect – EL 1105, CEAR No. 11-01-60633. Retrieved July 11, 2017 from <http://www.cnlopb.ca/pdfs/corridorresinc/ealet.pdf?lbisphpreq=1>.

Clark, B. and G. Mitchell. 2010. Unveiling NunatuKavut – Describing the land and people of south/central Labrador. Available at: http://www.nunatukavut.ca/home/files/pg/unveiling_nunatukavut.pdf. Accessed April 2017.

CMM (Complexe Manitou Mingan). 2017. Complexe Manitou Mingan Bienvenue. Retrieved July 14, 2017 from <http://www.pourvoirie-manitou-mingan.com/bienvenue.html>.

CRHSS (Conne River Health and Social Services). 2008. Website. Available at: <http://www.crhss.com/about.html>. Accessed April 2017.

DCC (Defence Construction Canada). 2016. UXO Shipwreck and Legacy Site Locations: Current to 2014.

Denys, N. 1993. The Native People of Acadia by Nicholas Denys, 1672, Retold by Ian Maxwell, Little Daisy Press.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Department of Municipal Affairs and Environment (MAE). 2017. Air Quality Health Index. Available online at: http://www.mae.gov.nl.ca/env_protection/science/aqhi.html

DFO (Fisheries and Oceans Canada). No date. 3LN Redfish (depleted or rare species) Within the PBGB LOMA. Available at: <http://www.dfo-mpo.gc.ca/Library/342998rank50.pdf>. Accessed October 15, 2016.

DFO (Fisheries and Oceans Canada). 2009. Northern Shrimp (SFAs) 0-7 and the Flemish Cap: Resource Management Operations. Available at: <http://www.dfo-mpo.gc.ca/fm-gp/peches-fisheries/ifmp-gmp/shrimp-crevette/shrimp-crevette-2007-eng.htm#ann-a>. Accessed July 22, 2016.

DFO (Fisheries and Oceans Canada). 2012. Aboriginal Fisheries Strategy. Retrieved July 18, 2017 from <http://www.dfo-mpo.gc.ca/fm-gp/aboriginal-autochtones/afs-srapa-eng.htm>.

DFO (Fisheries and Oceans Canada). 2014. Status of Northwest Atlantic harp seals, *Pagophilus groenlandicus*. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2014/011.

DFO (Fisheries and Oceans Canada). 2015a. DFO OCMD Submarine Cable Locations.

DFO (Fisheries and Oceans Canada). 2015b. Regional Framework Discussion on Stock Substructure of Northwest Atlantic Fisheries Organization (NAFO) Division 3NOPs4VWX5Zc Atlantic Halibut (Scotian Shelf and Southern Grand Bank). Available at: http://www.dfo-mpo.gc.ca/csas-sccs/Schedule-Horraire/2016/03_09-11-eng.html.

DFO (Fisheries and Oceans Canada). 2015c. Stock Assessment of Newfoundland and Labrador Atlantic Salmon – 2013. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep. 2014/023. Available at: http://www.dfo-mpo.gc.ca/csas-sccs/Publications/SAR-AS/2014/2014_023-eng.pdf

DFO (Fisheries and Oceans Canada). 2016a. Economic Analysis and Statistics Catch Data 2010-2014. Provided by Economic Analysis and Statistics, Strategic Policy, DFO, Ottawa, ON.

DFO (Fisheries and Oceans Canada). 2016b. Newfoundland and Labrador Region Species Quota Reports. Available at: <http://www.nfl.dfo-mpo.gc.ca/NL/Species-Quota-Reports>. Accessed July 25, 2016.

DFO (Fisheries and Oceans Canada). 2016c. An assessment of northern shrimp (*Pandalus borealis*) in Shrimp Fishing Areas 4-6 and of striped shrimp (*Pandalus montagui*) in Shrimp Fishing Area 4 in 2015. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep., 2016/028: v +22 pp.

DFO (Fisheries and Oceans Canada). 2016d. Assessment of Newfoundland and Labrador (Divisions 2HJ3KLNOP4R) snow crab. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep., 2016/013: v +22 pp.

DFO (Fisheries and Oceans Canada). 2016e. Stock assessment of northern cod (NAFO Divs. 2J3KL) in 2016. DFO Can. Sci. Advis. Sec. Sci. Advis. Rep., 2016/026: v +17 pp.

DFO (Fisheries and Oceans Canada). 2016f. Angler's Guide 2016-2017. Available online at: <http://www.nfl.dfo-mpo.gc.ca/NL/AG/anglersguide>. Accessed December 5, 2016.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

DFO (Fisheries and Oceans Canada). 2016g. Research Vessel Data provided by Fisheries and Oceans Canada, June 16, 2106.

DFO (Fisheries and Oceans Canada). 2017a. Statement: Annual Full Science Stock Assessments for Northern Cod to be in 2017-2018. Available online at: <http://www.nfl.dfo-mpo.gc.ca/NL/Statement-Stock-Assessments-Northern-cod>

DFO (Fisheries and Oceans Canada). 2017b. Personal Communication. August 2, 2017. Strategic Services, Québec City.

DFO (Fisheries and Oceans Canada). 2017c. Personal Communication. July 18, 2017. Resource Management, Gaspé.

Eel Ground First Nation. Undated. Eel Ground First Nation website. Available at: <http://firstnationhelp.com/eelground/leaders/ourcomm.html>. Accessed June 2017.

Eel Ground Health and Wellness Centre. 2017. Eel Ground Health and Wellness Centre website. Available at: http://www.eelgroundhealthcentre.com/?page_id=106. Accessed June 2017.

Eel River Bar First Nation. 2017. Ugpi'ganjib website. Available at: <http://www.ugpi-ganjig.ca/>. Accessed June 2017.

Egeland, G.M. 2010. Inuit Health Survey 2007-2008. Prepared with Nunatsiavut Steering Committee and contribution from CINE staff members and graduate students. Available at: https://www.mcgill.ca/cine/files/cine/adult_report_-_nunatsiavut.pdf. Accessed March 2017.

Elsipogtog First Nation. Undated. Elsipogtog First Nation website. Available at: <http://elsipogtog.ca/>. Accessed June 2017.

Emera Newfoundland and Labrador. 2013. Maritime Link Environmental Assessment Report. Available at: https://www.novascotia.ca/nse/ea/maritime-link/1_ENL_ES_TOC.pdf. Accessed March 2017.

Energy East Pipeline Ltd. 2016. Energy East Project, Volume 17: Biophysical and Socio-Economic Effects Assessment – New Brunswick, Section 15: Traditional Land and Resource Use. Available at: <https://apps.neb-one.gc.ca/REGDOCS/Item/View/2967860>. Accessed June 2017.

Eskasoni First Nation. Undated. Eskasoni Mi'kmaw Nation. Available online at: <http://www.eskasoni.ca/home/>

Explore Newfoundland and Labrador. 2010. Conne River – Newfoundland and Labrador. Available at: <http://www.explorenewfoundlandandlabrador.com/communities/conne-river.htm>. Accessed April 2017.

FFAW (Fish Food and Allied Workers)-Unifor. 2016. News Release: Northern Shrimp Quota Cuts Will Impact Coastal Communities. Available at: <http://ffaw.nf.ca/en/news-and-events/news/news-release-northern-shrimp-quota-cuts-will-impact-coastal-communities#.V6hsvU1TGpo>. Accessed July 25, 2016.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

First Nation Education Initiative Inc. Undated. New Brunswick Schools. Available at: <http://fneii.ca/html/schools.html>. Accessed June 2017.

FNQLEDC (First Nations of Québec and Labrador Economic Development Commission). 2010. Aboriginal Business Directory. Retrieved July 5, 2017 from http://www.cdepnql.org/index_eng.aspx.

Fort Folly First Nation. Undated. Fort Folly First Nation website. Available at: <http://www.fortfolly.com/>. Accessed June 2017.

Fugman, G. 2010. Changes in Economic Development in Nunatsiavut (Northern Labrador): Impacts on the Community of Nain. Poster presented at the IPY Oslo Science Conference, Oslo, Norway 8-12 June 2010. Available at: <http://www.apecs.is/images/stories/vps/GerlisFugmann2010a.pdf>. Accessed March 2017.

GHCS (Gesgapegiag Health and Community Services). 2016. Gesgapegiag Health and Community Services Annual Report. Retrieved June 14, 2017 from <http://www.gesgapegiag.ca/docs/news/43/health-annual-report.pdf>.

Global News. 2017. Atlantic Policy Congress formalizes partnership with Ulnooweg Development Group. June 28, 2017. Retrieved August 9, 2017 from <http://globalnews.ca/news/3562816/atlantic-policy-congress-formalizes-partnership-with-ulnooweg-development-group/>.

Glooscap First Nation. 2017. Glooscap First Nation. Available at: <http://www.glooscapfirstnation.com/>. Accessed June 2017.

GMRC (Gespe'gewaq Mi'gmaq Resource Council). 2015. About Us. Retrieved July 14, 2017 from <http://www.gmrc.ca/about-us>.

GOC (Government of Canada). 2017. Addictions treatment for First Nations and Inuit. Retrieved June 14, 2017 from <https://www.canada.ca/en/health-canada/services/substance-abuse/get-help/addictions-treatment-first-nations-inuit.html#a6>.

Government of Newfoundland and Labrador. 2013. Self-Government Agreement-in-Principle Signed with Miawpukek First Nation: A Renewed Relationship Based on Trust and Mutual Respect. Available online at: <http://www.releases.gov.nl.ca/releases/2013/exec/1108n07.htm>

Grant Thornton. 2016. Consolidated Financial Statements Membertou Reserve Band Council. Available at: <http://www.membertou.ca/sites/default/files/Membertou%20Cons%202016%20FINAL%20w%20Signatures.pdf>. Accessed July 2017.

Hanrahan, M. 2003. The lasting breach: The omission of Aboriginal People from the Terms of Union between Newfoundland and Canada and its ongoing impacts. The Royal Commission on Renewing and Strengthening Our Place in Canada (Government of Newfoundland and Labrador): St. John's, NLFD.

Heritage Newfoundland and Labrador. 2017. Innu Culture Available at: <http://www.heritage.nf.ca/articles/aboriginal/innu-culture.php>. Accessed April 2017

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

- Higgins, J. 2008. Innu Organizations and Land Claims. Available at: http://www.heritage.nf.ca/aboriginal/innu_claims.html. Accessed June 2017.
- HQP (Hydro-Québec Production). 2007. Complexe de la Romaine. Étude d'impact sur l'environnement. Volume 6. Milieu humain – Communautés innues et archéologie. Retrieved July 18, 2017 from <http://www.bape.gouv.qc.ca/sections/mandats/La%20Romaine/documents/PR3.6/PR3.6.pdf>.
- Huntington, H.P. 1998. Observation on the utility of the semi-directed interview for documenting Traditional Ecological Knowledge. *Arctic* 51(3):237-242.
- Husky Energy. 2012. White Rose Extension Project. Prepared by Stantec Consulting Ltd. For Husky Energy, St. John's, NL.
- INAC (Indigenous and Northern Affairs Canada). 2010. R. V. Marshall. Retrieved July 18, 2017 from <https://www.aadnc-aandc.gc.ca/eng/1100100028614/1100100028615>.
- INAC (Indigenous and Northern Affairs Canada). 2012(a). Connectivity for Aboriginal and Northern Communities in Canada. Available at: <https://www.aadnc-aandc.gc.ca/eng/1352214337612/1353504776242>. Accessed June 2017.
- INAC (Indigenous and Northern Affairs Canada). 2012(b). Miawpukek First Nation. Available at: <https://www.aadnc-aandc.gc.ca/eng/1309799513638/1309799575111>. Accessed April 2017.
- INAC (Indigenous and Northern Affairs Canada). 2013. Peace and Friendship Treaties (1725-1779). Available at: <https://www.aadnc-aandc.gc.ca/eng/1360937048903/1360937104633>. Accessed June 2017.
- INAC (Indigenous and Northern Affairs Canada). 2014. Negotiation Tables Update. Retrieved July 14, 2017 from <https://www.aadnc-aandc.gc.ca/eng/1100100028632/1100100028633>.
- INAC (Indigenous and Northern Affairs Canada). 2015. The Nations. Retrieved June 14, 2017 from <https://www.aadnc-aandc.gc.ca/Mobile/Nations/carte960/carte-eng.html>.
- INAC (Indigenous and Northern Affairs Canada). 2016. General Briefing Note on Canada's Self-government and Comprehensive Land Claims Policies and the Status of Negotiations. Retrieved July 4, 2017 from <https://www.aadnc-aandc.gc.ca/eng/1373385502190/1373385561540#s3>.
- INAC (Indigenous and Northern Affairs Canada). 2017a. Website. Available at: <https://www.aadnc-aandc.gc.ca/eng/1319805325971/1319805372507>
- INAC (Indigenous and Northern Affairs Canada). 2017b. First Nations. Retrieved June 12, 2017 from <http://fnpim-cippn.aandc-aadnc.gc.ca/index-eng.html>.
- INAC (Indigenous and Northern Affairs Canada). Undated. First Nation Profiles. Available at: <http://cippn-fnpim.aadnc-aandc.gc.ca/index-eng.html>. Accessed June 2017.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Indian Island First Nation. 2015. Indian Island First Nation website. Available at: <http://indianisland.ca/>. Accessed June 2017.

Innu Education. 2014. Available at <http://www.innueducation.ca/>. Accessed March 2017.

Innu Nation. 1997. Ntapueu: I am Telling the Truth. Final Report of the Innu Nation Baseline Socio-Economic.

Innu Nation. 2011. Available at: <http://www.innu.ca/>. Accessed March 2017.

Inside Newfoundland and Labrador Archaeology. 2013. Newfoundland Mi'kmaq. Available at: <https://nlarchaeology.wordpress.com/category/miawpukek-conne-river/>. Accessed April 2017.

Intervale Associates Inc. 2012. Engaging Local Stakeholders in the Stewardship of Murres and Important Bird Areas in Labrador. Prepared for Newfoundland and Labrador Murre Conservation Fund Bird Studies Canada and Wildlife Habitat Canada.

Jackson, L. 1982. Bounty of a barren coast. Happy Valley, Goose Bay, NL: Labrador Institute of Northern Studies.

Johnstone, Harvey. 2014. The Business Development Team of Ulnooweg. A Review. Retrieved August 9, 2017 from <http://www.pfc.ca/conference2014/wp-content/uploads/Fisheries-Ulnooweg-BDT-Review.pdf>.

Kennedy, J.C. 1995. Peoples of the Bays and Headlands. University of Toronto Press, Toronto.

Kingsclear First Nation. 2014. Kingsclear First Nation website. Available at <http://www.kingsclear.ca/>. Accessed June 2017.

KMKNO (Kwilmu'kw Maw-klusuaqn Negotiation Office). Undated. KMKNO website. Available at: <http://mikmaqrights.com/our-community/communities/>. Accessed June 2017.

Labrador and Aboriginal Affairs Office. Undated. Land Claims website. Available at: http://www.laa.gov.nl.ca/laa/land_claims/. Accessed March 2017.

Labrador Shrimp Company. 2014. Available at: <http://www.labshrimp.com/home/processing-facilities.htm>. Accessed April 2017.

Labrador-Grenfell Regional Health Authority. 2007(a). Available at: <http://www.lghealth.ca/index.php?pageid=53>. Accessed April 2017.

Labrador-Grenfell Regional Health Authority. 2007(b). Available at: <http://www.lghealth.ca/index.php?pageid=58>. Accessed April 2017.

Lennox Island First Nation. 2013. Available at: <http://www.lennoxisland.com/>. Accessed June 2017.

Listuguj Fisheries. 2014. Our Fisheries. Retrieved June 22, 2017 from <http://www.listugujfisheries.com/node/69>.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

- LMG (Listuguj Mi'gmaq Government). 2016. About Listuguj. Retrieved June 14, 2017 from <http://www.listuguj.ca/about-listuguj/>.
- LISA (Labrador Inuit Settlement Area) Regional Planning Authority. 2010. Available at: <http://www.nunatsiavut.com/department/land-use-planning/>. Accessed March 2017.
- MacLaren Plansearch. 1994. Innu of Labrador: Profile and Harvesting Practices: Technical Report 12. Prepared for Department of National Defence for Environmental Impact Statement on Military Flying Activities in Labrador and Québec.
- Madawaska Maliseet First Nation. Undated. Madawaska Maliseet First Nation website. Available online at: <http://www.madawaskamaliseetfirstnation.com/page61.html>
- Mainland Mi'kmaq Development Inc. 2016. Mi'kmaq Ecological Knowledge Study for the Highway 101 Twining Exit 26 to Marshalltown. Available at: http://novascotia.ca/nse/ea/highway-101-digby-marshalltown-corridor/Appendix_D-F.pdf. Accessed June 2017.
- Martin, D. 2009. Food Stories: A Labrador Inuit-Metis Community Speaks about Global Change. PhD Thesis, Dalhousie University. Halifax, NS.
- Martin, D.H., J.E. Valcour, J.R. Bull, J.R. Graham, M. Paul, and D. Wall. 2012. NunatuKavut Community Health Needs Assessment: A Community-Based Research Project. Available at: http://www.nunatukavut.ca/home/files/pg/ncha_web.pdf. Accessed March 2017.
- McCarthy, B. 2016. Vice President, Development, St. John's Port Authority
- MCPEI (Mi'kmaq Confederacy of Prince Edward Island). Undated. Available at: <http://www.mcpei.ca/>. Accessed June 2017.
- Membertou First Nation. Undated. Membertou First Nation website. Available at: <http://www.membertou.ca/about-us>
- Membertou Sports and Wellness Centre. Undated. Membertou Sport and Wellness Centre Website. Available at: <http://www.membertousportandwellness.com/>. Accessed July 2017.
- Metepenagiag Mi'gmaq Nation. 2017. Metepenagiag Mi'gmaq Nation website. <http://www.metpark.ca/>. Accessed June 2017.
- MFFP (Ministère des Forêts, de la Faune et des Parcs). 2017a. Bilan de l'exploitation du saumon au Québec en 2016. Retrieved August 9, 2017 from <http://mffp.gouv.qc.ca/publications/faune/bilan-saumon-2016.pdf>.
- MFFP (Ministère des Forêts, de la Faune et des Parcs). 2017b. Personal Communication. August 8, 2017. Direction des relations avec les nations autochtones, Québec City.
- MFFP (Ministère des Forêts, de la Faune et des Parcs). 2017c. Personal Communication. August 10, 2017. Direction des relations avec les nations autochtones, Québec City.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

- MGS (Membertou Geomatics Solutions). 2012. Donkin Export Coking Coal Project Mi'kmaq Ecological Knowledge Study II. Available at: <http://www.ceaa-acee.gc.ca/050/documents/p63924/80316E.pdf>. Accessed July 2017.
- MGS (Membertou Geomatics Solutions). 2016. Bear Paw Pipeline Project Mi'kmaq Ecological Knowledge Study. Available online at: http://www.novascotia.ca/nse/ea/bear-paw-pipeline/Bear_Paw_Pipeline_Appendix_A_to_C.pdf. Accessed June 2017.
- MICT (Mamit Innuat Council Tribal). 2011. Retrieved June 12, 2017 from <http://www.mamit-innuat.com/membres/nutashkuan.aspx>.
- Mi'kma'ki All Points Service. 2013. Mi'kmaq Ecological Knowledge Study for the Black Point Quarry Project. Available at: http://novascotia.ca/nse/ea/black-point-quarry/app_k_mikmaq_eco_knowledge_study_final.pdf. Accessed June 2017.
- Miawpukek First Nation. 2017. Welcome to Miawpukek First Nation website. Available at: <http://www.mfngov.ca/>. Accessed March 2017.
- Millbrook First Nation. 2017. Millbrook First Nation website. Available at: <http://www.millbrookfirstnation.net/about-us/>. Accessed June 2017.
- MMAFMA (Mi'gmaq Maliseet Aboriginal Fisheries Management Association). 2013. June 22, 2017 from <http://www.aghamm.ca/en/>
- MMAFMA (Mi'gmaq Maliseet Aboriginal Fisheries Management Association). 2017. ATLAS DES SITES ET USAGES MI'GMAQS ET MALÉCITES du Saint-Laurent marin des communautés de Gesgapegiag, Gespeg et Viger. Retrieved July 13, 2017 from http://catalogue.ogsl.ca/dataset/d4362afc-d2c1-4a2e-b529-eb6c23edd8d5/resource/05f89412-d2db-43eb-838a-5dbd92b486d1/download/atlas_aghamm_2017.pdf.
- MMEDC (Madawaska Maliseet Economic Development Corporation). 2017. MMEDC website. Available at: <http://mmedc.com/en/about/businesses-operation>. Accessed June 2017.
- MMNN (Mi'Kmaq Maliseet Nations News). 2016. Gesgapegiag FN Continues Remarkable Progress. Retrieved June 29, 2017 from <http://www.mmnn.ca/2017/02/gesgapegiag-fn-continues-remarkable-progress/>.
- MOG (Micmacs of Gesgapegiag). 2017. About Gesgapegiag. Retrieved June 12, 2017 from <https://www.gesgapegiag.ca>.
- MMAG (Migmawei Mawiomi Assembly of Gespe'gewa'gi). 2009. The Treaty Relationship between Mi'gmaq of Gespe'gewa'gi and the British crown and its implication for the Province of Québec. Retrieved June 13, 2017 from <http://www.migmawei.ca/?document=reports>.
- MMS (Mi'gmawei Mawiomi Secretariat). 2017. Retrieved June 13, 2017 from <http://www.migmawei.ca/>.
- MRCN (Musée régional de la Côte-Nord). 2010. Nametau Innu: Memory and Knowledge of Nitassinan. Retrieved June 23, 2017 from <http://www.nametauinnu.ca/en/culture>.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

- Mullowney, D., E. Dawe, W. Coffey, S. Quilty, E. Colbourne and D. Maddock Parsons. 2016. An assessment of Newfoundland and Labrador snow crab (*Chionoecetes opilio*) in 2014. DFO Can. Sci. Advis. Sec. Res. Doc., 2016/026: v +179 pp.
- NAFO (North American Fisheries Organization). 2015. NAFO Science Advice – Latest Stock Advice. Available at: <http://www.nafo.int/science/nafo-stocks.html>. Accessed July 22, 2016.
- NAFO (Northwest Atlantic Fisheries Organization). 2013. NAFO Geographic Information. Available from: <https://www.nafo.int/Data/GIS>. Accessed December 1, 2016.
- NAFO (Northwest Atlantic Fisheries Organization). 2014. NAFO Response to the C-NLOPB SEA Draft Report. Available at: <http://www.cnlopb.ca/pdfs/enlsea/nafocomment.pdf?lbisphpreq=1>. Accessed August 4, 2014
- NAFO (Northwest Atlantic Fisheries Organization). 2016a. NAFO Annual Fisheries Statistics Database. Available at: <http://www.nafo.int/data/frames/data.html>. Accessed July 22, 2016.
- NAFO (Northwest Atlantic Fisheries Organization). 2016b. NAFO – The NAFO Fishing Footprint. Available at: <http://www.nafo.int/fisheries/frames/fishery.html>. Accessed on August 4, 2016.
- NAFO (Northwest Atlantic Fisheries Organization). 2016c. 31st Annual Meeting – September 2009: Delineation of Existing Bottom Fishing Areas in the NAFO Regulatory Area. Available at: <http://www.nafo.int/fisheries/frames/fishery.html>. Accessed August 4, 2016.
- NAFO (Northwest Atlantic Fisheries Organization). 2017. Quota Tables. Available online at: <https://www.nafo.int/Portals/0/PDFs/fc/2017/QuotaTable2017.pdf>
- Nalcor Energy. 2010. Supplemental Information to IR JRP.151 (Consultation Assessment Report).
- Nalcor Energy. 2011. Labrador – Island Transmission Link Environmental Assessment – Socioeconomic Environment: Aboriginal Communities and Land Use Component Study. Available at: http://www.ecc.gov.nl.ca/env_assessment/projects/Y2010/1407/l_i_t_l_ea_aboriginal_cs_main_rpt.pdf. Accessed March 2017.
- Natcher, D.C., L. Felt, K. Chaulk, A. Procter and the Nunatsiavut Government. 2011. Monitoring the domestic harvest of migratory birds in Nunatsiavut, Labrador. *Arctic*, 64(3): 362-366.
- Natcher, D.C., L. Felt, K. Chaulk, A. Procter. 2012. The harvest and management of migratory bird eggs by Inuit in Nunatsiavut, Labrador. *Environmental Management*, 50:1047-1056. DOI 10.1007/s00267-012-9939-x.
- NL Department of Finance. 2017. The Economy 2017. Economic and Project Analysis Division. Available at: <http://www.economics.gov.nl.ca/E2017/TheEconomy2017.pdf>. Accessed May 3, 2017.
- NLDFA (Newfoundland and Labrador Department of Fisheries and Aquaculture). 2016. Seafood Industry Year in Review: 2015. Available online at: http://www.fishaq.gov.nl.ca/publications/pdf/SYIR_2015.pdf. Accessed December 5, 2016.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

NP (National Post). 2016. Innu nations in Québec on verge of historic land settlement that would give them greater autonomy. Published February 7, 2016. Retrieved July 4, 2017.

Nunacor. 2017. NDC Fisheries Limited. Available at: <https://www.nunacor.com/companies/ndc-fisheries-ltd/>. Accessed July 2017.

Nunatsiavut Government Department of Health and Social Development. 2013. Regional Health Plan. Available at: <http://www.nunatsiavut.com/wp-content/uploads/2014/03/2013-2018.pdf>. Accessed March 2017.

Nunatsiavut Government. 2017. Nunatsiavut Government website. Available at: <http://www.nunatsiavut.com/government/about-nunatsiavut-government/>. Accessed March 2017.

Nunatsiavut Government. Undated. Fisheries. Available at: <http://www.nunatsiavut.com/beneficiary-information/fisheries/>. Accessed July 2017.

NunatuKavut Community Council. 2010. Comments from NunatuKavut on the Consultation Assessment Report as supplemental information to IR 151. CEAR # 518. Available at: <http://www.ceaa-acee.gc.ca/050/document-eng.cfm?document=46154>.

NunatuKavut Community Council. 2013. Who We Are. Available at: http://www.nunatukavut.ca/home/who_we_are.htm

OAA (Office of Aboriginal Affairs). 2015. Office of Aboriginal Affairs website – Fact Sheet and Additional Information. Available online at: <https://novascotia.ca/abor/aboriginal-people/demographics/>. Access June 2017.

OIIQ (Ordre des infirmières et infirmiers du Québec). 2014. Les services de santé des Premières Nations. Retrieved July 14, 2017 from https://www.oiiq.org/sites/default/files/188_4_premieres_nations.pdf.

Pabineau First Nation. Undated. Pabineau First Nation website. Available at: <https://www.pabineaufirstnation.ca/>. Accessed June 2017.

Paq'tnkek Mi'kmaw Nation. Undated. Paq'tnkek Mi'kmaw nation website. Available at: <http://paqtnkek.ca/community/>

Pastore, R. 1998. The History of the Newfoundland Mi'kmaq. Available at: <http://www.heritage.nf.ca/articles/aboriginal/mikmaq-history.php>. Accessed March 2017.

Peskotomuhkati Nation. 2017. 2016: The New Wampum: Respect, Trust and Friendship. Available at: <https://qonaskamkuk.com/peskotomuhkati-nation/2016-the-new-wampum-respect-trust-and-friendship/>.

Pictou landing First Nation. Undated. Pictou Landing First Nation History. Available at: <http://www.plfn.ca/cultural-history/history/>. Accessed July 2017.

Potlotek First Nation. 2016. Potlotek First Nation website. Available at: <http://potlotek.ca/>. Accessed June 2017.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

Qalipu First Nation. Undated. Qalipu First Nation website. Available at: <http://qalipu.ca/>

Qalipu First Nation. 2016. Qalipu First Nation website. Available at: <http://qalipu.ca/about/background/>. Accessed March 2017.

Qalipu Mi'kmaq First Nation. 2015. Annual Report 2014-2015. Available at: http://qalipu.ca/qalipu/wp-content/uploads/2016/01/Annual-Report_2014-2015.pdf. Accessed March 2017.

QAT (Québec Aboriginal Tourism). 2017. Discover. Retrieved June 22, 2017 from <http://www.quebecaboriginal.com/decouvrir/>.

Robertson, M. 1969. Red Earth, Nova Scotia Museum.

RP (Regroupement Petapan). 2017. Négociation-Traité. Retrieved Jul 14, 2017 from <http://petapan.ca>.

SAA (Secrétariat aux Affaires autochtones). 2017. Ententes avec les Micmacs. Retrieved July 14, 2017 from http://www.autochtones.gouv.qc.ca/relations_autochtones/ententes/micmacs/ententes_micmacs.htm#ge

Saumon Québec. 2017. Fishing Cascapédia River. Retrieved July 14, 2017 from <https://www.saumonquebec.com/en/fishing/regions-and-rivers/gaspe-peninsula/cascapedia-river/>.

SCI (Strategic Concepts Inc). 2007. Lower Churchill Demographic Baseline Profile of Innu Communities. Prepared for Minaskuat Limited Partnership in reference to the Newfoundland and Labrador Hydro Lower Churchill Project.

Sikimiut Environmental Management Ltd. 2008. Strategic Environmental Assessment Labrador Shelf Offshore Area. Prepared for Canada-Newfoundland and Labrador Offshore Petroleum Board. Available at: <http://www.cnlopb.ca/pdfs/sealab/sltoc12.pdf?lbisphpreq=1>. Accessed March 2017.

Sikumiut Environmental Management Ltd. 2009. Labrador Inuit Knowledge of Lake Melville. Prepared for Nunatsiavut Government, Newfoundland and Labrador. Available at: <http://www.ceaa.gc.ca/050/documents/37353/37353E.pdf>. Accessed March 2017.

Sikimiut Environmental Management Ltd. 2011. An Assessment of Predicted Socio-Economic Impacts of Labrador Shelf Oil and Gas Activity on Labrador Communities and Individuals. Environmental Studies Research Funds Report No. 189. St. John's, NL. 124 p. Available at: http://publications.gc.ca/collections/collection_2016/one-neb/NE22-4-189-eng.pdf. Accessed March 2017.

Sipekne'katik First Nation. 2016. Sipekne'katik First Nation website. Available at: <http://sipeknekatik.ca/>. Access June 2017.

Speck, Frank G. 1922. Indian Notes and Monographs, Beothuk and Micmac, Part II, Micmac Hunting Territories in Nova Scotia and Newfoundland, Museum of the American Indian, AMS Press, New York.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

Existing Human Environment
December 2017

St. George's Indian Band. 2017. Traditional Sites – newfoundland Seal Rocks. Available at: <http://www.sgibnl.ca/traditional-sites-newfoundland-seal-rocks/>. Accessed April 2017.

St. Mary's First Nation. Undated. St. Mary's First Nation website. Available at: <http://www.stmarysfirstnation.com/>. Accessed June 2017.

Stantec (Stantec Consulting Ltd.), Harbourside Engineering Consultants, Altus Group, Ekistics Planning and Design. 2017. Our Avalon 2017. Background Report. Available at: https://static1.squarespace.com/static/561e5fbfe4b0383208babf63/t/589e2565ff7c507d3556cc4b/1486759296351/final_ouravalon2017_20170210+Complete+low+res_opt4.pdf

Statistics Canada. Undated(b). 2011 Census of Canada (Provinces, Census Divisions, Municipalities) (database). Available at: <http://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/prof/index.cfm?Lang=E>. Accessed March 2017.

Statistics Canada. 2015. 2011 National Household Survey. Retrieved June 12, 2017 from <http://www12.statcan.gc.ca/nhs-enm/2011/dp-pd/prof/index.cfm?Lang=E>.

Statistics Canada. Undated(a). 2016 Census of Canada (Provinces, Census Divisions, Municipalities) (database). Available at: <http://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E&TABID=1>. Accessed April 2017.

Statistics Canada. 2017a. Census Profile. 2016 Census. Retrieved June 12, 2017 from <http://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E>.

Statistics Canada. 2017b. St. John's [Census metropolitan area], Newfoundland and Labrador and Newfoundland and Labrador [Province] (table). Census Profile. 2016 Census. Statistics Canada Catalogue no. 98-316-X2016001. Ottawa. Released February 8, 2017. <http://www12.statcan.gc.ca/census-recensement/2016/dp-pd/prof/index.cfm?Lang=E>

Stopp, M. 2002. Reconsidering Inuit presence in Southern Labrador. *Inuit Studies*, 26(2), 71-106

Tanner, A. 1977. Land Use and Occupancy Among the Sheshatshiu Innu of Labrador. Unpublished report for the Naskapi Montagnais Innu Association.

Tobique First Nation. 2015. Tobique First Nation website. Available at: <http://www.tobiquefirstnation.ca/>. Accessed June 2017.

Toms, J. 2016. Team Leader, Licensing Operations, Department of Fisheries and Oceans: Newfoundland Region.

Torngasok. 2013. Torngasok website. Archaeology in Nunatsiavut. Available at: http://www.torngasok.ca/home/archaeology_in_nunatsiavut.htm

Town of Hopedale. 2005. Municipal Plan 2005-2015. Prepared by: D.W. Knight Associates. Available at: <http://www.mae.gov.nl.ca/registry/community/hopedale/files/MP.pdf>. Accessed July 2017.

Town of Postville. 2003. Town of Postville Municipal Plan 2003-2013. Prepared by Plan-Tech Environment. Available at: <http://www.mae.gov.nl.ca/registry/community/postville/files/MP.pdf>. Accessed July 2017.

Flemish Pass Exploration Drilling Program – Environmental Impact Statement

December 2017

Tremblay, François G. 2011. The Québec Innu Nation Example: New Approaches to Aboriginal Rights in Treaties. Retrieved July 4, 2017 from http://www.cba.org/cba/cle/PDF/ABOR11_Tremblay_Paper.pdf.

UDG (Ulnooweg Development Group Inc.). 2016. Ulnooweg Strategic Plan 2016-2021. Retrieved August 3, 2017 from <http://www.ulnooweg.ca/wp-content/uploads/2016/08/Ulnooweg-Strategic-Plan-2016-21-3.pdf>.

University of Toronto Press. 2010. Alliance Re/Envisioning Indigenous Non-Indigenous Relationships. Edited by Lynne Davis.

Usher, P.J. 1976. Evaluating Country Food in the Northern Native Economy. *Arctic* 29 (2), 1976.

VBNC (Voisey's Bay Nickel Company Limited). 1997. Voisey's Bay Mine/Mill Project Environmental Impact Statement. Available at: <http://www.vbnc.com/Reports.asp>.

Verreault, Pierre, Léo St-Onge, Catherine Béland and Serge Langelier. 2013. Pêches des Communautés Innues de la Côte-Nord. Étude de cas à dimension multiple. Retrieved July 14, 2017 from http://www.terre-citoyenne.org/fileadmin/TC/RESSOURCES_COMMUNES_PDF/Guerande2013/ECADIM/ECADIM_CANADA_INNUS_OK.pdf

Wagmatcook First Nation. 2016. Wagmatcook First Nation website. Available at: <http://www.wagmatcook.com/>. Accessed June 2017.

Waycobah First Nation. Undated. Waycobah First Nation website. Available at: <http://waycobah.ca/>. Accessed June 2017.

Woodstock First Nation. Undated. Woodstock First Nation website. Available at: <http://www.woodstockfirstnation.com/>. Accessed June 2017.

YSAC (Youth Solvent Addictions Committee). 2013. Walgwan Centre. Retrieved June 14, 2017 from http://ysac.info/?page_id=10.