West White Rose Project 2024 Environmental Assessment Update

Report

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Abbreviations

°C	degrees Celsius
CD	Chart Datum
CGS	Concrete Gravity Structure
cm	centimetre
C-NLOPB	Canada-Newfoundland and Labrador Offshore Petroleum Board
COSEWIC	Committee on the Status of Endangered Species in Canada
DFO	Fisheries and Oceans Canada
EA	Environmental Assessment
EBSA	Ecologically and Biologically Sensitive Area
ECCC	Environment and Climate Change Canada
EPCMP	Environmental Protection and Compliance Monitoring Plan
FFAW-Unifor	Fish, Food and Allied Workers - Unifor
FLC	Fisheries Liaison Committee
IBA	Important Board Area
ID	Inner Diameter
kg	kilogram
km	kilometre
km²	square kilometre
LED	Life Extension Drydock
m	metre
NAFO	Northwest Atlantic Fisheries Organization
NL	Newfoundland and Labrador
NLDECC	Newfoundland and Labrador Department of Environment and Climate Change
OA	Operations Authorization
PAO	Provincial Archaeology Office
SARA	*Species at Risk Act*
UA	Unit Area
USA	United States of America
WWRP	West White Rose Project / Platform

1.0 INTRODUCTION

Cenovus Energy (Cenovus) will be towing the concrete gravity structure (CGS) of the West White Rose wellhead platform to the White Rose field in 2025. In preparation for the tow-out, in 2024 Cenovus will prepare the concrete gravity structure (CGS) installation area, and inner and outer tow-out channels (the Project). The scope of this Project is addressed in the approved environmental assessment "White Rose Extension Project Environmental Assessment" (Husky Energy 2012) and Consolidated Addendum (Husky Energy 2013), released September 18, 2013.

The Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) requires that operators, when applying for various program authorizations, submit information confirming that the proposed activities fall within the scope of a previously approved environmental assessment (EA), indicate if the EA predictions remain valid, and provide an update on commercial fisheries, species at risk, and sensitive areas. The information in this document herein provides the information to support the above requirements and notes changes that need to be addressed. This EA update provides the following information:

- Overview of planned Project activities for 2024 (Section 2)
- Information on consultation and engagement activities undertaken (Section 4)
- Update applicable baseline information for key environmental components that has become available since the EA was produced, specifically regarding:
  - Commercial fisheries (Section 3.1)
  - Species at risk, or of conservation concern (Section 3.2)
  - Special Areas (Section 3.3)
- Evaluation and confirmation that the nature and scope of the proposed activities are within the scope of the approved EA, including the appropriateness and adequate of the associated environmental effects predictions and mitigation measures (Section 3.6)

The scope of the planned Project were assessed under the approved EA as summarized in Table 1.1.

Table 1.1 Environmental Assessment Summary

EA Reference:	
• White Rose Extension Project Environmental Assessment" (Husky Energy 2012) • Consolidated Addendum (Husky 2013) • *Canadian Environmental Assessment Act* (S.C. 1992, c. 37) Screening Report - White Rose Extension Project (C-NLOPB et al. 2013) • Environmental Assessment – Drill Cuttings Amendment (Cenovus 2023)	
Reference No.	Canadian Environmental Assessment Registry No. 12-01-68249
Temporal Scope	Year-round
Geographic Scope	Placentia Bay and Grand Banks area (see Figure 2.1; Table 2.1 for a listing of geographical coordinates)
Planned 2024 Activities	Nearshore Project activities include: • Boulder and Debris Removal (inner and outer channel) • Dredging (inner / outer channel) • Dredging (bundwall and exit channel) Offshore Project activities include: • Offshore tow route survey • WWRP subsea construction • Marine rock installation

2.0 PROPOSED ACTIVITIES FOR 2024

Key 2024 Project activity areas include both the nearshore and offshore areas.

The Nearshore Project Area is located in the inner portion of Northwest Atlantic Fisheries Organization (NAFO) Unit Area (UA) 3PSc (Figure 2.1). The 2024 Study Area is comprised of NAFO UAs 3PSc, 3PSf, and 3L (Figure 2.2). Water depths range from 0 to 17 m in the dredge areas, 70 to 100 m in the disposal areas, 15 to 17 m along the inner channel tow route, and 13 to 15 m along the outer channer tow route to the installation site. Water depth at the proposed wellhead platform installation site is 118.5m. Coordinates for key Project activity areas are provided in Table 2.1.

Table 2.1 2024 Project Activity Area Coordinates

Area	Coordinates
CGS Installation Area	E724266, N5186607 (NAD83, Zone 22)
Nearshore Ballasting Site	• E264151.4435, N5293290.211 • E263586.8753, N5292331.832 • E261145.2486, N5290413.626 • E261457.7365, N5294447.125 • E265845.9081, N5294106.095 • E265532.747, N5290072.82 • E261448.619, N5292067.183 • E262845.3669, N5294161.741 • E265546.8629, N5292574.517 • E264394.1362, N5290338.821
Exit Channel Dredge Area	• E275349.72, N5243969.67 • E275724.04, N5243675.63 • E275497.16, N5243406.23 • E275132.28, N5243692.86
Inner Channel Dredge Area	• E276290.00, N5244586.00 • E276874.00, N5244497 • E276873.00, N5245869.00 • E276534.06, N5245945.78
Outer Channel Dredge Area	• E274490.00, N5248250.00 • E277108.02, N5247244.67 • E276833.19, N5246568.38 • E274165.09, N5247652.64
Disposal Area (Placentia Sound)	• E279208, N5243205

Table 2.1 2024 Project Activity Area Coordinates

Area	Coordinates
Inner Channel Tow Route	• E275846, N5243846 • E275593, N5243537 • E275877, N5243537 • E276247, N5246671 • E276521, N5243902 • E276669, N5244219 • E276669, N5244569 • E276669, N5244578
Outer Channel Tow Route	• E276789, N5245907 • E276966, N5245084 • E277188, N5246200 • E277309, N5246358 • E277342, N5246505 • E277309, N5246651 • E277218, N5246770 • E277142, N5246810 • E276492, N5247091 • E274789, N5247786 • E274661, N5247886 • E274290, N5248300

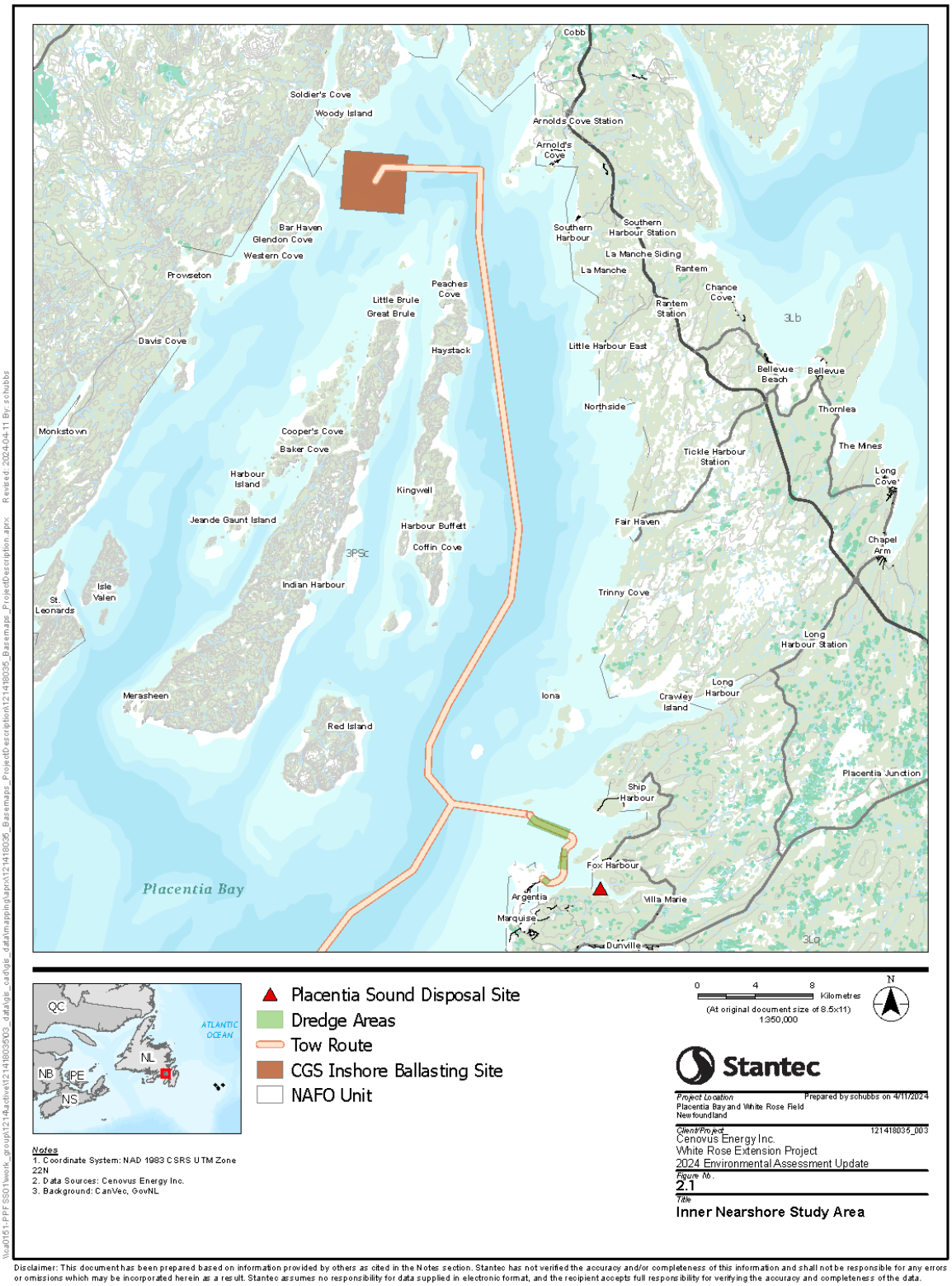
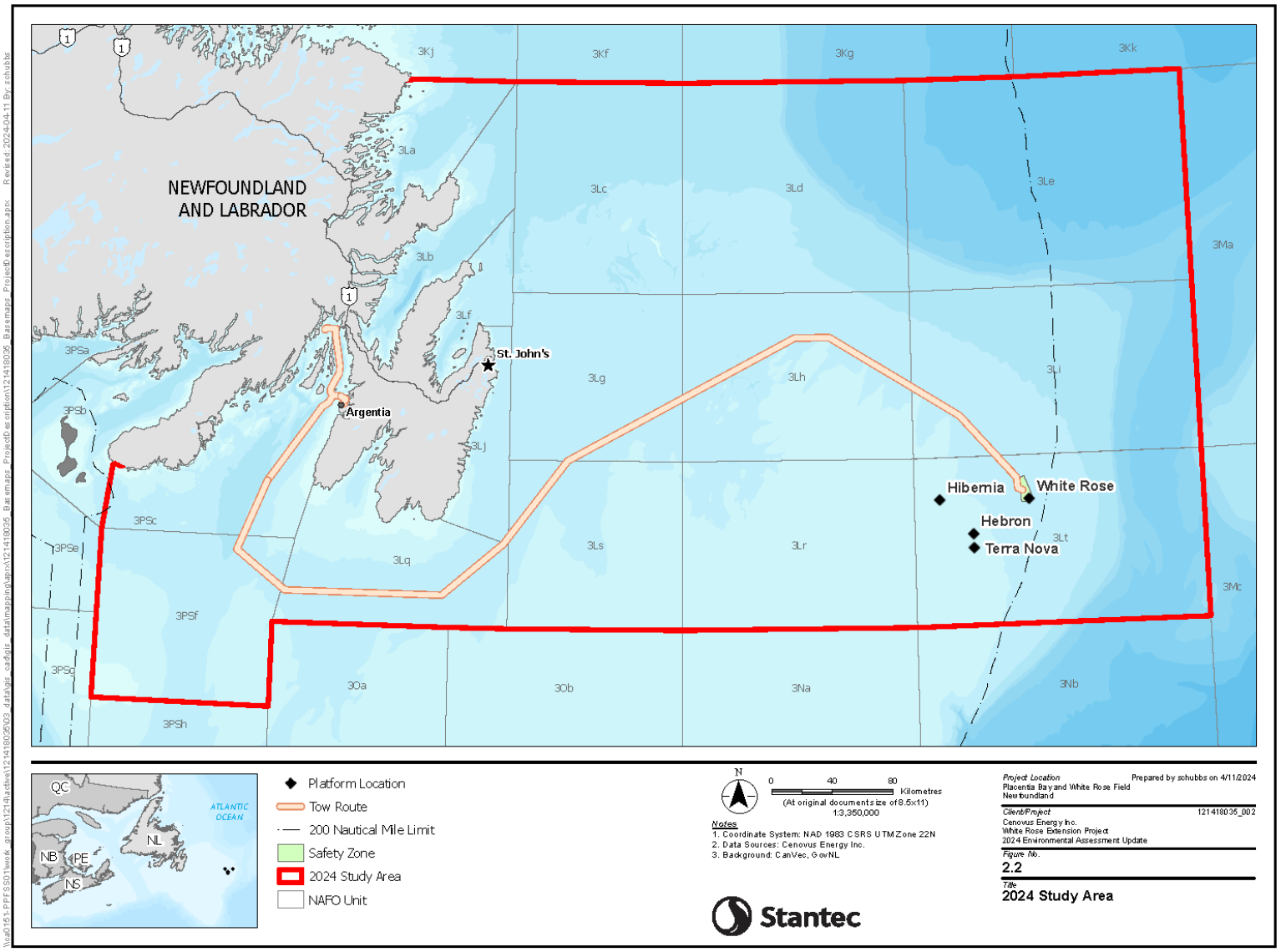


Figure 2.1 Inner Nearshore Study Area

Proposed Activities for 2024



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Figure 2.2 2024 Study Area

2.1 NEARSHORE PROJECT ACTIVITIES

Nearshore Project activities include:

- Boulder and Debris Removal (inner and outer channel)
- Dredging (inner / outer channel)
- Dredging (bundwall and exit channel)

Project activities will take place at several locations onshore and offshore in Placentia Bay. Figure 2.3 provides an overview of the key Project locations for nearshore activities in 2024:

- Graving dock, separated from open water by a bundwall (including exit channel)
- Inner Channel, subject to dredging works and includes area concentrate by subsurface boulders and natural debris
- Outer Channel, subject to dredging works
- The Pond, onshore disposal area
- Placentia Sound, marine disposal area



Figure 2.3 Key Inner Nearshore Project Locations

2.1.1 Boulder and Debris Removal (inner and outer channel)

The initial works completed by the dredging contractor will be the removal of natural objects and debris located at the Inner and Outer Channel prior to (and partially simultaneous with) the dredging works. These activities are expected to start as early as September 2024. To perform the surface boulder removal work and the debris removal, a backhoe dredger equipped with necessary accessories such as an orange peel grab will be used. Tugs and support barges will be used as required.

The natural objects will be dumped alongside the existing channels to areas where they will not pose a risk to the tow out of the CGS or disposed at an alternate nearby location as approved by regulators.

Debris will be loaded onto a barge. When the barge is fully loaded it will be transported to Argentia Port and it will be offloaded by shore crane. Debris will be disposed of in an approved facility.

2.1.2 Dredging (inner / outer channel)

A trailing suction hopper dredger will perform the dredging works at the outer channel. The design depths is -18.6 m Chart Datum (CD). Width and length of the channel are approximately 245 and 1,700 m, respectively. These activities are expected to start as early as November 2024 in the Inner and Outer Channels.

Both a cutter suction dredger and a trailing suction hopper dredger will perform the works on the Inner Channel. The design depth is -18.6 m CD. Width and length of the channel are approximately 245 and 1,000 m, respectively. These activities are expected to start as early as October 2024.

The marine disposal area to be used for the discharge of natural materials dredged in the Outer and Inner Channel is Placentia Sound.

2.1.3 Dredging (Bundwall and Exit Channel)

The graving dock bundwall will be excavated initially using land-based equipment by the CGS construction contractor. Land based equipment will also be used to transport the excavated equipment to the designated onshore disposal site (“The Pond”). The design depth of this excavation is tentatively set at -2 m CD. These activities are expected to start as early as October 2024.

On the seaward side of the natural depression in the landscape a containment bundwall will be created. This is to allow for creation of sufficient capacity for onshore disposal of dredged materials.

A cutter suction dredger will perform the dredging works at the bundwall / exit channel. The design depth is -18.1 m CD. The width is varying from 147 to 245 m and the length of the exit channel is approximately 250 m. These activities will start after the completion of bundwall excavation.

The materials, dredged by the cutter suction dredger will be directly pumped ashore by means of a discharge pipeline. The discharge of the pipeline is located inside the onshore disposal area. Materials inside the bundwall and exit channel will be disposed onshore by pumping the material through the pipeline. When the works are finished, the disposal line will be dismantled.

Since the onshore disposal area will be enclosed by a containment bundwall, there will be a need for installing a weir box. A weir box is used to dewater the reclamation area. The purpose of this box is to manage the outflow of water and fines from the reclamation area and control the suspended solids to an acceptable norm prior to discharging. The weir box is typically placed in the containment bundwall at the ar end of the reclamation area.

“The Pond” is the onshore disposal area used to discharge the entire graving dock bundwall and exit channel materials (Figure 2.4). The natural materials, excavated by means of land-based equipment, will be disposed here as well.



Figure 2.4 “The Pond” On-land Disposal Area

2.2 OFFSHORE PROJECT ACTIVITIES

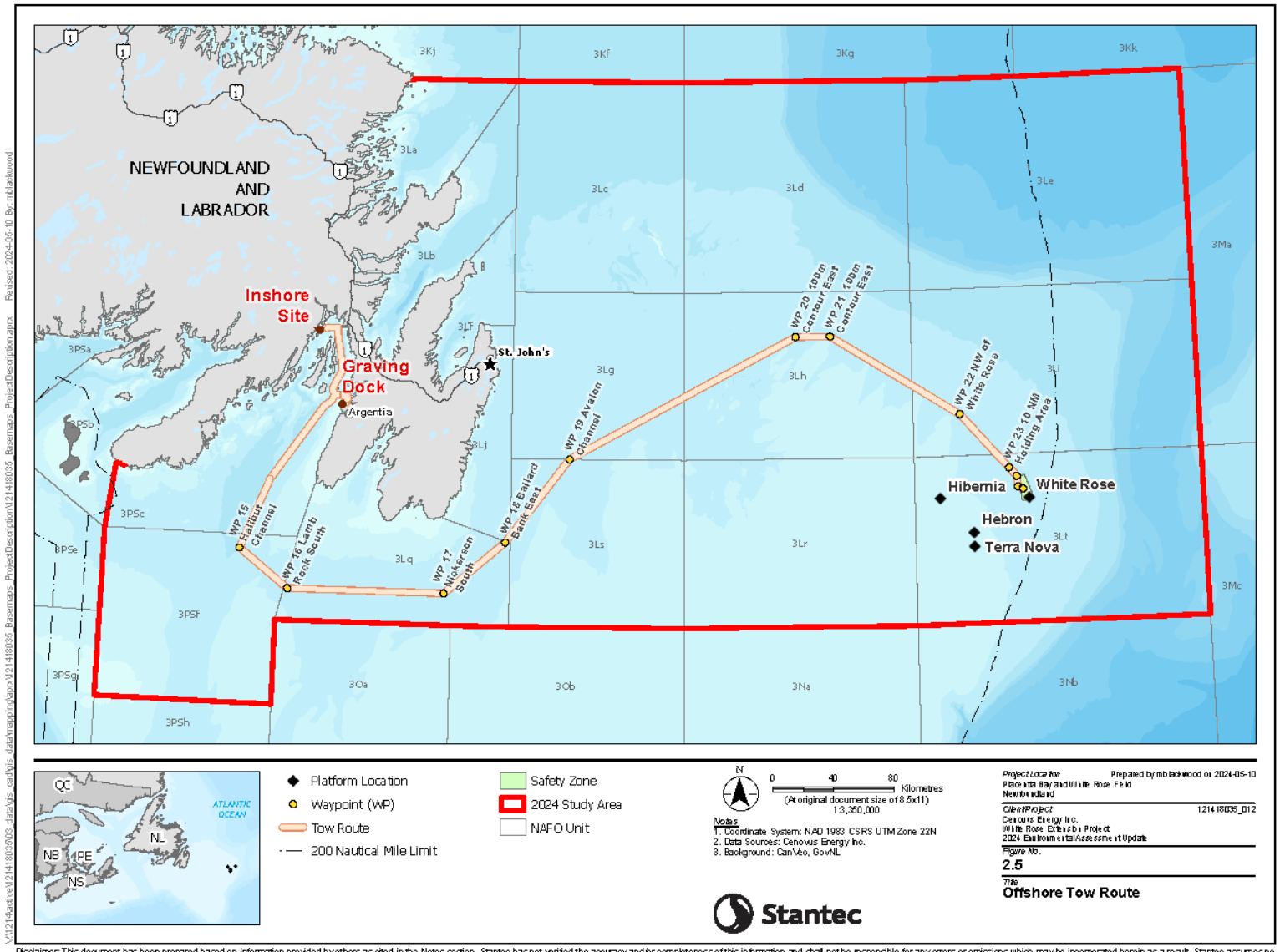
Offshore Project activities include:

- Offshore tow route survey
- WWRP subsea construction
- Marine rock installation

2.2.1 Offshore Tow Route Survey

Cenovus will be contracting a vessel to conduct a survey of the tow-route (Figure 2.5) to confirm the bathymetry from the nearshore site to the offshore site in the White Rose Field. The vessel will use multibeam / bathymetry equipment to perform the survey, which is expected to be conducted in Spring / Summer 2024.

Proposed Activities for 2024



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Figure 2.5 Offshore Tow Route

2.2.2 WWRP Subsea Construction

Subsea construction activities will be completed in a joint program with the Life Extension Drydock work for the *SeaRose FPSO*. The joint program is planned to be conducted between May and October 2024.

The *M/V TechnipFMC Deep Explorer* will lay (wet store) the flowlines and structures in the field in preparation for the final tie-in to the structures. The following items are planned to be installed:

- 10” / 12” inner diameter (ID) production flowline and jumper segments
- 9” ID Water Injection flowline
- 6” ID Gas supply flowline
- Production flowline mid-line WYE tie-in structure
- Production flowline mid-line TEE tie-in structure
- Gas Supply Subsea Isolation Valve structure
- Water Injection Flowline Termination Module

Structures would be installed in their nominated target locations or temporarily parked nearby.

A single pile will be installed near the Central Drill Center to serve as flowline weak link hold back / flowline anchoring.

2.2.3 Marine Rock Installation

The *M/V Van Oord Stornes* has been contracted for marine rock installation activities in 2024. The flexible fall pipe vessel will be installing a seabed preparation layer on the natural seabed at the CGS laydown location (Figure 2.6). The offshore activities are planned to be conducted between July and October 2024.

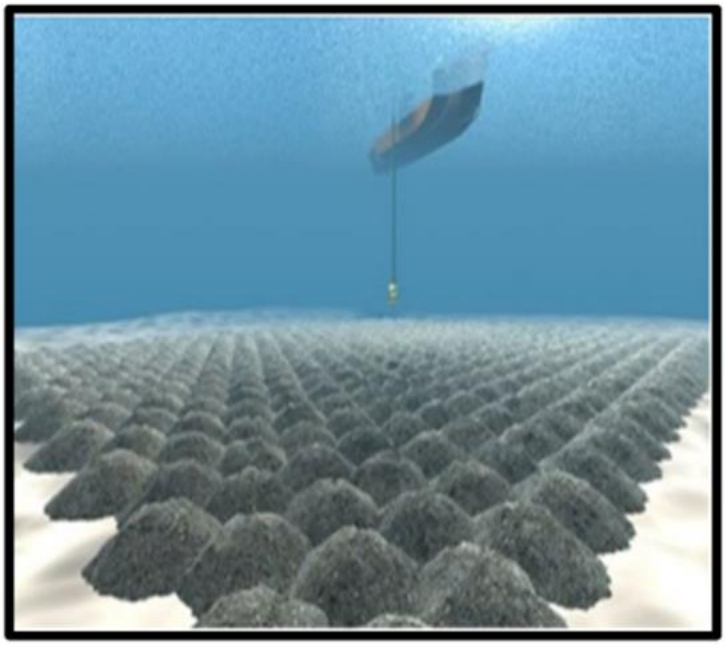


Figure 2.6 Illustration of Installing Seabed Preparation (Discrete Mounds)

3.0 ENVIRONMENTAL ASPECTS

This section addresses the environmental aspects associated with the activities outlined in Section 2.2.

3.1 COMMERCIAL FISHERIES

Information on weight and value of commercial fish species for the Nearshore Area (Unit Area 3PSc) and Offshore Area (Unit Areas 3PSf and 3Lghiqst) have been developed using commercial landings data provided by the Statistics Branch of Fisheries and Oceans Canada (DFO). Figure 3.1 illustrates the commercial fishing intensity for species fished between 2017 to 2021 in the UAs transited by the tow channel (i.e., 2024 Study Area).

3.1.1 Nearshore Area

This section provides a general overview and description of commercial fisheries activities in the Nearshore Area (UA 3PSc) since the EA was published in 2012. For the purpose of this updated baseline analysis, the area examined is all of Placentia Bay, which is encompassed by UA 3PSc. This administrative area is shown in Figure 2.1.

3.1.1.1 Current Unit Area 3PSc Fisheries

The composition of the harvest from 3PSc during the period 2011 to 2021, by weight and value, is provided in Table 3.1. Commercial landings (composite landings [kg] per 10 km² hexagon) of species harvested in Placentia Bay are illustrated in Figure 3.2. Cod, crab, and scallop landings in Placentia Bay are illustrated in Figures 3.3 to 3.5, respectively.

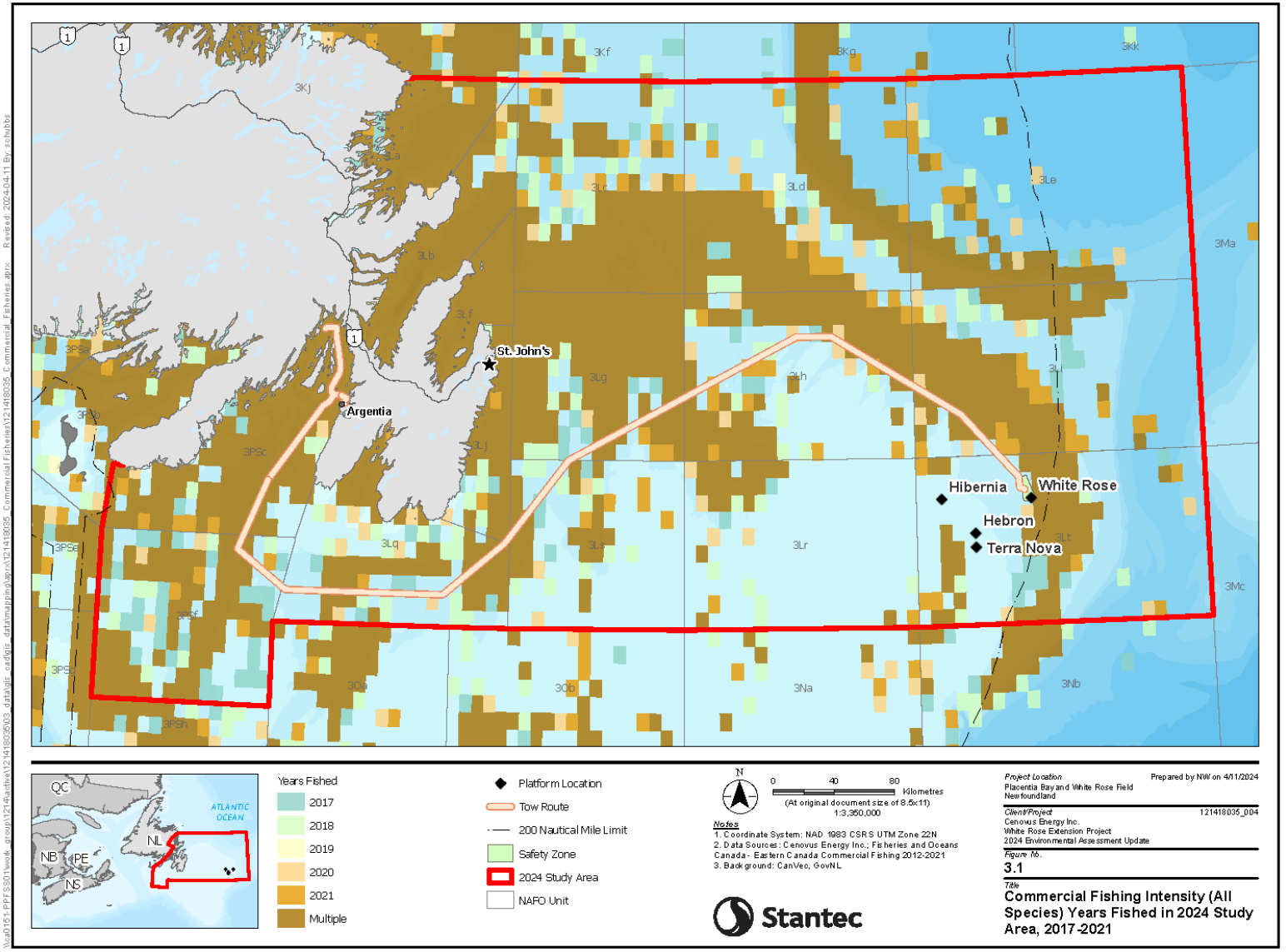
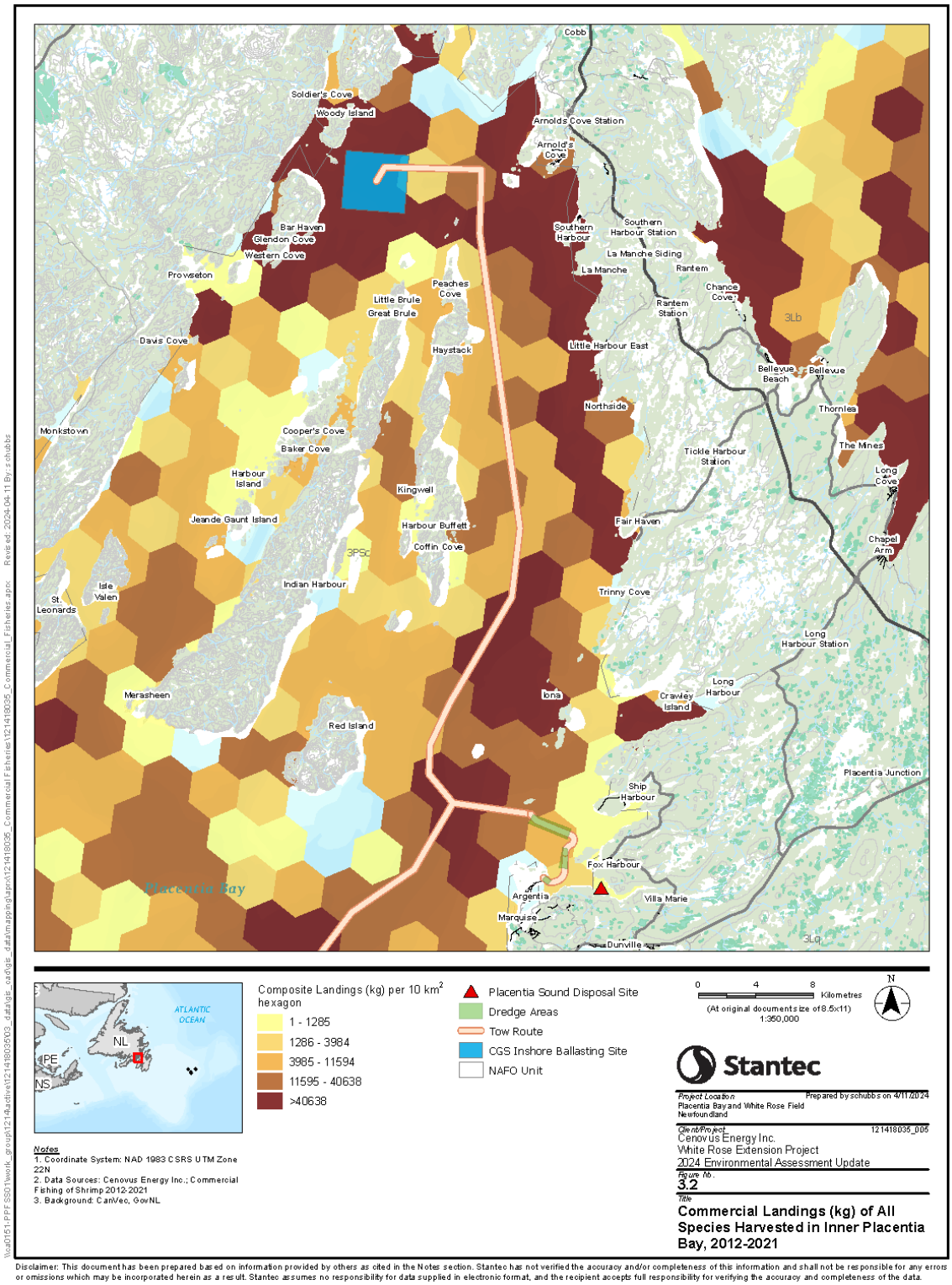

St. John's
Argentia
Hibernia
White Rose
Hebron
Terra Nova
3Ma
3Mc
3Nb
3Na
3Ob
3Oa
3Lq
3Lr
3Lt
3Lg
3Lh
3Lj
3Lf
3Ld
3Le
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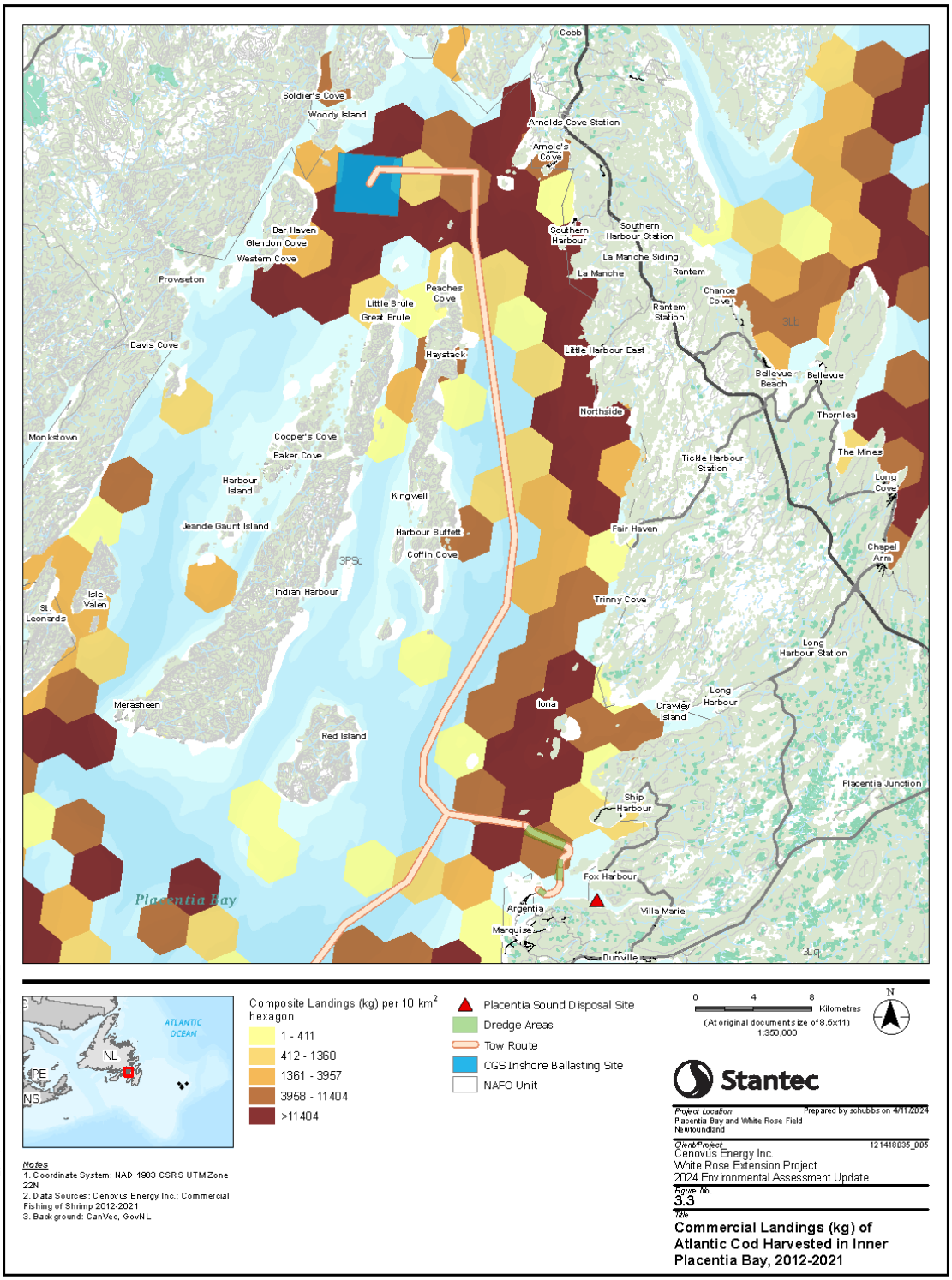
Table 3.1 Unit Area 3PSc by Species, 2011 to 2021 Annual Average Harvest, Quantity and Value

Species	Weight (kg)	% of Total by kg	Value ($)	% of Total by $
Atlantic Cod	15,999,399	35.24%	19,726,768	12.99%
Snow Crab	15,793,251	34.79%	114,027,720	75.12%
Capelin	2,955,580	6.51%	938,296	0.62%
Atlantic Herring	2,916,357	6.42%	989,329	0.65%
Whelk	2,419,655	5.33%	4,231,148	2.79%
Sea Scallop	2,031,466	4.47%	4,835,753	3.19%
Sea Cucumber	1,375,958	3.03%	1,208,379	0.80%
Winter Flounder	571,412	1.26%	926,530	0.61%
Pollock	268,151	0.59%	239,183	0.16%
Lobster	213,661	0.47%	2,320,531	1.53%
Greenland Halibut	211,272	0.47%	792,882	0.52%
American Plaice	162,360	0.36%	108,034	0.07%
White Hake	140,499	0.31%	141,193	0.09%
Yellowtail Flounder	91,172	0.20%	377,323	0.25%
Skate	74,750	0.16%	22,225	0.01%
Atlantic Halibut	61,202	0.13%	756,664	0.50%
Haddock	56,110	0.12%	55,610	0.04%
Icelandic Scallop	47,835	0.11%	84,311	0.06%
Redfish	5,709	0.01%	3,939	0.003%
Monkfish	2,768	0.01%	4,817	0.003%
Eels	1,373	0.003%	9,588	0.01%
Lumpfish (Roe)	714	0.002%	3,329	0.002%
Greysole/Witch	473	0.001%	327	0.0002%
Total	**45,401,127**	**100.00%**	**151,803,879**	**100.00%**
Source: DFO Catch and Effort Data 2011 to 2021				



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Figure 3.2 Commercial Landings (kg) of All Species Harvested in Inner Placentia Bay, 2012-2021



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Figure 3.3 Commercial Landings (kg) of Atlantic Cod Harvested in Inner Placentia Bay, 2012-2021

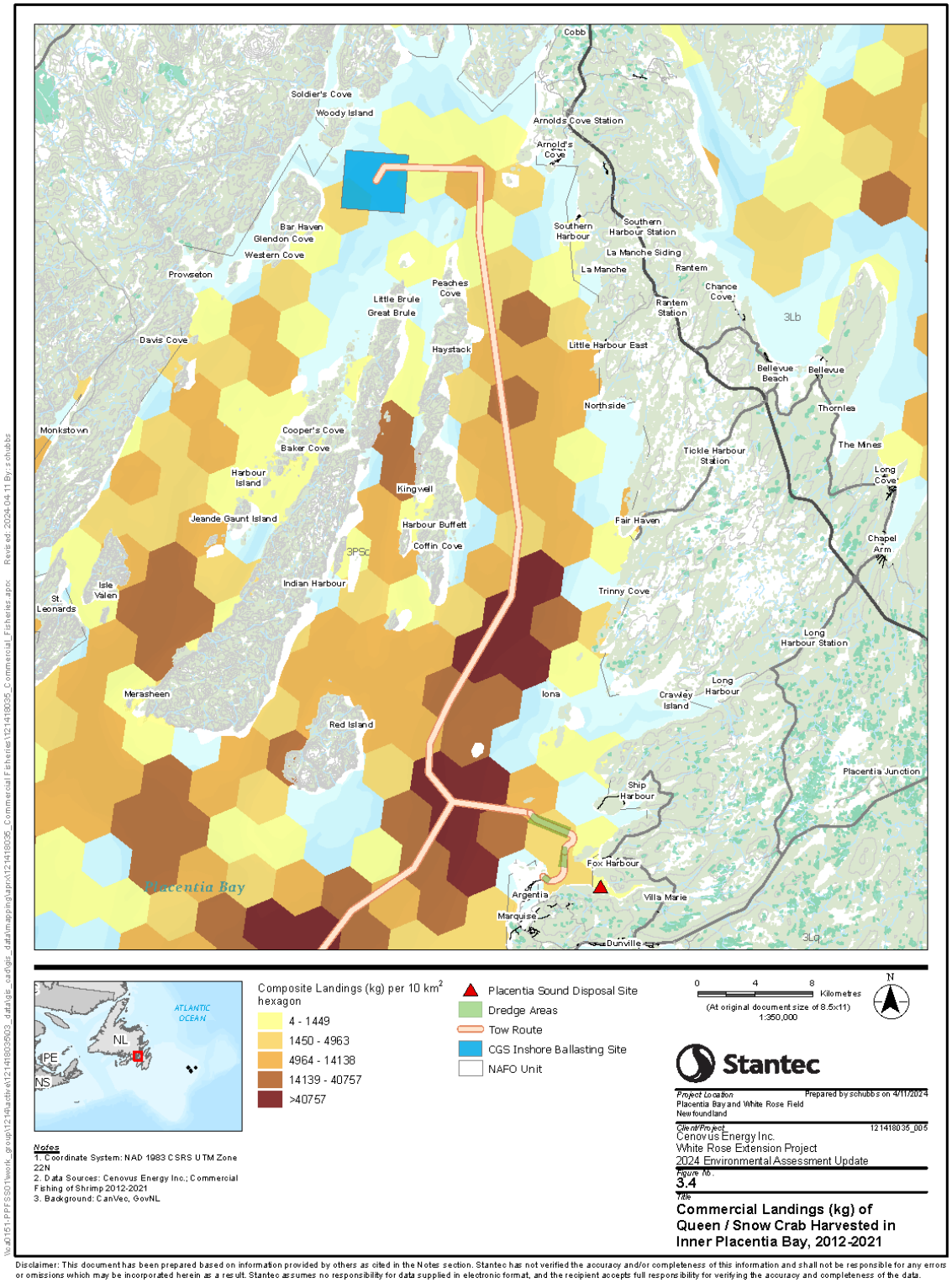
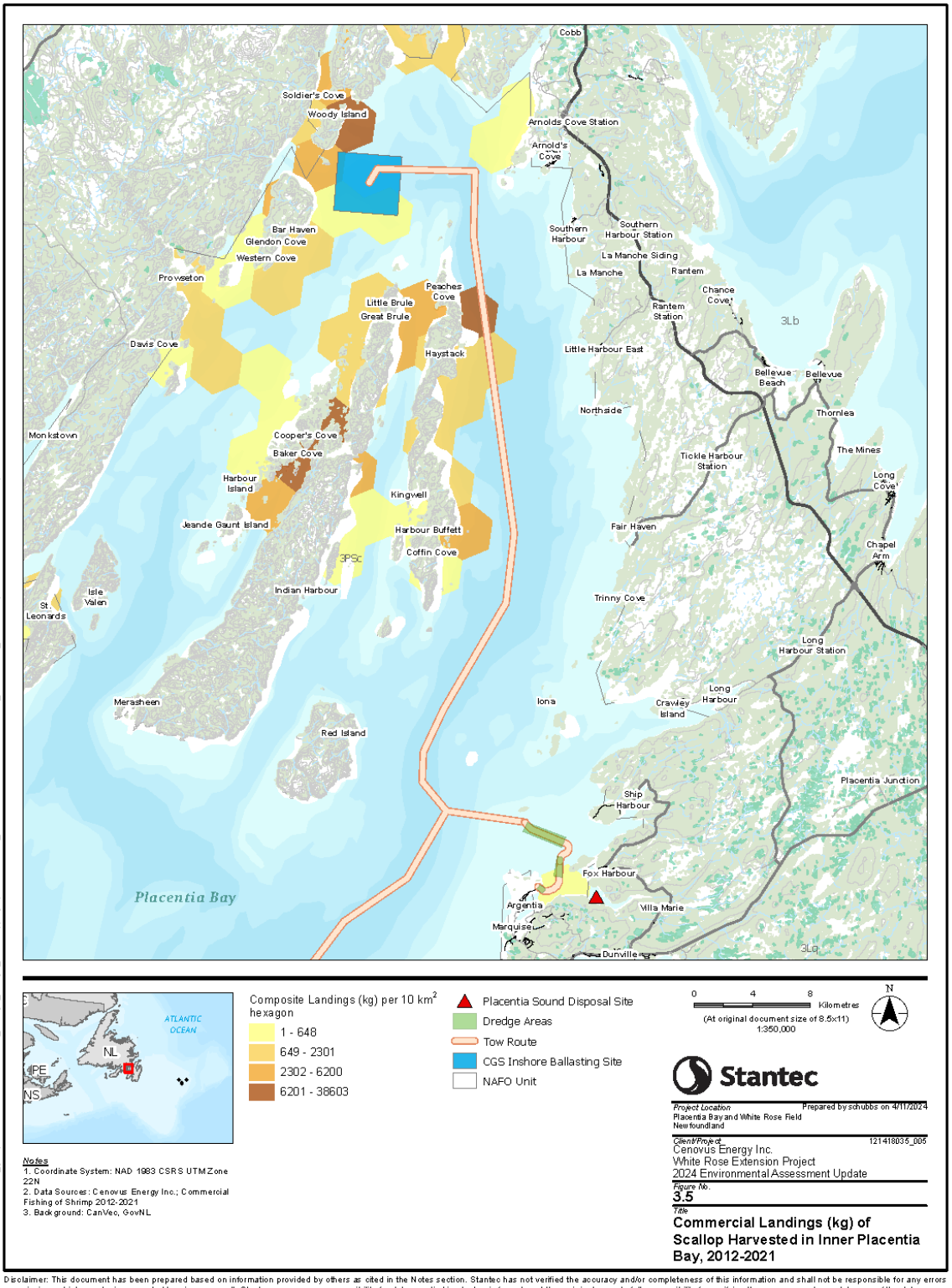


Figure 3.4 Commercial Landings (kg) of Queen / Snow Crab Harvested in Inner Placentia Bay, 2012-2021

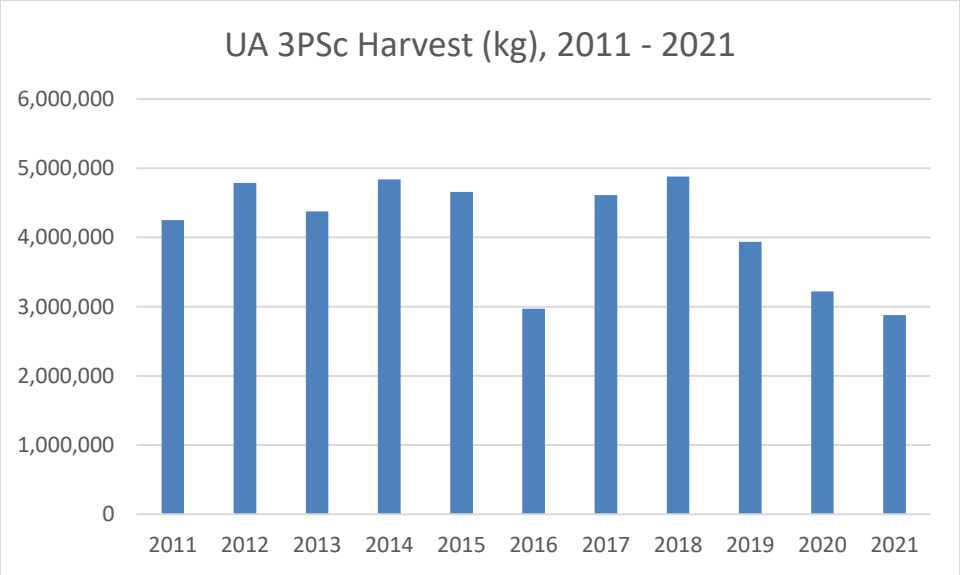


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Figure 3.5 Commercial Landings (kg) of Scallop Harvested in Inner Placentia Bay, 2012-2021

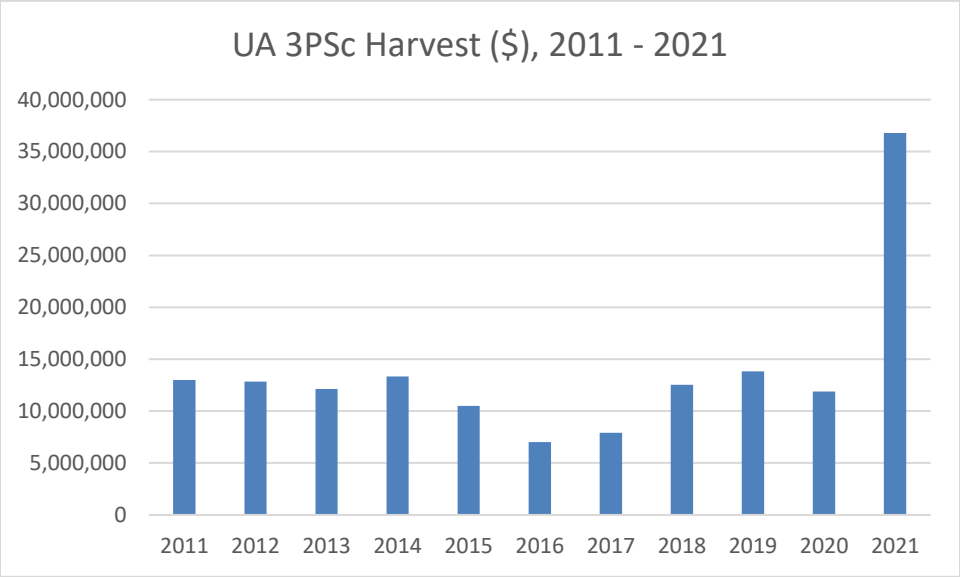
As the data in Table 3.1 show, Atlantic cod and snow crab are by far the most commercially important species harvested in the area, accounting for approximately 35% of the catch each, by weight, followed by capelin (6.51%) and Atlantic herring (6.4%). Although snow crab had a similar percentage to Atlantic cod of the overall quantity of harvest, given its high product value accounted for over 75% of the landed value during 2011 to 2022. The 10 top species, together, comprise more than 98% of the total quantity of the harvest in these years. In terms of value, Atlantic cod and snow crab together made up approximately 88% of the average annual value.

The quantity and value of the UA 3PSc fisheries by year from 2011 to 2021 are plotted in Figures 3.6 and 3.7. As these figures indicate, the area's annual catch was relatively consistent, apart from 2016, 2020 and 2021. The highest total catch occurred in 2018 with a total of 4,879,082 kg and $12,527,740 in value. The lowest total catch occurred in 2021 (2,876,402 kg), which also had the highest value ($36,805,982). This is likely a result of inflation due to the COVID-19 pandemic.



Source: DFO Catch and Effort Data 2011 to 2021

Figure 3.6 Quantity of Harvest by Year, Unit Area 3PSc, 2011 to 2021



Source: DFO Catch and Effort Data 2011 to 2021

Figure 3.7 Value of Harvest by Year, Unit Area 3PSc, 2011 to 2021

3.1.1.2 Fishing Gear

The average quantity and value of the total harvest by each gear and gear type (fixed [Figure 3.8] versus mobile [Figure 3.9]) for the 2011 to 2021 period is listed in Table 3.2. Overall, during 2011 to 2021, over 88% (by weight) of the all-species were harvested with fixed gear.

Table 3.2 Unit Area 3PSc Harvest by Gear and Gear Type, 2011 to 2021 Annual Average, Quantity and Value

Gear	Type	Weight (kg)	% of Total by kg	Value ($)	% of Total by $
Pots	Fixed	18,426,567	40.59%	120,579,399	79.43%
Gillnet (set of fixed)	Fixed	14,667,156	32.31%	18,670,957	12.30%
Tuck Seine	Fixed	2,955,580	6.51%	938,296	0.62%
Purse Seine	Mobile	2,806,054	6.18%	1,010,776	0.67%
Dredge (boat)	Mobile	2,079,301	4.58%	4,920,064	3.24%
Hand Line (baited)	Fixed	1,767,325	3.89%	2,469,462	1.63%
Sea Cucumber Drag	Fixed	1,375,958	3.03%	1,208,379	0.80%
Longline	Fixed	1,124,647	2.48%	1,748,134	1.15%
Rectangular Trap	Fixed	186,625	0.41%	234,314	0.15%
Bottom Otter Trawl (stern)	Mobile	10,541	0.02%	14,510	0.01%
Fyke Net	Fixed	1,373	0.003%	9,588	0.01%
Total		**45,401,127**	**100%**	**151,803,879**	**100%**
Source: DFO Catch and Effort Data 2011 to 2021					

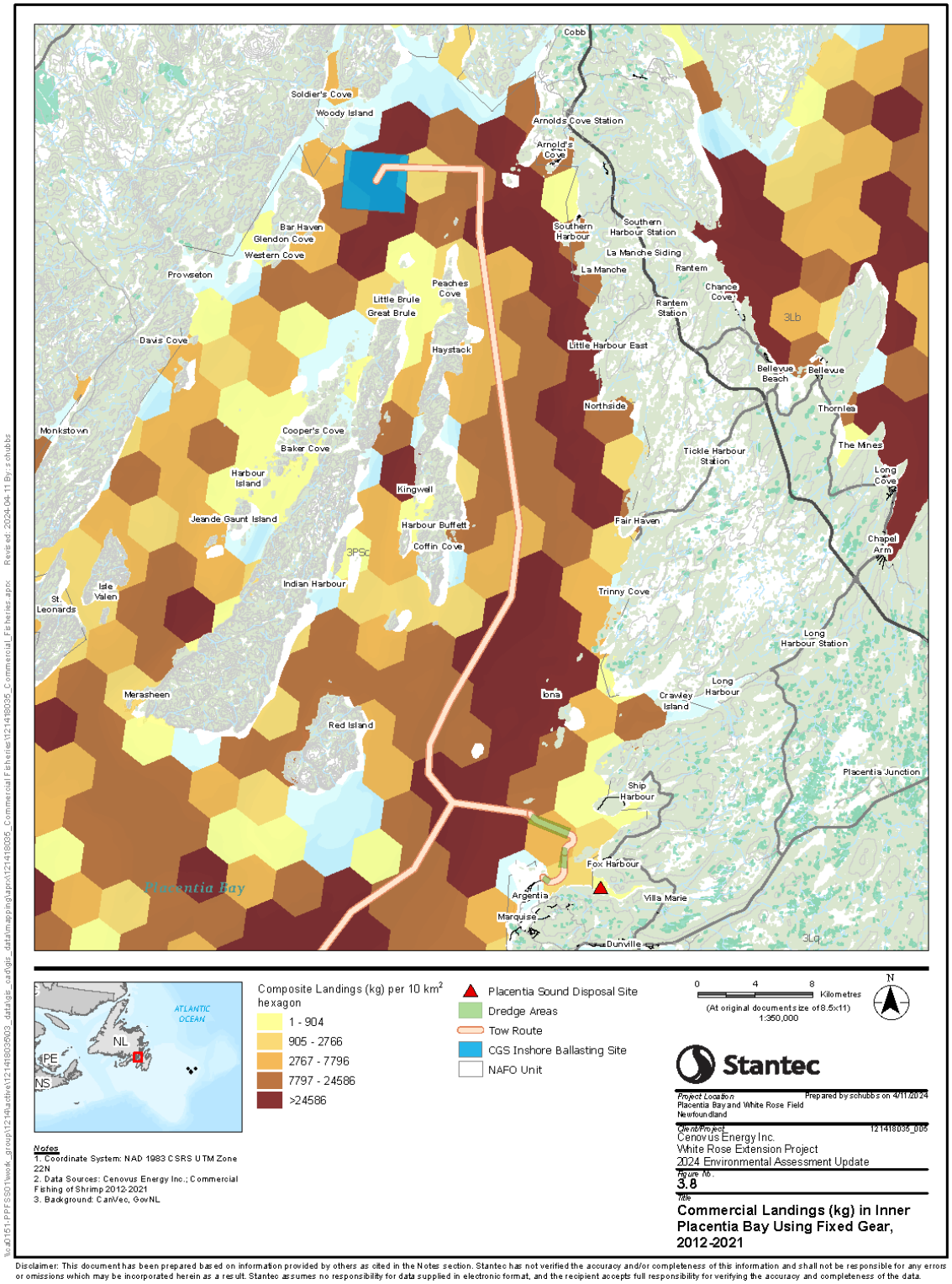
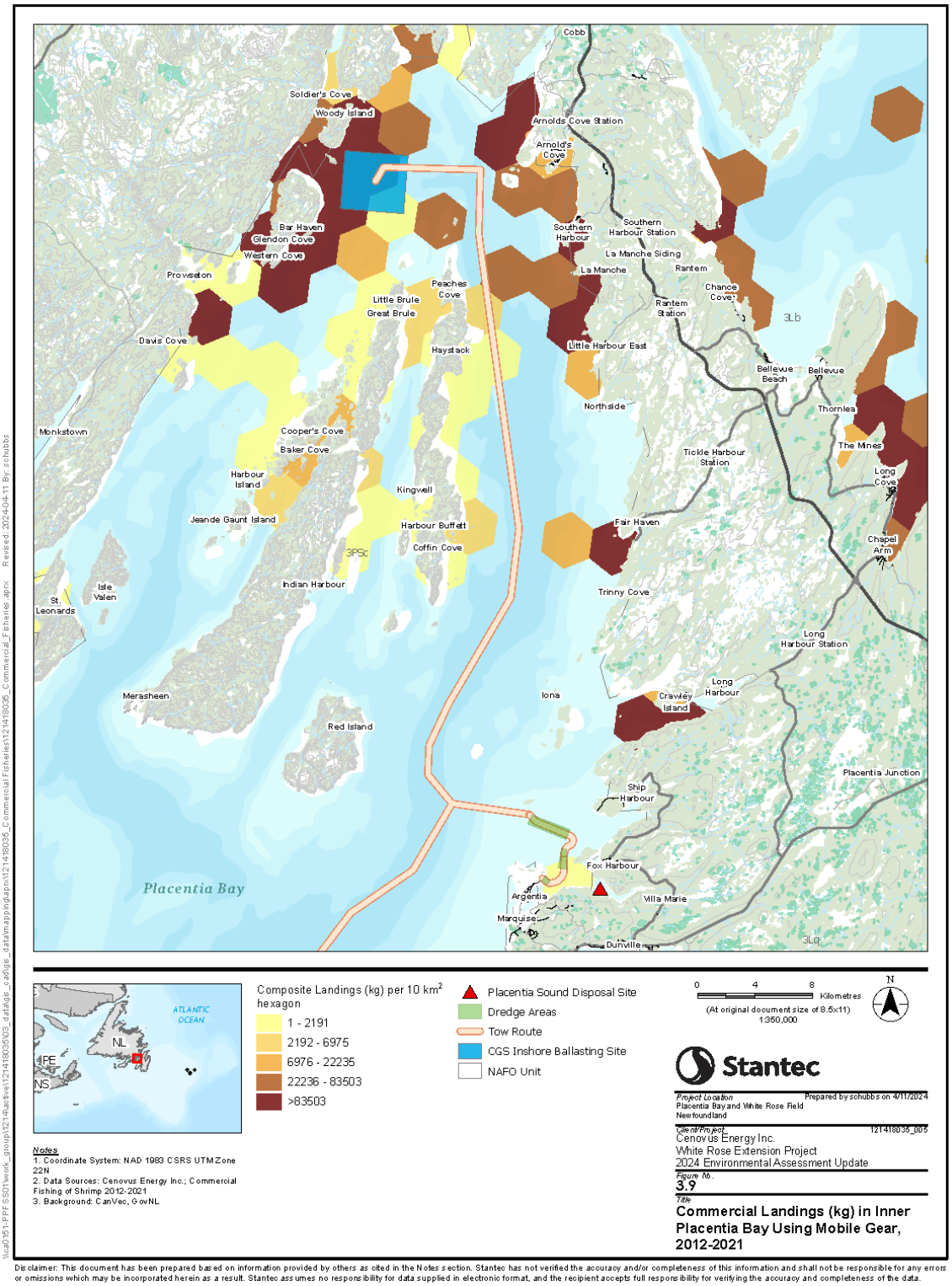


Figure 3.8 Commercial Landings (kg) in Inner Placentia Bay Using Fixed Gear, 2012-2021



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Figure 3.9 Commercial Landings (kg) in Inner Placentia Bay Using Mobile Gear, 2012-2021

3.1.2 Offshore Area

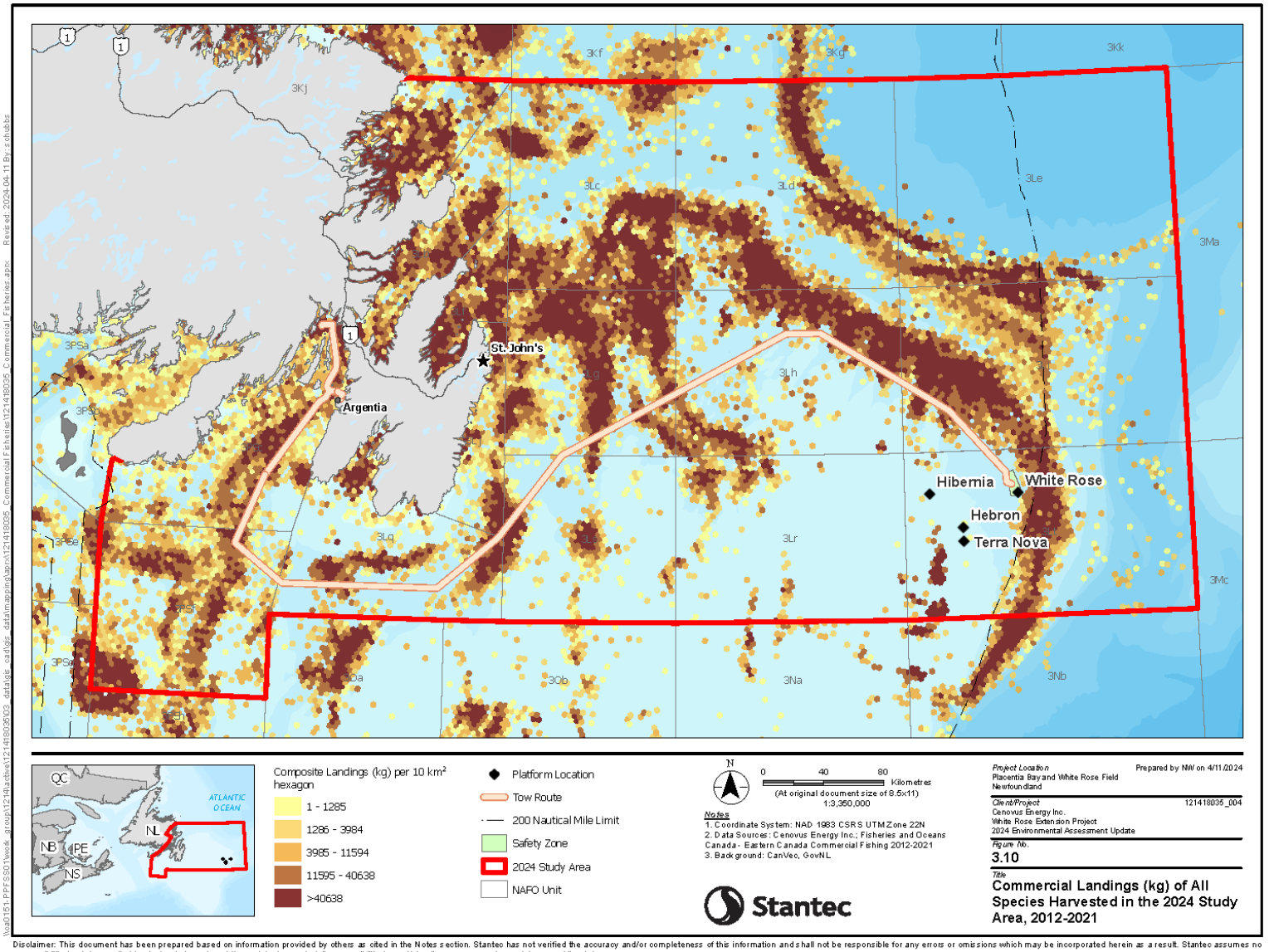
This section provides a general overview and description of commercial fisheries activities in UAs 3PSf and 3Lghiqst since the EA was published in 2012. For the purpose of this updated baseline analysis, the UAs examined comprise the Offshore Area. This administrative area is shown in Figure 2.1. Note that while the 2024 Study Area includes Placentia Bay (Section 3.1.1), the tables provide information specific to UAs 3PSf and 3Lghiqst, the UAs through which the tow channel transits.

3.1.2.1 Current Offshore Area Fisheries

The composition of the harvest from UAs 3PSf and 3Lghiqst during the period 2011 to 2021, by weight and value, is provided in Table 3.3. Commercial landings (composite landings [kg] per 10 km² hexagon) of species harvested in the Offshore are illustrated in Figure 3.10. Crab landings in offshore area are illustrated in Figure 3.11.

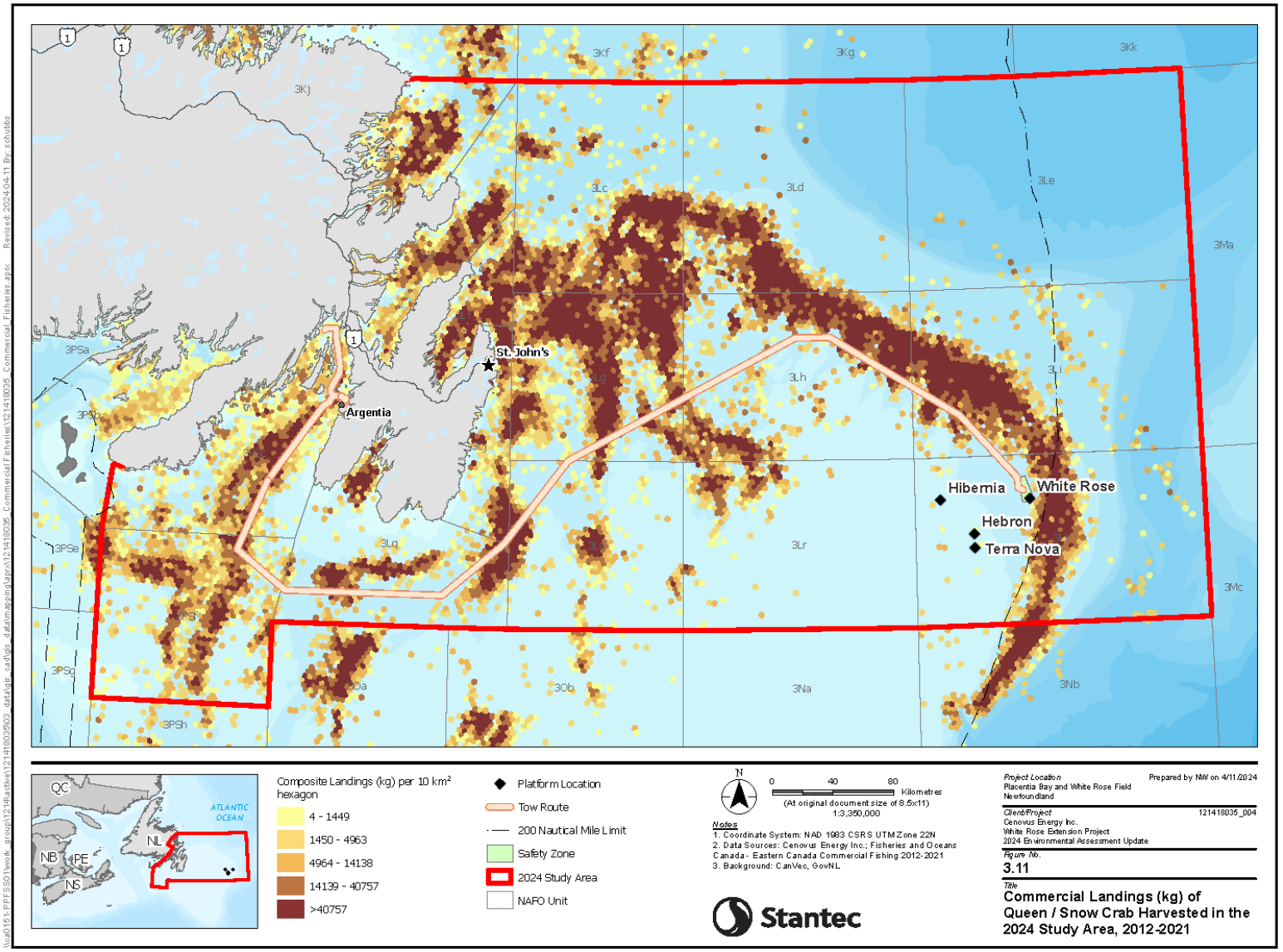
Table 3.3 Unit Areas 3PSf and 3Lghiqst by Species, 2011 to 2021 Annual Average Harvest, Quantity and Value

Species	Weight (kg)	% of Total by kg	Value ($)	% of Total by $
Queen/Snow Crab	177,083,292	85.66%	$1,201,155,259.77	95.87%
Shrimp, *Pandalus borealis*	11,258,570	5.45%	$22,812,833.38	1.82%
Sea Cucumber	6,375,867	3.08%	$9,450,562.71	0.75%
Atlantic Cod	4,085,385	1.98%	$5,102,319.51	0.41%
Whelk	3,292,468	1.59%	$5,246,862.95	0.42%
Capelin	1,250,170	0.60%	$396,887.76	0.03%
Haddock	1,094,134	0.53%	$1,506,408.11	0.12%
Turbot/Greenland Halibut	829,153	0.40%	$2,923,590.60	0.23%
Sea Scallop	647,538	0.31%	$1,701,476.13	0.14%
Redfish	305,345	0.15%	$307,722.63	0.02%
Bluefin Tuna	124,934	0.06%	$1,200,747.57	0.10%
White Hake	115,335	0.06%	$149,020.59	0.01%
Squid, Illex/Shortfin	86,696	0.04%	$126,147.12	0.01%
Pollock	53,702	0.03%	$58,304.95	0.00%
American Plaice	50,408	0.02%	$34,719.83	0.00%
Atlantic Halibut	61,223	0.03%	$712,135.09	0.06%
Skate	15,265	0.01%	$7,186.60	0.00%
Monkfish (American Angler)	5,257	0.00%	$7,423.39	0.00%
Yellowtail Flounder	3,028	0.00%	$1,721.07	0.00%
Total	**206,737,770**	**100.00%**	**$1,252,901,329.76**	**100.00%**



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Figure 3.10 Commercial Landings (kg) of All Species Harvested in the 2024 Study Area, 2012-2021



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Figure 3.11 Commercial Landings (kg) of Queen / Snow Crab Harvest in the 2024 Study Area, 2012-2021

As the data in Table 3.3 show, snow crab is by far the most commercially important species harvested in the area, accounting for approximately 86% of the catch each by weight, followed by shrimp (5.5%) (which are not harvested in the UAs transited by the tow channel). Snow crab accounted for over 95% of the landed value during 2011 to 2022.

The quantity and value of the UAs 3PSf and 3Lghiqst fisheries by year from 2011 to 2021 are plotted in Figures 3.12 and 3.13, respectively. The highest total catch occurred in 2011 with a total of 21,777,148 kg. As Figure 3.12 indicates, the area's annual catch was relatively consistent, apart from 2011 to 2015. The harvest dropped steadily from 2015 to 2019, which had the lowest total catch (8,003,323 kg). Catch weight increased in 2020 and 2021; with 2021 recording the highest value ($243,448,123).

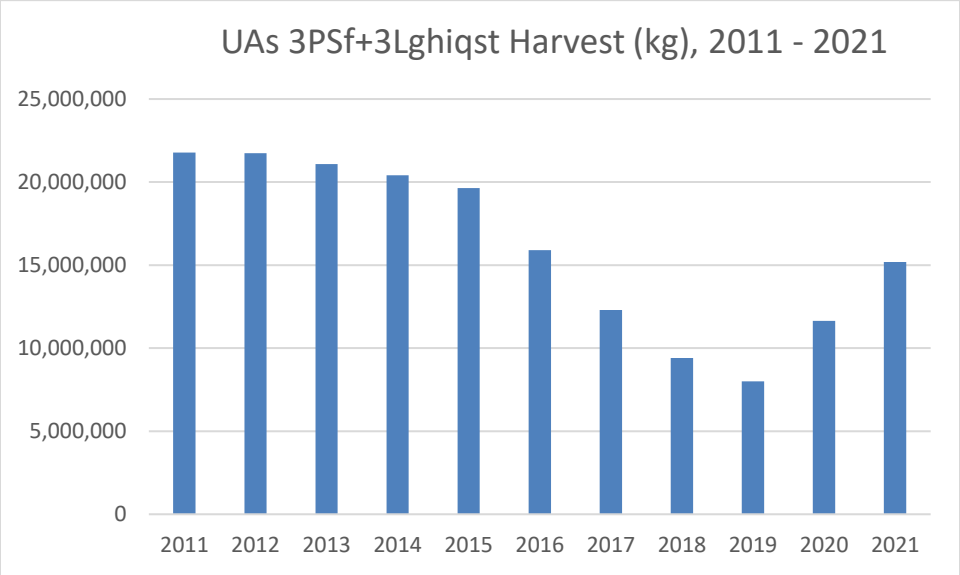


Figure 3.12 Quantity of Harvest by Year, Unit Areas 3PSf and 3Lghiqst, 2011 to 2021

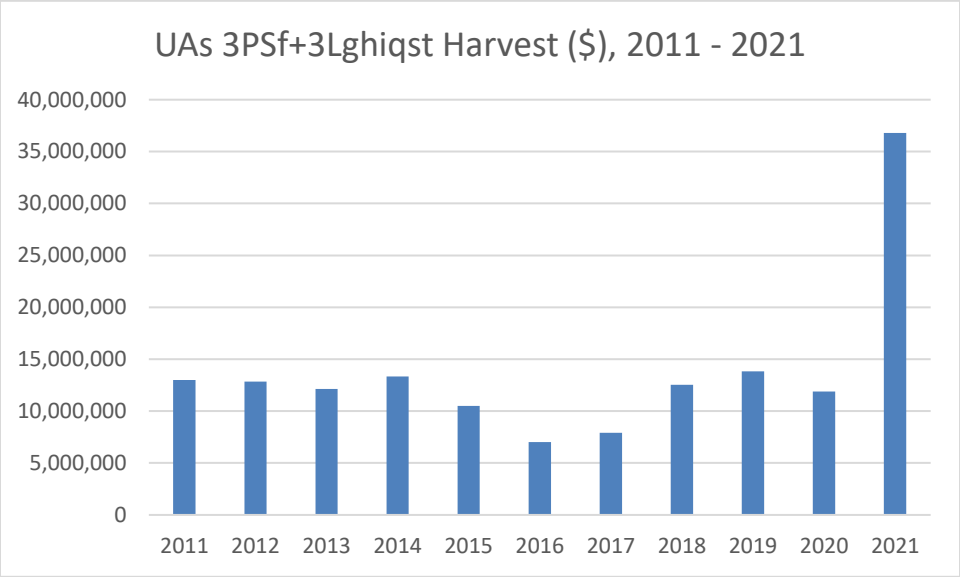


Figure 3.13 Value of Harvest by Year, Unit Areas 3PSf and 3Lghiqst, 2011 to 2021

3.1.2.2 Fishing Gear

The average quantity and value of the total harvest by each gear and gear type (fixed [Figure 3.14] versus mobile [Figure 3.15]) in the 2024 Study Area for the 2011 to 2021 period is listed in Table 3.4. Overall, during 2011 to 2021, over 93% (by weight) of all species were harvested with fixed gear.

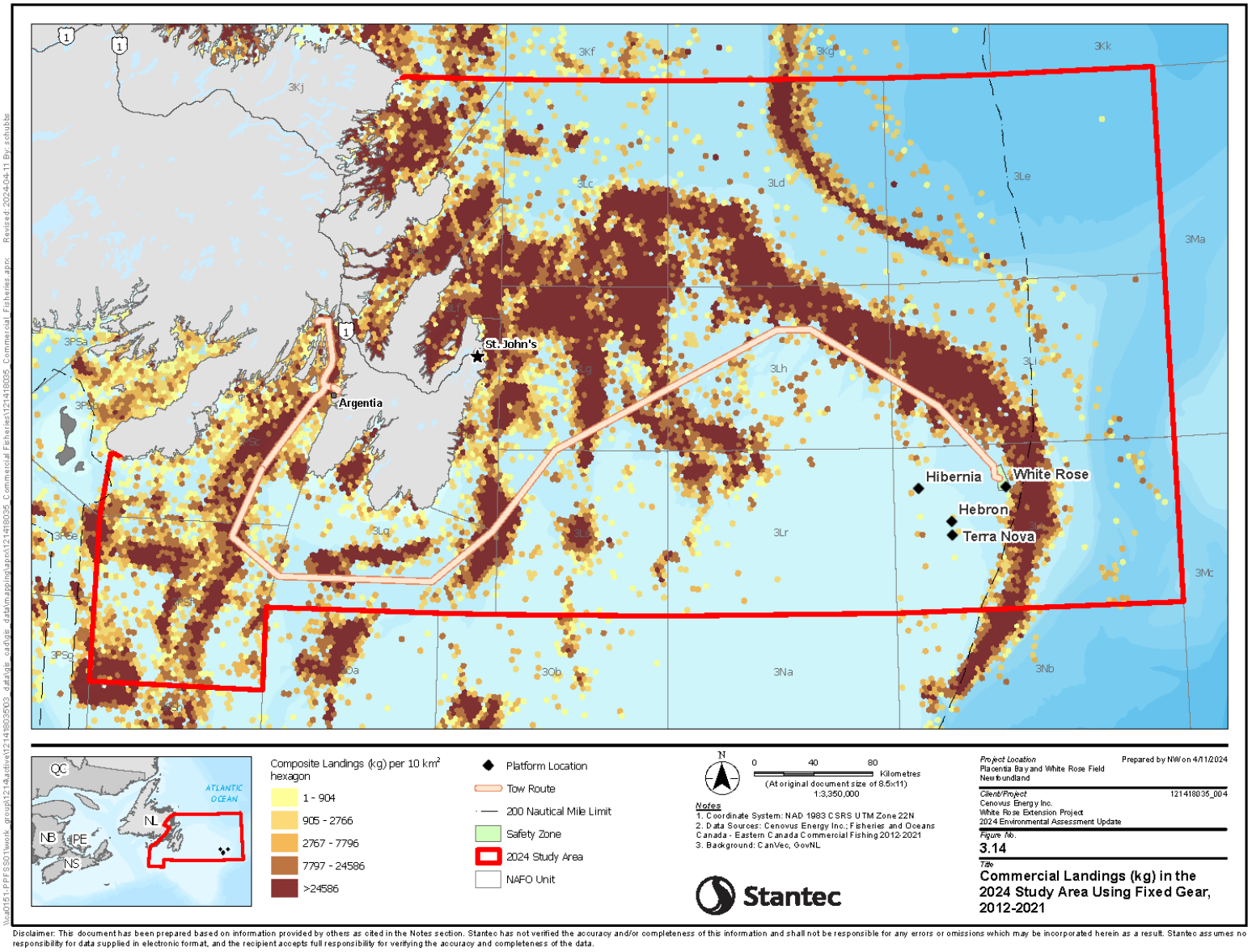


Figure 3.14 Commercial Landings (kg) in the 2024 Study Area Using Fixed Gear, 2012-2021

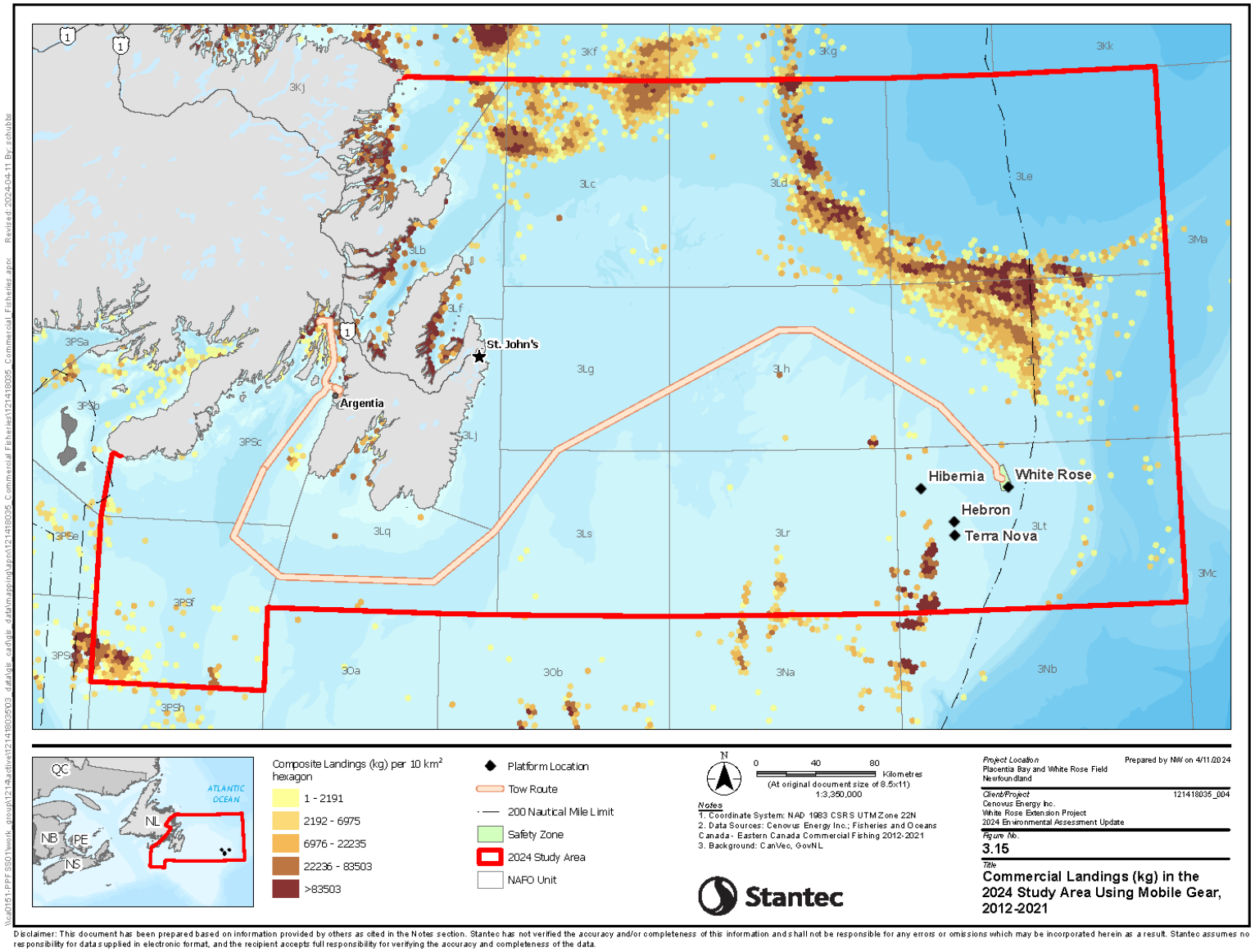


Figure 3.15 Commercial Landings (kg) in the 2024 Study Area Using Mobile Gear, 2012-2021

Table 3.4 Unit Areas 3PSf and 3Lghiqst Harvest by Gear and Gear Type, 2011 to 2021 Annual Average, Quantity and Value

Gear	Type	Weight (kg)	% of Total by kg	Value ($)	% of Total by $
Pots	Fixed	177,157,540	87.05%	$1,206,402,123	96.29%
Shrimp Trawl	Mobile	11,258,570	5.53%	$22,812,833	1.82%
Sea Cucumber Drag	Fixed	6,375,867	3.13%	$9,450,563	0.75%
Gillnet	Fixed	5,041,676	2.48%	$8,014,557	0.64%
Bottom Otter Trawl (stern)	Mobile	1,358,808	0.67%	$1,916,753	0.15%
Dredge (Boat)	Mobile	647,538	0.32%	$1,701,476	0.14%
Longline	Fixed	192,894	0.09%	$959,929	0.08%
Troller Lines	Mobile	102,872	0.05%	$929,653	0.07%
Tuck Seine	Fixed	1,027,803	0.51%	$326,293	0.03%
Electric Harpoon	Mobile	8,645	0.00%	$155,824	0.01%
Mechanized Squid Jigger	Fixed	86,696	0.04%	$126,147	0.01%
Purse Seine	Fixed	222,367	0.11%	$70,594	0.01%
Handline (baited)	Fixed	31,254	0.02%	$34,585	0.00%
Total	**-**	**203,512,530**	**100.00%**	**$1,252,901,330**	**100.00%**

3.2 SPECIES AT RISK

Appendix A outlines species at risk as designated by the *Species at Risk Act* (SARA) and the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), as well as the Newfoundland and Labrador (NL) *Endangered Species Act*, for the Nearshore Study Area and 2024 Study Area.

Since the 2012 EA, six species have been re-assessed by COSEWIC and/or SARA with new designations (Environment and Climate Change Canada [ECCC] 2023a):

- Cusk (*Brosme brosme)* - Designated Threatened by COSEWIC in May 2003. Status re-examined and designated Endangered in November 2012
- Winter skate (*Leucoraja ocellata*; Eastern Scotian Shelf and Newfoundland population) - Populations were re-assigned in 2015; the Eastern Scotian Shelf population of Winter Skate was assessed as Threatened in May 2005, and the Northern Gulf - Newfoundland population was assessed as Data Deficient in May 2005. Designated Endangered by COSEWIC in May 2015
- Blue shark (*Prionace glauca*; North Atlantic population) - Designated Special Concern by COSEWIC in April 2006. Status re-examined and designated Not at Risk in November 2016
- Roughhead grenadier (*Macrourus berglax*) - Designated Special Concern by COSEWIC in April 2007. Status re-examined and designated Not at Risk in November 2018

- Shortfin mako (*Isurus oxyrinchus*; Atlantic population) - Designated Threatened by COSEWIC in April 2006. Status re-examined and designated Special Concern in April 2017. Status re-examined and designated Endangered in May 2019
- Beluga whale (*Delphinapterus leucas*; Eastern Hudson Bay population) - Designated Threatened by COSEWIC in April 1988. Status re-examined and designated Endangered in May 2004. Status re-examined and designated Threatened in November 2020

A search of the SARA Registry as of November 8, 2023, indicated 11 new Recovery Strategies, Management Plans, or Action Plans have been issued for species at risk in the Project Area since the 2012 EA (ECCC 2023a). These are outlined in Appendix A.

Since the 2012 EA, four new species (lumpfish, white hake, Leach's storm-petrel, and red-necked phalarope) have been assessed by COSEWIC, one of which (red-necked phalarope) has also been added to SARA Schedule 1. An additional species (loggerhead sea turtle) has also been added to SARA Schedule 1 since the 2012 EA (ECCC 2023a). These are discussed further below.

3.2.1 Lumpfish

Lumpfish (*Cyclopterus lumpus*) was designated Threatened by COSEWIC in November 2017. Consultation has been conducted on whether lumpfish should be added to the List of Wildlife Species at Risk under the SARA. Lumpfish are thick, round fish with a short head, rounded snout, and mouth. They can vary in color and size, with females reaching larger sizes (29 to 68 cm) compared to males (26 to 46 cm). Lumpfish attach to objects using suckers, preventing drifting with the currents. They can be found in various habitats, including the water column and near the bottom. In Canadian waters they prefer temperatures below 5°C but can tolerate temperatures as high as 18°C. Lumpfish inhabit various waters in the western Atlantic, including NL waters, Flemish Cap, Gulf of St. Lawrence, Scotian Shelf, Bay of Fundy, Chesapeake Bay, Hudson Bay, and James Bay (COSEWIC 2017).

The only threat for which there is direct, quantitative data is fishing, which could contribute to the notable decline in abundance that has occurred since 2005. Currently in NAFO divisions 3KL, 3P, and 4RS, there are no quota regulations, but Conservation Harvesting Plans are in place in NL and Quebec. Lumpfish may also be threatened by the degradation or pollution of their inshore spawning and nesting habitat (COSEWIC 2017).

3.2.2 White Hake

White hake (*Urophycis tenuis*; Atlantic and Northern Gulf of St. Lawrence population) was designated Threatened by COSEWIC in November 2013 and is under consideration to be added to Schedule 1 under SARA. White Hake are cod-like groundfish observed on the east coast of Canada and the United States of America (USA), ranging from Labrador to North Carolina. The Atlantic and Gulf of St. Lawrence population overlaps with white hake found in NAFO divisions 5Y and 5Z in the USA. In Canadian waters, they are found on the Scotian Shelf (NAFO 4VWX), in the Northern Gulf (NAFO 4RS) and in NL waters (NAFO 3LNOP). White Hake can be found in environments with varying depths, temperatures, and salinities depending on their size. Larger fish are found in deeper waters, while juveniles occupy shallow

areas near shore or offshore banks. Juvenile fish are often associated with nearshore eelgrass beds. White hake typically travel inshore in summer moving to deeper waters in winter (COSEWIC 2013).

Fishing mortality from directed white hake fisheries and bycatch mortality in commercial fisheries are the only measurable threat for white hake recovery. Overfishing in the late 1980s and early 1990s led to the decline, but the threat is now considered low. The population of this species has experienced a 70% decline in adults over the past three generations, primarily before the mid-1990s. However, the population has remained stable, possibly due to restrictions on fisheries since the mid-1990s. High levels of natural mortality within the Atlantic and Northern Gulf of St. Lawrence population are currently the primary factor affecting recovery (COSEWIC 2013).

3.2.3 Leach's Storm-petrel

Leach's storm-petrel (*Oceanodroma leucorhoa*; Atlantic population) was designated as Threatened by COSEWIC in November 2020 and is under consideration to be added to Schedule 1 under SARA. This nocturnal seabird is characterized by its dark blackish-brown plumage with a white rump and a tube nose. Leach's Storm-petrel is the smallest and most widespread petrel species in the Northern Hemisphere, breeding in large colonies on coastal and offshore islands. Canada hosts 40% of the world's breeding population, with its largest colony at Baccalieu Island, Newfoundland. There are 93 active Atlantic breeding colonies in eastern Canada. Breeding occurs between May and September primarily along Newfoundland's east and south coasts and the Atlantic coast of Nova Scotia. Leach's Storm-petrel is typically found in warm productive waters with high nutrient upwelling areas outside of the breeding season (COSEWIC 2020).

Over the past three generations, the number of individuals in eight major colonies according to surveys has declined by 54%, with the rate increasing. These declines are contributed to several factors including displacement from preferred nesting habitat by other seabird species, high predation rates by gulls, changes in the food web of the northwest Atlantic, and light attraction from anthropogenic sources such as land-based lights, oil and gas installations, fishing vessels, and other marine traffic. Light pollution has been known to cause collisions and stranding of young birds, particularly near breeding colonies in eastern Newfoundland during the fall migration (COSEWIC 2020). This species is protected in Canada under the federal *Migratory Birds Convention Act, 1994*.

3.2.4 Red-necked Phalarope

Red-necked Phalarope (*Phalaropus lobatus*) was designated Special Concern by COSEWIC in November 2014 and added to Schedule 1 under SARA in May 2019 with the same status. This small shorebird is recognized by its red-orange breeding plumage on the sides and base of its neck. Females have brighter coloring during breeding season than males and are larger in size. The Red-necked Phalarope is a circumpolar breeder found in northern North America, Europe, and Asia and migrates along the Atlantic and Pacific coasts and interior North America to primarily winter offshore off the western coast of Peru. Breeding or migration occurs in every province and territory in Canada and may be present in the Study Areas during migration periods. The majority of Red-necked Phalarope that migrate are pelagic in nature, frequently staging on breaks in the continental shelf and upwellings, feeding primarily on zooplankton (COSEWIC 2014).

Threats to the Red-necked Phalarope are not well understood. Population decline is likely caused by factors such as breeding habitat degradation brought on by climate change. They are also vulnerable to pollution and oil exposure due to congregating in big groups on the ocean, particularly in areas where pollution is concentrated due to currents (COSEWIC 2014). The Red-necked Phalarope is protected in Canada under the federal *Migratory Birds Convention Act, 1994*. In 2023, ECCC published the *Management Plan for the Red-necked Phalarope (Phalaropus lobatus) in Canada* report under SARA. The management plan aims to achieve a stable or increasing population trend by 2043, focusing on monitoring trends, conserving habitat, engaging the public, preventing contaminants, and conducting research (ECCC 2023b).

3.2.5 Loggerhead Sea Turtle

The loggerhead sea turtle (*Caretta caretta*) was designated Endangered by COSEWIC prior to the 2012 EA in April 2010. This species has since been added to Schedule 1 under SARA in April 2017 with the same status. Among the six species of hard-shelled marine sea turtles, the loggerhead is distinguished by its large head and beak in comparison to other sea turtles, as well as its reddish-brown carapace. They are found in temperate, sub-tropical, and tropical waters of the Atlantic, Pacific, and Indian Oceans. This species nests and forages at lower latitudes but also migrate to forage in higher latitudes. In Atlantic Canada, they typically occur offshore during summer, primarily along the continental shelf break and have been observed in areas from George's Bank to the southern Grand Banks. Loggerhead habitat in Atlantic Canada is influenced by sea surface temperature with warmer waters being preferred. There is currently no population estimate for loggerheads in the Northwest Atlantic region (COSWEIC 2010).

Threats to loggerhead sea turtles in Atlantic Canada include fisheries bycatch, entanglement in ghost gear or other marine debris, underwater noise, marine pollution, and vessel strikes. Bycatch in the pelagic longline fishery in this region is considered the most harmful to loggerhead sea turtles (COSEWIC 2010). In 2020, DFO published the *Recovery Strategy for the Loggerhead Sea Turtle (Caretta caretta) in Canada* report under SARA. There is currently no identified critical habitat for this species due to limited information available. Specific recovery measures or activities required to meet the objectives outlined in the recovery strategy will be outlined in an action plan, which is expected to be completed within three years of posting the final recovery strategy (DFO 2020).

3.3 SPECIAL AREAS

The planned tow route travels through the Placentia Bay Extension Ecologically and Biologically Significant Area (EBSA) and Placentia Bay Important Bird Area (IBA) (Figure 3.16). These were described in the White Rose Extension Project EA (Husky 2012). The planned tow route does not overlap with the Cape St. Mary's IBA and Marine Refuge or a large gorgonian coral Significant Benthic Area (Figure 3.16). In addition to the IBAs, other sensitive areas located along the coast / shoreline include eelgrass beds, salt marshes, capelin beaches, and river otter haul-outs. These were described in the White Rose Extension Project EA (Husky 2012). Other than the Placentia Bay Extension EBSA and Placentia Bay IBA, the tow route does not transit through a special or environmentally sensitive area (Figure 3.16).



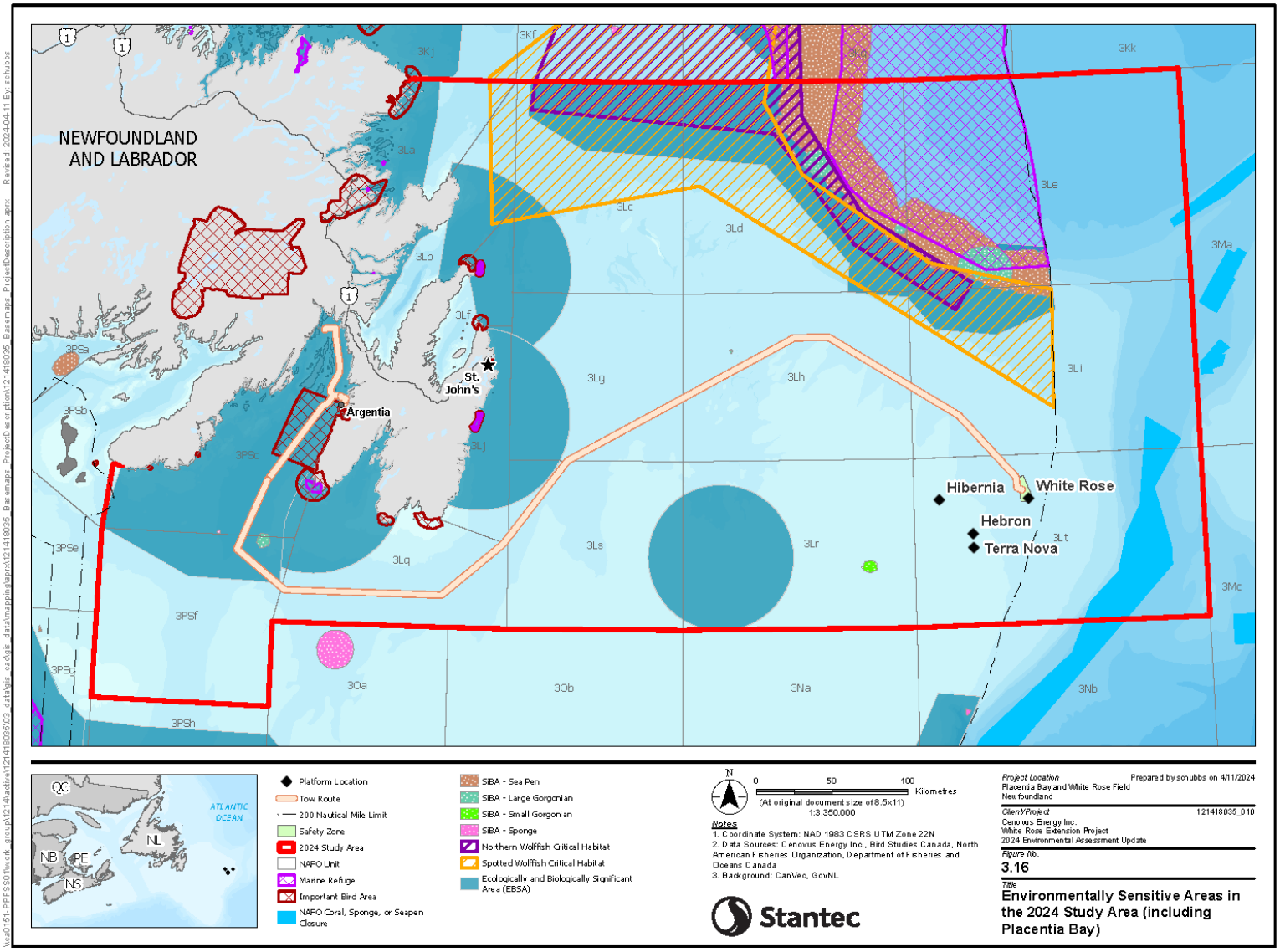


Figure 3.16 Environmentally Sensitive Areas in the 2024 Study Area (including Placentia Bay)

3.4 DFO SURVEYS

DFO undertakes annual fisheries research surveys in the NL offshore area. Table 3.5 provides the schedule for DFO research surveys for 2023 (P. Upward, pers. comm. 2023). It is assumed that 2024 surveys will occur within similar time frames. Cenovus will coordinate with DFO prior to commencement of proposed activities described in Section 2.2 to determine if there are spatial or temporal conflicts.

Table 3.5 Proposed 2023 DFO Research Vessel Surveys

Vessel	Activity	NAFO Divisions	Planned Start	Planned End
RV Cabot	NL Multispecies Spring Survey	3LNOPs	April 10, 2023	June 21, 2023
	NL Summer 2023 AZMP Oceanographic Survey	To be determined	July 11, 2023	August 1, 2023
	NL Multispecies Fall Survey	2HJ3K	September 17, 2023	December 15, 2023
RV Teleost	NL Spring Multispecies Survey	3LNOP	April 13, 2023	June 20, 2023
	Shellfish Survey	To be determined	August 29, 2023	September 10, 2023
	NL Fall Multispecies Survey	2HJ3K	September 17, 2023	December 15, 2023
	2024 Capelin Winter Acoustic Survey	To be determined	January 2, 2024	January 16, 2024
RV Cartier	NL Spring 2023 AZMP Oceanographic Survey	To be determined	April 3, 2023	April 25, 2023
	NL Spring Calibration and Capelin Survey	To be determined	April 26, 2023	May 21, 2023
	NL Fall Multispecies Survey	2HJ3KL3LNO	October 6, 2023	December 15, 2023

There is also an annual Industry-DFO Collaborative Post Season Trap Survey for snow crab, which is conducted using commercial and modified snow crab traps at established trap stations (J. Pantin, DFO, pers. comm.). The survey typically starts in late August or early September after the commercial snow crab season has ended. The fixed locations are the same each year; other stations are selected using a random stratified method and vary in location each year, based upon consultations with Food, Fish and Allied Workers-Unifor (FFAW-Unifor). Each station consists of setting 10 traps for a maximum soak time of 24 hours, after which the station



is surveyed. This is important to recognize and work with the FFAW to avoid conflicts (i.e., stations can be surveyed in advance / after activities).

The Atlantic Halibut Survey is conducted by DFO Maritimes each year. Survey locations include both fixed and random stratified stations.

Appendix B illustrates the 2023 locations of the post-season crab survey and the 2022 locations for the halibut survey.

Cenovus will contact DFO prior to commencement of proposed 2024 activities described in Section 2.2 to determine if there are spatial or temporal conflicts.

3.5 MITIGATION MEASURES

Each vessel for construction will have its own Environmental protection Plan that will align with the C-NLOPB's Offshore Waste Treatment Guidelines (National Energy Board et al. 2010), Environmental Protection Plan Guidelines (National Energy Board et al. 2011), Drilling and Production Guidelines (C NLOPB and Canada-Nova Scotia Offshore Petroleum Board 2017), the Geophysical, Geological, Environmental and Geotechnical Program Guidelines (C-NLOPB 2019) and other applicable regulatory requirements.

Cenovus re-commits to implementing the mitigation measures described in the approved EA for the proposed activities to be carried in 2024. Mitigation measures to be implemented for the proposed 2024 activities, as outlined in the previously approved EA and amendments, include the following:

- Equipment design
- Water quality monitoring during dredging
- Spill Response Plan
- Adherence to Transport Canada's *Ballast Water Control and Management Regulations*
- Environmental Protection Plan
- Compliance with *Fisheries Act* Authorization
- Use of industry best practices
- Safety zone
- Adhere to Canadian Wildlife Service recovery and release protocol for stranded birds
- Maintain steady course and safe speed when possible
- Avoid / deviate course for marine mammal and sea turtle and marine bird concentrations when possible
- Minimum altitude of 300 m and lateral distance of 2 km over active colonies, including Cape St. Mary's Ecological Reserve and elsewhere when possible
- Fisheries Liaison Committee (FLC)
- Fisheries Liaison Officer
- Single point of contact
- Marine Mammal and Seabird Observer(s)
- Communication / notifications
- Gear damage compensation



- Loss of access compensation
- Use of agreed routes / Vessel Traffic Separation Scheme

3.6 ENVIRONMENTAL EFFECTS ASSESSMENT STATEMENT

The proposed 2024 construction activities to be executed by Cenovus has been reviewed and assessed to be within the scope of previously approved EA, specifically:

- The scope and nature of proposed activities and addressed under the previously approved EA and amendments have not changed
- The nature and extent of the fishing activities being undertaken in the 2024 Study Area have been validated and have not changed such that proposed activities pose potential effects not previously assessed
- The nature of the species at risk in the 2024 Study Area have been validated; since the 2012 EA, six species have been re-assessed by COSEWIC and/or SARA with new designations: cusk, winter skate (Eastern Scotian Shelf and Newfoundland population), blue shark (North Atlantic population), roughhead grenadier, shortfin mako (Atlantic population), and beluga whale (Eastern Hudson Bay population) and four new species (lumpfish, white hake, Leach's storm-petrel, and red-necked phalarope) have been assessed by COSEWIC, one of which (red-necked phalarope) has also been added to SARA Schedule 1. An additional species (loggerhead sea turtle) has also been added to SARA Schedule 1 since the 2012
- No critical habitats for these species defined pursuant to the SARA occur in the 2024 Study Area
- The mitigation measures defined and committed to in the previously approved EA are still valid and will continue to be implemented
- The commitments and conditions associated with the previously approved EA will be implemented
- Cenovus continues to consult with regulatory agencies, fishers and Indigenous groups directly affected by the proposed activities under the previously approved EA

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

4.0 ENGAGEMENT

The following is a high-level summary of the engagements that were completed by Cenovus as it relates to the West White Rose Project.

4.1 LEGACY PROJECT ENGAGEMENT

The original project EA was approved in 2012 with amended scope changes in 2014. The WWRP project was then placed on hold until it was sanctioned in 2017. Since 2018, there has been consistent activities at the Argentia site where the CGS is currently under construction. The project has been engaging with the Newfoundland and Labrador Department of Environment and Climate Change (NLDECC), Placentia Bay Traffic Management Committee, Traffic Advisory Committee, Port Of Argentia, and town of Argentia throughout this period. The marine and subsea components of the Project were placed on hold during the Covid-19 pandemic with some varying levels of engagement with stakeholders for these programs. The Project had an official restart in late 2022 and has now re-engaged stakeholders in the area as planned works are expected to start within Placentia Bay and offshore. The scope of this engagement section of this EA update has been limited to this period to reflect the re-engagement of key stakeholders.

4.2 FISHERS

Table 4.1 summarizes Cenovus engagement with commercial fishers and One Ocean since the Project restart. During this time period, the FLC was re-established in order to provide a working group as activity picks up in Placentia Bay. Fisheries engagement will continue through 2024.

Table 4.1 Summary of Engagement with Commercial Fishers and One Ocean

Group	Date	Purpose	Commitments / Outcomes
One Ocean	24-May-2023	Provide a project update of WWRP and discuss best approach for future engagement	• Provide update to One Ocean Board at next meeting
FFAW-Unifor	21-June-2023	Provide general overview of WWRP to new industry liaison officer	• Provide slides with high level schedule of marine activities. • Stay in communication re marine activities. • Provide description of nearshore / offshore activities and maps (NAFO fishing areas)
One Ocean	28-June-2023	Provide WWRP 101 to One Ocean board	• No additional outcomes
FFAW-Unifor / One Ocean	18-Sept-2023	More detailed discussion regarding nearshore marine scopes, way forward for FLC and go forward communication	• Establishment of the FLC and plan initial meeting

Table 4.1 Summary of Engagement with Commercial Fishers and One Ocean

Group	Date	Purpose	Commitments / Outcomes
FFAW-Unifor	4-Dec-2023	Inaugural meeting of the FLC	• Cenovus to provide images / maps for next fleet meeting • Finalize Terms of References for FLC
FFAW-Unifor	2-Feb-2024	Meeting with 3PS Fish Harvesters Identify FLC Summary of 2023 nearshore project activities (Debris removal and Dredging)	• Request to add additional members to FLC • Some fishers raised concerns about Placentia Sound disposal location – follow up required. • Commitment to develop a compensation program for fish harvesters
Fox Harbour Fishers	1-Mar-2024	Working session to discuss disposal location in Placentia Sound and potential offsetting locations	• Identified preferred location for dumping dredge spoils would be behind White's point in Placentia Sound (back half of proposed disposal area). • Noted a preferred rock relocation location to Isaac's Head. • Identified three locations in Placentia Bay for potential reef ball offsetting program.

Cenovus has had limited indigenous fisheries engagement to date for the WWRP. An initial outreach correspondence was made August 2023 to the Qalipu First Nation and the Miawpukek First Nation but further communication has not taken place. As part of the *Fisheries Act* Authorization (DFO) and the Disposal at Sea (ECCC) permitting processes associated with dredging activities, Cenovus will seek increased engagement in 2024.

4.3 REGULATORY AGENCIES

Cenovus has met with the C-NLOPB and various federal and provincial regulators.

4.3.1 C-NLOPB

The C-NLOPB authorizes offshore area activities for the WWRP. Cenovus plans to execute the following activities in 2024 requiring C-NLOPB authorization:

- Offshore tow route survey
- WWRP / life extension drydock (LED) subsea construction (diving and construction program)
- Marine rock installation

A summary of some of the key engagements of 2023-2024 is provided in Table 4.2. The list is not exhaustive as more focused meetings are held on detailed Project topics on a regular basis.

Table 4.2 Summary of Engagement with C-NLOPB

Group	Date	Purpose	Commitments / Outcomes
CNLOPB	06-Jan-2023	WWRP Operations Authorization (OA) Plan Overview of the planned authorizations for WWRP construction	• Alignment on planned authorizations
CNLOPB	25-Jan-2023	WWRP Authorizations - Environmental Assessment	• EA amendment determined to be required for drill cuttings discharge overboard
CNLOPB	21-Apr-2023	Jurisdiction Discussion – Marine Sequence	• Alignment on the C-NLOPB jurisdiction for Marine Activities
CNLOPB	28-Apr-2023	WWRP / LED Subsea Construction OA Kick-Off	• N/A
CNLOPB	13-July-2023	WWRP Marine Rock Installation OA Kick-Off	• N/A
CNLOPB	14-Sept-2023	WWRP Topsides Installation OA Kick-Off	• N/A
CNLOPB	25-Jan-2024	WWRP Hookup and Commissioning and Use of Accommodation Support Vessel Kick-Off	• N/A
CNLOPB	27-Feb-2024	WWRP CGS Tow and Installation	• N/A
CNLOPB	Monthly	2023-2024 Operations Authorization Progress Updates	• Progress updates on Marine Rock Installation and WWRP / LED Subsea Construction authorizations

4.3.2 Fisheries and Oceans Canada

DFO regulates both nearshore and offshore components of the Project and will be assessing the work scopes with respect to the impact on Fish and Fish Habitat. Cenovus has the following project activities under assessment with DFO for 2024:

- Debris and boulder removal (Placentia Bay)
- Inner channel / outer channel / exit channel dredging and bundwall removal (Placentia Bay)
- Marine rock installation (offshore area)

A summary of some of the key engagements of 2023-2024 is provided in Table 4.3.

Table 4.3 Summary of Engagement with DFO

Group	Date	Purpose	Commitments / Outcomes
DFO	23-Mar-2023	Re-engage with DFO on project Status and upcoming activities	• Letter of Advice for bundwall removal no longer valid – resubmission required • New Request for Project Review for dredging • New Request for Project Review for debris and boulder removal • Benthic survey and plume model will be required for nearshore ballasting site • DFO will need to assess validity of existing habitat bank for offsetting
DFO	9-Feb-2024	Cenovus Scallop Shell Habitat	• Confirmed that habitat credits will be accepted on basis that it is survey and confirmed to be valid
DFO	Bi-Weekly	2023 - 2024 Request for Review Progress	• Progress updates on request for review and associated deliverables

4.3.3 Environment and Climate Change Canada

Engagement started with ECCC the Disposal at Sea Permit required for the disposal of dredge materials in Placentia Sound. Regular engagement with ECCC will start again in Q1 2024 upon finalizing details of disposal site. A summary of some of the key engagements of 2023-2024 is provided in Table 4.4.

Table 4.4 Summary of Engagement with ECCC

Group	Date	Purpose	Commitments / Outcomes
ECCC	18-May-2023	Re-engage with ECCC on project Status and upcoming activities	• Confirmed 90 day review period with complete application • ECCC to provide contact for indigenous coordinator • Alternative assessment and effects assessment required for Disposal at Sea submission • Dispersion modelling for Placentia Sound will be required for Disposal at Sea submission

Table 4.4 Summary of Engagement with ECCC

Group	Date	Purpose	Commitments / Outcomes
ECCC	6-Mar-2024	Engage with ECCC on upcoming Disposal at Sea application	• Reviewed mapping of disposal area. • Discussion of alignment with DFO and local Fishers. • Discussion of boulder placement and side-casting application.

4.3.4 Transport Canada

Cenovus is engaged with Transport Canada with respect to the Navigation Protection Program. Cenovus will be seeking approval for works that will be occurring within Placentia Bay navigable waters and has the following project activities under assessment with Transport Canada for 2024:

- Inner channel dredging
- Outer channel dredging
- Exit channel dredging

A list of engagements with Transport Canada is provided in Table 4.5.

Table 4.5 Summary of Engagement with Transport Canada

Group	Date	Purpose	Commitments / Outcomes
Transport Canada	23-Feb-2023	Re-engage with Transport Canada on project Status and upcoming activities	• Provided Transport Canada an overview of the Placentia Bay activities
Transport Canada	7-Nov-2023	Pre-application for Navigation Protection Program	• Confirmed scopes that require applications • Discussed potential for an exclusion zone

4.4 OTHER FEDERAL DEPARTMENTS

Cenovus will contact the Department of National Defence to determine if there are planned military activities scheduled in 2024 that overlap spatially / temporally with the planned Project activities.

4.5 NEWFOUNDLAND AND LABRADOR DEPARTMENT OF ENVIRONMENT AND CLIMATE CHANGE

NLDECC regulates construction of the CGS in Argentia including the work scopes impacting industrial compliance through the Pollution Prevention Division, and the effect on freshwater and marine through the Water Resources Management Division. Cenovus has the following Project activities under assessment with NLDECC for 2024:

- Construction of the CGS at the Argentia graving dock
- Removal of the bundwall and dredging of the exit channel
- Infilling of “The Pond”.

A summary of some of the key engagements of 2023-2024 is provided in Table 4.6.

Table 4.6 Summary of Engagement with NLDECC

Group	Date	Purpose	Commitments / Outcomes
NLDECC	1-Mar-2023	Engage with NLDECC on Project activities	• Certificate of approval for construction of CGS was updated in 2022 and extended out to 2027.
NLDECC – Pollution Prevention Division	22-Aug-2023	Argentia Site Closure Plan	• Provided overview of timeline for closure and details of decommissioning, along with facilities that will be turned over to the Port of Argentia
NLDECC – Water Resources Management Division	13-Sept-2023	Alter a Body of Water permit application	• Review of scope of the bundwall removal and infilling of the Pond, to confirm aspects were covered for the permit application. • Approval received: # ALT13230-2023

4.6 PROVINCIAL ARCHAEOLOGY OFFICE

The Provincial Archeology Office (PAO) is the regulatory agency for archaeology conducted within the Province of NL. The PAO was consulted on the removal of debris from the inner and outer channels which require dredging for the tow out of the CGS. Some of the objects discovered during surveys for debris date back to WWII and may have historical significance. A summary report was presented to the PAO July 2023, and there were no issues identified for the removal process.

5.0 REFERENCES

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APPENDIX A

Species in the 2024 Study Area

Table A.1 Species at Risk in the 2024 Study Area

Family	Species		Federal		Provincial	Updates since 2012 EA
	Common Name	Scientific Name	SARA Status (Schedule 1)[1]	COSEWIC Designation	Designation	
Marine Fish						
Anarhichadidae	Atlantic wolffish	*Anarhichas lupus*	Special Concern[2]	Special Concern	Not listed	No change
Anarhichadidae	Northern wolffish	*Anarhichas denticulatus*	Threatened[2]	Threatened	Not listed	No change
Anarhichadidae	Spotted wolffish	*Anarhichas minor*	Threatened[2]	Threatened	Not listed	No change
Anguillidae	American eel	*Anguilla rostrata*	Not listed	Threatened	Vulnerable	No change
Cetorhinidae	Basking shark (Atlantic population)	*Cetorhinus maximus*	Not listed	Special Concern	Not listed	No change
Cyclopteridae	Lumpfish	*Cyclopterus lumpus*	Not listed	Threatened	Not listed	Added to COSEWIC – Threatened (Nov. 2017)
Gadidae	Atlantic cod (Newfoundland and Labrador population)	*Gadus morhua*	Not listed	Endangered	Not listed	No change
Gadidae	Atlantic cod (Southern population)	*Gadus morhua*	Not listed	Endangered	Not listed	No change
Gadidae	Cusk	*Brosme brosme*	Not listed	Endangered	Not listed	COSEWIC status change – Endangered (Nov. 2012)
Lamnidae	Porbeagle	*Lamna nasus*	Not listed	Endangered	Not listed	No change
Lamnidae	Shortfin mako (Atlantic population)	*Isurus oxyrinchus*	Not listed	Endangered	Not listed	COSEWIC status change - Endangered (May 2019)
Lamnidae	White shark (Atlantic population)	*Carcharodon carcharias*	Endangered	Endangered	Not listed	No change
Macrouridae	Roundnose grenadier	*Coryphaenoides rupestris*	Not listed	Endangered	Not listed	No change
Phycidae	White hake (Atlantic and Northern Gulf of St. Lawrence population)	*Urophycis tenuis*	Not listed	Threatened	Not listed	Added to COSEWIC – Threatened (Nov. 2013)
Pleuronectidae	American plaice (Maritime population)	*Hippoglossoides platessoides*	Not listed	Threatened	Not listed	No change

Table A.1 Species at Risk in the 2024 Study Area

Family	Species		Federal		Provincial	Updates since 2012 EA
	Common Name	Scientific Name	SARA Status (Schedule 1)[1]	COSEWIC Designation	Designation	
Pleuronectidae	American plaice (Newfoundland and Labrador population)	*Hippoglossoides platessoides*	Not listed	Threatened	Not listed	No change
Rajidae	Smooth skate (Funk Island Deep population)	*Malacoraja senta*	Not listed	Endangered	Not listed	No change
Rajidae	Thorny skate	*Amblyraja radiata*	Not listed	Special Concern	Not listed	No change
Rajidae	Winter skate (Eastern Scotian Shelf and Newfoundland population)	*Leucoraja ocellata*	Not listed	Endangered	Not listed	Added to COSEWIC – Endangered (May 2015)
Salmonidae	Atlantic salmon (Outer Bay of Fundy population)	*Salmo salar*	Not listed	Endangered	Not listed	No change
Salmonidae	Atlantic salmon (South Newfoundland population)	*Salmo salar*	Not listed	Threatened	Not listed	No change
Scombridae	Atlantic bluefin tuna	*Thunnus thynnus*	Not listed	Endangered	Not listed	No change
Scorpaenidae	Acadian redfish (Atlantic population)	*Sebastes fasciatus*	Not listed	Threatened	Not listed	No change
Scorpaenidae	Deepwater redfish (Northern population)	*Sebastes mentella*	Not listed	Threatened	Not listed	No change
Squalidae	Spiny dogfish (Atlantic population)	*Squalus acanthias*	Not listed	Special Concern	Not listed	No change
Marine Birds						
Anatidae	Harlequin Duck (Eastern population)	*Histrionicus histrionicus*	Special Concern[3]	Special Concern	Vulnerable	No change
Charadriidae	Piping Plover *melodus* subspecies	*Charadrius melodus melodus*	Endangered[4]	Endangered	Endangered	No change

Table A.1 Species at Risk in the 2024 Study Area

Family	Species		Federal		Provincial	Updates since 2012 EA
	Common Name	Scientific Name	SARA Status (Schedule 1)[1]	COSEWIC Designation	Designation	
Charadriidae	Red Knot *rufa* subspecies (Tierra del Fuego / Patagonia wintering population)	*Calidris canutus rufa*	Endangered[5]	Endangered	Endangered	No change
Charadriidae	Red Knot *rufa* subspecies (Northeastern South America wintering population)	*Calidris canutus rufa*	Not listed	Special Concern	Endangered	Previously assessed under the '*roselaari* type'
Charadriidae	Red Knot *rufa* subspecies (Southeastern USA / Gulf of Mexico / Caribbean wintering population)	*Calidris canutus rufa*	Not listed	Endangered	Endangered	Previously assessed under the '*roselaari* type'
Hydrobatidae	Leach's Storm-Petrel (Atlantic population)	*Oceanodroma leucorhoa*	Not listed	Threatened	Not listed	Added to COSEWIC – Threatened (Nov. 2020)
Laridae	Ivory Gull	*Pagophila eburnea*	Endangered[6]	Endangered	Endangered	No change
Scolopacidae	Red-necked Phalarope	*Phalaropus lobatus*	Special Concern[7]	Special Concern	Not listed	Added to SARA list – Special Concern (since May 22, 2019) Added to COSEWIC - Special Concern (in Nov. 2014)
Marine Mammals and Sea Turtles						
Balaenidae	North Atlantic right whale	*Eubalaena glacialis*	Endangered[8,9]	Endangered	Not listed	No change
Balaenopteridae	Blue whale (Atlantic population)	*Balaenoptera musculus*	Endangered[10,11]	Endangered	Not listed	No change
Balaenopteridae	Fin whale (Atlantic population)	*Balaenoptera physalus*	Special Concern[12]	Special Concern	Not listed	No change

Table A.1 Species at Risk in the 2024 Study Area

Family	Species		Federal		Provincial	Updates since 2012 EA
	Common Name	Scientific Name	SARA Status (Schedule 1)[1]	COSEWIC Designation	Designation	
Delphinidae	Killer whale (Northwest Atlantic / Eastern Arctic populations)	*Orcinus orca*	Not listed	Special Concern	Not listed	No change
Monodontidae	Beluga whale (Eastern Hudson Bay population)	*Delphinapterus leucas*	Not listed	Threatened	Not listed	COSEWIC status change – Threatened (Nov. 2020)
Phocoenidae	Harbour porpoise (Northwest Atlantic population) [Threatened – SARA Schedule 2]	*Phocoena phocoena*	Not listed	Special Concern	Not listed	No change
Ziphiidae	Northern bottlenose whale (Scotian Shelf population)	*Hyperoodon ampullatus*	Endangered[13,14]	Endangered	Not listed	No change
Ziphiidae	Northern bottlenose whale (Davis Strait Baffin Bay, Labrador Sea population)	*Hyperoodon ampullatus*	Not listed	Special Concern	Not listed	No change
Ziphiidae	Sowerby's beaked whale	*Mesoplodon bidens*	Special Concern[15]	Special Concern	Not listed	No change
Cheloniidae	Loggerhead sea turtle	*Caretta caretta*	Endangered[16]	Endangered	Not listed	Added to SARA list - Endangered (since April 13, 2017) No change to COSEWIC designation
Dermochelyidae	Leatherback sea turtle (Atlantic population)	*Dermochelys coriacea*	Endangered[17,18]	Endangered	Not listed	No change

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

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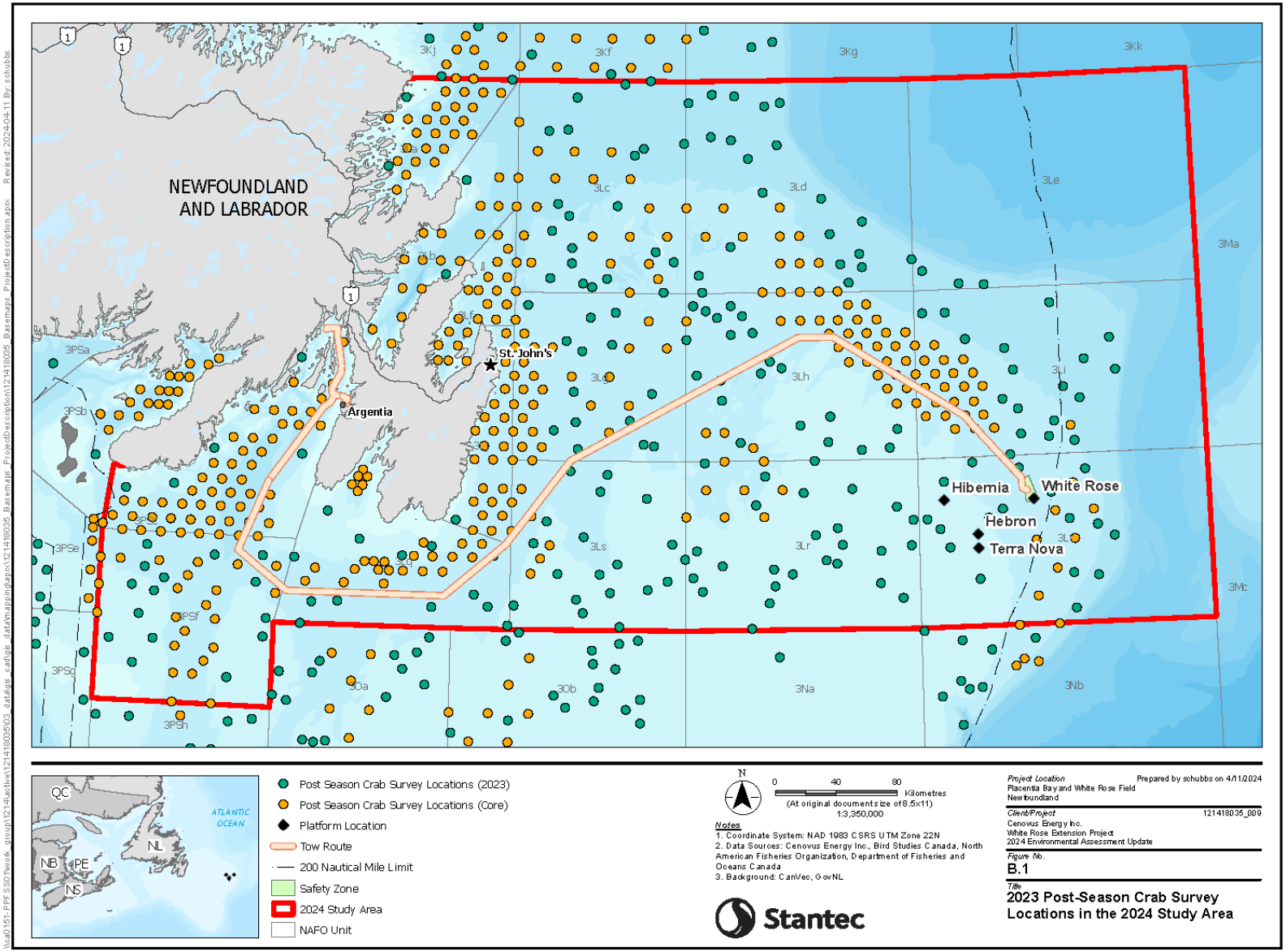
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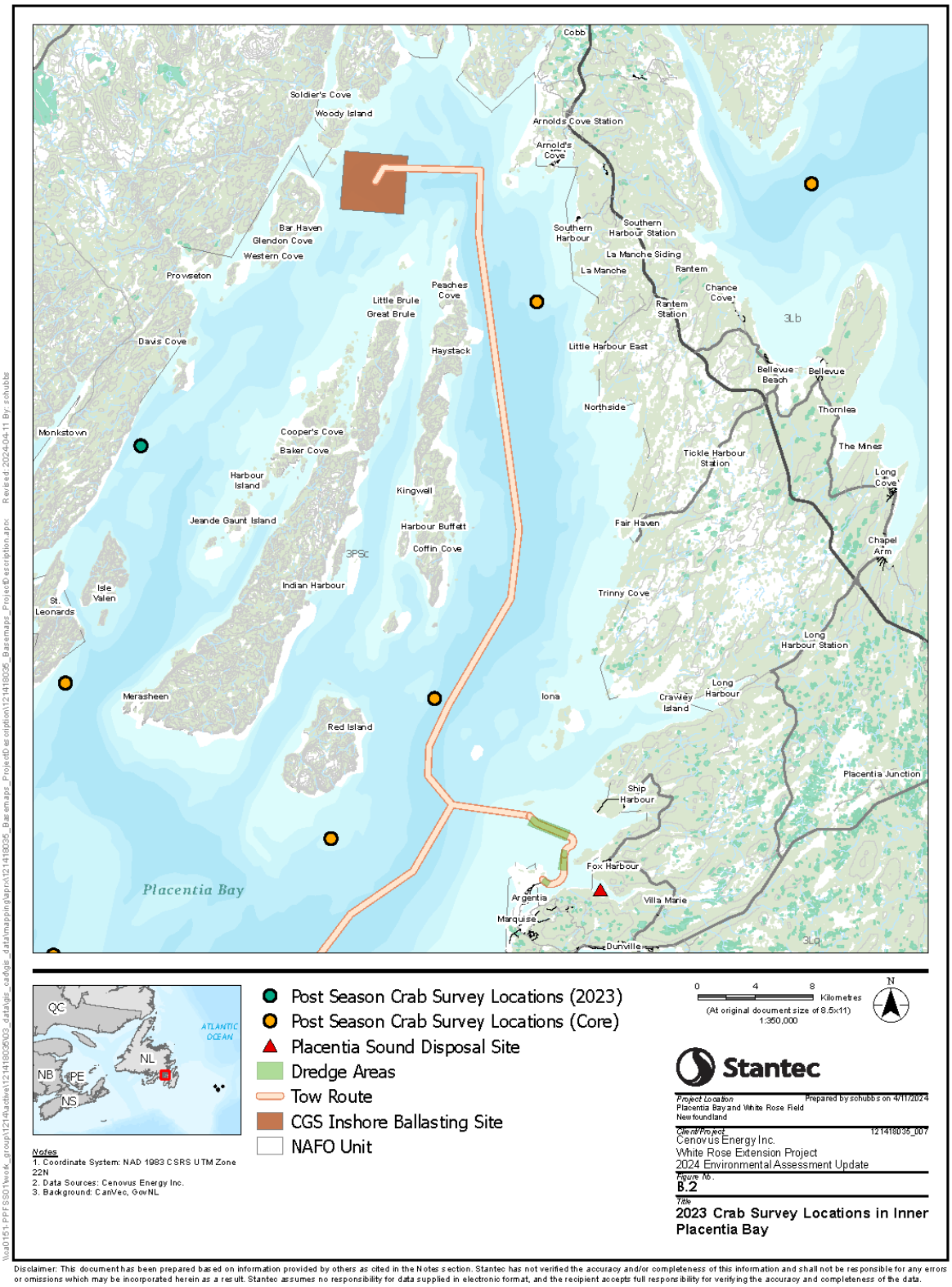
APPENDIX B

Industry-DFO Collaborative Trap Survey Locations



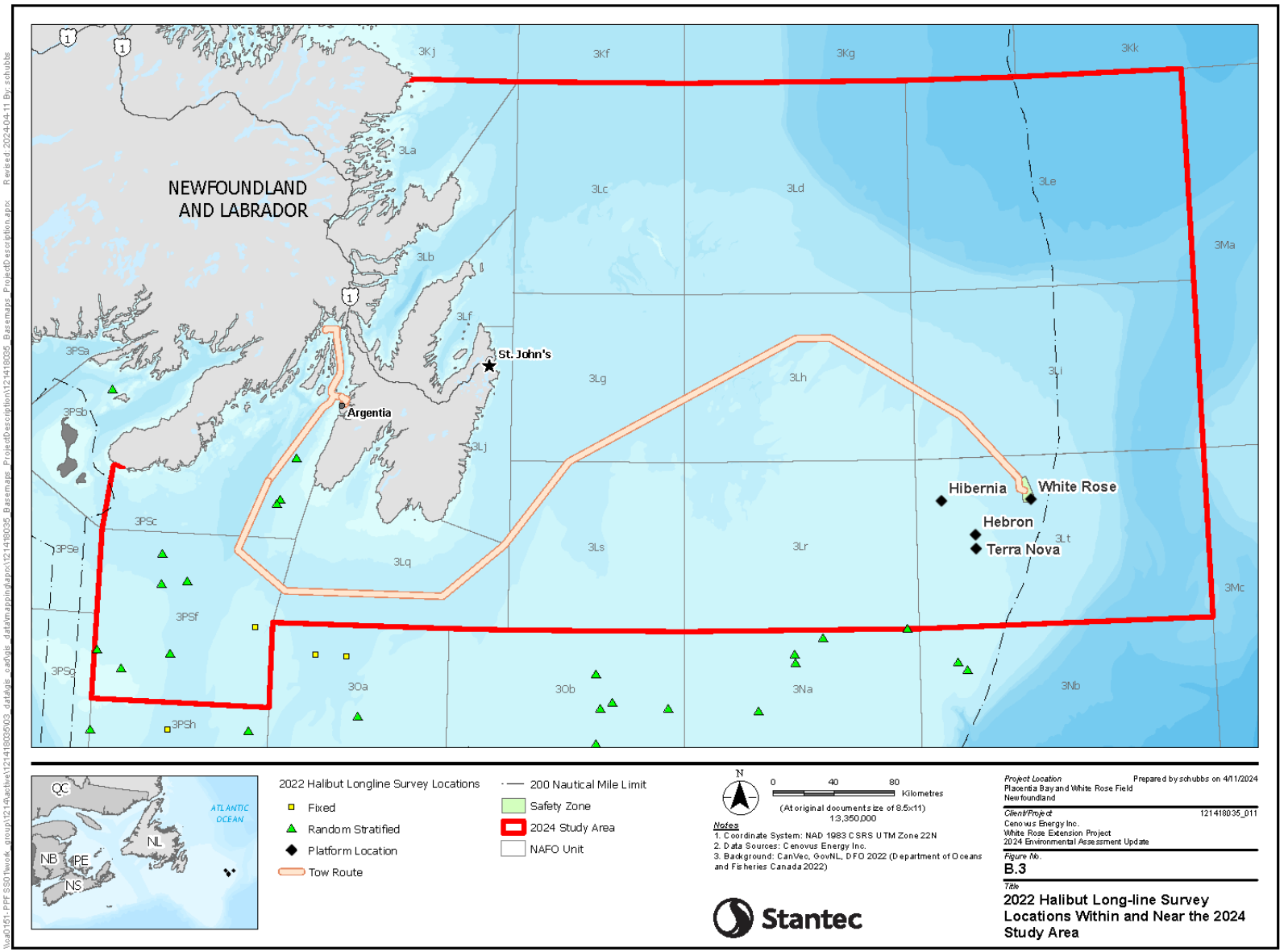
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Figure B.1 2023 Post-season Crab Survey Locations in the 2024 Study Area



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Figure B.2 2023 Post-season Crab Survey Locations in Inner Placentia Bay



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Figure B.3 2022 Halibut Longline Survey Locations Within and Near the 2024 Study Area