4.3.3.4. Harvest Timing

The times that commercial species are harvested may change, depending on seasons and regulations set by DFO, the harvesting strategies of fishing enterprises, or on the availability of the resource itself. Figure 4.8 shows the 2003 to 2009 catch by month (averaged) from the Study Area; May, June, and July were the most productive months during this period, accounting for nearly 65% of the annual catch.

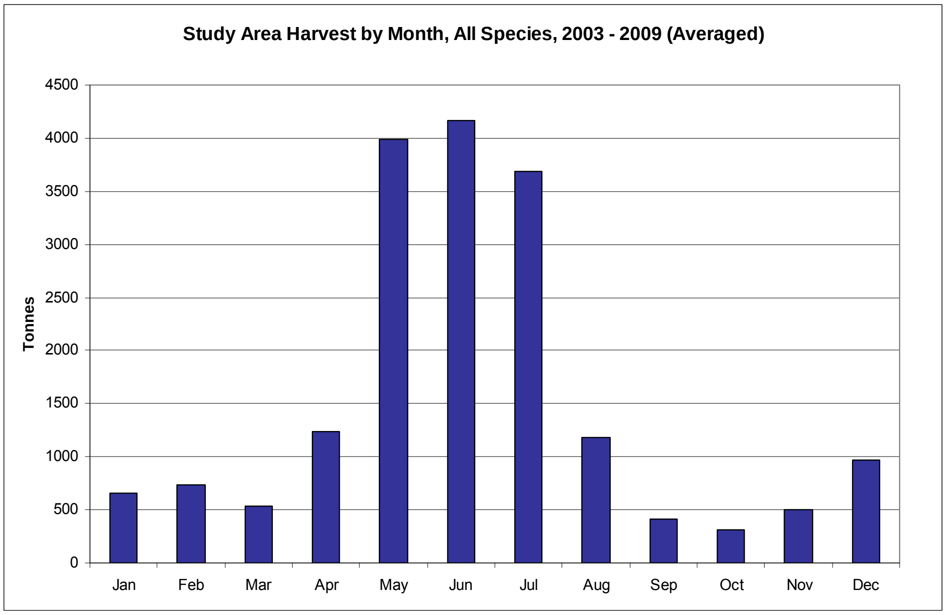


Figure 4.8. Average monthly domestic harvest, all species, 2003 to 2009.

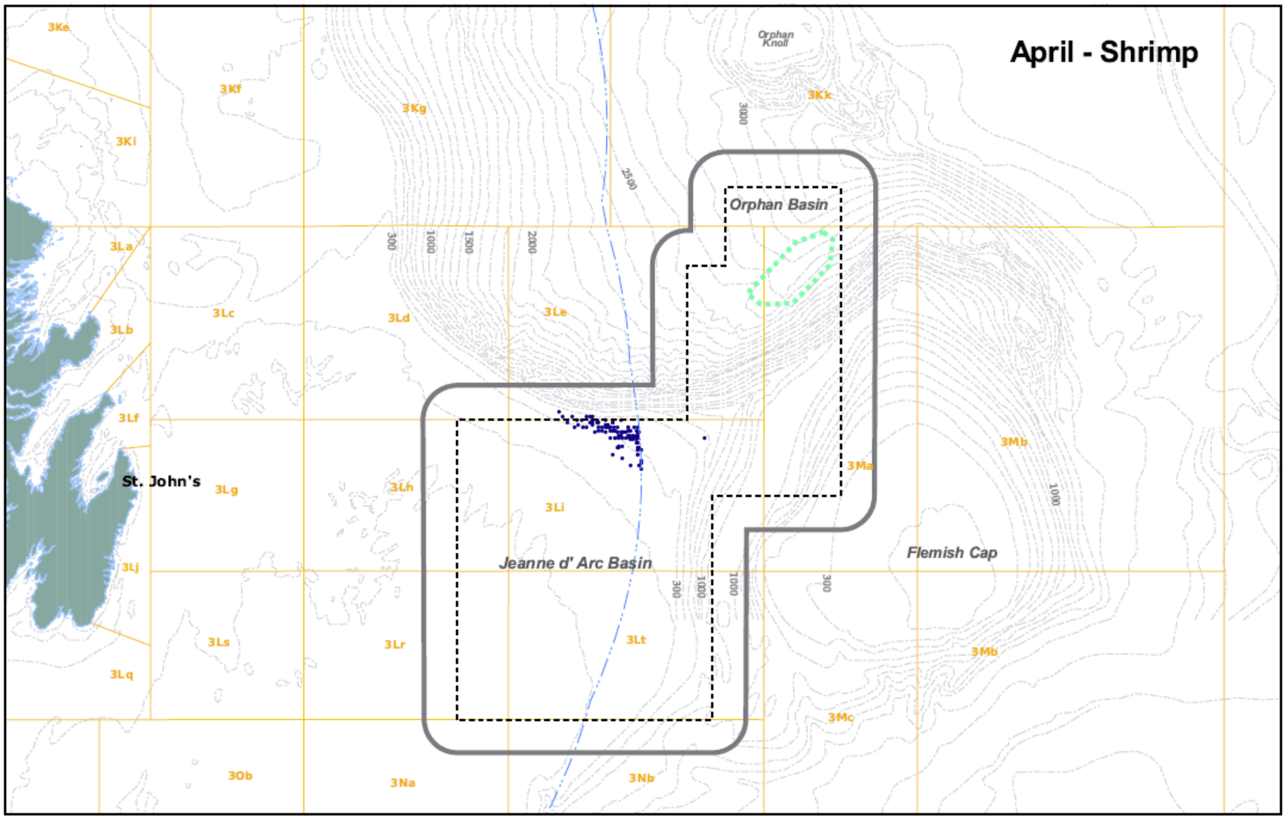
Figures 4.9 to 4.16 show the monthly reported domestic harvesting locations for key species for April to October, 2003 to 2009. Unlike the aggregated (multi-year) maps which are used to define the recent fishing patterns more prominently, these maps are a better representation of the actual levels of activity that might occur in any actual Project month.

4.3.4. Principal Species Fisheries

As noted above, the domestic harvest within the Study and Project Areas is equally northern shrimp and snow crab, with a minor component of Greenland halibut / turbot. Together, these three species have typically made up more than more than 99% of the Study Area harvest in recent years (though with decreasing shrimp quotas the relative importance of the species may change somewhat in the next few years). This section describes these three fisheries in more detail.

4.3.4.1. Northern Shrimp

Northern shrimp is the second most significant species harvested within the Study Area in terms of quantity and value of harvest, accounting for, on average 7,432 t (more than 49% of the total harvest) between April and October in recent years. The Study Area overlaps with parts of Shrimp Fishing Area (SFA) 6, 7 and 3M (Figure 4.16). As noted above, SFA 7 (which corresponds to Division 3L) and 3M are managed through NAFO, while SFA 6 (consisting of Division 3K plus the Hawke Channel portion of 2J) is managed by Canada's DFO.



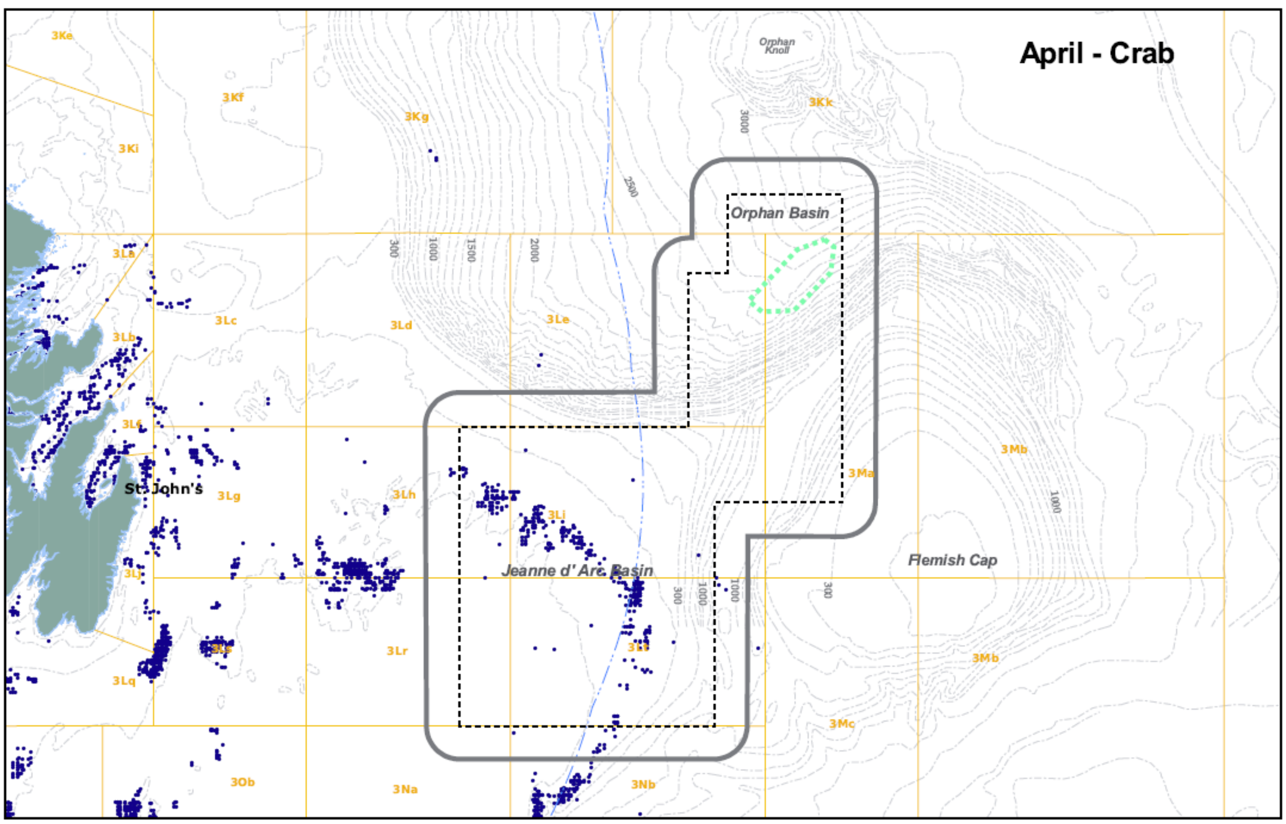
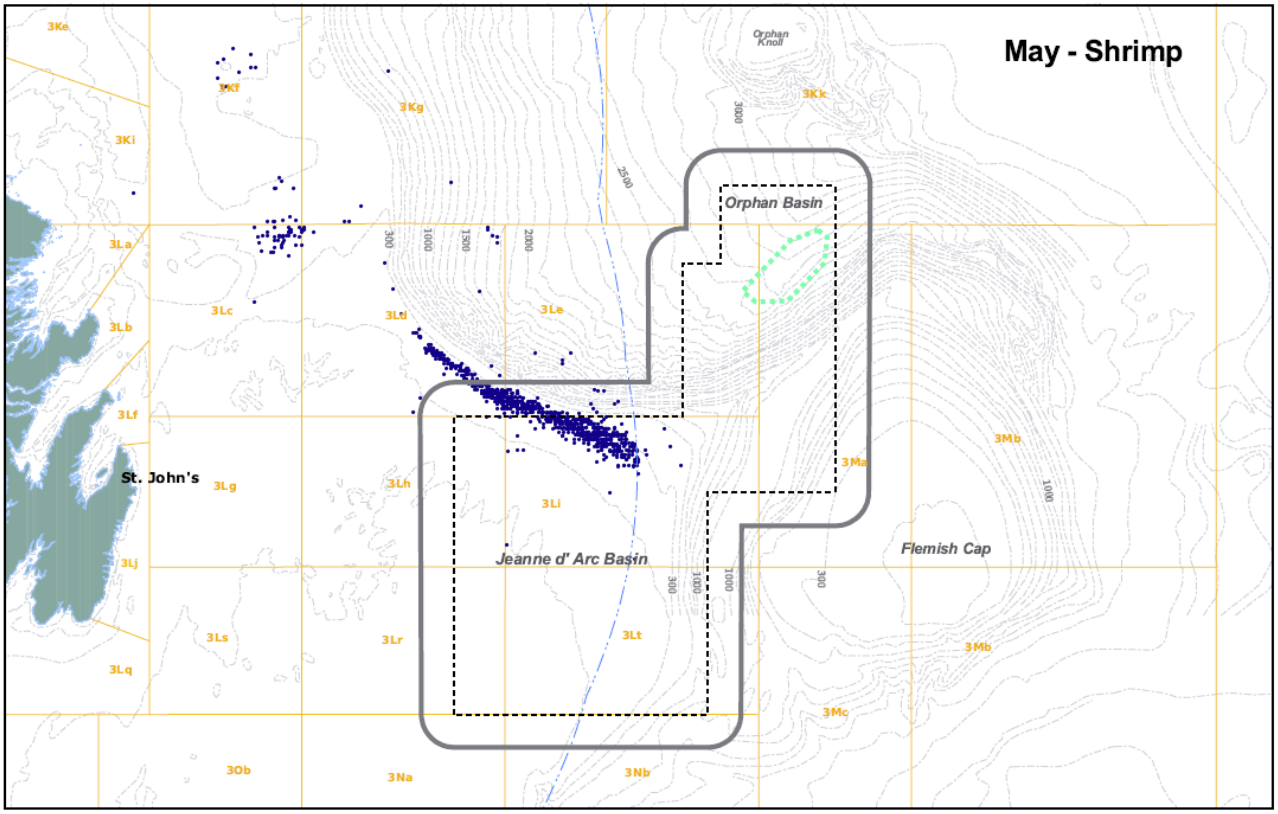


Figure 4.9. Harvesting locations, shrimp and crab, 2009, April.



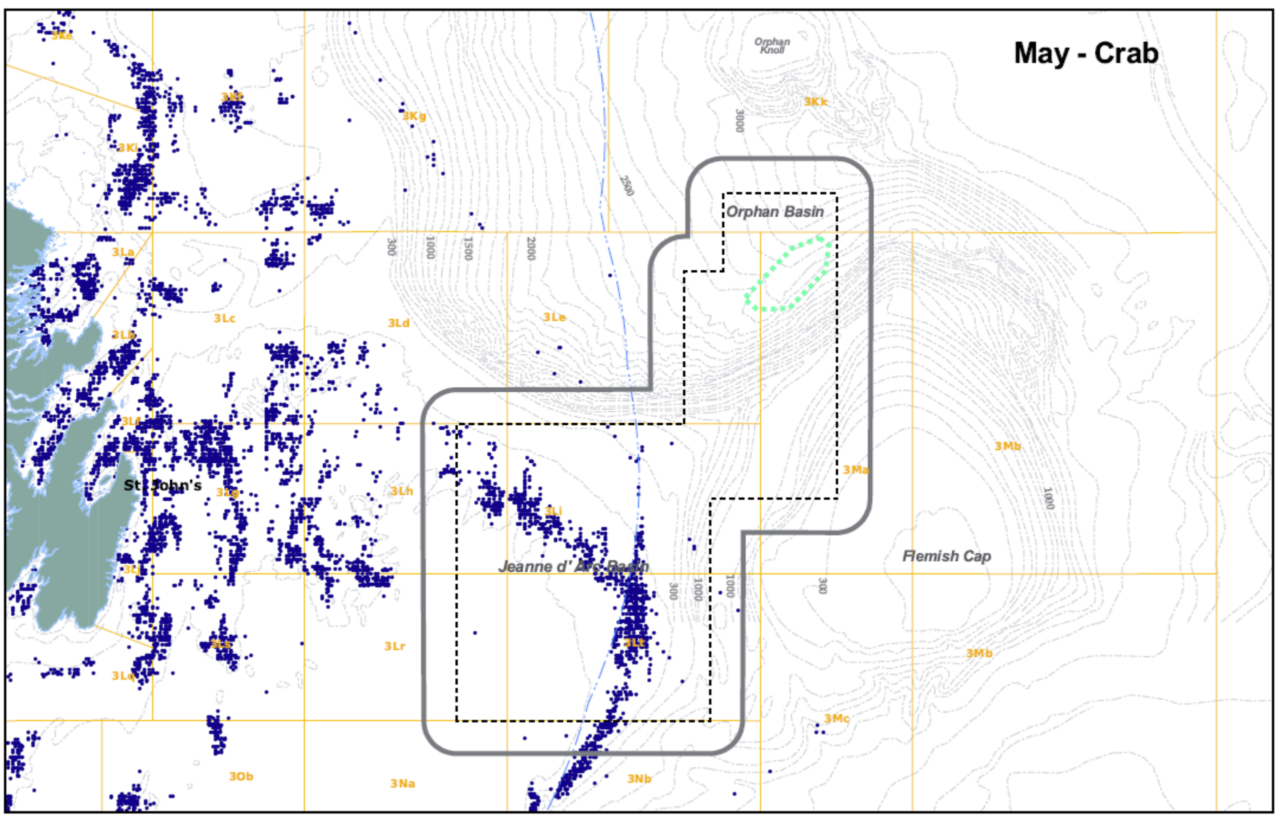


Figure 4.10. Harvesting locations, shrimp and crab, 2009, May.

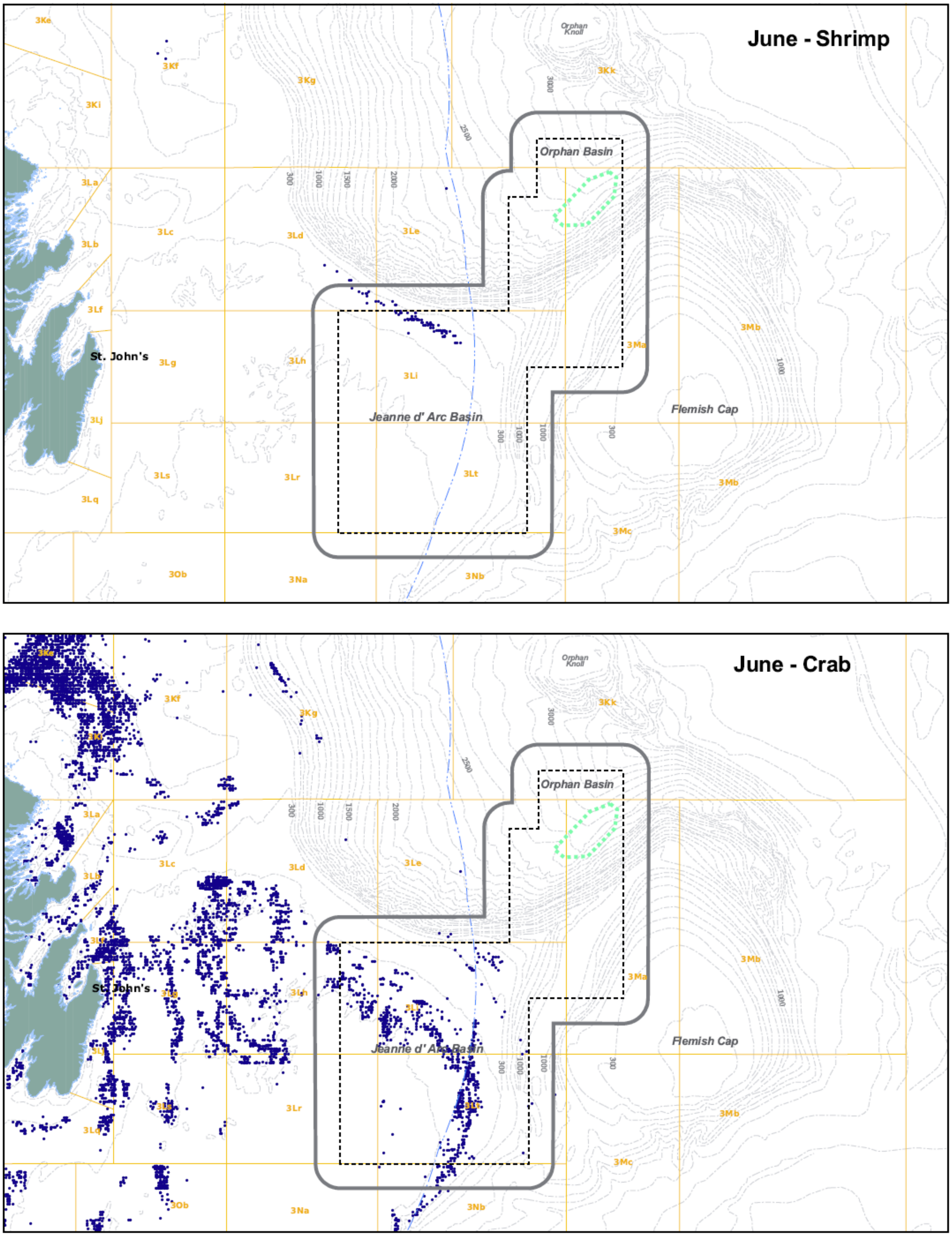


Figure 4.11. Harvesting locations, shrimp and crab, 2009, June.

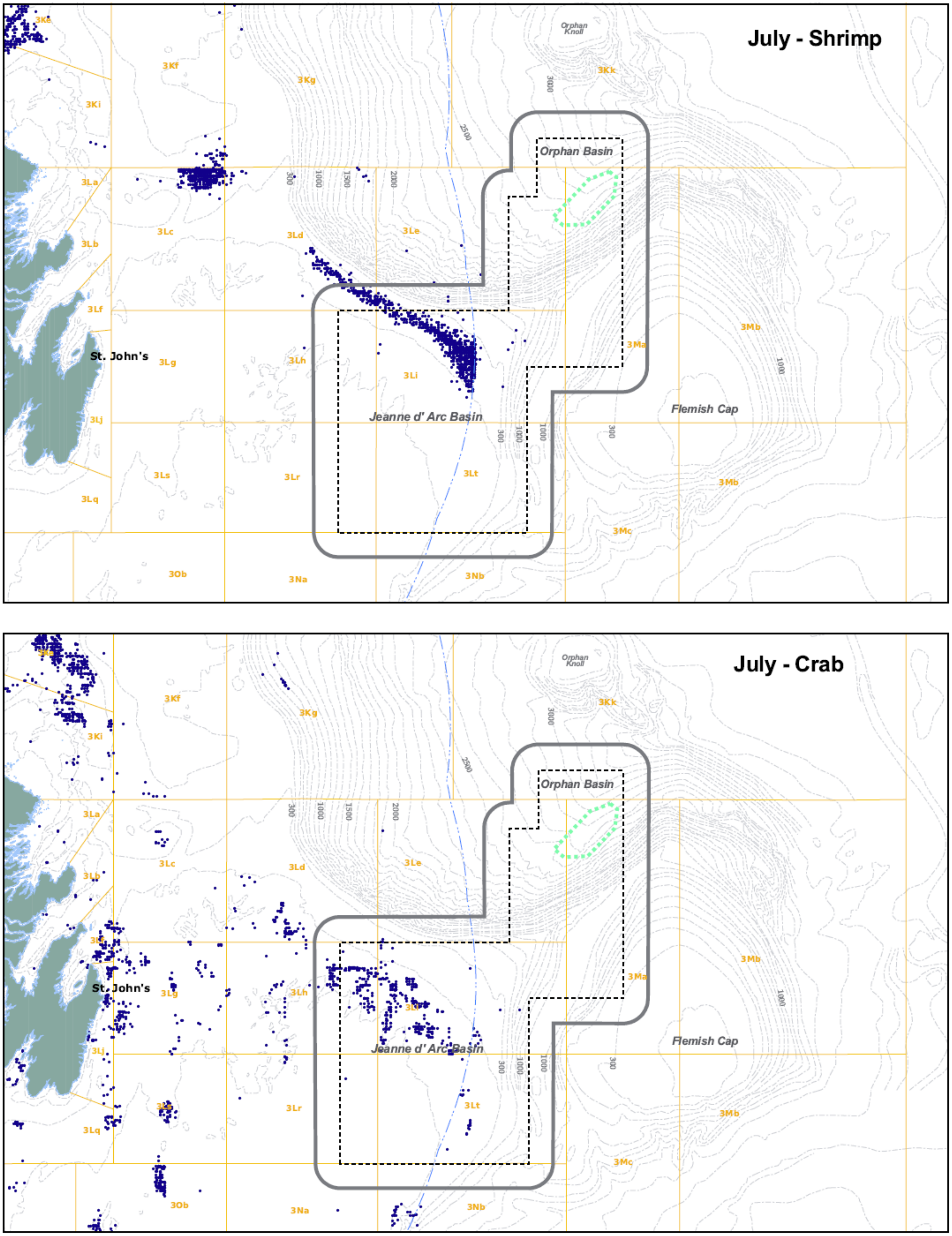
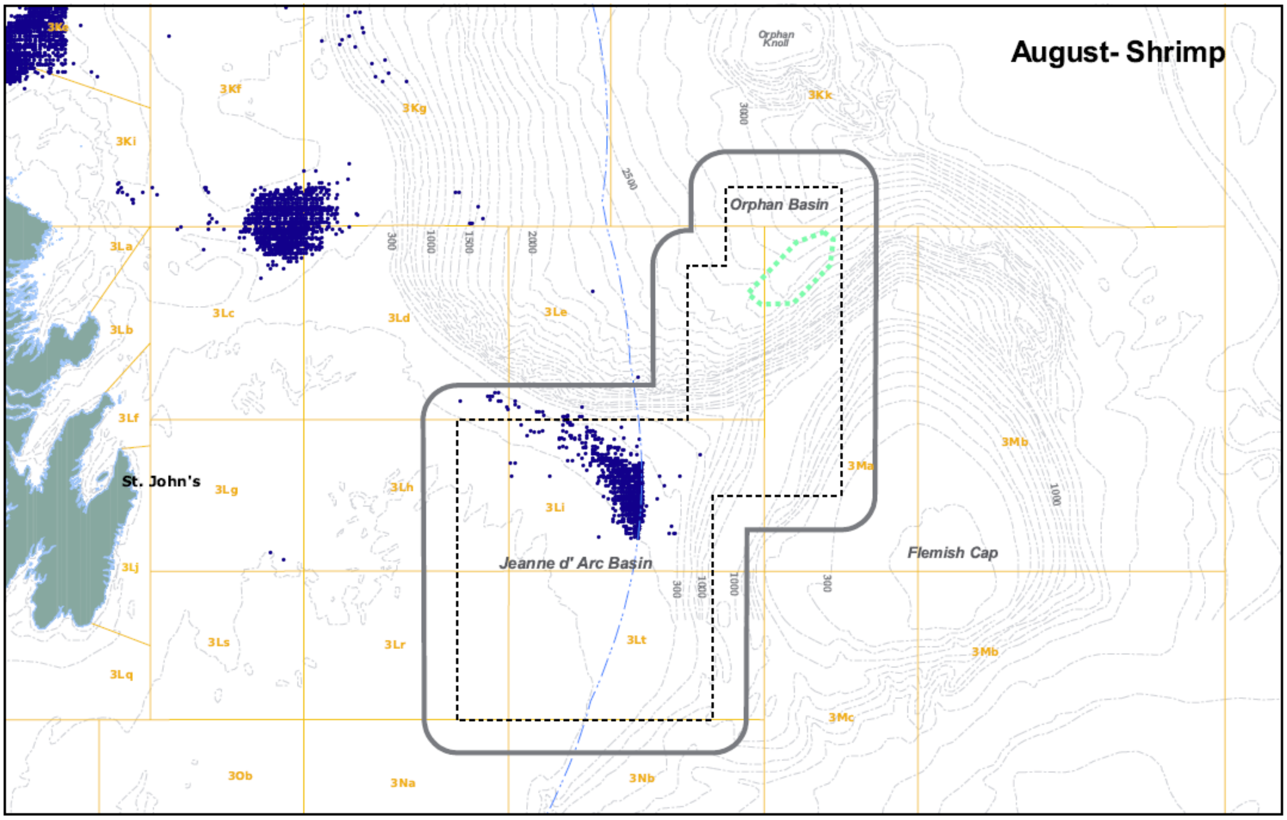


Figure 4.12. Harvesting locations, shrimp and crab 2009, July.



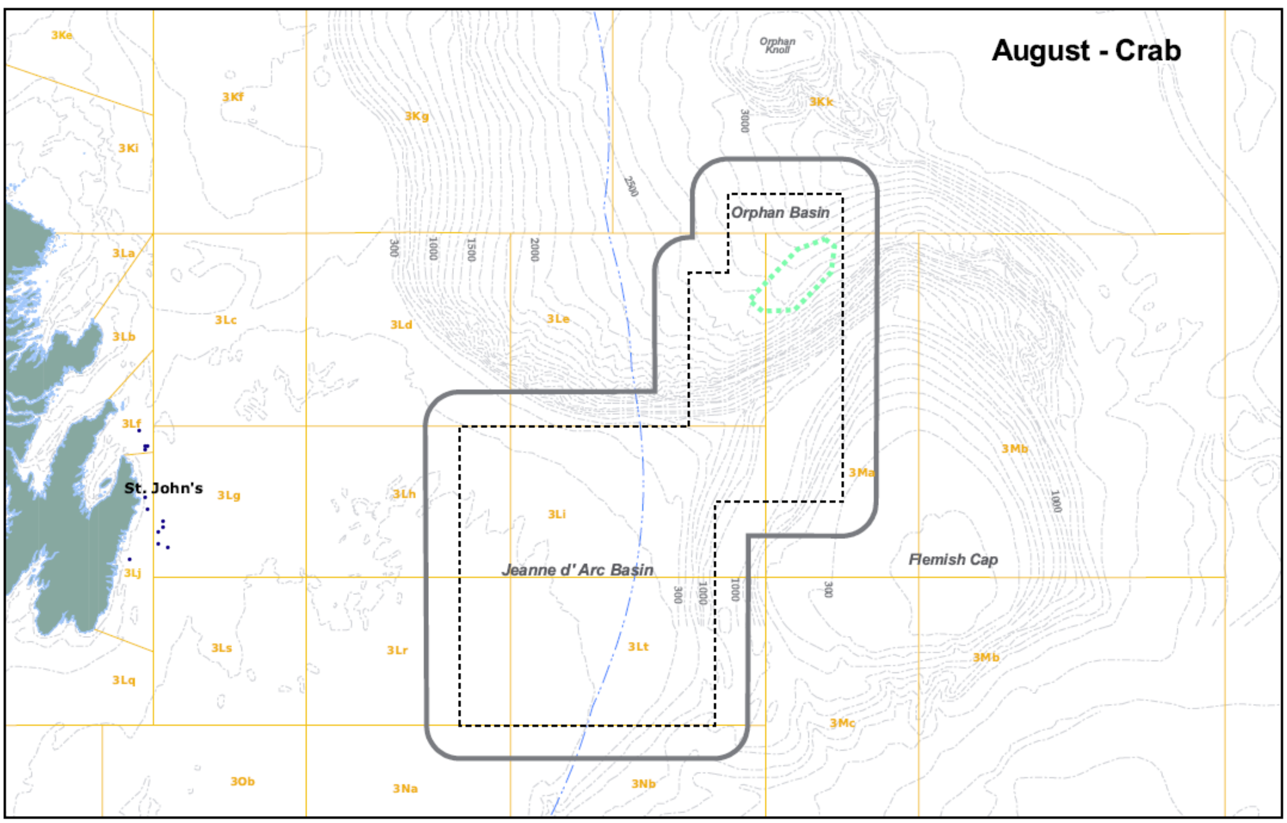
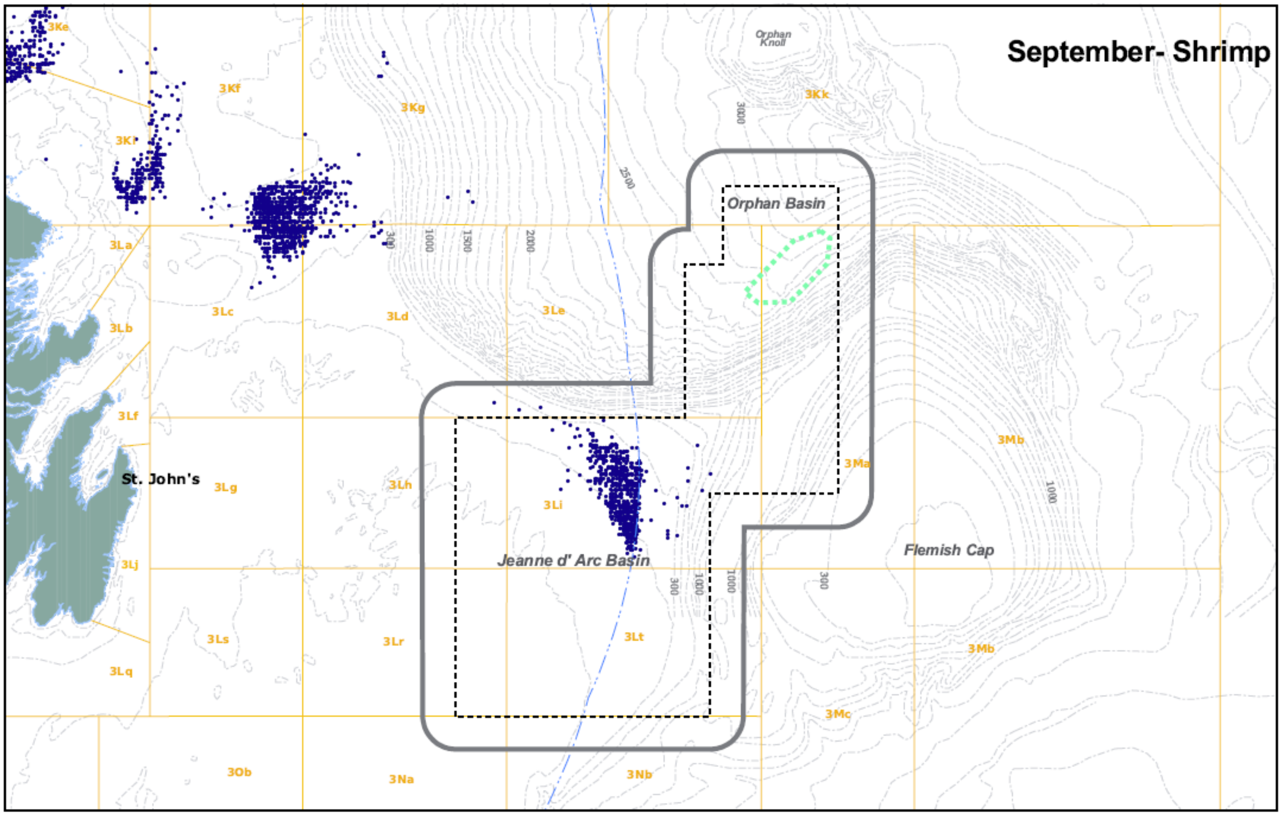


Figure 4.13. Harvesting locations, shrimp and crab 2009, August.



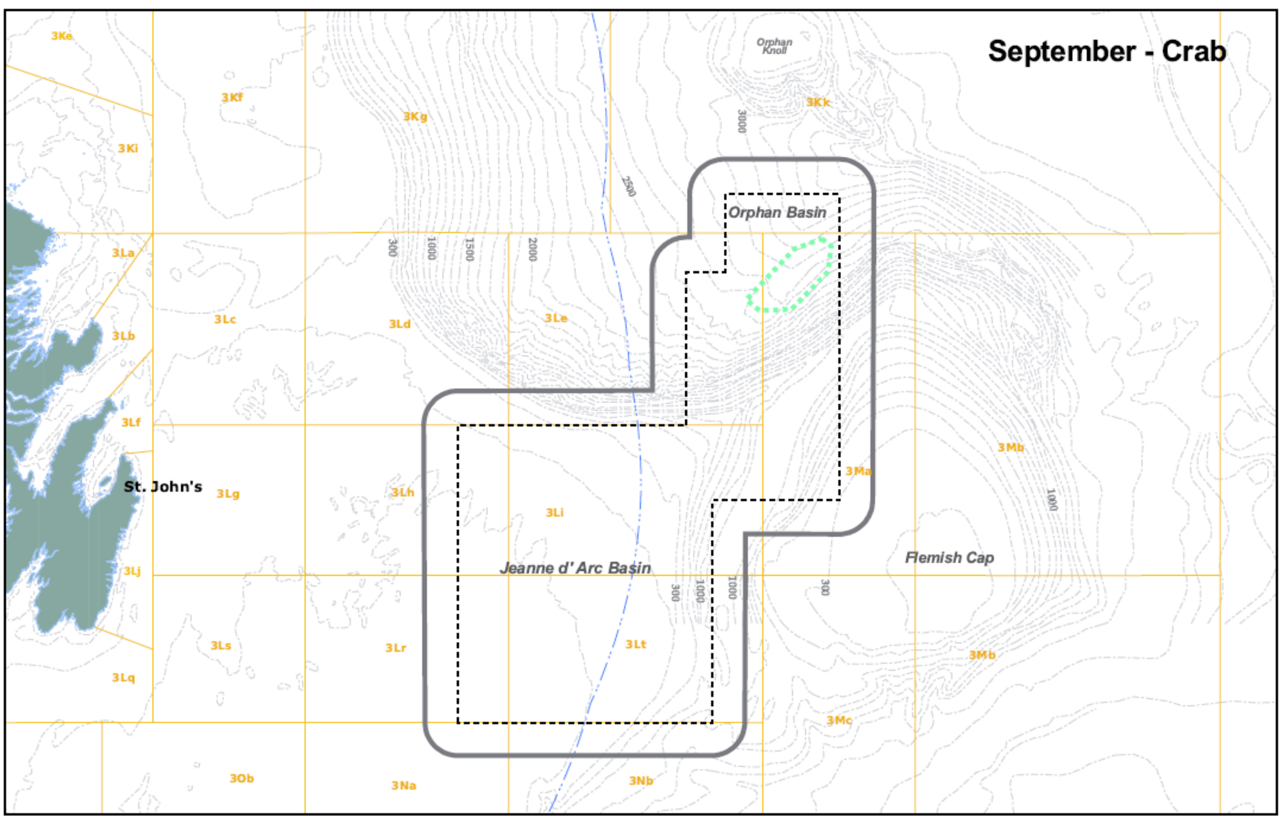


Figure 4.14. Harvesting locations, shrimp and crab, 2009, September.

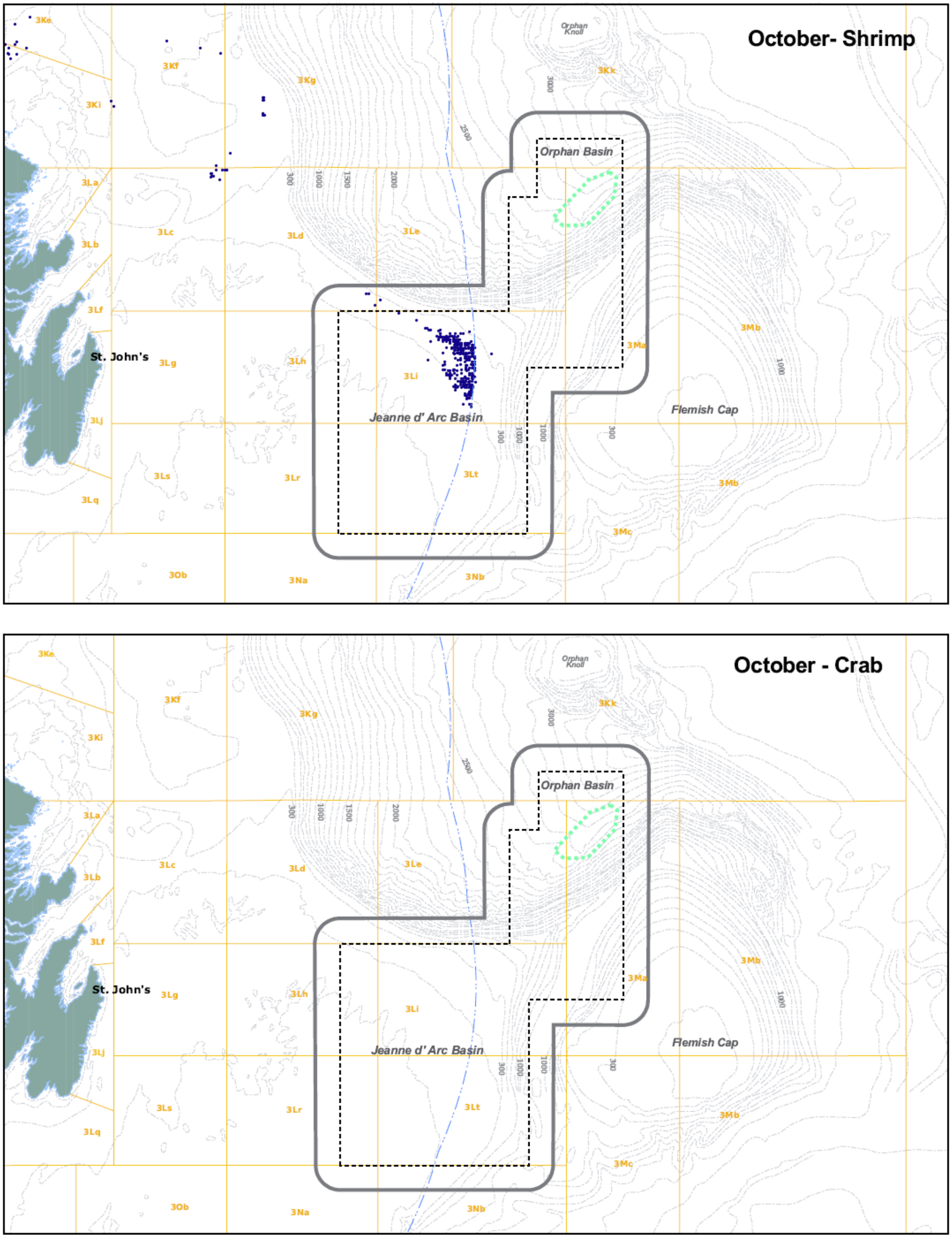


Figure 4.15. Harvesting locations, shrimp and crab, 2009, October.

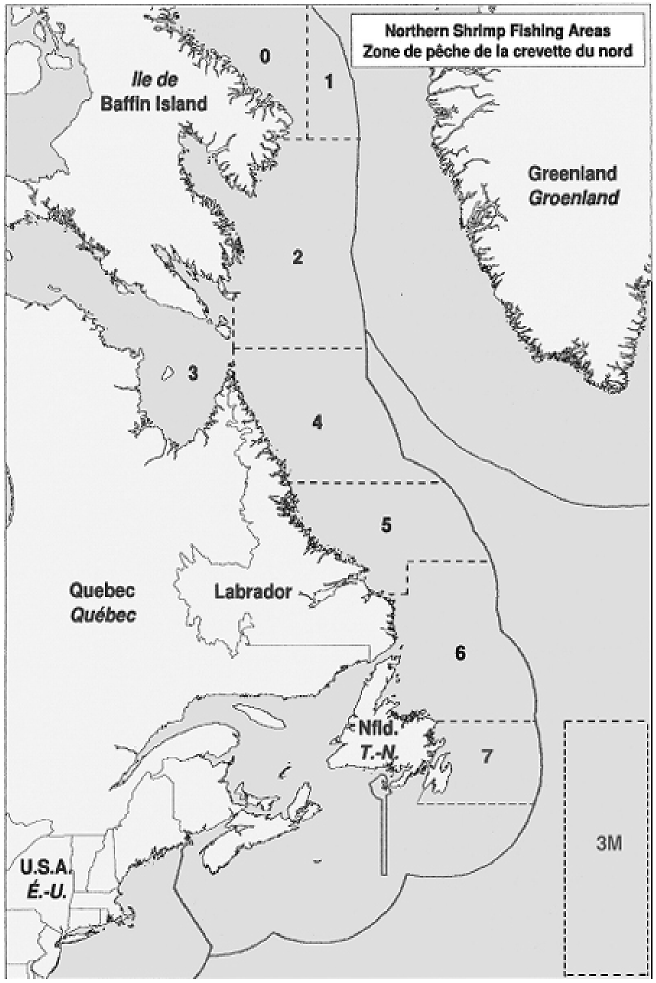


Figure 4.16. Northern Shrimp Fishing Areas.

Figure 4.17 shows domestic harvesting locations for 2003 to 2009, April to October, aggregated. As indicated, this fishery is confined to a well-defined zone in the southwestern central part of the Study and Project Areas.

Figure 4.18 shows the quantity of the northern shrimp harvest taken from the Study Area over the past seven years. The increase has been largely the result of increasing quotas. However, because of increasing science concerns about the status of the resource, catch allowances have been cut in all three areas since 2009/10 so this trend is expected to change, potentially for the next several years. As discussed above, the overall quota for SFA 7 has been reduced by a third and will drop further in 2012. The 2011 quota for SFA 7 is 15,994 t. The TAC in Division 3L for 2011 was set by NAFO at 19,200 t, down from 30,000 t in 2010. Canada's portion (83.3%) of this quota, fished in SFA 7, is reduced accordingly. This reduction is shared by the inshore and offshore fleets according to the current sharing agreement; there is no change to special allocation quotas – the offshore fleet's quota allocation is 3,230 t[6]. All shrimp fishing in 3M has been banned. The SFA 6 quota, which was 85,725 t in 2009/10 (DFO 2010d) was reduced by nearly 30% to 61,632 t for 2010/11.

[6] http://www.dfo-mpo.gc.ca/decisions/fm-2011-gp/atl-001-eng.htm

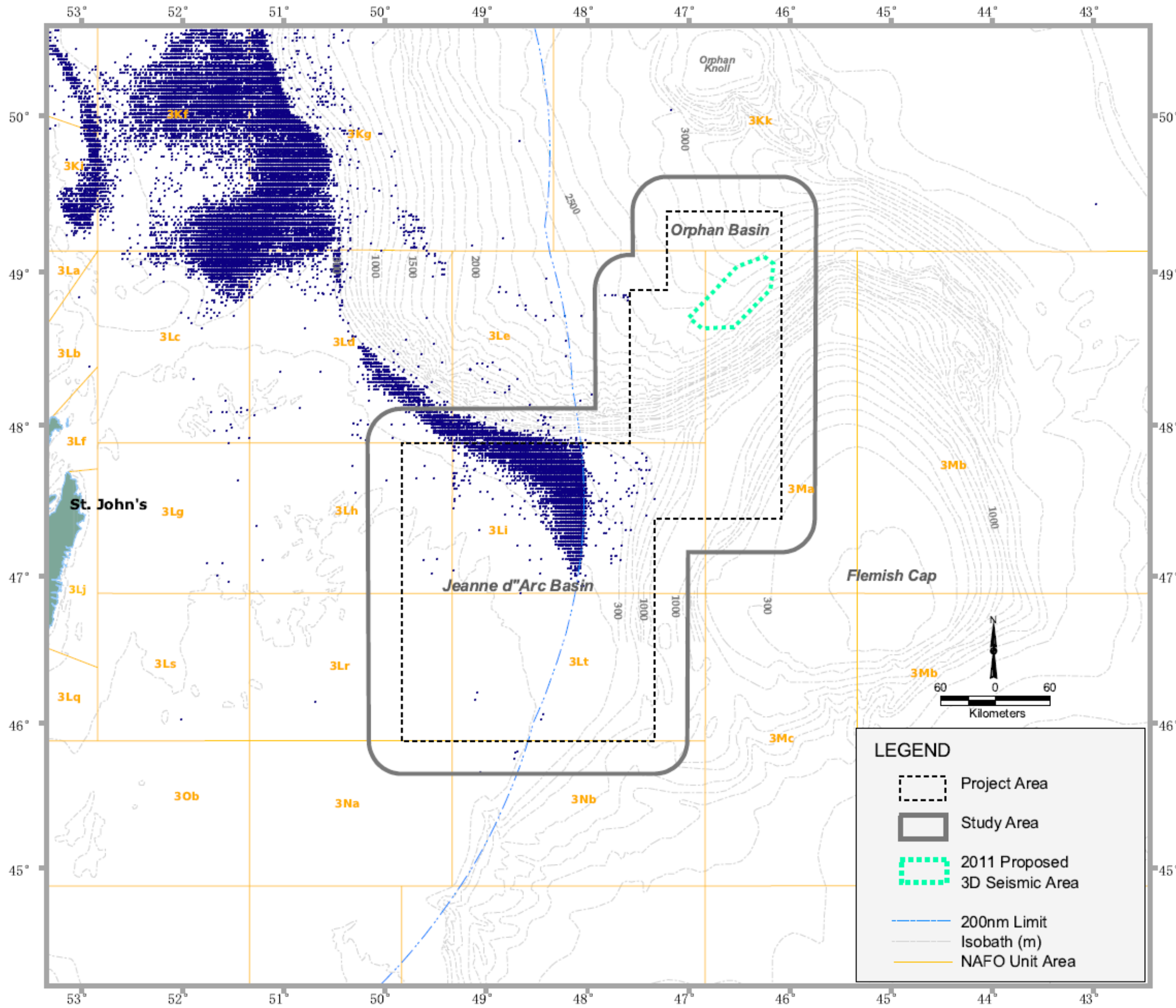


Figure 4.17. Northern shrimp harvesting locations, April to October 2003-2009, aggregated.

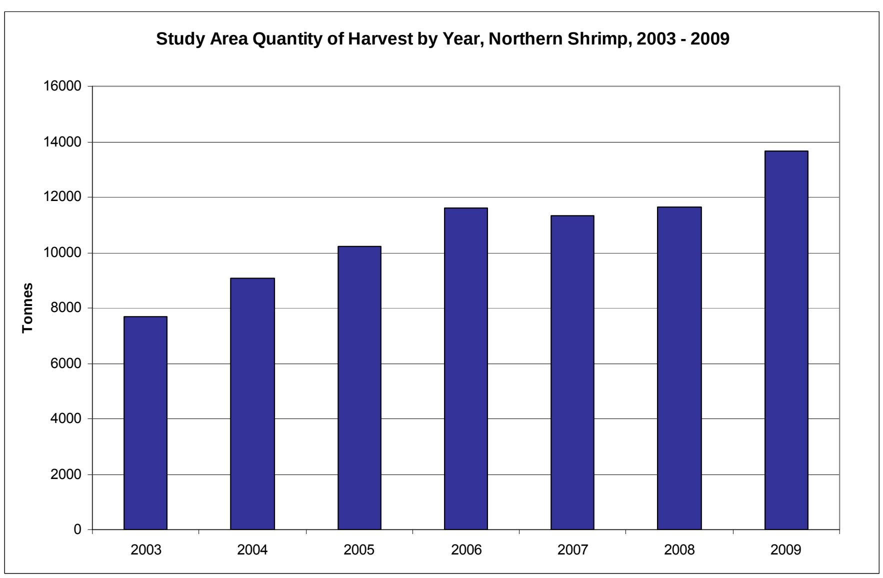


Figure 4.18. Yearly northern shrimp harvest from 2003 to 2009.

Figure 4.19 shows the northern shrimp harvest by month (averaged) from the Study Area, for the period 2003 to 2009.

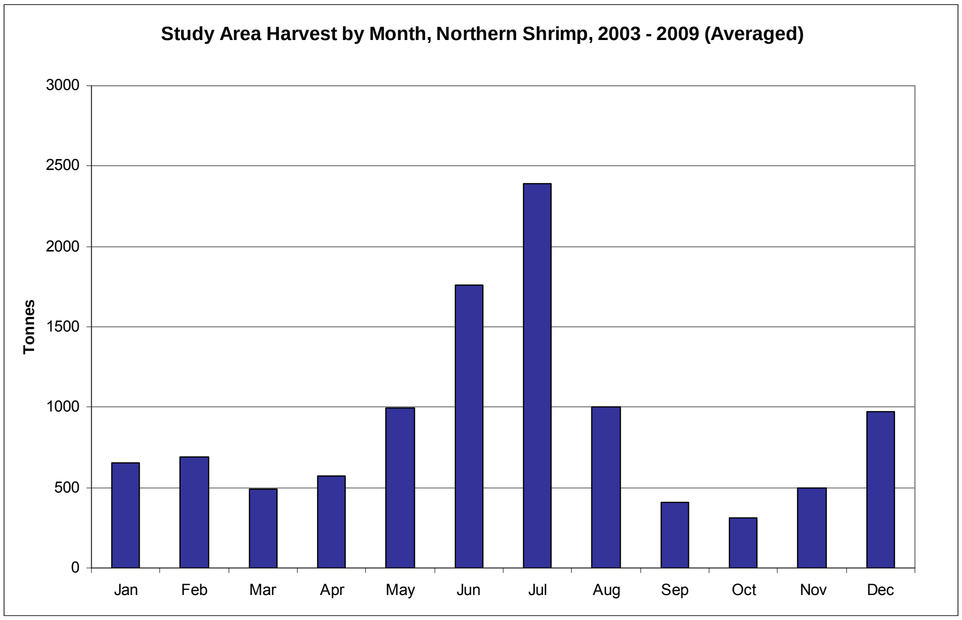


Figure 4.19. Monthly northern shrimp harvesting from 2003 to 2009, averaged.

4.3.4.2. Snow Crab

Snow crab is of the most importance in the Study Area's fisheries, averaging 7,504.4 tonnes from April to August and accounting for about 50% of the total harvest. The season is defined each year, but typically runs from April to July or August. Because the fishery uses fixed gear (crab pots), the fishery poses a potential for seismic / fishing gear conflicts in those areas where the two marine activities might overlap. Figure 4.20 shows the regulatory fishing areas for snow crab. The Study Area overlaps with portions of Crab Fishing Areas (CFA) 3Lex (from 170 miles to 200 miles from shore) and 3L200 (beyond 200 nautical miles), both of which are within Division 3L.

Over the past decade, the Newfoundland and Labrador snow crab fishery has gone through a number of fluctuations, with changes in both quantity and value in many CFAs. Prices have been lower in recent years compared to the late 1990s and early 2000s, and in 2006 averaged under $1 a pound. In 2010, the average price per pound was $1.38 ($3.04/Kg).[7]

The most recent DFO snow crab science advisory report (DFO 2010b) notes that "Offshore landings, mostly in Div. 3L, peaked at 27,300 t in 1999 and decreased to about 22,100 t in 2000 due to a reduction in the TAC. Landings remained at 22,000 to 25,000 t since 2000. Effort increased steadily from 2000 to 2007 and changed little since." Specifically describing the 3LNO offshore area, the report states, "The exploitable biomass has recently increased. The exploitable biomass index from the trawl survey declined steadily from 2001 to 2007, but has since more than doubled. The CPS index [based on an Industry-DFO collaborative post-season trap survey] declined steadily from 2004 to 2008, but increased in 2009)."

[7] See http://www.nfl.dfo-mpo.gc.ca/publications/reports_rapports/Land_All_Vessels_Debarquer_Tous_Les_Navires_2010_eng.htm