

Flatfish Accountability Measures

The Council has identified the creation and modification of flatfish accountability measures as a 2017 work priority. Currently, the scallop fishery has sub-ACLs and AMs in place for three flatfish stocks managed through the groundfish FMP: GB yellowtail, SNE/MA yellowtail, and southern windowpane flounder. The Council has recommended that a scallop sub-ACL for northern windowpane be established through Framework 56, with the development of accountability measures for this stock in the next available scallop action. Existing scallop fishery AMs vary by permit category and gear type. The Scallop AP, Committee, and full Council have expressed interest in redesigning the AMs for GB yellowtail flounder and SNE/MA yellowtail flounder to make AMs as consistent to the extent feasible with gear modification AMs for southern windowpane flounder (Council Motion #4a, June 22, 2016). The Scallop Committee reaffirmed its interest in exploring the use of gear modifications at its March 30, 2017 meeting in Providence, Rhode Island.

The Council Staff have worked with members of the PDT and scientific community to assemble information relevant to this management priority. This document is not an official product of the scallop PDT.

Observed flatfish d/K ratios

The following figures display observed monthly d/K ratios of GB yellowtail, SNE yellowtail, and N. windowpane to scallop meats kept by ten-minute square. Data included in analysis were observed hauls from standard observer trips on Limited Access and Limited Access General Category dredge/trawl vessels between FY2006 and FY2016. For each month, data were aggregated by ten-minute square.

The d/K ratios for each ten-minute square were estimated using the following equation:

$$\frac{(d_{2006} + d_{2007} + d_{2008} + \cdots d_{2016})}{(K_{2006} + K_{2007} + K_{2008} + \cdots K_{2016})}$$

Where d = observed weight of discarded flatfish (lbs) and K = observed weight of kept scallops (lbs). For observed hauls where only round weights of scallops were recorded, lbs of round scallops were converted to lbs of dressed scallops using the equation:

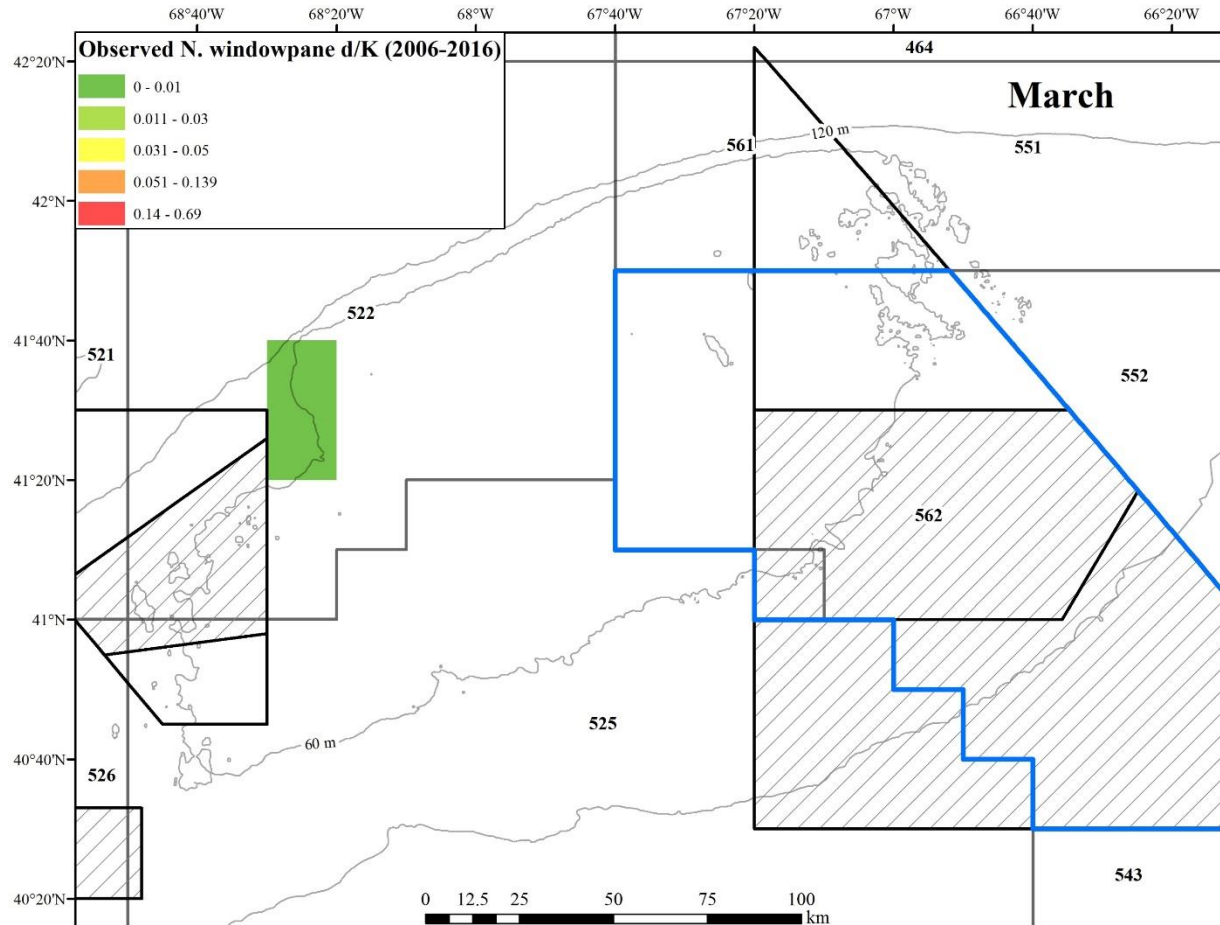
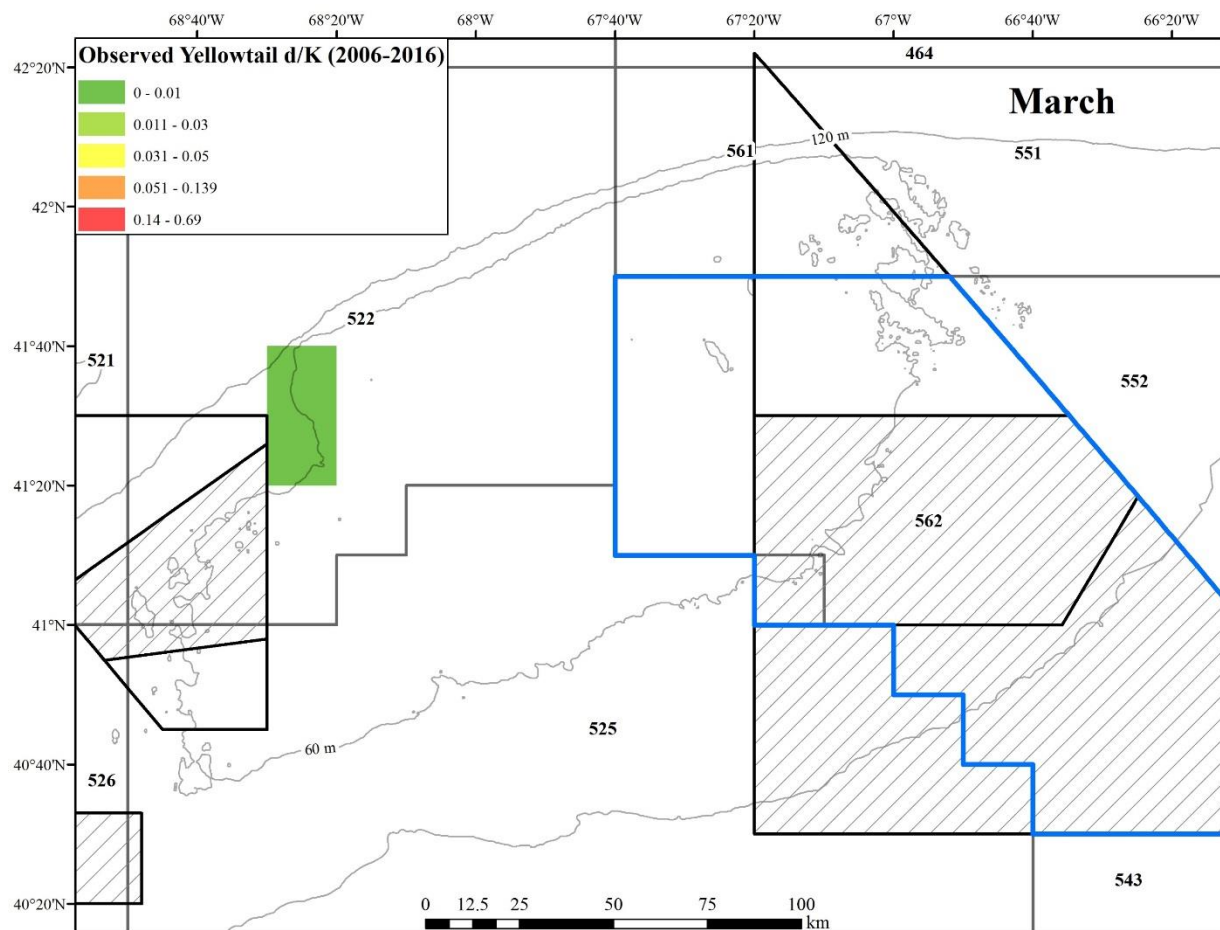
$$\frac{K_{round}}{8.33}$$

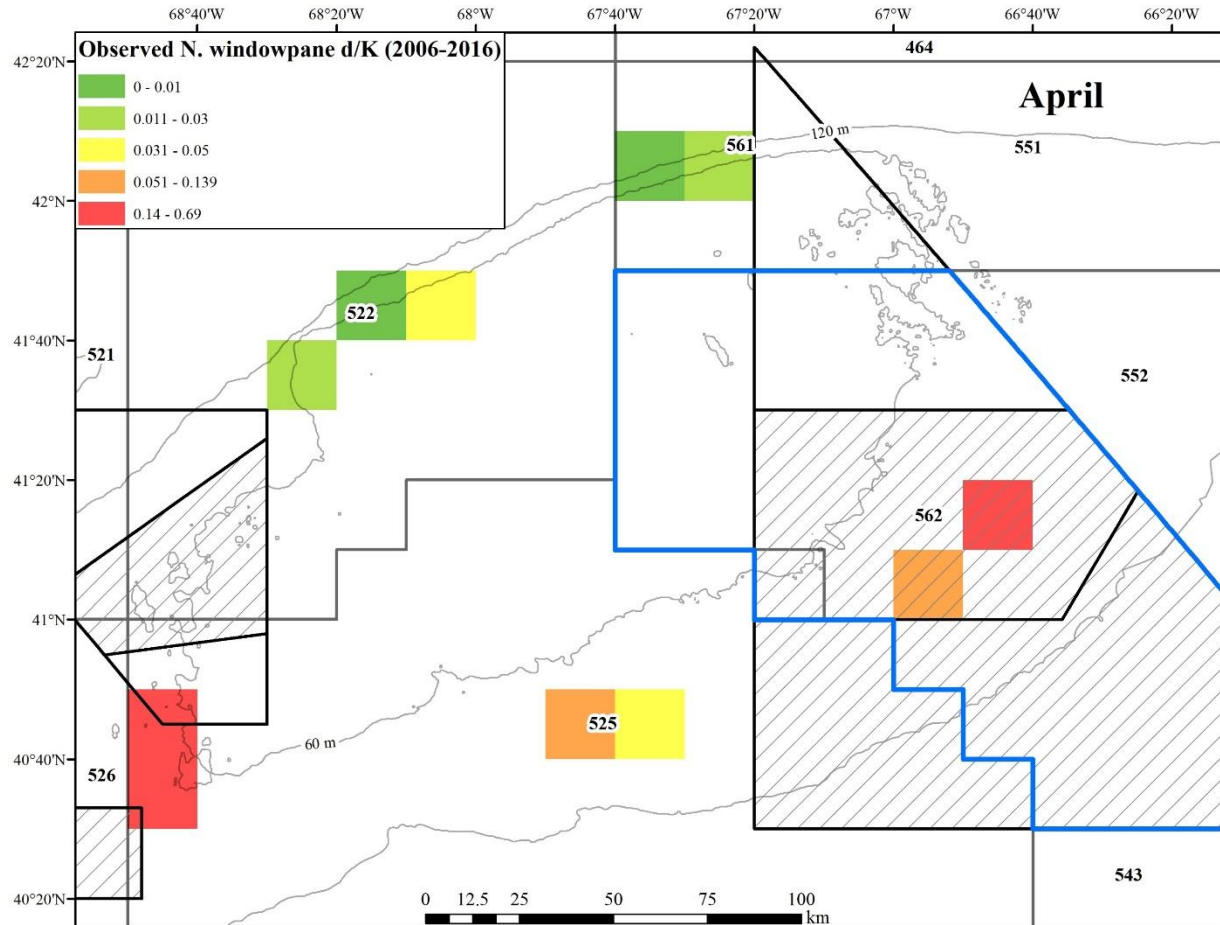
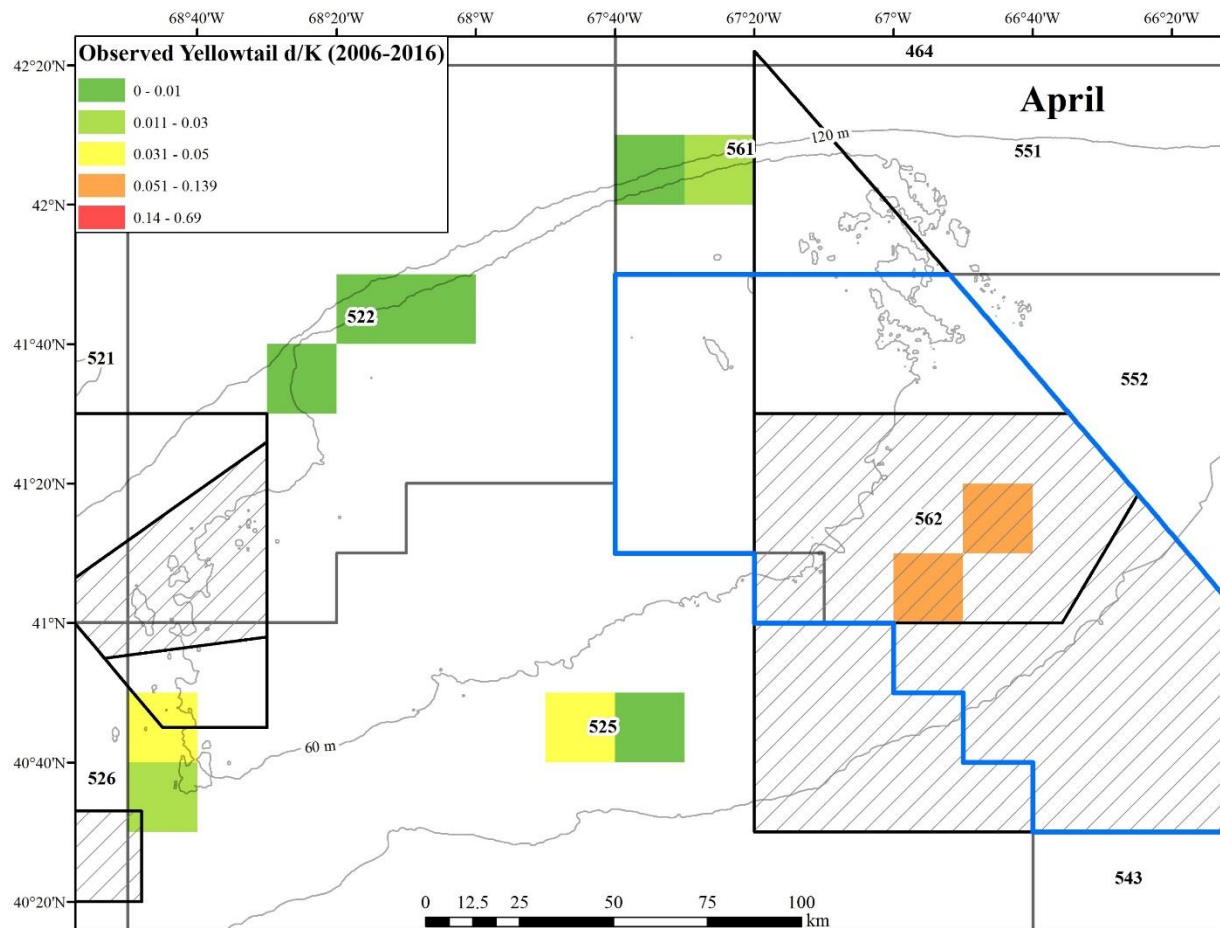
Where K_{round} = the weight of in shell scallops (lbs).

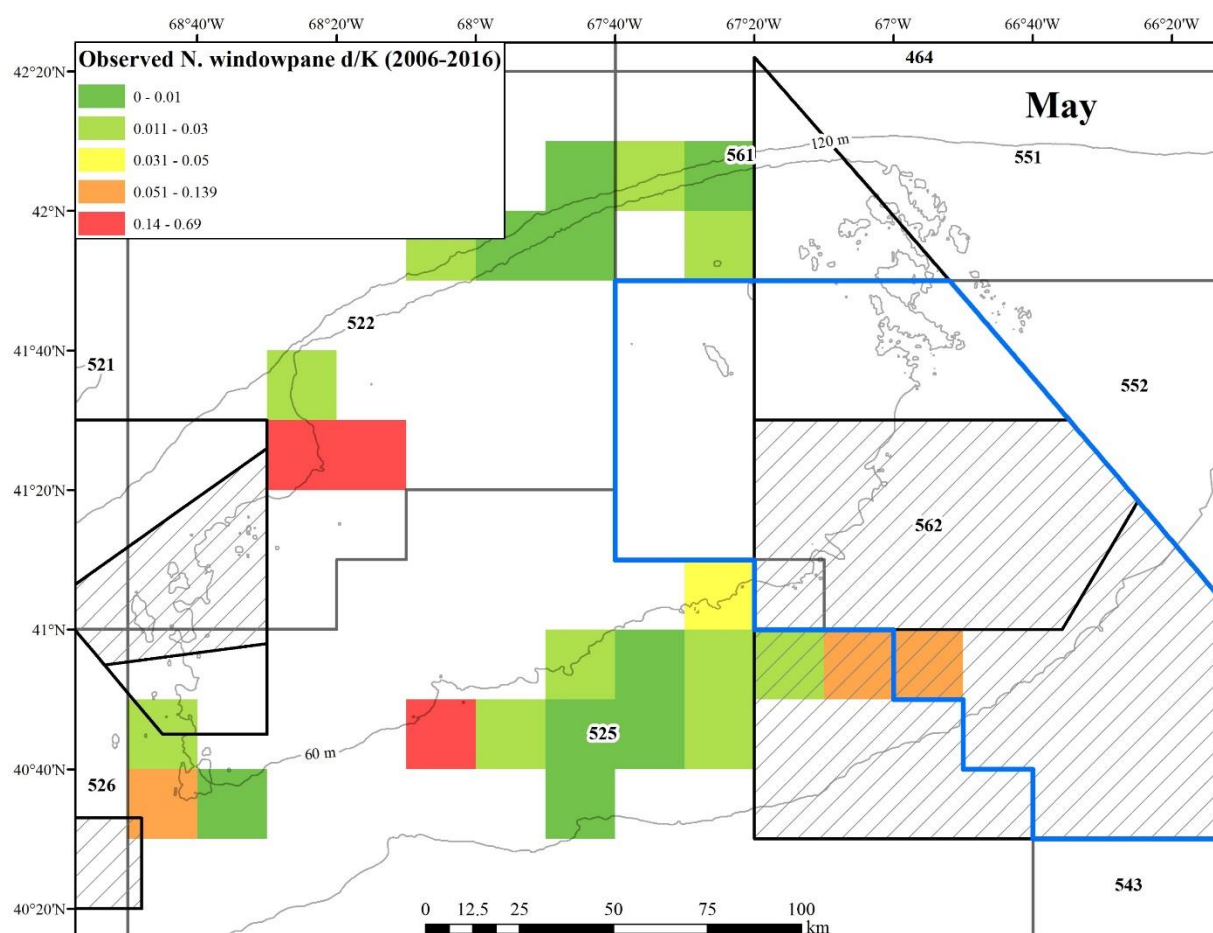
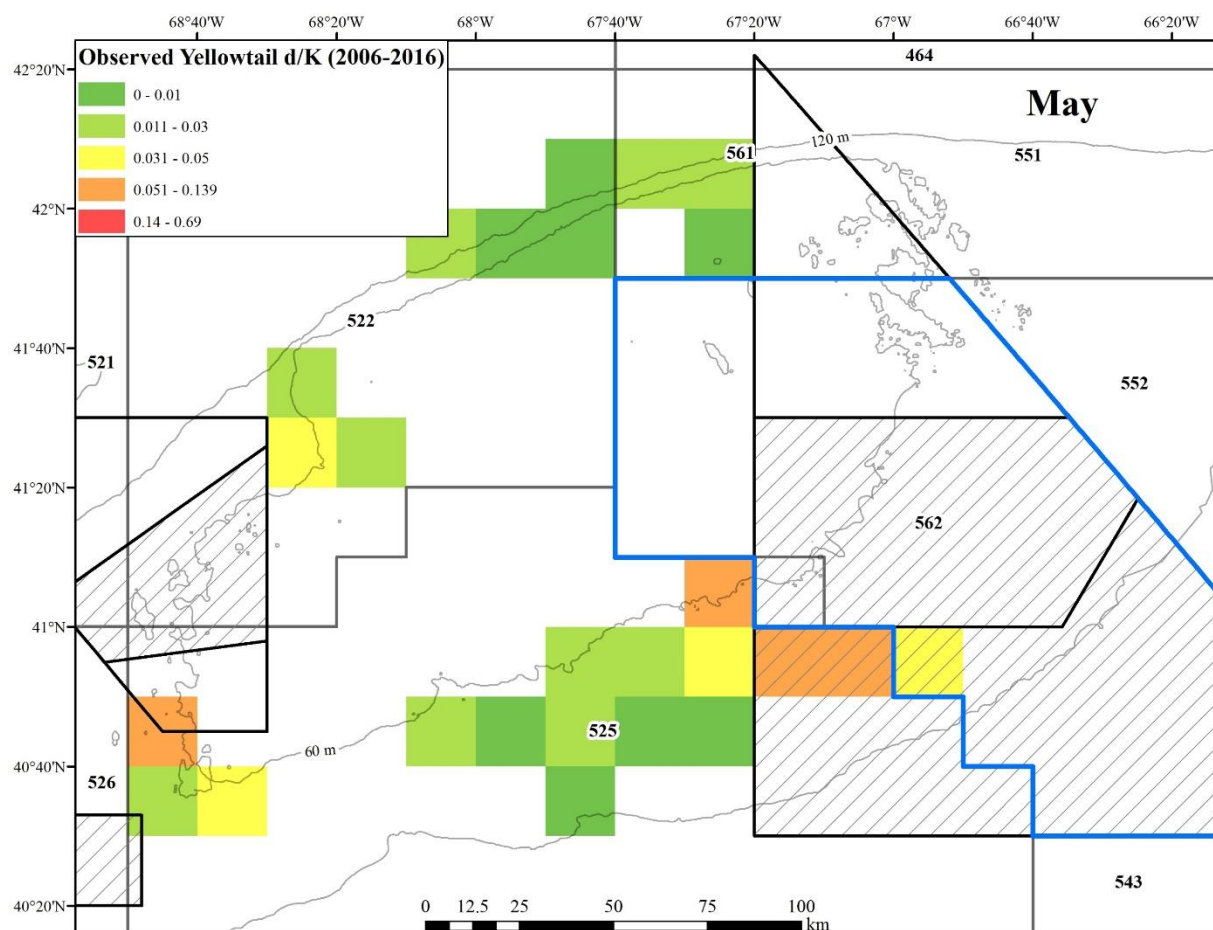
To comply with data confidentiality requirements, the following figures only display ten-minute squares with observed activity from 3 or more vessels for each month. The blue lines depict boundaries of the GB and SNE yellowtail flounder AM areas. The red line depicts the eastern boundary of the SNE/MA windowpane flounder AM gear restricted area (71° W).

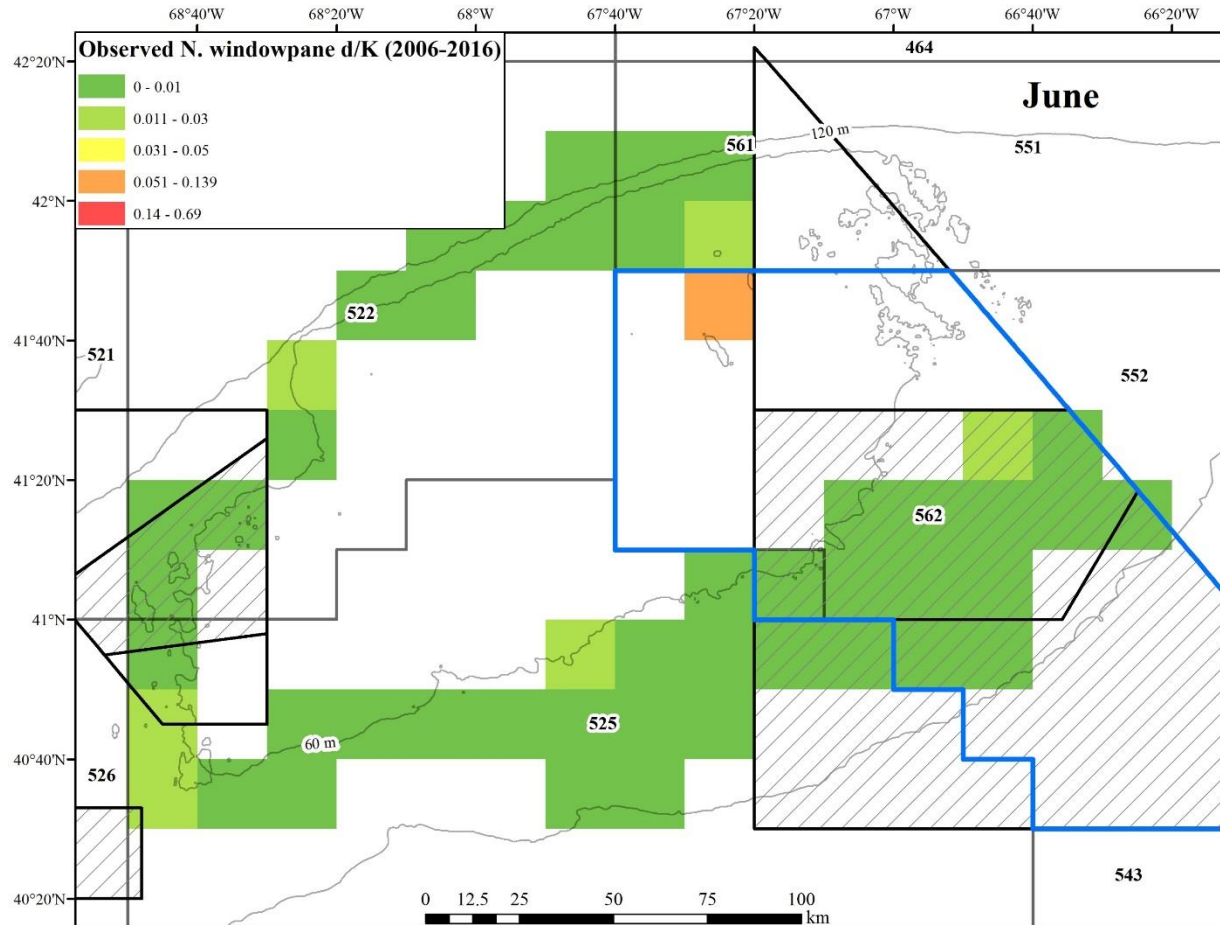
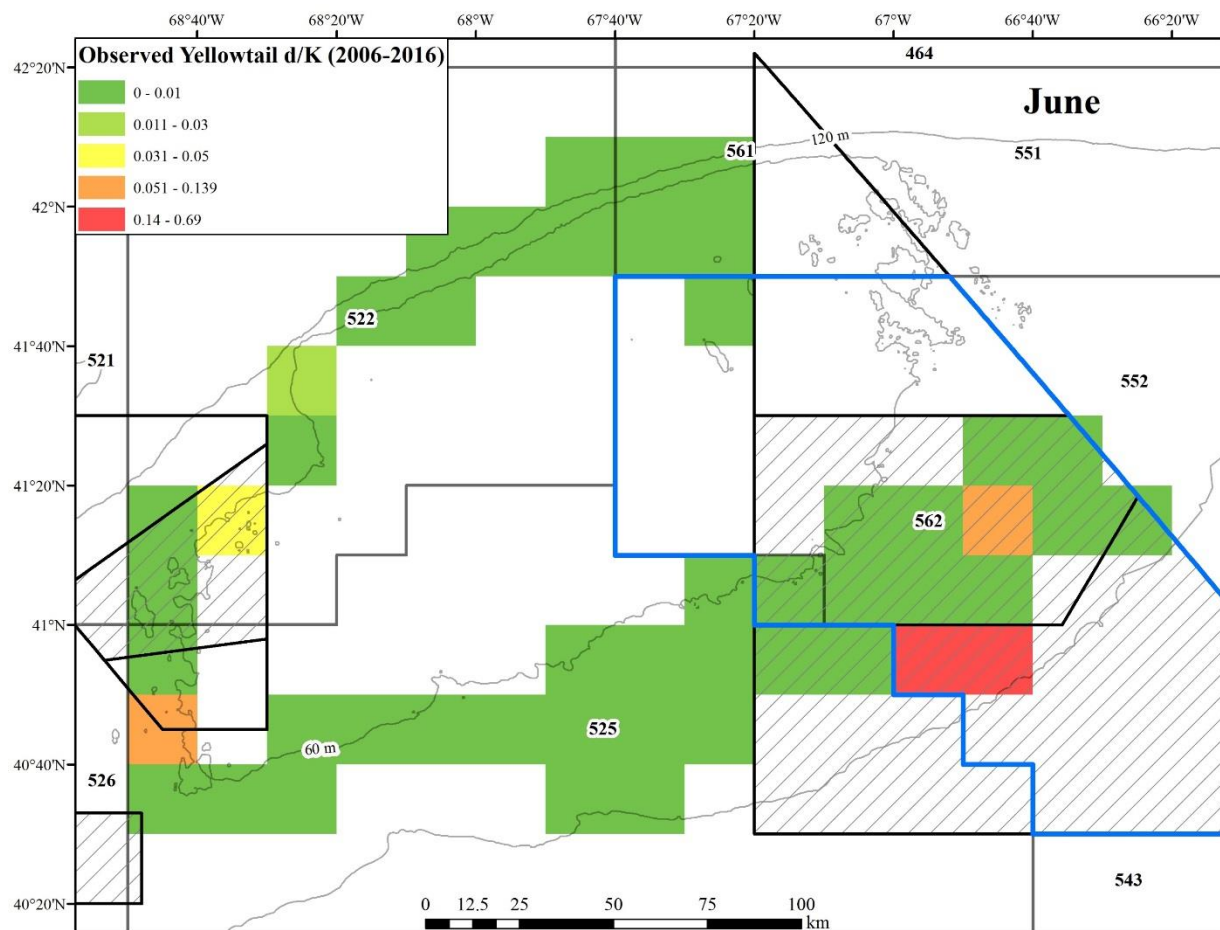
The first group of figures depict both GB yellowtail and northern windowpane bycatch by month (one month per page, GB yellowtail as top figure, and northern windowpane as the bottom figure). The second grouping of figures is for SNE/MA yellowtail flounder only (each page contains two months). The scale for all figures is the same. One way to interpret these figures is as follows: Yellow squares indicate between 3-5 lbs of flatfish catch per 100 lbs of dressed scallops kept, orange squares indicate between 5-13 lbs of flatfish catch per 100 lbs of dressed scallops kept, and red squares indicate over 14 lbs of flatfish catch per 100 lbs of dressed scallops kept.

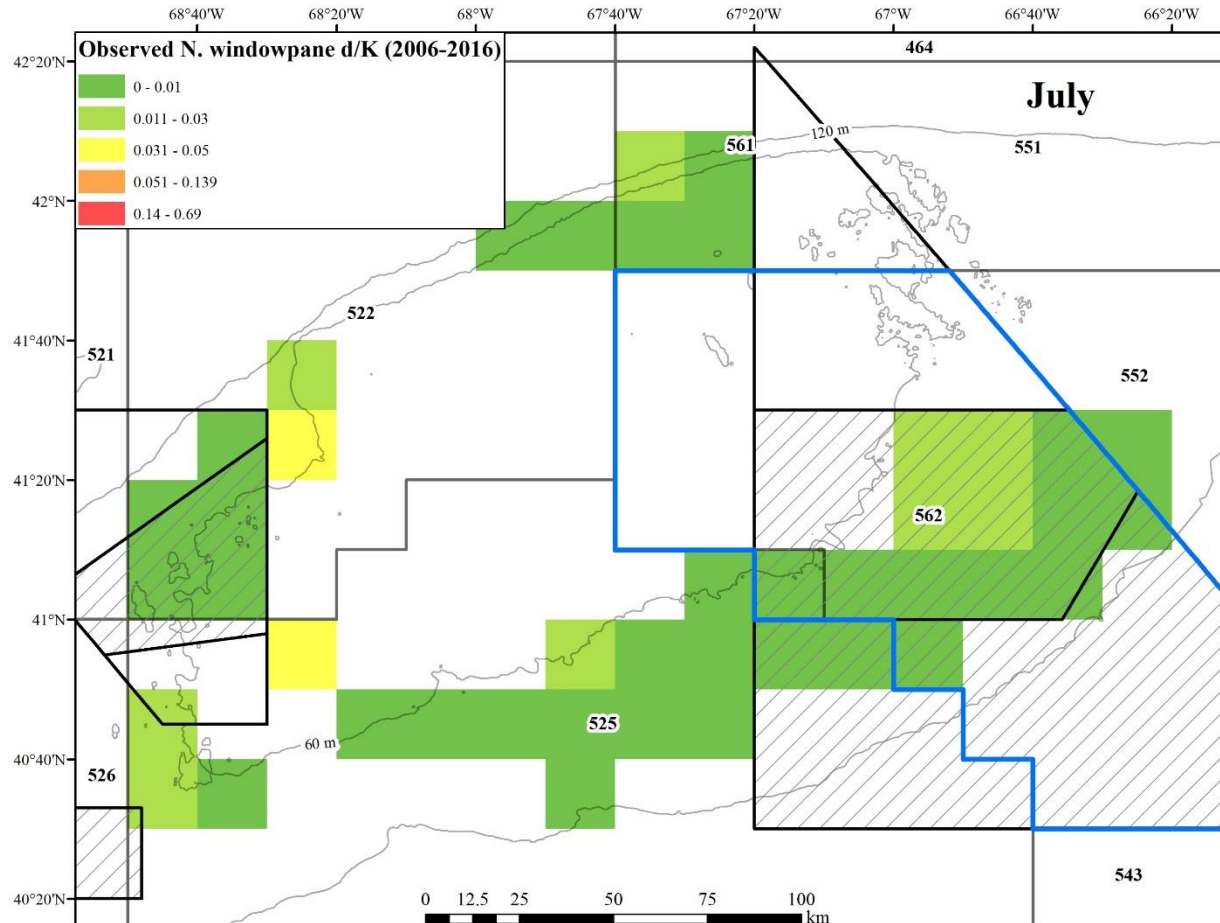
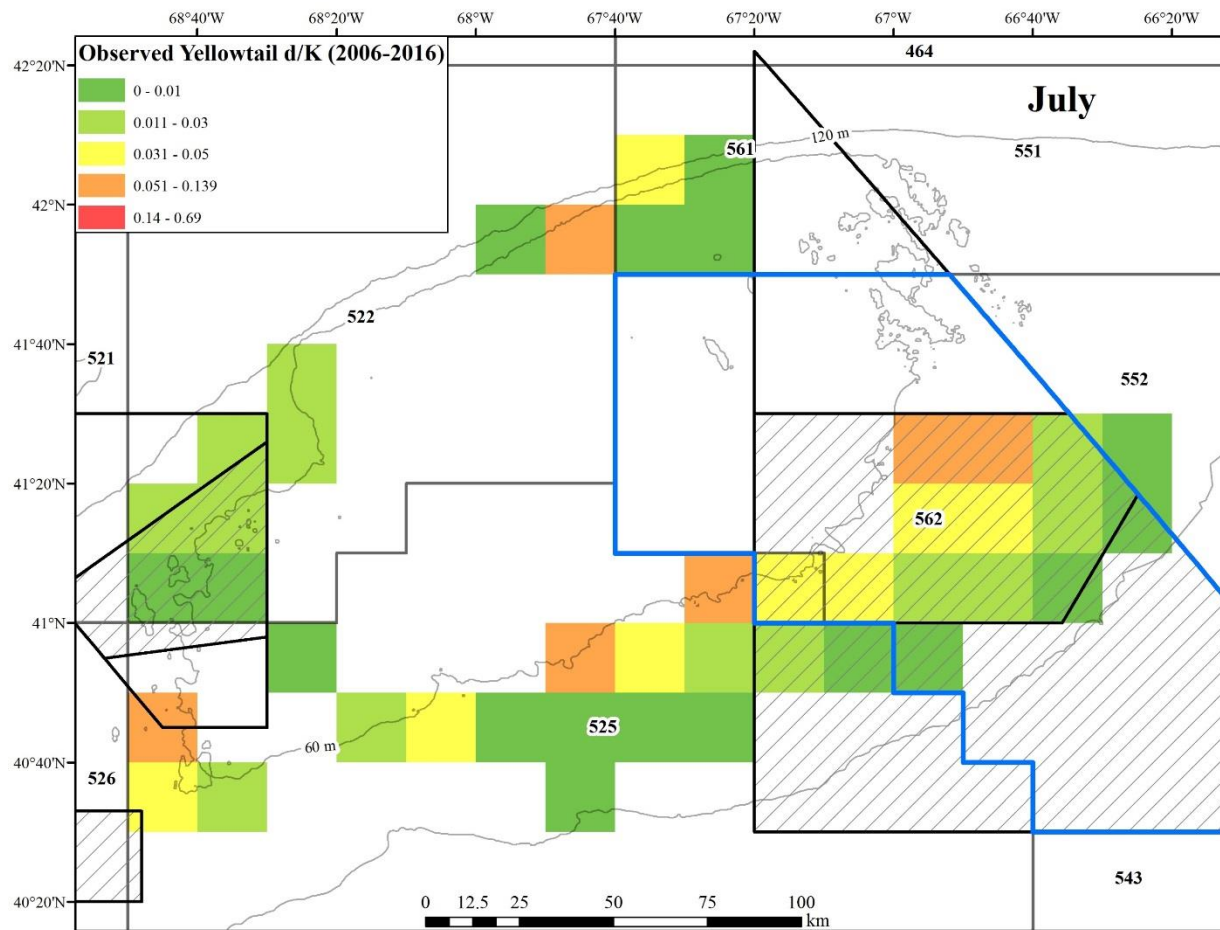
Observed d/K by month, GB YT vs. NWP

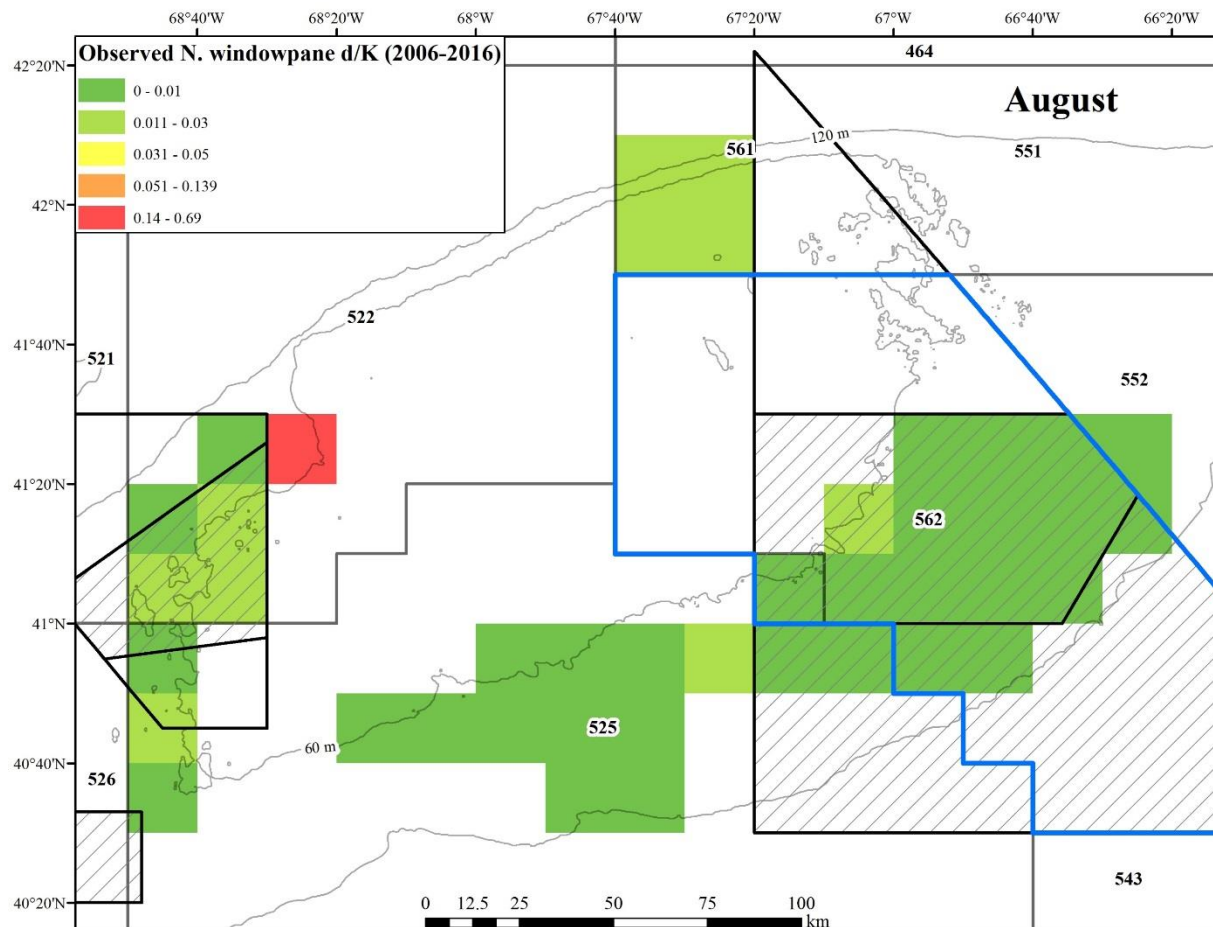
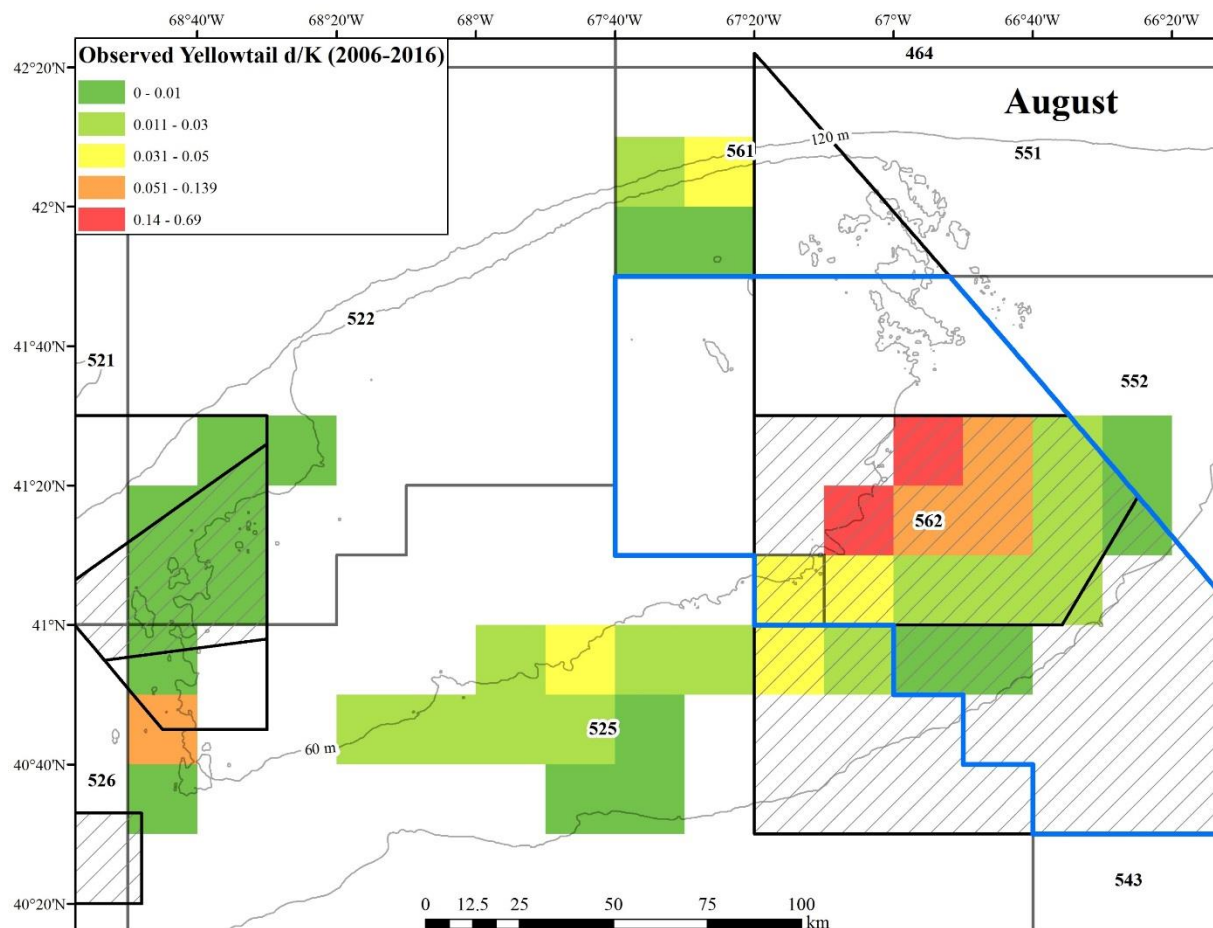


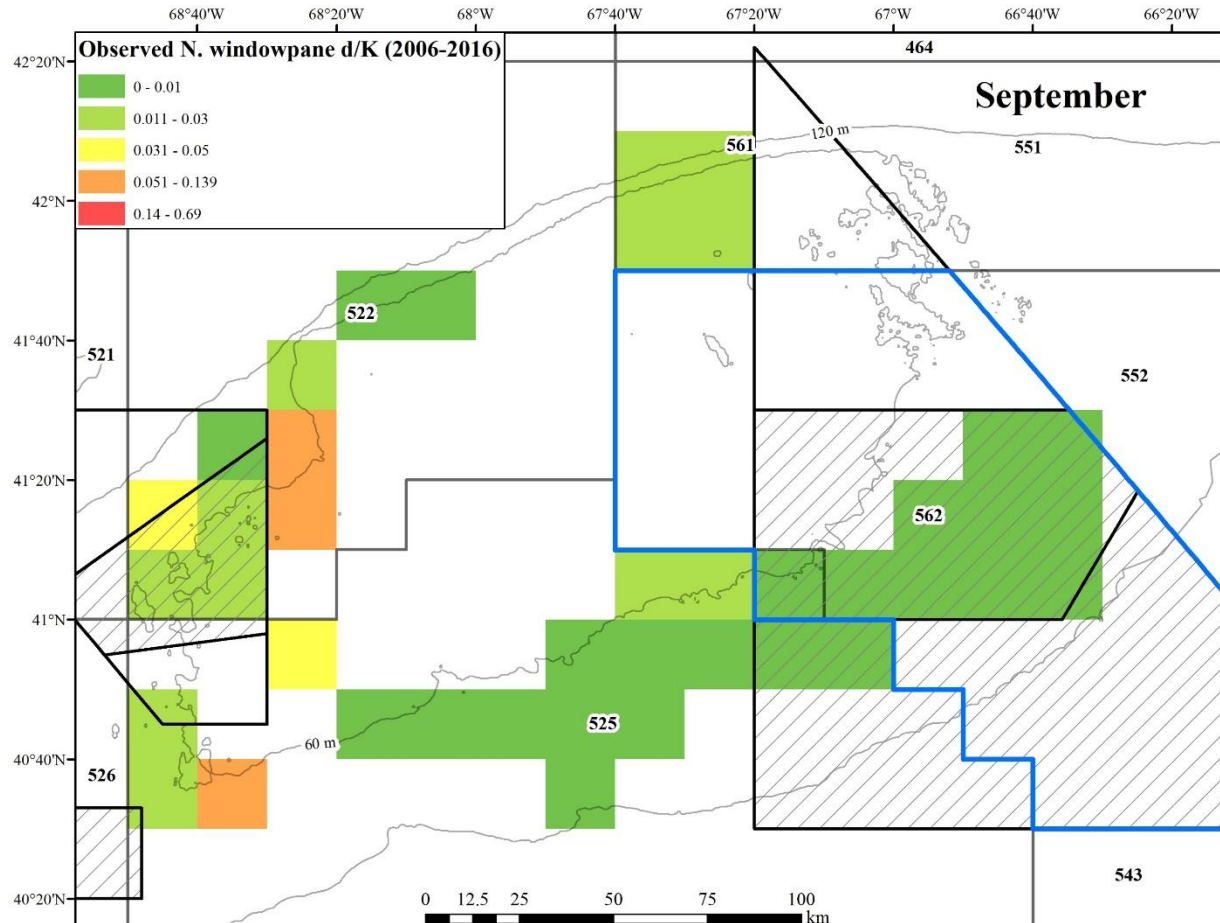
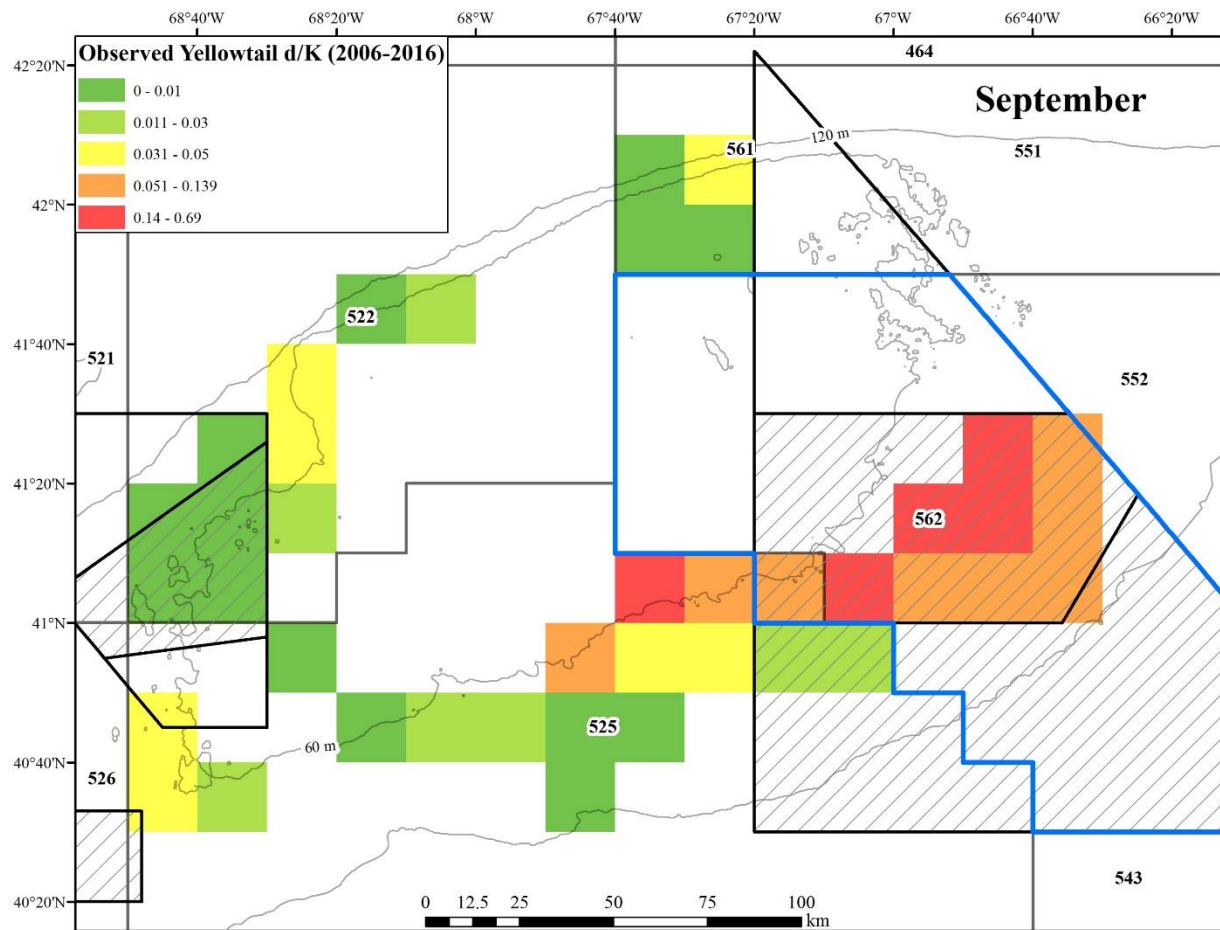


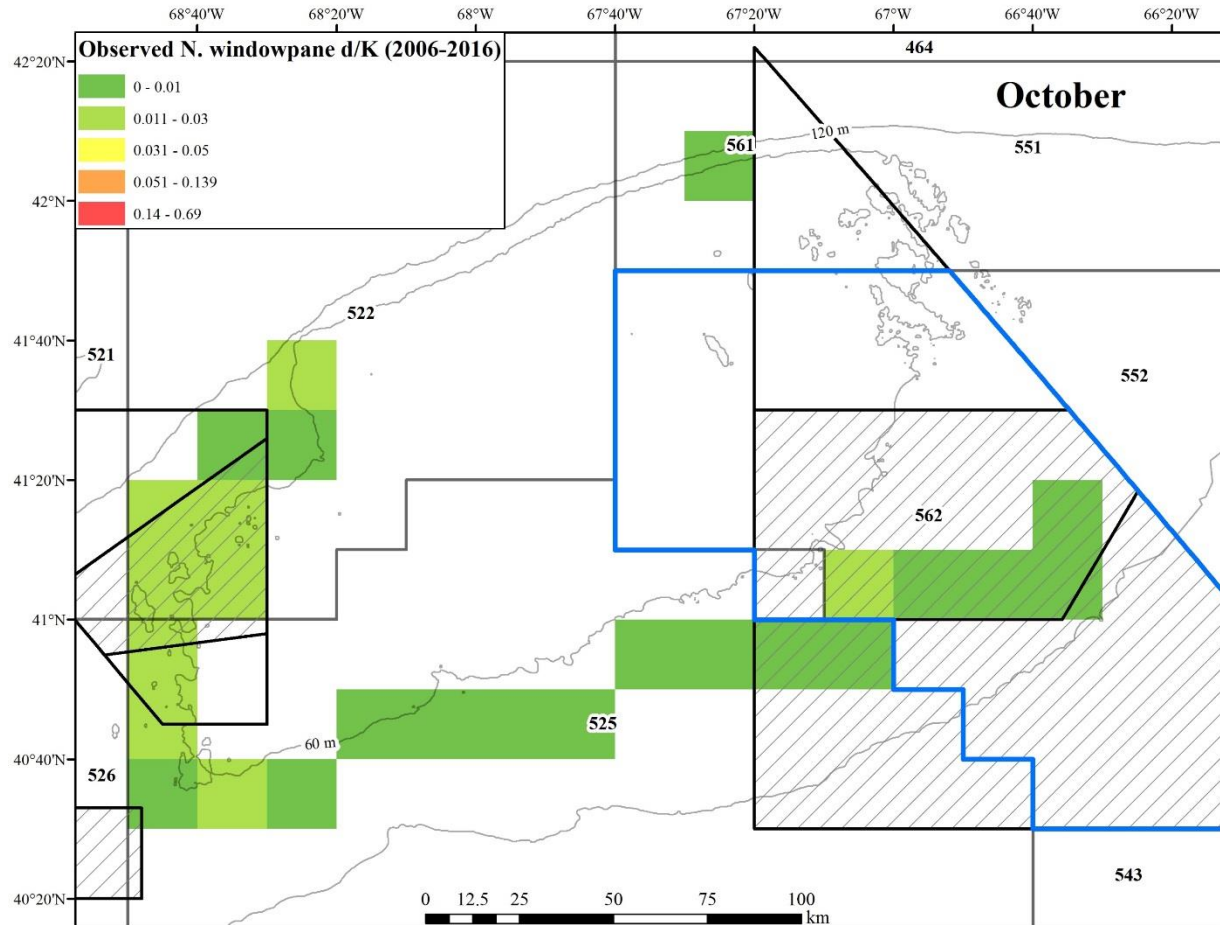
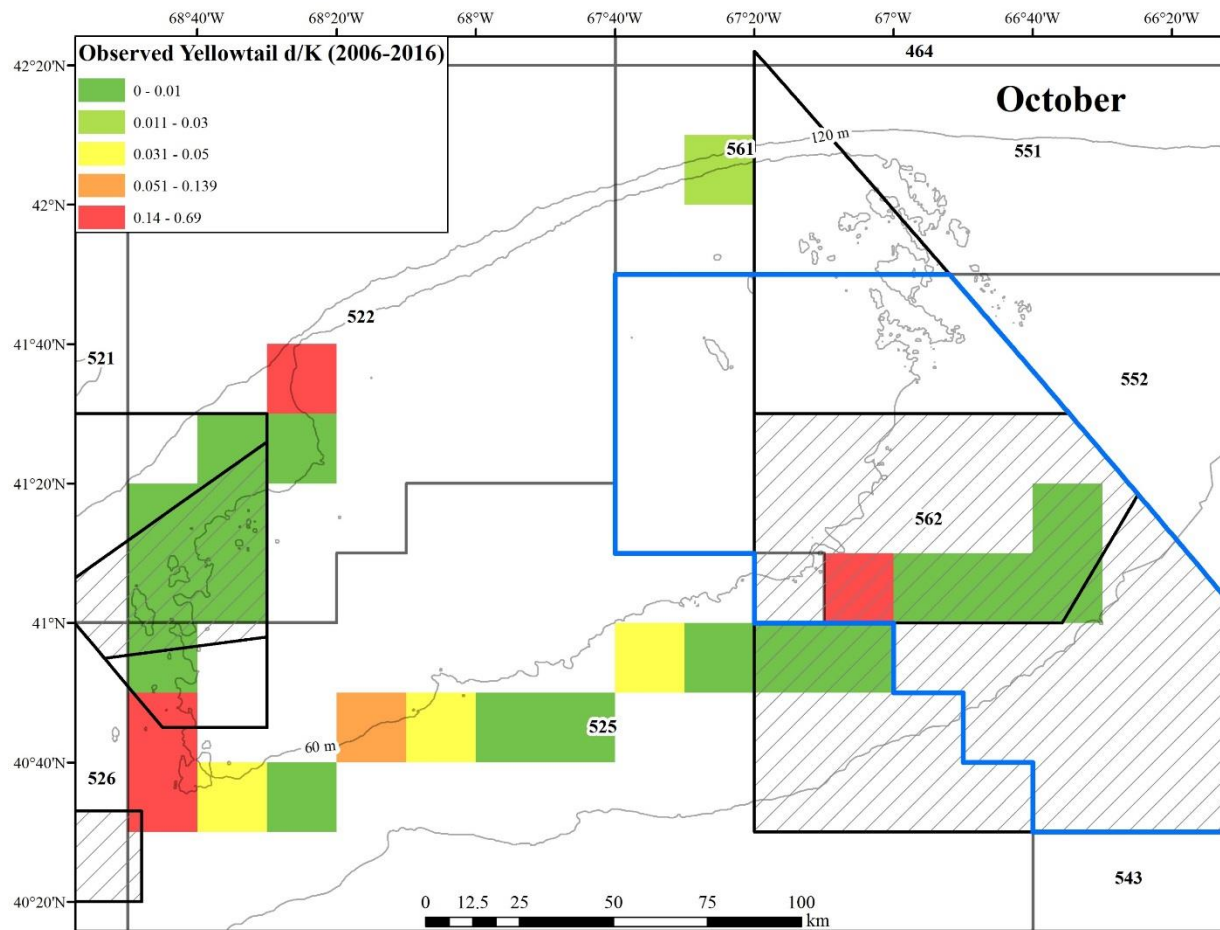


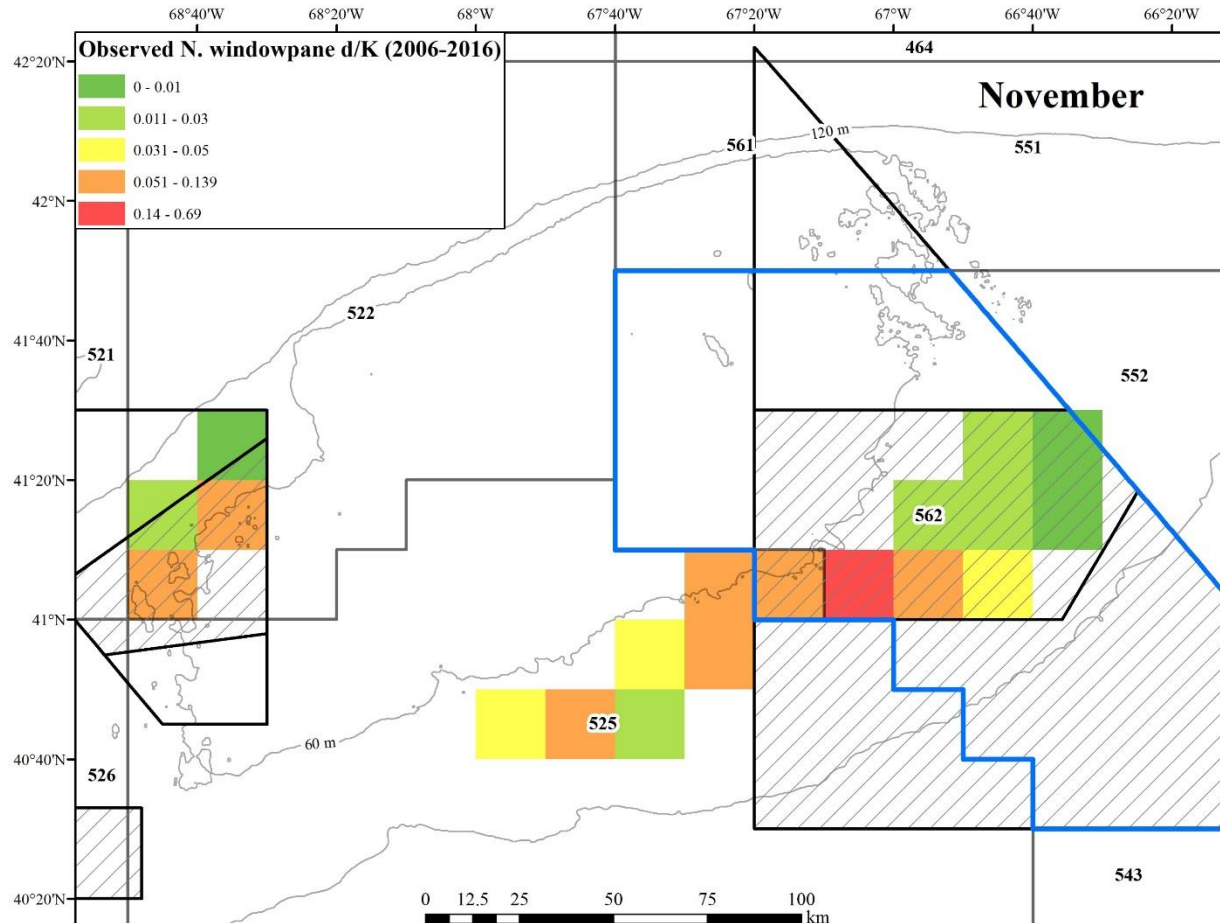
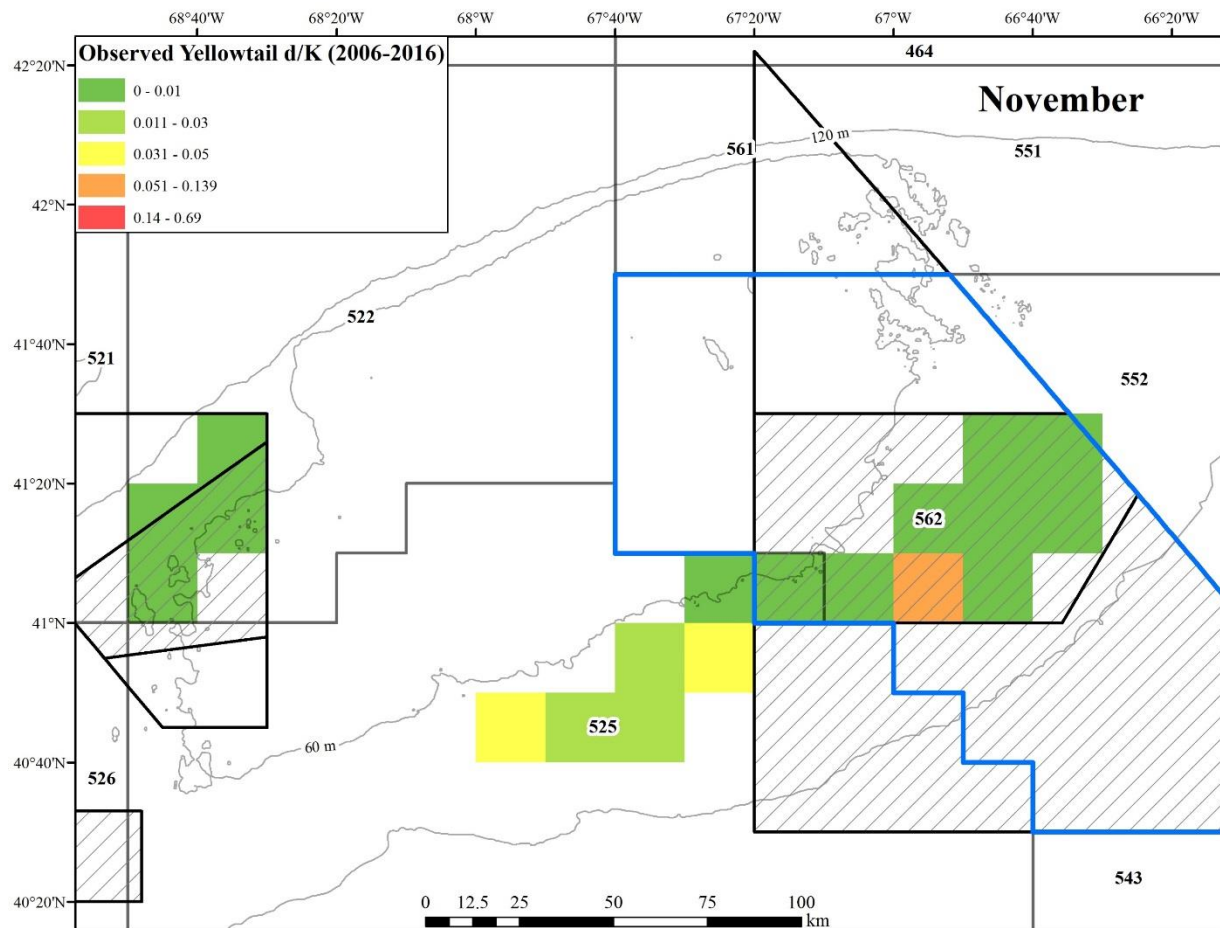


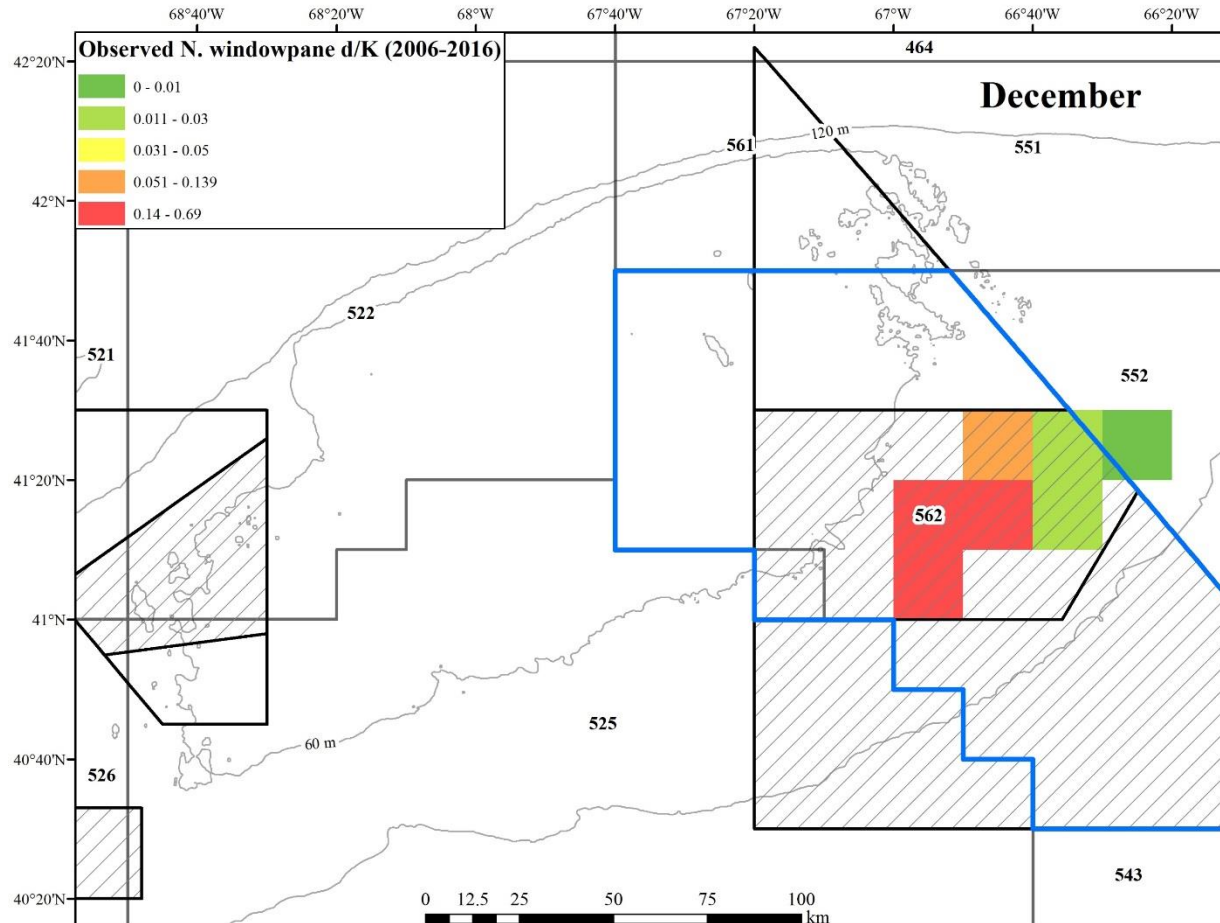
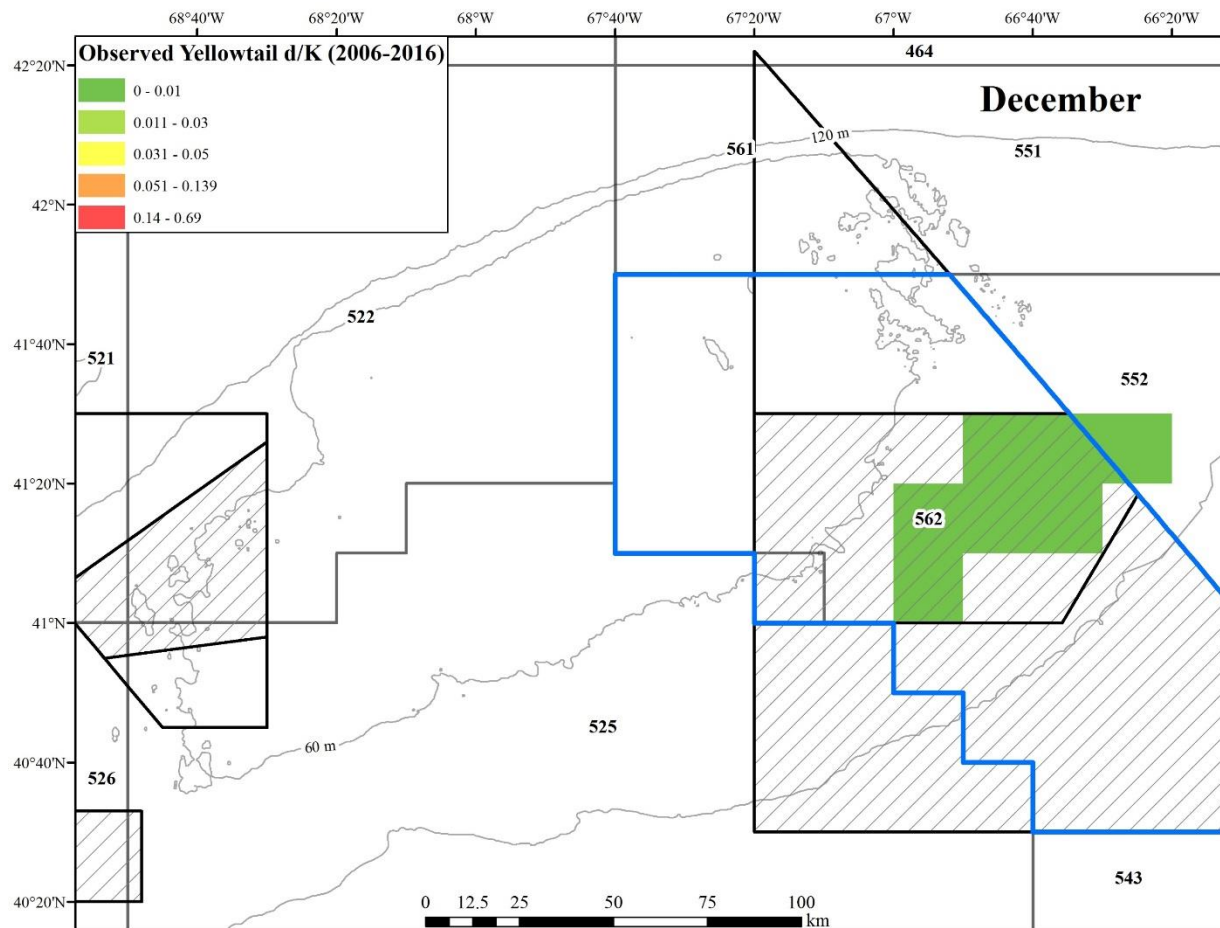


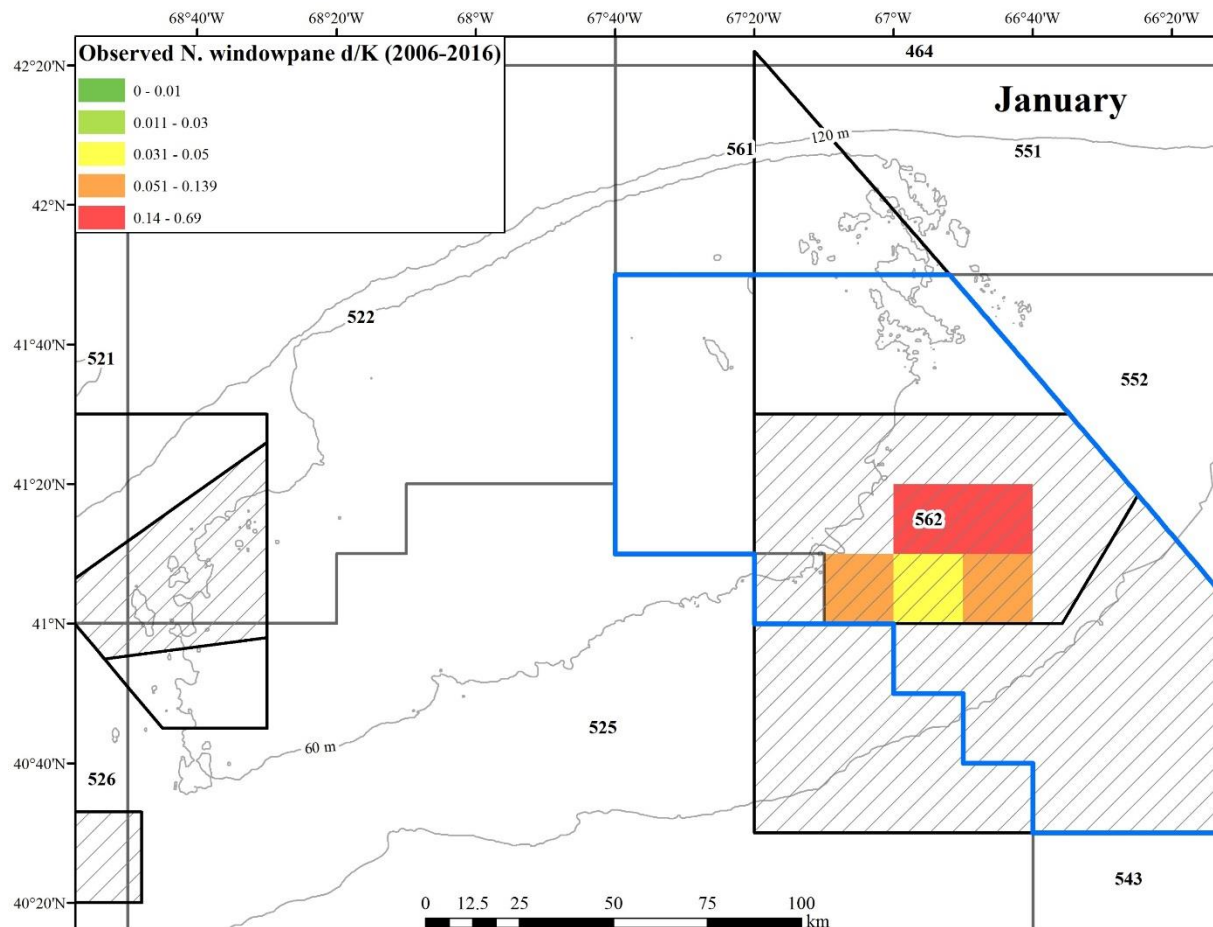
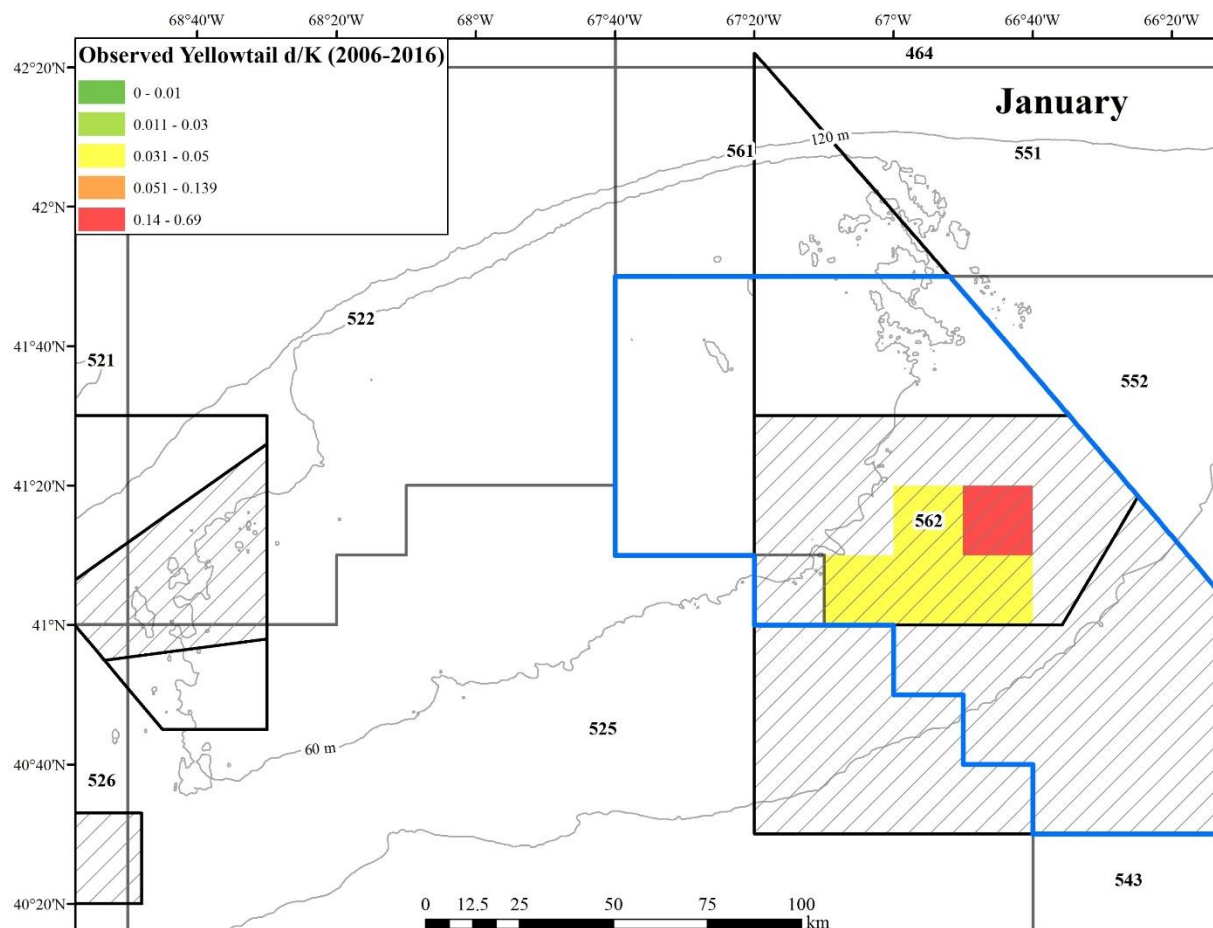


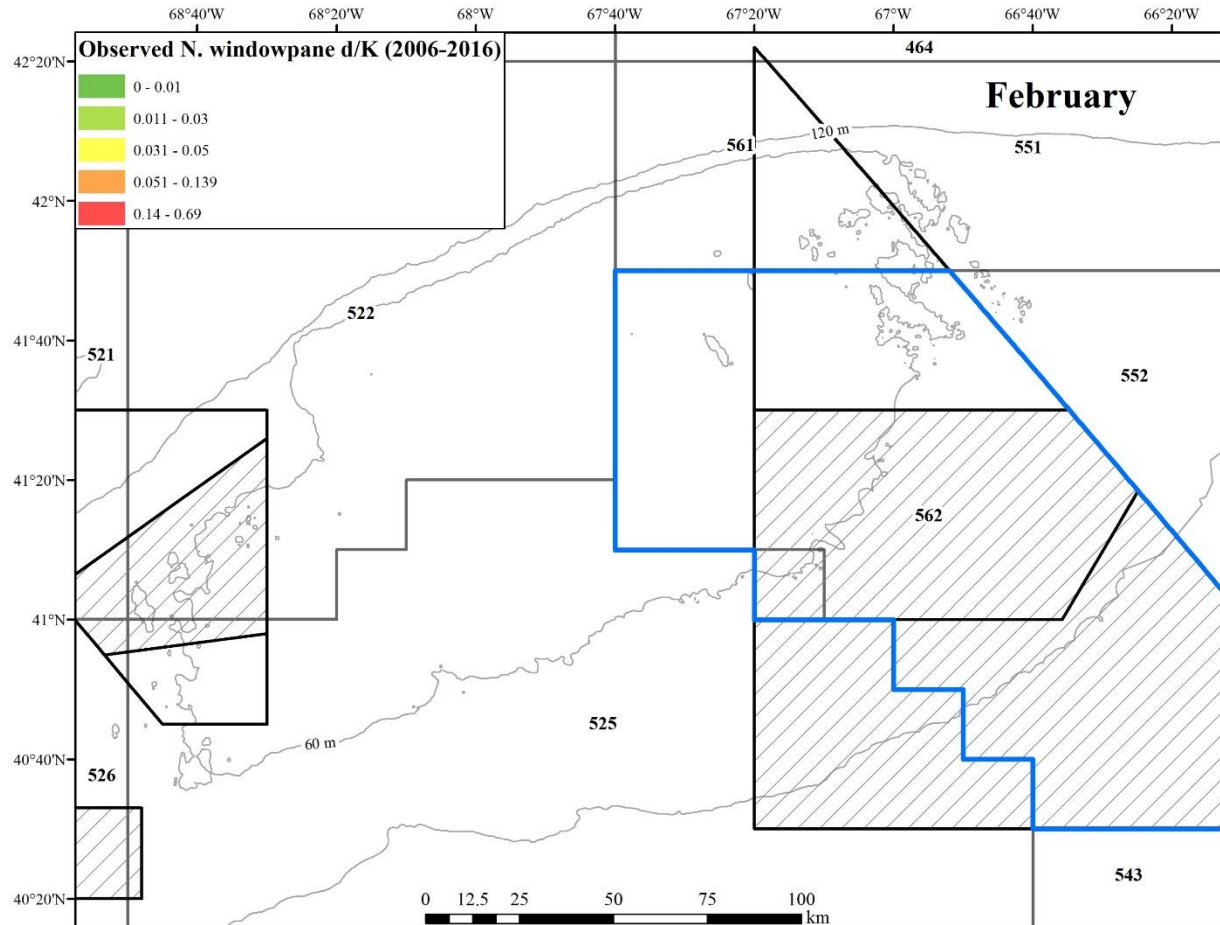
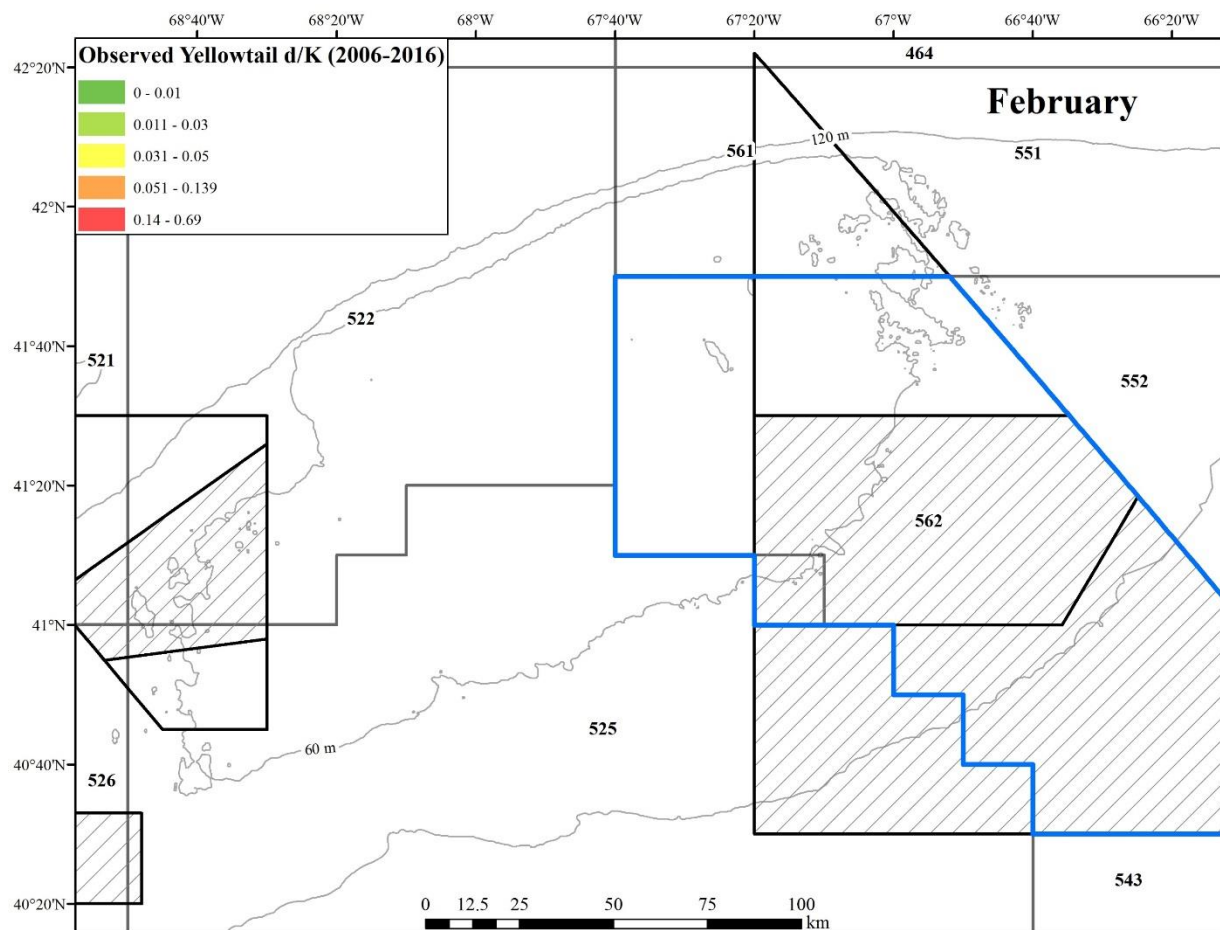


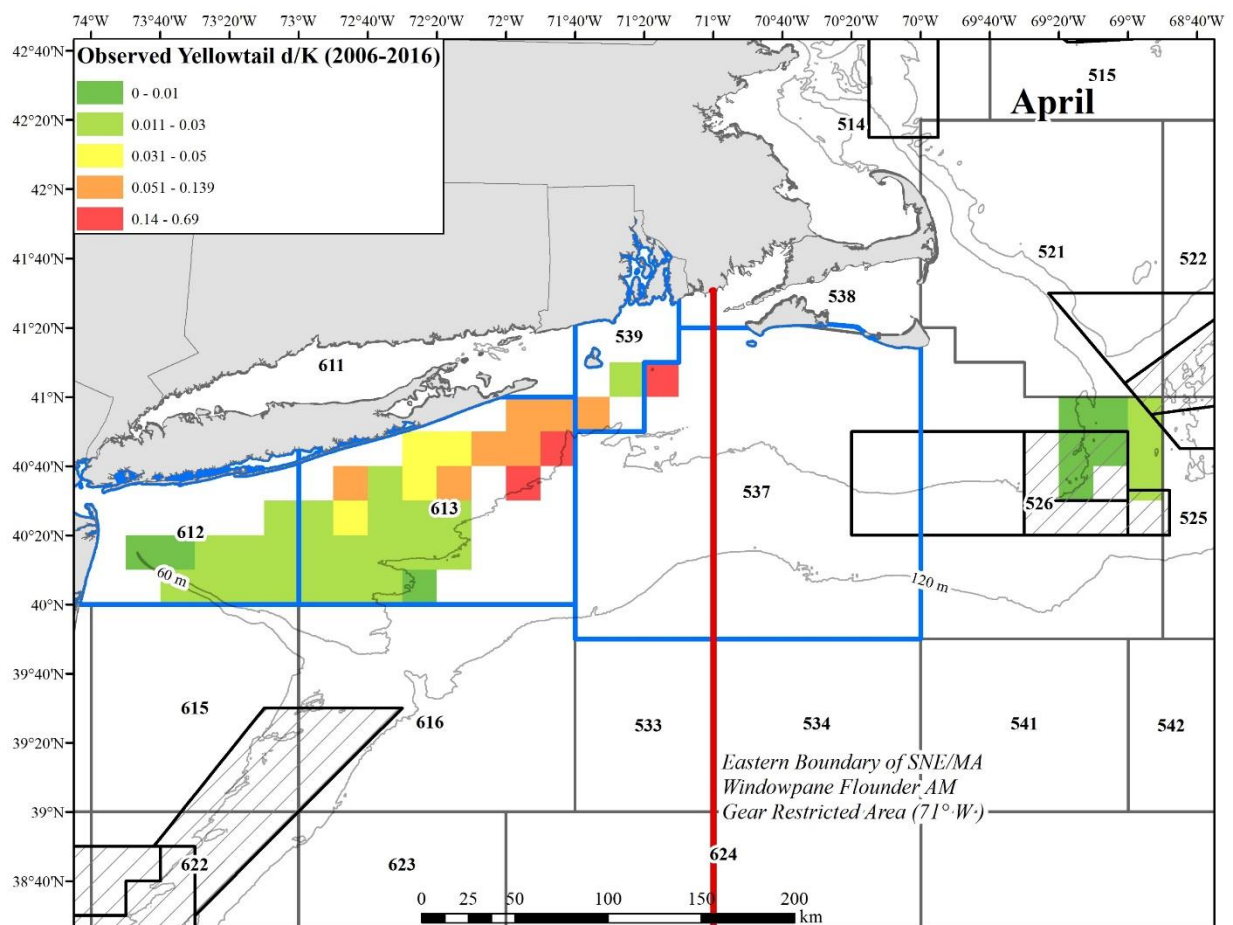
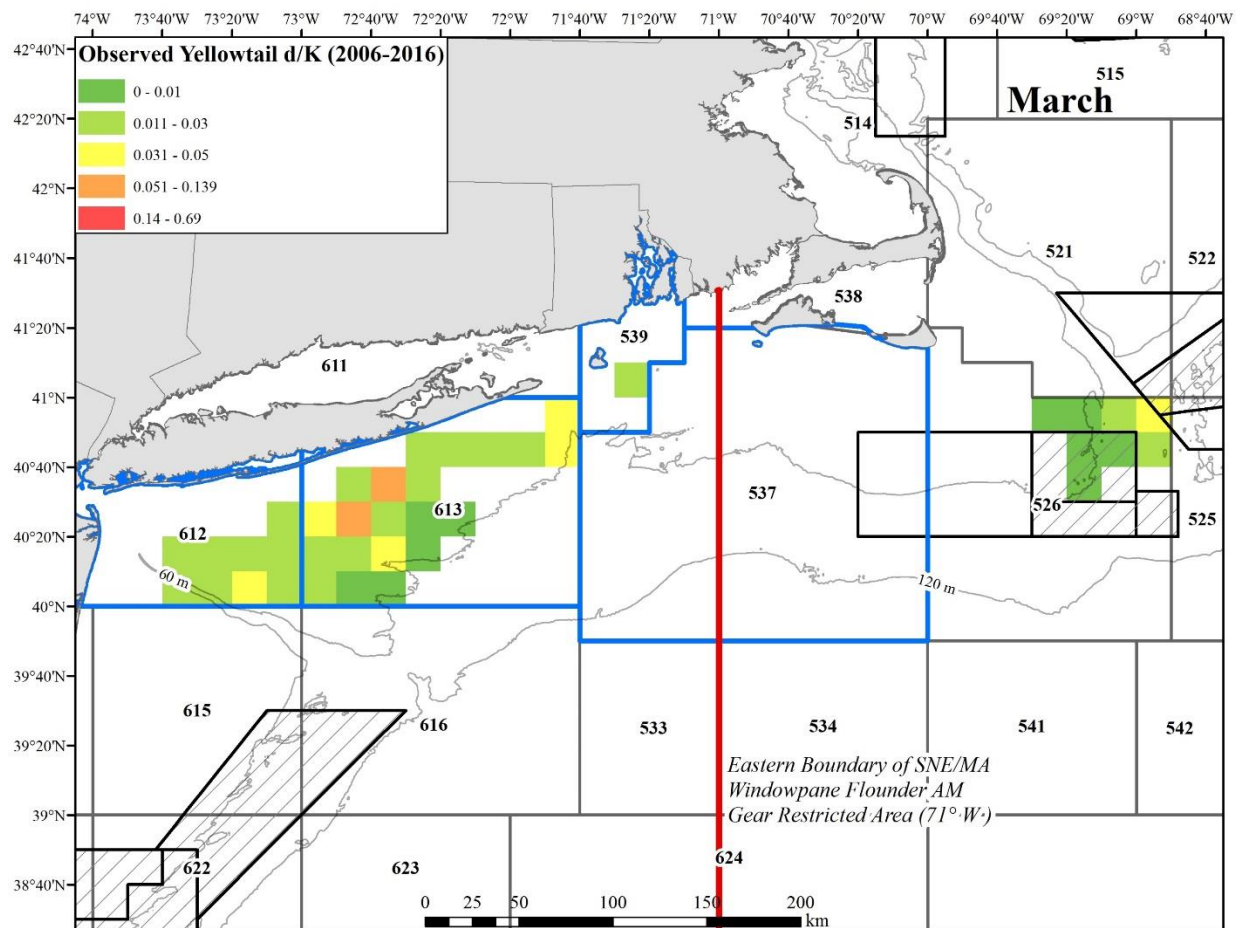


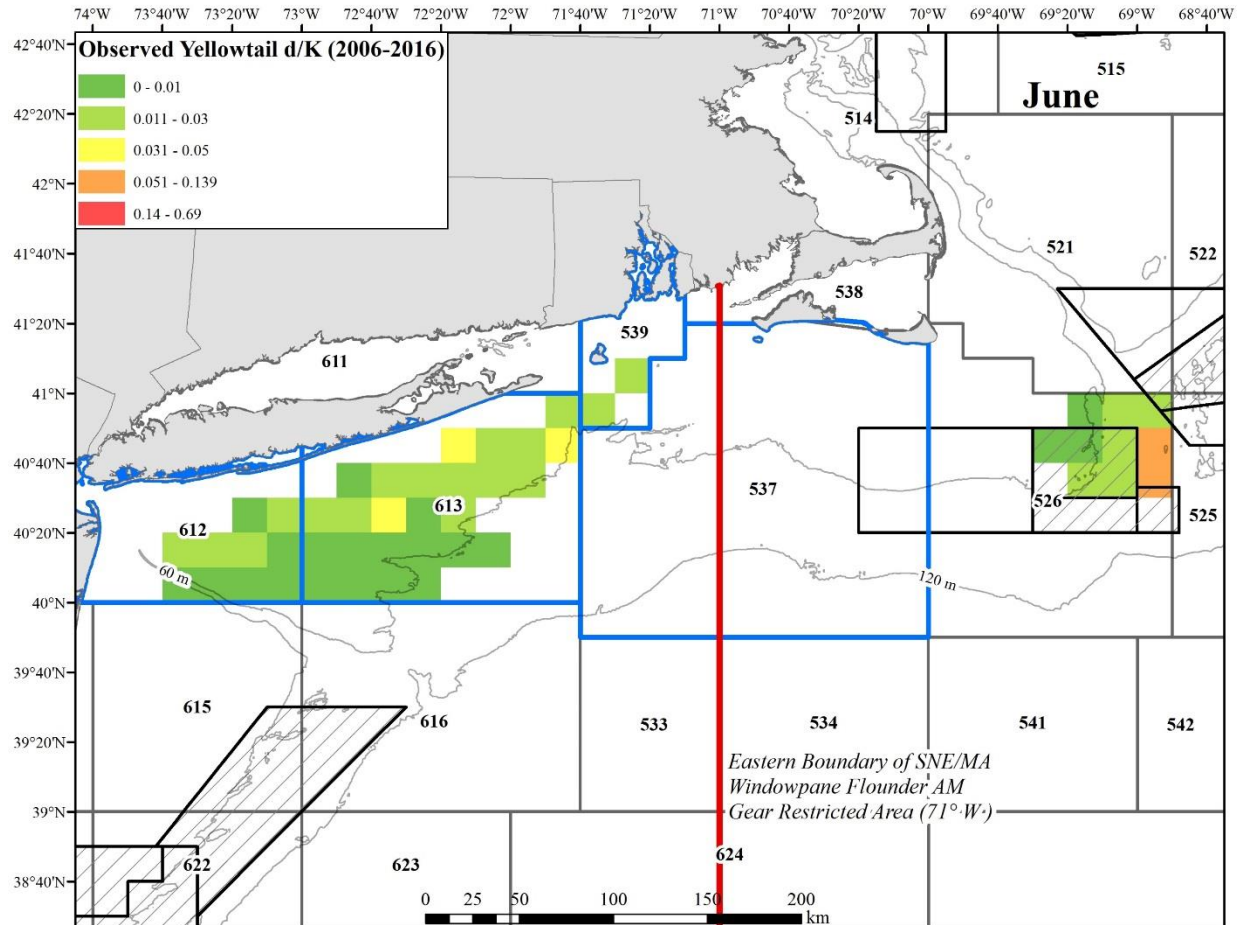
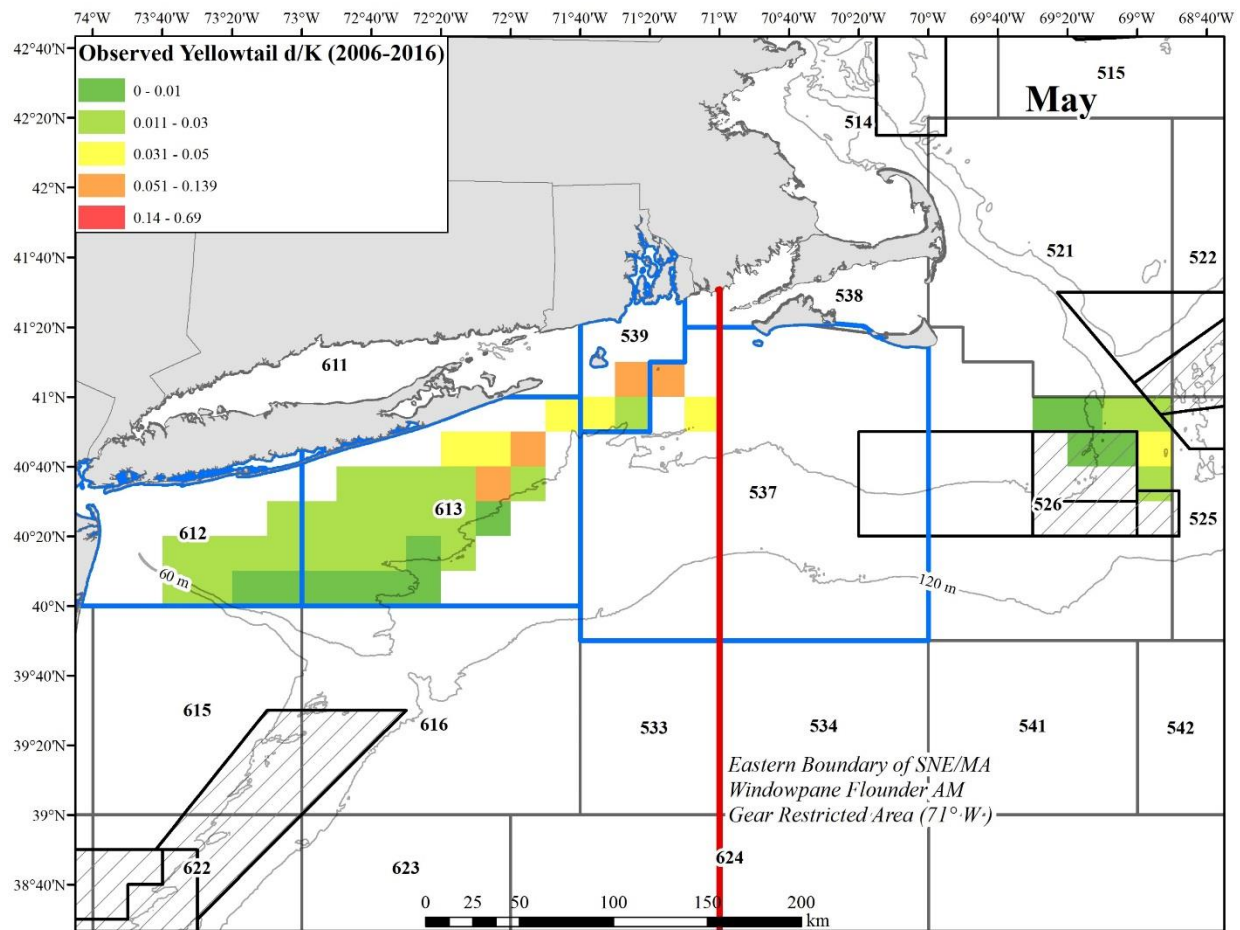


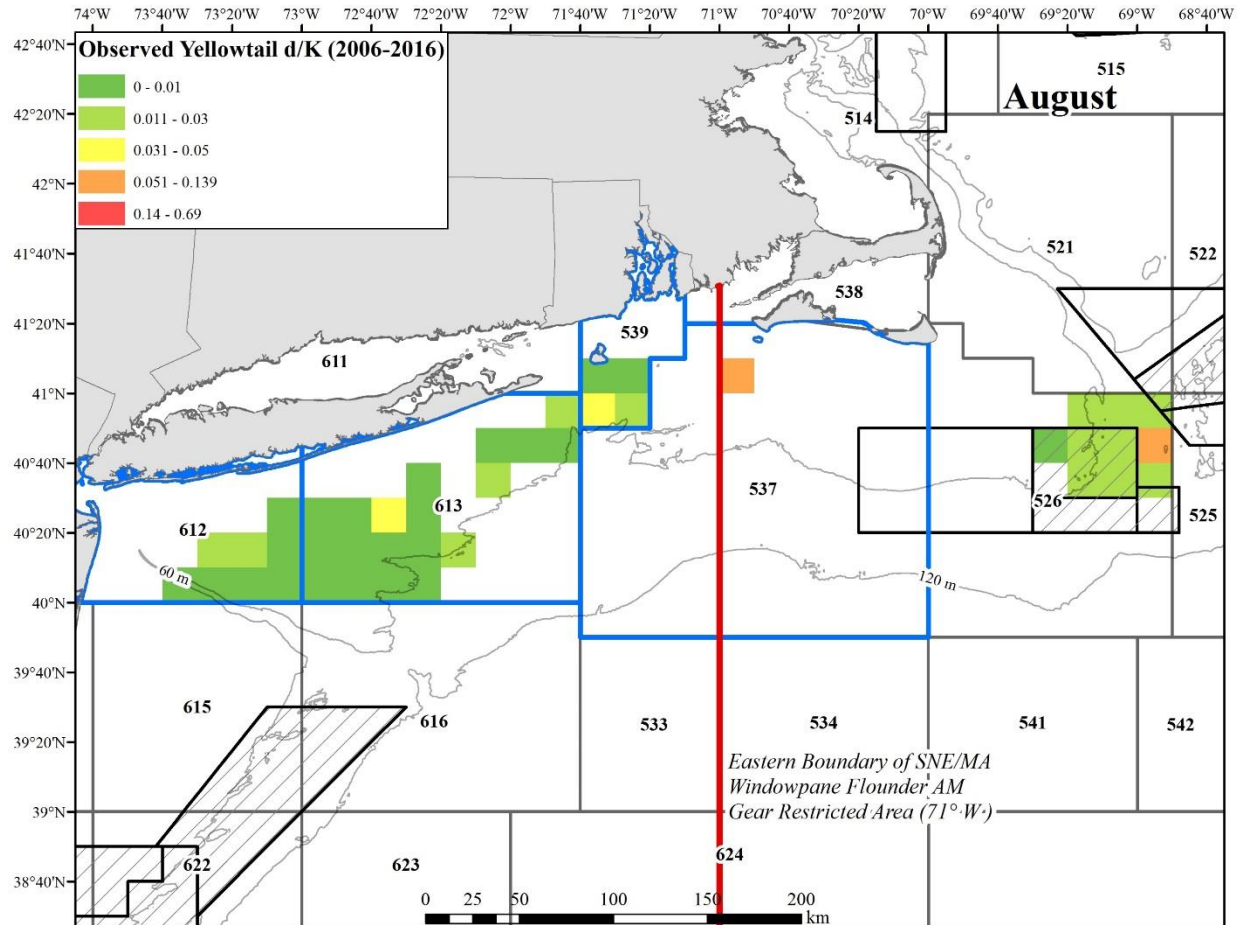
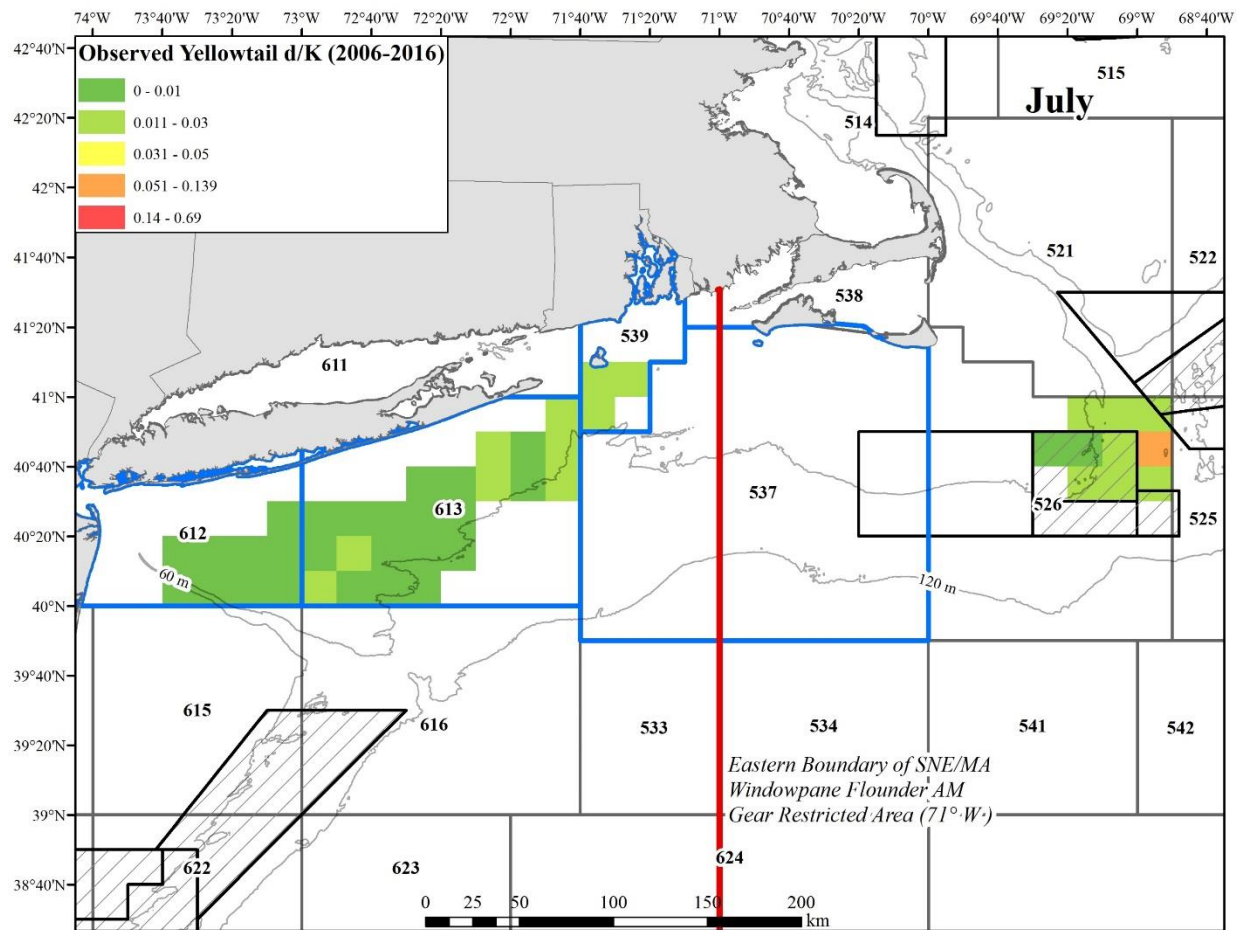


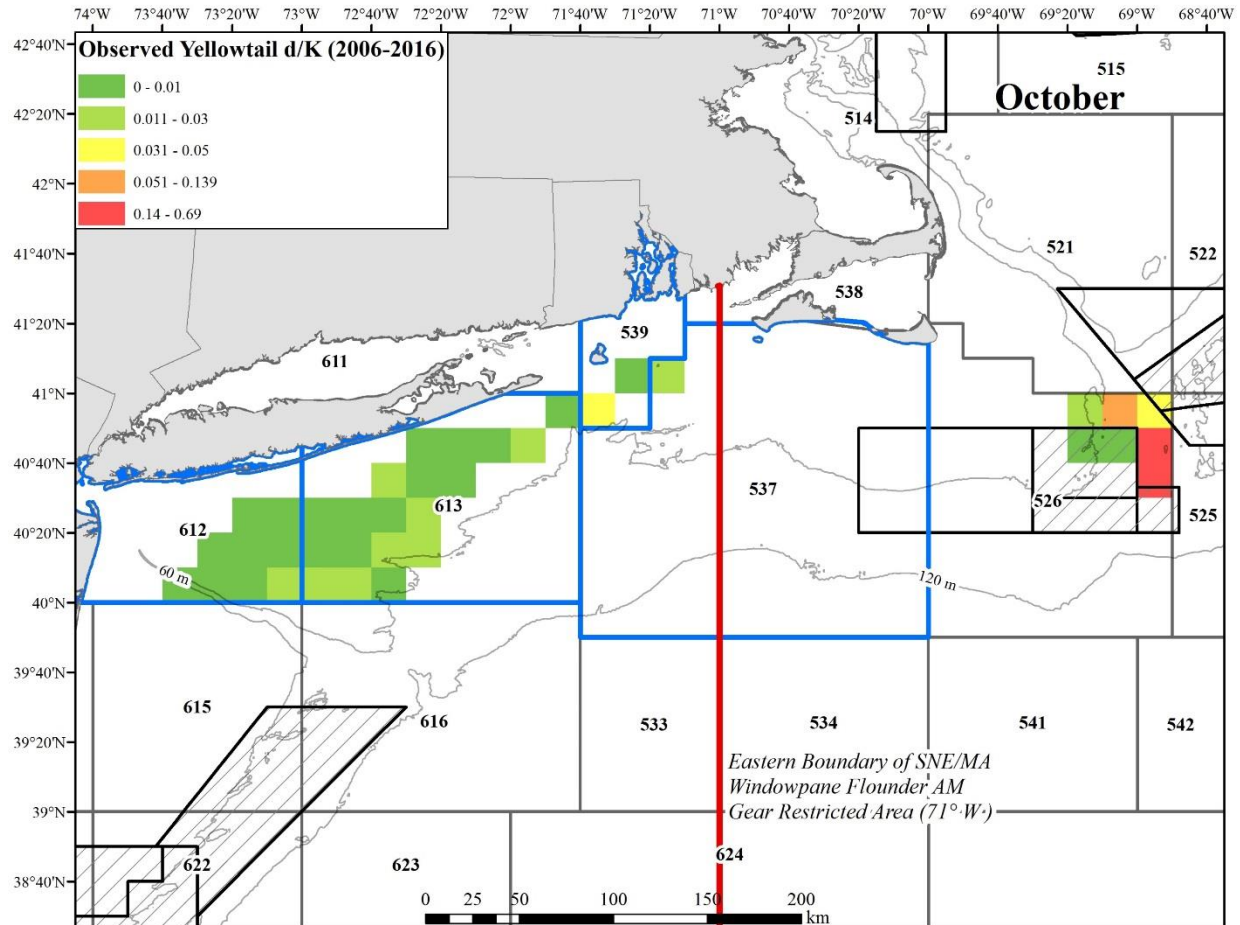
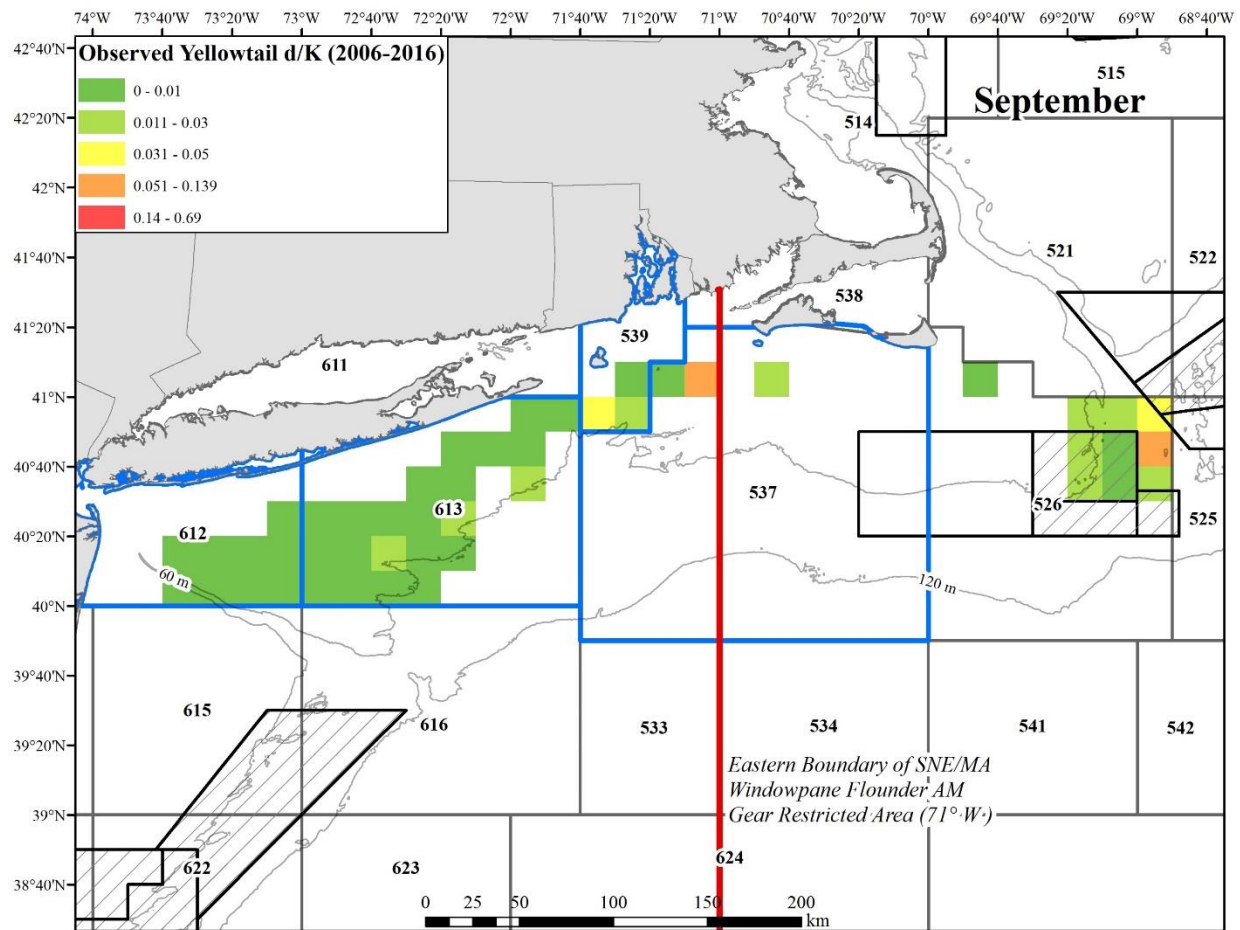


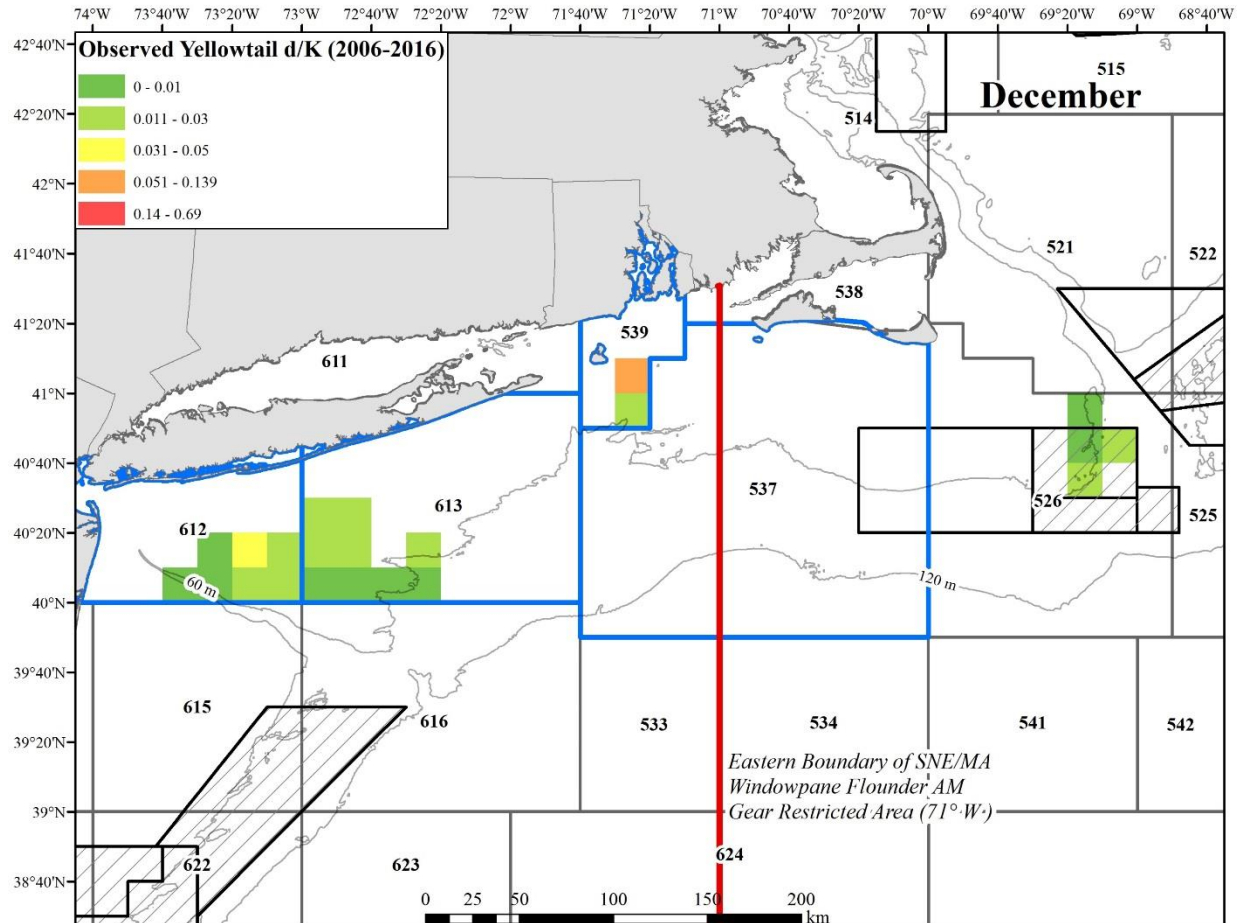
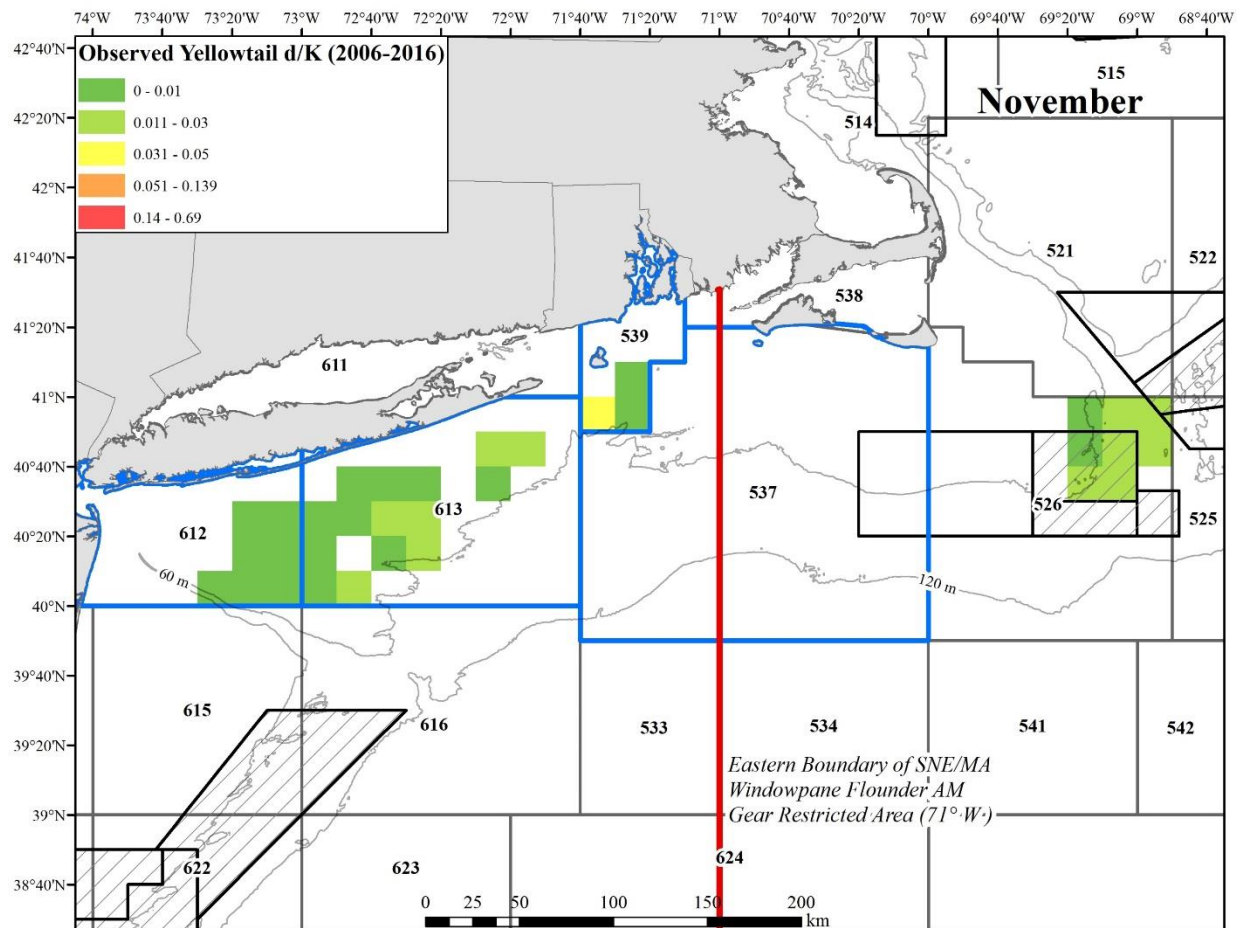


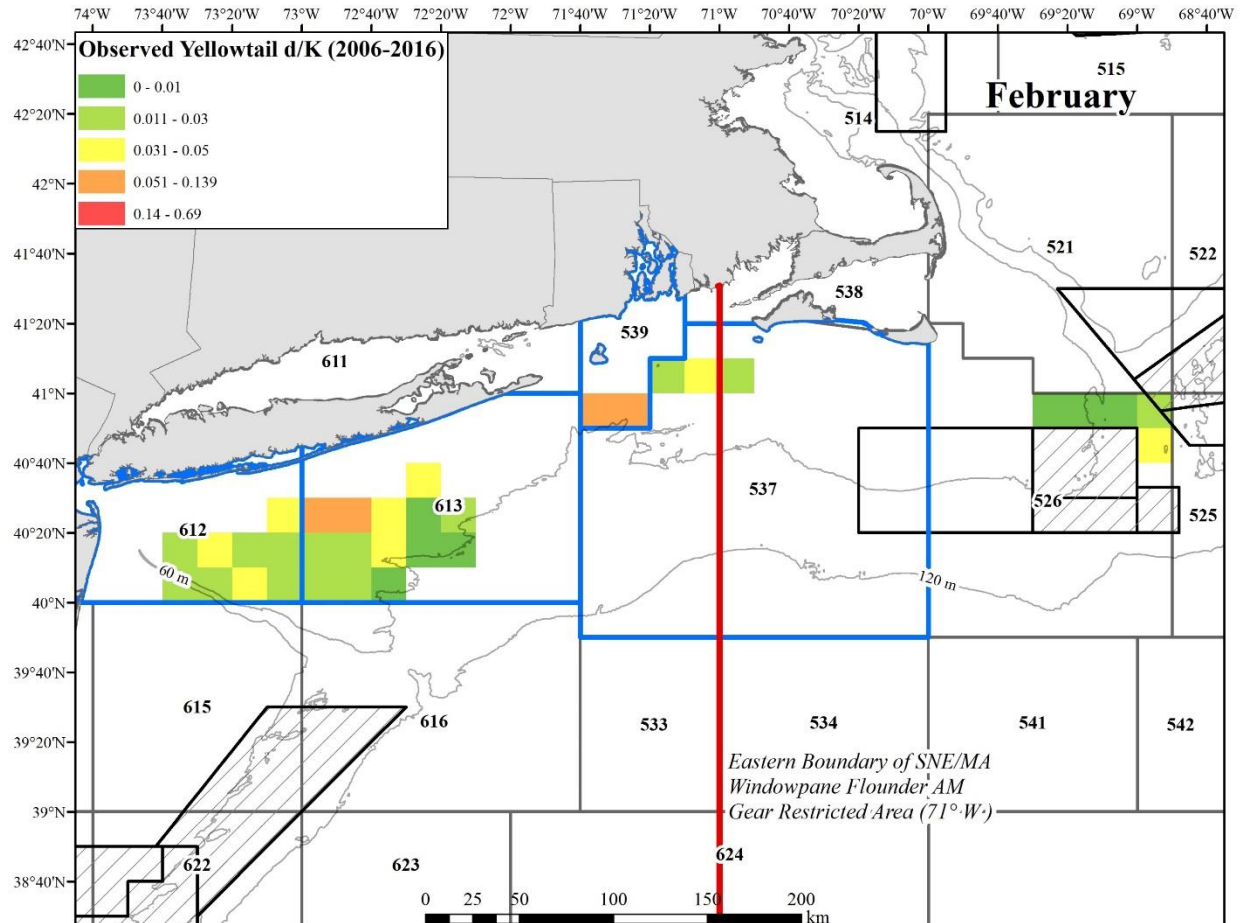
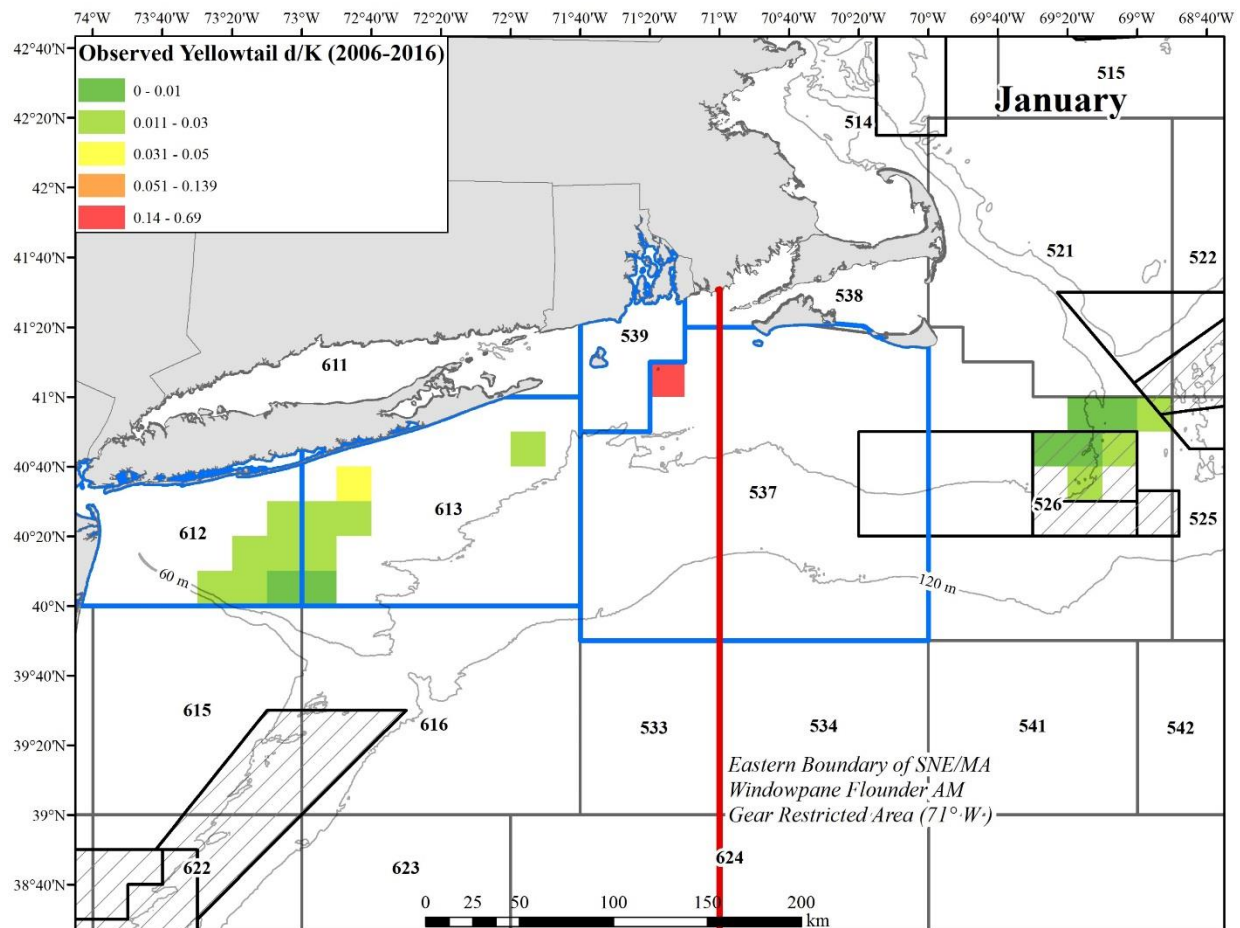










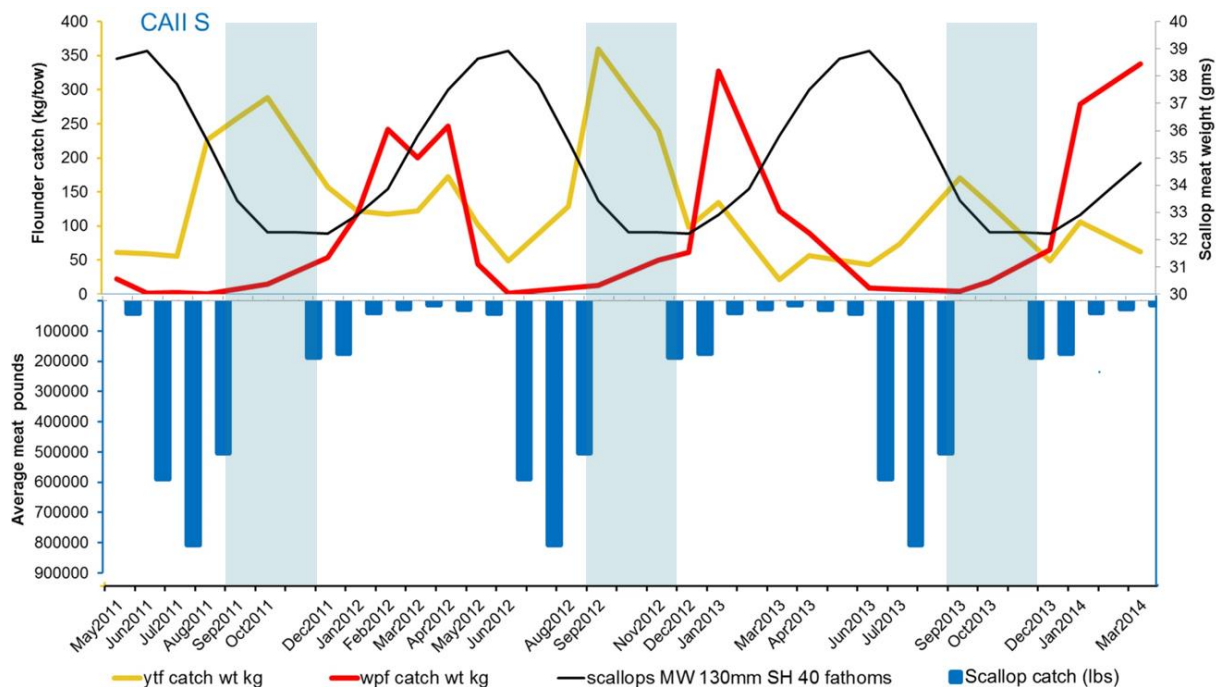


Data from Coonamessett Farm Foundation's seasonal bycatch survey

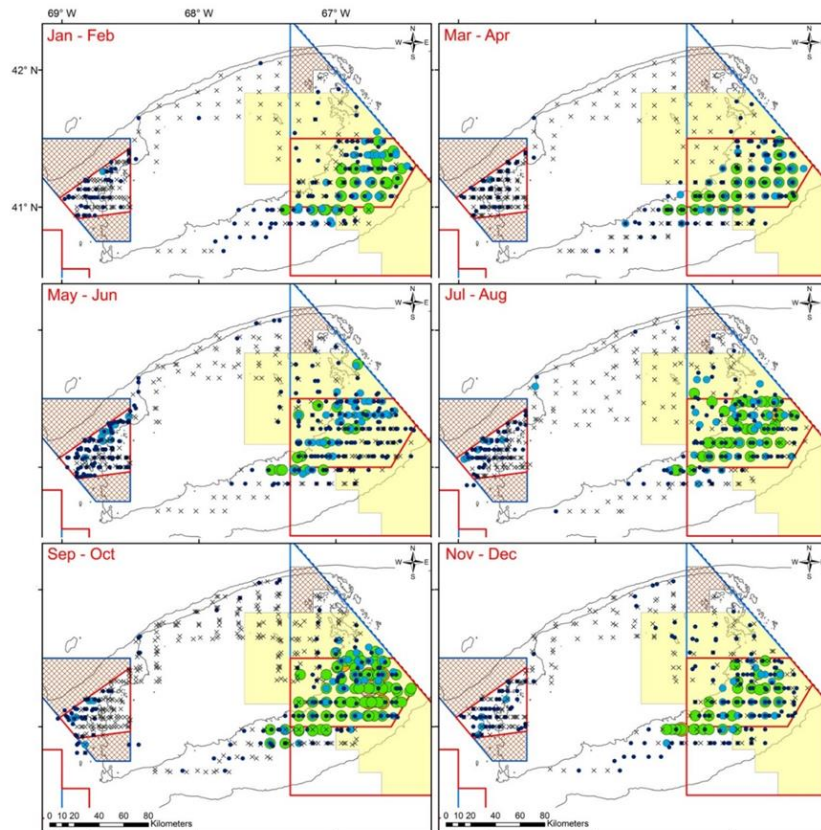
Dr. Liese Siemann has presented data from the CFF's seasonal bycatch on two occasions this year (March 1, 2017 and May 4, 2017). The following figures were presented to the scallop PDT on May 4th.

The CFF dredge survey used a fix grid design and was conducted every four to six weeks from May 2011-March 2014 in the scallop access areas of CAI and CAII. Since 2011, one of the dredges used was a turtle deflector dredge (TDD) with a 7 row apron. The survey was designed to collect spatially and temporally specific information about groundfish bycatch and scallop meat yield in scallop access areas on GB.

Figure 1: Catch of yellowtail and windowpane flounder in Closed Area II from May 2011 – March 2014, including scallop catches during this time period by two month period from May 2013 – April 2015 as a comparison of recent fishing effort during those months.

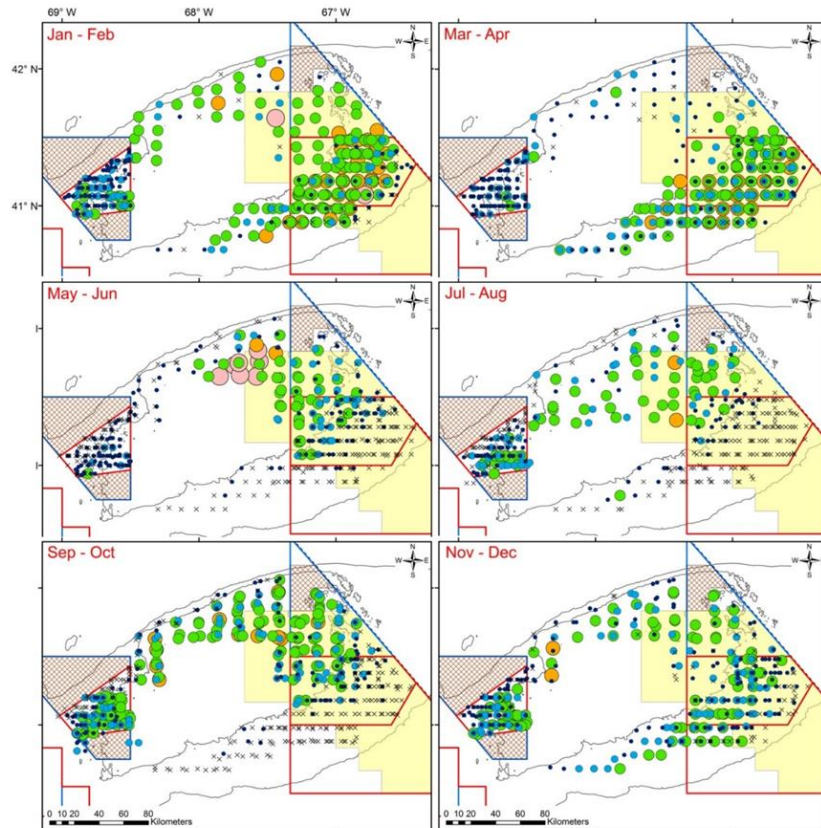
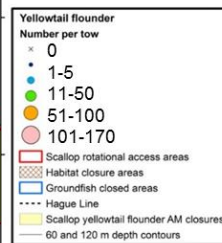


Coonamessett Farm Foundation



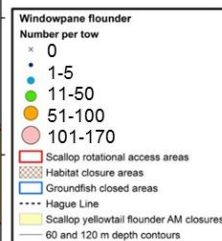
Georges Bank yellowtail
seasonal distribution and
relative abundance.

Scale: Number per tow
(2011 – 2014)



Northern windowpane
seasonal distribution and
relative abundance

Scale: Number per tow
(2011 – 2014)



Scallop landings in SNE/Mid-Atlantic Yellowtail areas

Benjamin Galuardi (NOAA/NMFS/GARFO/APSD)

2017-05-17

Table 1: Total LA Pounds by Fishing Year and Stat Area

	526	537	539	612	613
2008	7,518,861	208,159	1,456	985,741	536,728
2009	3,761,710	126,508	7,926	3,133,381	842,990
2010	7,320,590	124,591	97,780	4,326,870	2,575,865
2011	2,540,626	199,691	130,116	7,153,040	3,659,065
2012	6,953,449	93,928	4,987	2,715,121	5,255,522
2013	6,684,558	119,032	368,013	1,845,339	3,072,894
2014	2,709,380	122,553	381,386	2,074,941	7,102,196
2015	2,714,481	84,148	170,053	745,845	1,912,575
2016	2,168,657	143,850	331,880	715,555	6,063,013

Table 2: Total LAGC Pounds by Fishing Year and Stat Area

	526	537	539	612	613
2008	315,240	171,945	67,453	1,151,480	86,525
2009	8,333	371,092	46,998	1,482,735	359,442
2010	241,957	60,461	77,458	331,143	155,611
2011	13,151	75,933	156,929	691,856	160,391
2012	23,825	9,680	113,384	515,055	174,200
2013	71,935	13,964	137,151	441,512	217,381
2014	24,182	50,486	81,344	477,109	143,407
2015	10,234	53,760	71,743	305,149	137,568
2016	285,578	73,554	199,513	503,741	468,766

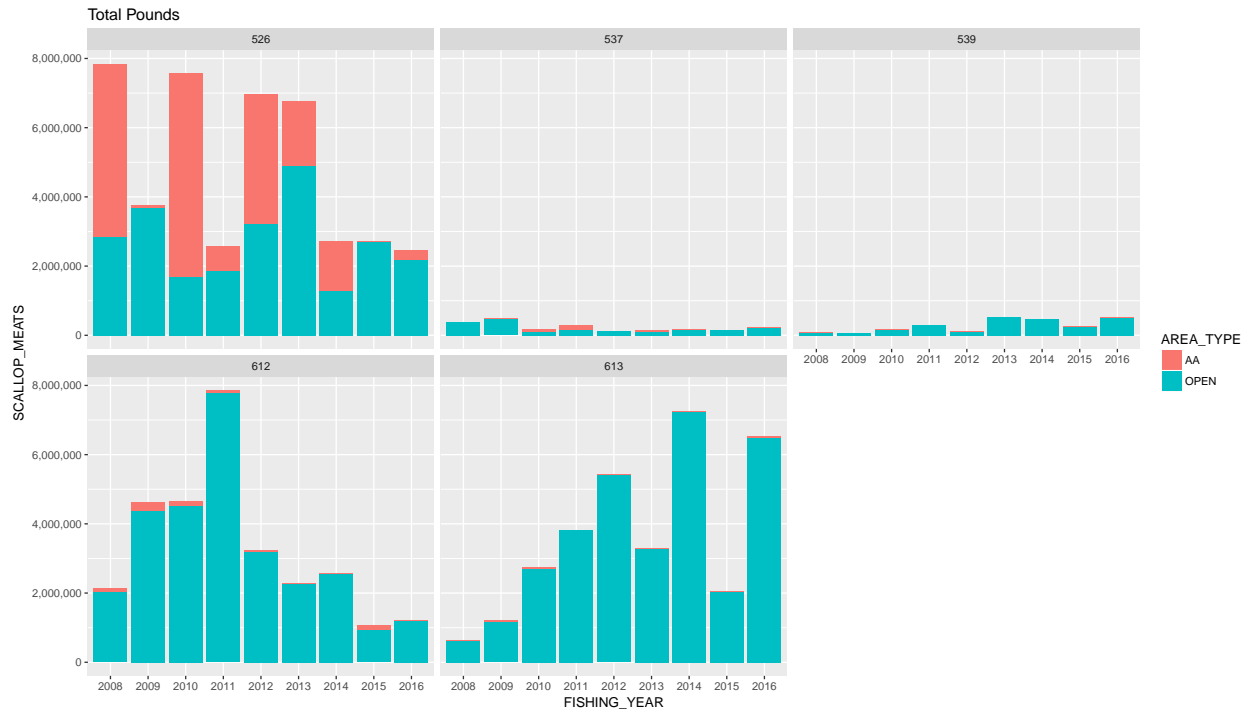


Figure 1: Landings by Stat Area, Open vs. Access Area, and Fishing Year

Table 3: Total LA Pounds by Month and Stat Area

	526	537	539	612	613
January	1,402,152	17,396	14,148	437,115	255,815
February	1,863,787	638	6,699	1,500,701	1,089,955
March	1,187,666	25,097	9,327	2,867,288	1,599,412
April	2,626,482	139,343	189,762	3,990,113	4,769,074
May	4,841,634	255,063	211,252	5,353,589	6,668,572
June	6,364,414	153,911	244,117	3,508,223	4,813,152
July	12,856,775	218,162	222,491	1,572,369	2,697,379
August	5,029,597	263,971	72,383	1,347,933	2,719,707
September	2,810,989	92,201	227,174	1,536,365	3,395,176
October	1,524,034	1,423	160,798	741,224	2,215,620
November	905,714	26,005	71,323	428,434	547,155
December	959,068	29,250	64,123	412,479	249,831

Table 4: Total LAGC Pounds by Month and Stat Area

	526	537	539	612	613
January	15,004	36,030	28,712	230,977	135,003
February	8,386	16,657	22,591	217,761	114,764
March	4,018	44,917	26,001	281,141	89,414
April	3,228	82,621	43,567	524,823	161,276
May	148,221	99,236	107,200	630,694	149,107
June	312,952	220,288	124,433	1,112,883	301,977
July	274,811	125,744	140,255	862,532	193,217
August	98,701	79,462	143,465	683,190	151,802
September	43,604	87,558	114,834	674,769	252,966
October	30,959	28,431	73,840	241,840	154,491
November	32,222	27,091	79,162	113,429	93,895
December	22,329	32,840	47,913	325,741	105,379

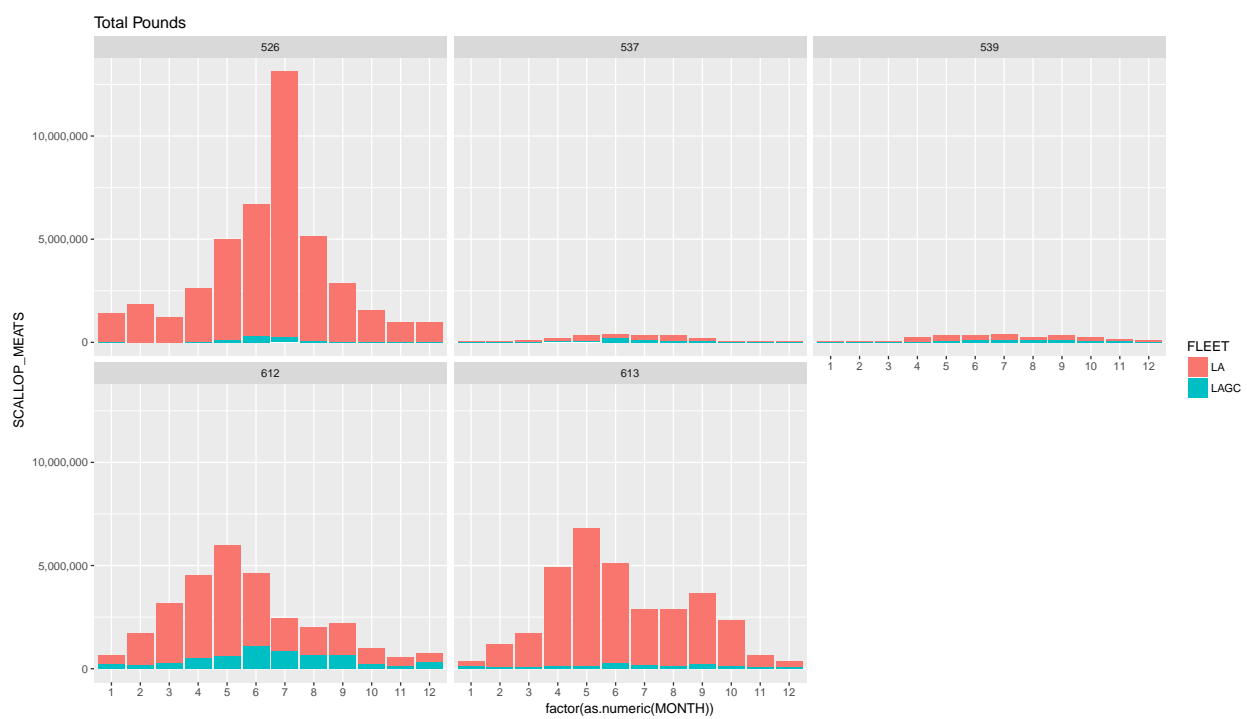


Figure 2: Landings by Stat Area, Fleet, and Month

Windowpane AM work

Benjamin Galuardi (NOAA/NMFS/GARFO/APSD)

2017-03-21

Table 1: Total Pounds by Fishing Year

	521	522	525	561	562
2008	937922	218534	2982156	763273	158958
2009	753699	836793	4446190	1627294	3070421
2010	3402143	287712	348989	1172292	26433
2011	3043191	6071736	1847595	1718184	2659428
2012	9196044	2795566	2576959	2633596	5302462
2013	9412874	1551912	1916095	1897387	2384950
2014	2345308	268033	2357097	346487	2307772
2015	2196254	918648	3961417	387370	480027
2016	2671528	474362	2262999	173335	48337



Figure 1: Landings by Stat Area, Trip type, and Fishing Year

Table 2: Total Pounds by Month

	521	522	525	561	562
January	1783538	60017	63696	73630	240058
February	2895771	52336	130873	27973	45913
March	2940793	172592	168539	81655	46752
April	3044158	536570	605705	238703	77546
May	4593624	844174	3690600	795617	280306
June	3821900	2400710	5944471	2346920	5234172
July	3283632	1353621	5205925	3339356	3013280
August	4290098	5608969	4053592	2268113	3294700
September	2651804	1155722	1780567	1137663	1536688
October	2035464	681269	675980	310241	992074
November	1163787	432672	170230	34739	977052
December	1454394	124644	209319	64608	700247

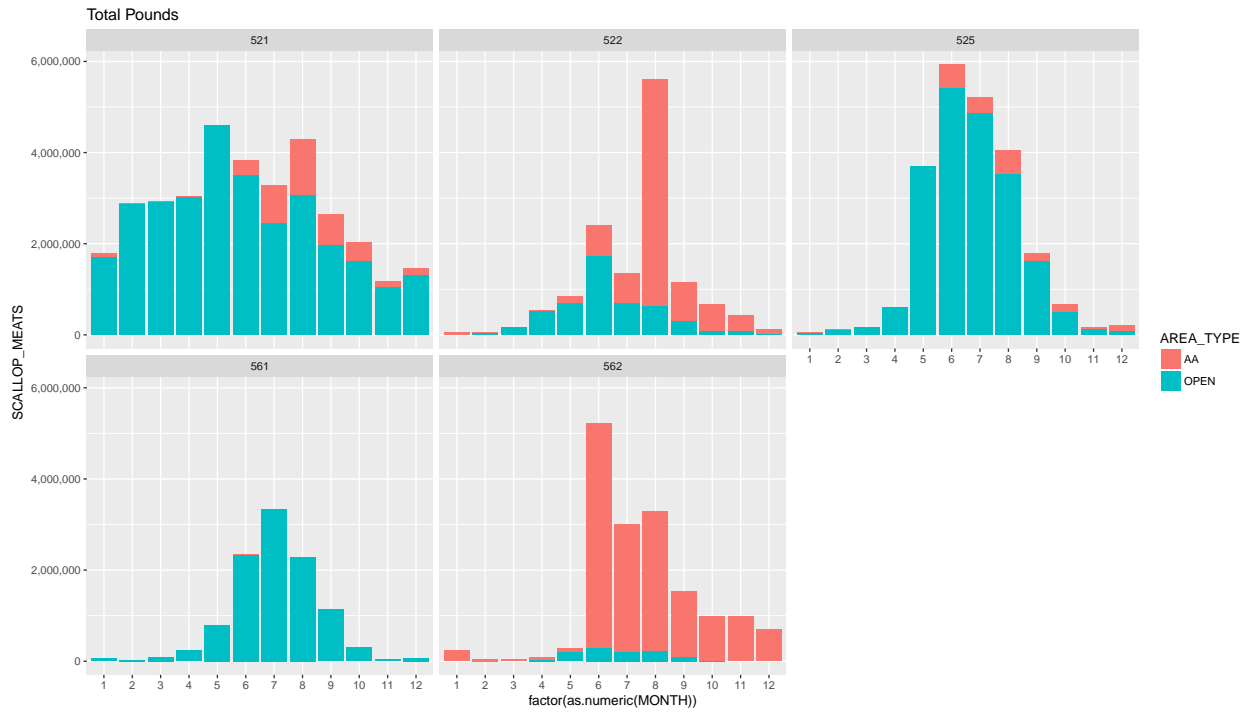


Figure 2: Landings by Stat Area, Trip type, and Month