New England Fishery Management Council
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Eric Reid, *Acting Chairman* | Thomas A. Nies, *Executive Director*

MEMORANDUM

DATE: September 16, 2021

TO: Groundfish Committee

FROM: Groundfish Plan Development Team

SUBJECT: **Framework Adjustment 63 – default specifications analysis**

The Groundfish Plan Development Team (PDT) met on September 9, 2021, to discuss analysis for the default specifications measures in Framework Adjustment 63 (FW63), in response to the Committee's tasking at their August 6th meeting:

> The Groundfish Committee tasks the Groundfish Plan Development Team to develop an analysis to support developing alternatives to the current default specifications process that:
>
> a. Explore a duration of 3, 4, 5, or 6 months.
> b. Explore a percentage of ACLs of 50%, 75%, or 100%.
> c. Analyze maintaining the no holdback provision.
> d. Establish two-year TACs for cod and haddock in the US/CA area.
>
> [Carried 14/0/2]

Default specifications process

Discussion and analysis are summarized under each of the components in the Committee's request for analysis of the default specifications process.

a. Explore a duration of 3, 4 , 5, or 6 months

The PDT discussed the range of default specifications durations recommended for analysis by the Committee. Default specifications are implemented for stocks that do not already have specifications for the incoming fishing year, as set by a previous action (FW53). The default specifications process was established to ensure the groundfish fishery could receive allocations and the fishing year could start on time on May 1, even if there was a delay in rulemaking for the annual framework action. In practice, it has become standard to operate under default specifications due to delays in the timeline of framework actions, with four of the most recent six

framework actions operating under default specifications for several stocks. Delays have been the result of a variety of factors[1].

The PDT raises concerns about extending default specifications beyond the current timeline, and is concerned that simply extending the duration of default specifications by a few months will continue to result in delays in submission of the framework and in rulemaking and exacerbate issues with overlapping timelines with the incoming year's framework action. Additionally, the fishery would still face the same potential impacts of having default specifications expire and quotas going to zero for stocks without specifications in place for the incoming fishing year.

The PDT notes the following uncertainties and issues created when the default specifications deadline is approached:

- Interruptions to business planning for fishing businesses
- Confusion as to whether vessels can begin and complete a trip underway just prior to the deadline
- Disruptions to the ACE leasing market

The PDT suggests considering a longer default specifications duration such as 12 months, at a percentage less than 100%. This would avoid continuing to shift the timeline for annual framework actions that may occur with extending the default specifications beyond three months, and the approach would address the issue of the fishery potentially having zero quota for stocks without specifications in place. The Council has expressed its intention to preserve the timeline for December final action for annual framework actions. A December final action should allow sufficient time for rulemaking to be in place for May 1, although it may at times require GARFO staff to find ways to abbreviate the rulemaking timeline through concurrent reviews and waivers to requirements under APA. However, the PDT acknowledges the potential for delays due to a variety of factors, including other rulemaking priorities (both groundfish and non-groundfish, or outside of NOAA Fisheries), which can push the final rulemaking date beyond May 1. The PDT agrees with maintaining the timeline for framework actions, but the PDT thinks that a 12-month default specifications duration would provide a placeholder should delays occur, while avoiding the disruption of expiring quotas.

b. Explore a percentage of ACLs of 50%, 75%, or 100%

The PDT presents commercial fishery catch utilization by stock for FY2018-FY2021, to explore seasonal fishery trends and how these relate to the default percentage options under evaluation. Default specifications were not in place in FY2018, while they were for FY2019, FY2020, and FY2021 for certain stocks (highlighted in Table 1). Stock utilization figures are presented in Attachment 1. The PDT does recognize that changes in ACLs from year to year may influence the percentage caught among the different stocks in the multispecies fishery, which may make it difficult to detect patterns in utilization related to default specifications.

[1] See Memo from Nies to Council re Background Northeast Multispecies (Groundfish) Default Specifications, June 21, 2021. Available at: https://s3.amazonaws.com/nefmc.org/0.a_210621-Memo-Nies-to-Council-re-Groundfish-Default-Specifications.pdf

Table 1- Groundfish ACL percent caught by quarter by stock from FY2018–FY2021. Highlighting indicates stocks and years for which default specifications were in place.

Allocated Stocks		Fishing Year	Quarter 1 (through July 31st)	Quarter 2 (through Oct. 31st)	Quarter 3 (through Jan. 31st)	Quarter 4 (through Apr. 30th)	Total
	GB Cod East	2018	23.6%	10.6%	3.3%	3.8%	41.3%
		2019	13.2%	5.7%	1.3%	14.6%	34.8%
		2020	14.0%	5.8%	2.2%	8.3%	30.3%
		2021*	8.6%	0.6%			9.2%
	GB Cod	2018	15.0%	11.9%	18.7%	24.5%	70.1%
		2019	7.6%	6.5%	9.2%	10.4%	33.7%
		2020	12.8%	7.4%	7.7%	11.7%	39.6%
		2021*	10.6%	3.1%			13.6%
	GOM Cod	2018	18.5%	14.3%	20.5%	32.0%	85.2%
		2019	15.6%	13.9%	26.8%	23.2%	79.5%
		2020	12.1%	13.3%	26.5%	29.9%	81.7%
		2021*	10.7%	4.4%			15.0%
	GB Haddock East	2018	0.4%	0.2%	0.8%	2.7%	4.0%
		2019	1.0%	0.2%	0.3%	3.3%	4.8%
		2020	0.7%	0.0%	0.4%	2.3%	3.5%
		2021*	1.0%	0.0%			1.0%
	GB Haddock	2018	2.8%	2.8%	2.0%	3.9%	11.5%
		2019	2.8%	2.7%	1.6%	2.8%	9.9%
		2020	2.3%	1.3%	0.9%	0.9%	5.3%
		2021*	1.2%	0.6%			1.7%
	GOM Haddock	2018	5.9%	8.6%	10.6%	7.7%	32.8%
		2019	10.3%	11.3%	9.9%	11.2%	42.8%
		2020	7.2%	7.2%	7.4%	11.8%	33.7%
		2021*	6.3%	2.8%			9.1%
	GB Yellowtail Flounder	2018	13.8%	0.6%	0.2%	0.1%	14.7%
		2019	2.1%	0.8%	0.0%	0.1%	3.1%
		2020	5.2%	1.1%	0.2%	0.2%	6.7%
		2021*	0.8%	0.1%			0.9%
	CC/GOM Yellowtail Flounder	2018	13.3%	10.8%	6.6%	11.9%	42.6%
		2019	15.9%	7.3%	5.1%	8.3%	36.6%
		2020	8.7%	3.8%	5.3%	9.7%	27.5%
		2021*	17.2%	4.8%			22.0%
	SNE/MA Yellowtail Flounder	2018	4.3%	1.8%	11.7%	1.6%	19.4%
		2019	0.6%	0.2%	4.1%	1.4%	6.3%
		2020	1.4%	0.2%	1.8%	2.8%	6.2%
		2021*	1.0%	2.6%			3.6%
	American Plaice	2018	14.3%	17.9%	19.4%	16.6%	68.2%
		2019	19.1%	15.2%	15.1%	7.8%	57.2%
		2020	6.7%	5.4%	4.9%	3.5%	20.4%
		2021*	8.7%	2.7%			11.4%
	Witch Flounder	2018	18.1%	17.6%	29.0%	33.2%	97.8%
		2019	17.2%	17.1%	28.7%	26.3%	89.3%
		2020	14.9%	18.2%	17.5%	17.7%	68.2%
		2021*	14.7%	5.0%			19.7%

	GB Winter Flounder	2018	27.6%	27.5%	2.2%	0.1%	57.4%
		2019	12.8%	24.4%	2.1%	0.4%	39.6%
		2020	24.1%	30.0%	1.1%	0.3%	55.5%
		2021*	23.0%	6.4%			29.4%
	GOM Winter Flounder	2018	3.3%	10.1%	4.8%	7.4%	25.6%
		2019	3.6%	4.9%	4.0%	4.0%	16.4%
		2020	3.3%	4.0%	4.0%	9.5%	20.8%
		2021*	5.0%	4.3%			9.3%
	SNE/MA Winter Flounder	2018	11.2%	25.9%	10.0%	1.2%	48.3%
		2019	6.1%	13.0%	7.1%	1.6%	27.7%
		2020	4.1%	7.0%	6.7%	1.3%	19.2%
		2021*	6.3%	3.4%			9.6%
	Redfish	2018	15.9%	8.9%	10.9%	14.1%	49.9%
		2019	17.7%	8.5%	9.0%	9.9%	45.1%
		2020	19.0%	12.4%	13.1%	15.3%	59.8%
		2021*	19.1%	5.1%			24.2%
	White Hake	2018	21.2%	19.9%	16.1%	19.5%	76.7%
		2019	19.8%	16.1%	18.7%	20.7%	75.4%
		2020	22.6%	22.7%	22.8%	22.1%	90.2%
		2021*	20.8%	8.4%			29.3%
	Pollock	2018	2.2%	1.8%	2.8%	2.5%	9.3%
		2019	1.5%	2.0%	2.7%	2.0%	8.2%
		2020	3.1%	3.9%	4.8%	4.7%	16.4%
		2021*	3.9%	1.4%			5.3%
Non-Allocated Stocks	Halibut	2018	26.3%	28.0%	16.8%	20.4%	91.6%
		2019	32.0%	32.8%	19.8%	21.9%	106.5%
		2020	24.0%	18.9%	11.0%	13.5%	67.5%
		2021*	21.7%	9.4%			31.1%
	Northern Windowpane Flounder	2018	13.9%	16.5%	8.6%	13.6%	52.5%
		2019	10.7%	8.7%	7.4%	7.8%	34.5%
		2020	7.8%	6.4%	4.8%	7.9%	26.9%
		2021*	2.8%	1.2%			4.0%
	Southern Windowpane Flounder	2018	41.0%	23.2%	39.6%	22.6%	126.4%
		2019	15.3%	9.4%	19.8%	16.9%	61.4%
		2020	15.4%	4.8%	13.5%	17.5%	51.2%
		2021*	14.3%	0.7%			15.0%
	Ocean Pout	2018	5.6%	4.4%	3.6%	4.7%	18.3%
		2019	7.5%	4.3%	3.9%	4.2%	19.7%
		2020	8.2%	4.0%	3.7%	6.0%	21.9%
		2021*	43.2%	14.2%			57.4%
	Wolffish	2018	0.6%	0.5%	0.3%	0.5%	1.8%
		2019	0.9%	0.9%	0.5%	0.7%	3.0%
		2020	0.4%	0.3%	0.2%	0.3%	1.2%
		2021*	1.4%	0.5%			1.9%

Includes both sector and common pool
Based on final quota of the fishing year
* Based on DMIS data as of August 18, 2021
Source: GARFO, September 8, 2021

Through Committee meeting discussions the commercial groundfish industry had shared that fewer vessels fish under default specifications because the quotas are too low to make it worthwhile to take trips, especially for vessels fishing in the US/CA area in Eastern Georges Bank which has a seasonal component. Examining only catch utilization does not capture the full range of impacts of default specifications percentages. The PDT presents commercial fishing effort by quarter from FY2018-FY2021, to compare effort in years under default specifications to those in which default specifications were not in place. Default specifications were not in place in FY2018, while they were in FY2019 for Eastern GB cod, in FY2020 for Eastern GB cod and Eastern GB haddock, and in FY2021 for Eastern GB cod, Eastern GB haddock, GOM winter flounder, SNE/MA winter flounder, redfish, ocean pout, and wolffish.

Table 2 – Commercial groundfish fishing effort by quarter as number of trips and by percentage of total trips, allocated groundfish trips only, from FY2018-FY2021.

Fishing Year	Quarter 1 (through July 31st)		Quarter 2 (through Oct. 31st)		Quarter 3 (through Jan. 31st)		Quarter 4 (through Apr. 30th)		Total	
2018	2,072	34.1%	1,588	26.1%	1,274	20.9%	1,150	18.9%	6,084	100.0%
2019	1,957	33.3%	1,583	26.9%	1,179	20.1%	1,157	19.7%	5,876	100.0%
2020	2,022	34.7%	1,485	25.5%	1,078	18.5%	1,239	21.3%	5,824	100.0%
2021*	1808		341						2,149	

Includes both sector and common pool
* Based on DMIS data as of August 18, 2021
Source: GARFO, September 8, 2021

Table 3 – Commercial groundfish fishing effort by quarter as number of trips and by percentage of total trips by Broad Stock Area, allocated groundfish trips only, from FY2018-FY2021.

Fishing Year	Broad Stock Area	Quarter 1 (through July 31st)		Quarter 2 (through Oct. 31st)		Quarter 3 (through Jan. 31st)		Quarter 4 (through Apr. 30th)		Total	
2018	GB	117	26.7%	111	25.3%	85	19.4%	126	28.7%	439	100.0%
	GOM	1,451	35.0%	1,131	27.3%	733	17.7%	830	20.0%	4,145	100.0%
	IGB	282	27.7%	301	29.5%	239	23.5%	197	19.3%	1,019	100.0%
	SNE	366	33.3%	164	14.9%	392	35.6%	178	16.2%	1,100	100.0%
2019	GB	107	24.8%	109	25.2%	90	20.8%	126	29.2%	432	100.0%
	GOM	1,468	35.0%	1,182	28.2%	698	16.6%	850	20.2%	4,198	100.0%
	IGB	236	26.5%	292	32.8%	208	23.4%	154	17.3%	890	100.0%
	SNE	258	29.4%	137	15.6%	320	36.4%	164	18.7%	879	100.0%
2020	GB	156	27.7%	155	27.5%	122	21.7%	130	23.1%	563	100.0%
	GOM	1,398	33.8%	1,102	26.6%	705	17.0%	937	22.6%	4,142	100.0%
	IGB	283	27.1%	322	30.9%	226	21.7%	212	20.3%	1,043	100.0%
	SNE	334	42.1%	97	12.2%	216	27.2%	147	18.5%	794	100.0%
2021*	GB	148		18						166	
	GOM	1,310		260						1,570	
	IGB	248		72						320	
	SNE	256		13						269	

Includes both sector and common pool
* Based on DMIS data as of August 18, 2021
Area counts are by sub-trip
Source: GARFO, September 8, 2021

The PDT examined fishing effort in Eastern Georges Bank to explore seasonality patterns and potential impacts of default specifications, which were in place for most of Quarter 1 in FY2019, FY2020, and FY2021. Fishing effort was lower for Quarter 1 in FY2019 and FY2020 compared to FY2018.

Table 4 – Eastern Georges Bank commercial groundfish fishing effort by quarter as number of trips and by percentage of total trips, allocated groundfish sub-trips only, from FY2018-FY2021.

Fishing Year	Quarter 1 (through July 31st)		Quarter 2 (through Oct. 31st)		Quarter 3 (through Jan. 31st)		Quarter 4 (through Apr. 30th)		Total	
2018	75	51.7%	24	16.6%	16	11.0%	30	20.7%	145	100.0%
2019	53	35.6%	25	16.8%	16	10.7%	55	36.9%	149	100.0%
2020	53	28.2%	46	24.5%	27	14.4%	62	33.0%	188	100.0%
2021*	63		6						69	

Includes both sector and common pool
* Based on DMIS data as of August 18, 2021
Source: GARFO, September 8, 2021

Additionally, the PDT examined effort under the redfish sector exemption by quarter in FY2020 and FY2021, to explore any differences in effort between the years possibly attributed to the default specifications in place for redfish in FY2021.

Table 5 -Redfish sector exemption fishing effort by quarter as number of trips and by percentage of total trips from FY2020-FY2021.

Fishing Year	Quarter 1 (through July 31st)		Quarter 2 (through Oct. 31st)		Quarter 3 (through Jan. 31st)		Quarter 4 (through Apr. 30th)		Total	
2020	45	33.3%	38	28.1%	28	20.7%	24	17.8%	135	100.0%
2021*	30								30	

* Based on DMIS data as of August 18, 2021
Source: GARFO, September 8, 2021

Lastly, the PDT examined quarterly ACE lease prices estimated over FY2015 – FY2019, to see if there are impacts on ACE lease prices possibly resulting from default specifications. This analysis is provided as Attachment 2.

The PDT recommends that the default specifications percentage be increased above the current level of 35%, but not as high as 100%, especially if the Council chooses a 12-month duration for the default specifications. Since FY2018, five stocks have exceeded 75% ACL utilization over the entire fishing year at least once – GOM cod, witch flounder, white hake, halibut, and southern windowpane flounder. Some of these stocks exceeded 75% utilization only once or twice since FY2018. GOM cod consistently exceeds 75%, and white hake to a lesser extent. An additional five stocks exceeded 50% ACL utilization at least once – GB cod,

American plaice, GB winter flounder, redfish, and northern windowpane flounder. All of these stocks exceeded 50% utilization only once or twice since FY2018 (see Table 1). The PDT does note that because there are no in-season accountability measures for the unallocated stocks, exceeding the default specifications percentage for these stocks would not affect the fishery's ability to continue fishing.

Considerations for default specifications less than 100%:

1) A percentage less than 100% of the prior year's ACL reflects a more precautionary approach than carrying forward 100% of the prior year's specifications given the variation in stock statuses within the multispecies complex.
2) The provision requiring that the default specifications be adjusted so they do not exceed the incoming year ABC recommendations would be maintained, potentially requiring default specifications to be less than 100%.
3) A default specifications percentage less than 100% should provide incentive to maintain the timeline for framework actions.

The PDT recommends considering a default specifications percentage of 75%. This percentage should provide enough ACL for the majority of stocks for the fishery to operate under default specifications balanced with some precaution to protect stocks and incentives to ensure the framework action timelines are met. Additionally, the intent is to maintain the provision requiring that the default specifications be adjusted so they do not exceed the incoming year recommendations, which provides protection for stocks whose status may have changed.

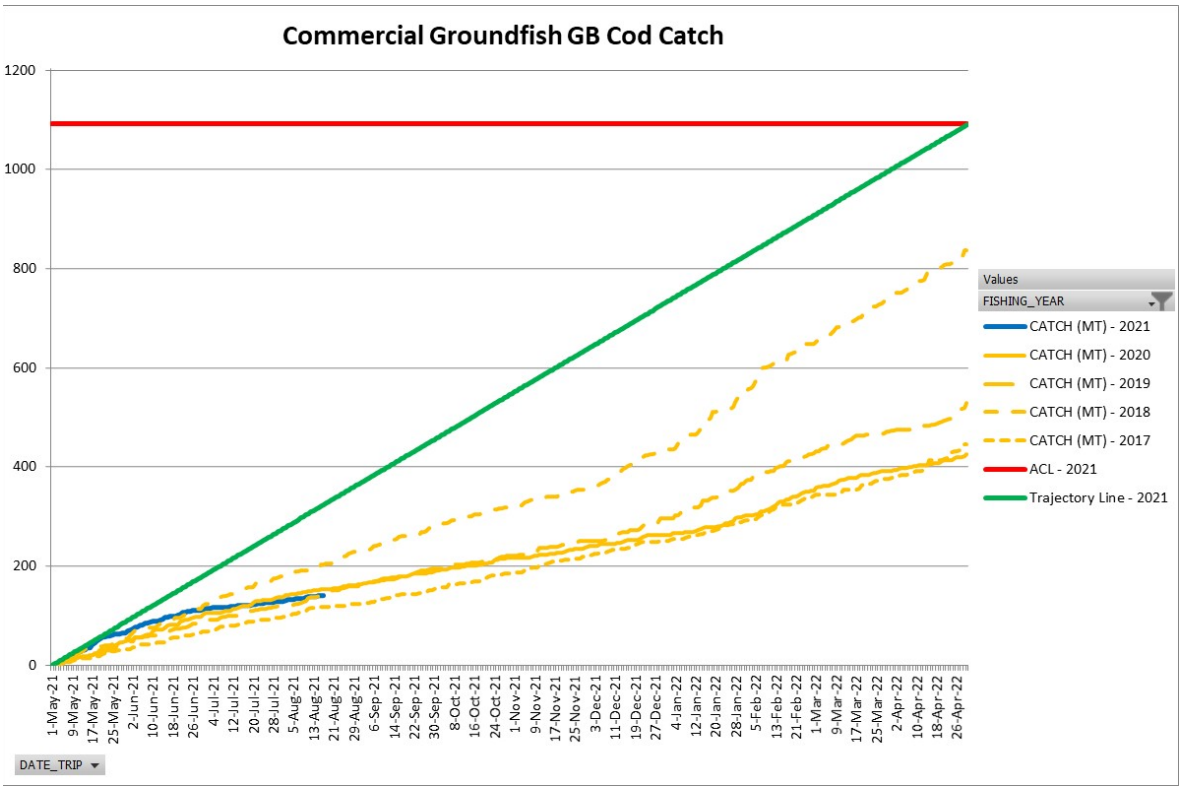
c. Analyze maintaining the no holdback provision

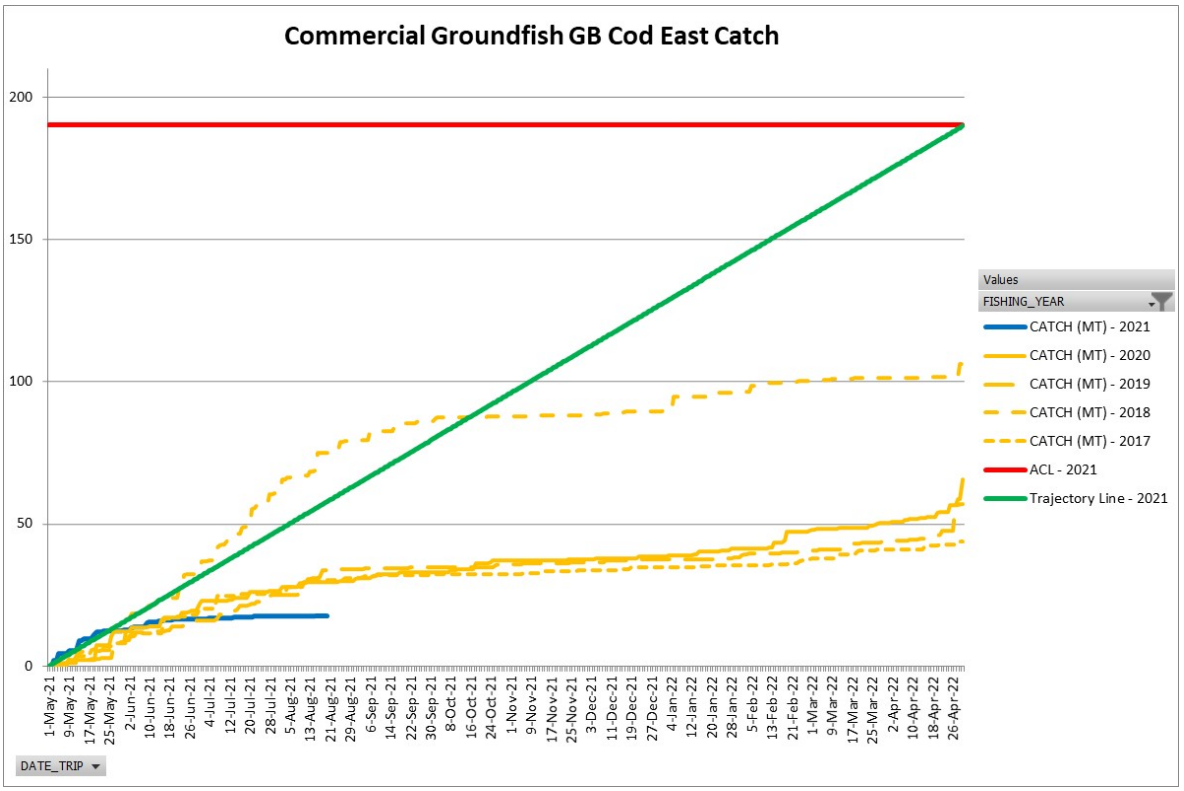
Currently sectors are not subject to a 20% holdback of the prior year's sector annual catch entitlement (ACE) for stocks that have default specifications in place. The PDT does not have any concerns about maintaining the no holdback provision, so long as the default specifications percentage is not 100%.

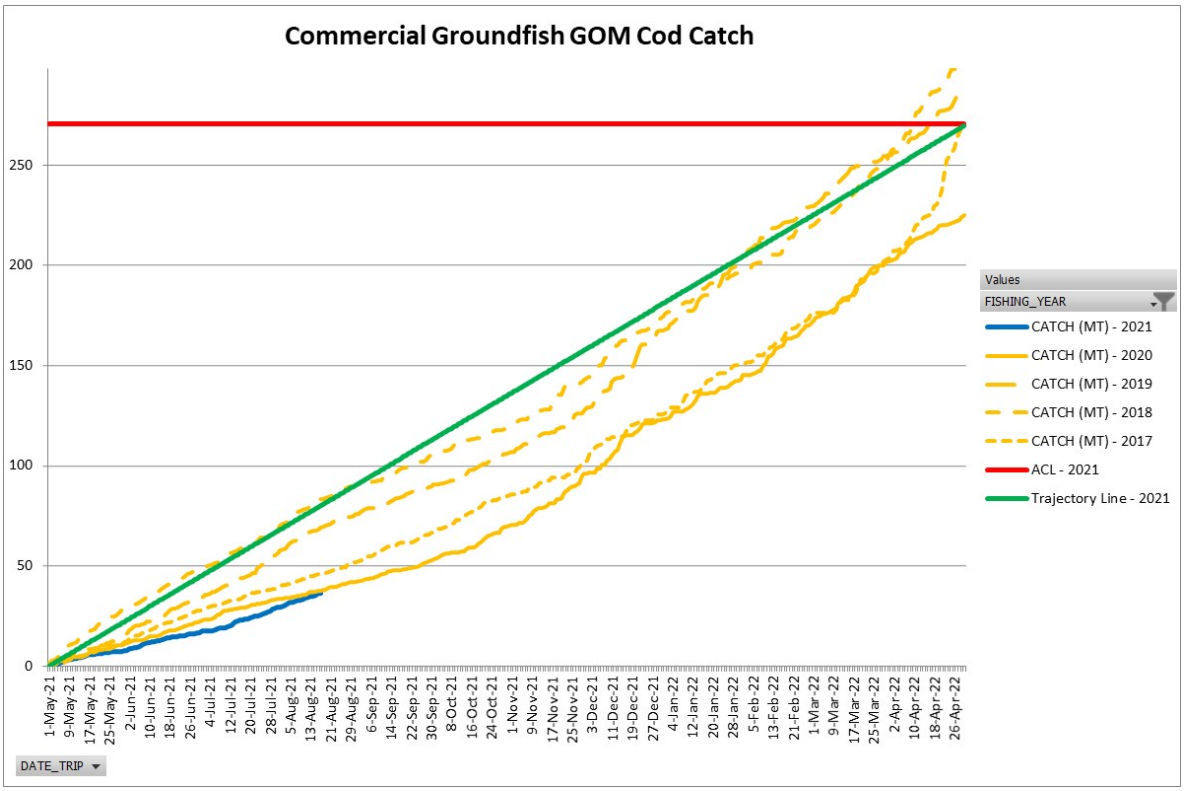
d. Establish two-year TACs for cod and haddock in the US/CA area

Establishing two-year TACs for Eastern GB cod and Eastern GB haddock would eliminate disruptions to the fishery from the quotas for these two US/CA stocks going to zero when default specifications expire, and from these two stocks consistently requiring default specifications. Presently, GB yellowtail flounder has two-year specifications. This would essentially treat Eastern GB cod and Eastern GB haddock the same as GB yellowtail flounder, for which the Council anticipates annual assessments but sets a second year TAC as a placeholder. Under such a system, the PDT expects the TACs for Eastern GB cod and Eastern GB haddock for Year 2 would be set the same as Year 1, with the expectation that the TACs will be revised with the annual US/CA assessment and management process. Should these two stocks not have updated specifications, in Year 3 default specifications would be in place.

Attachment 1






Commercial Groundfish GOM Cod Catch
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200
150
100
50
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9-May-21
17-May-21
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10-Jun-21
18-Jun-21
26-Jun-21
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25-Mar-22
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10-Apr-22
18-Apr-22
26-Apr-22
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CATCH (MT) - 2019
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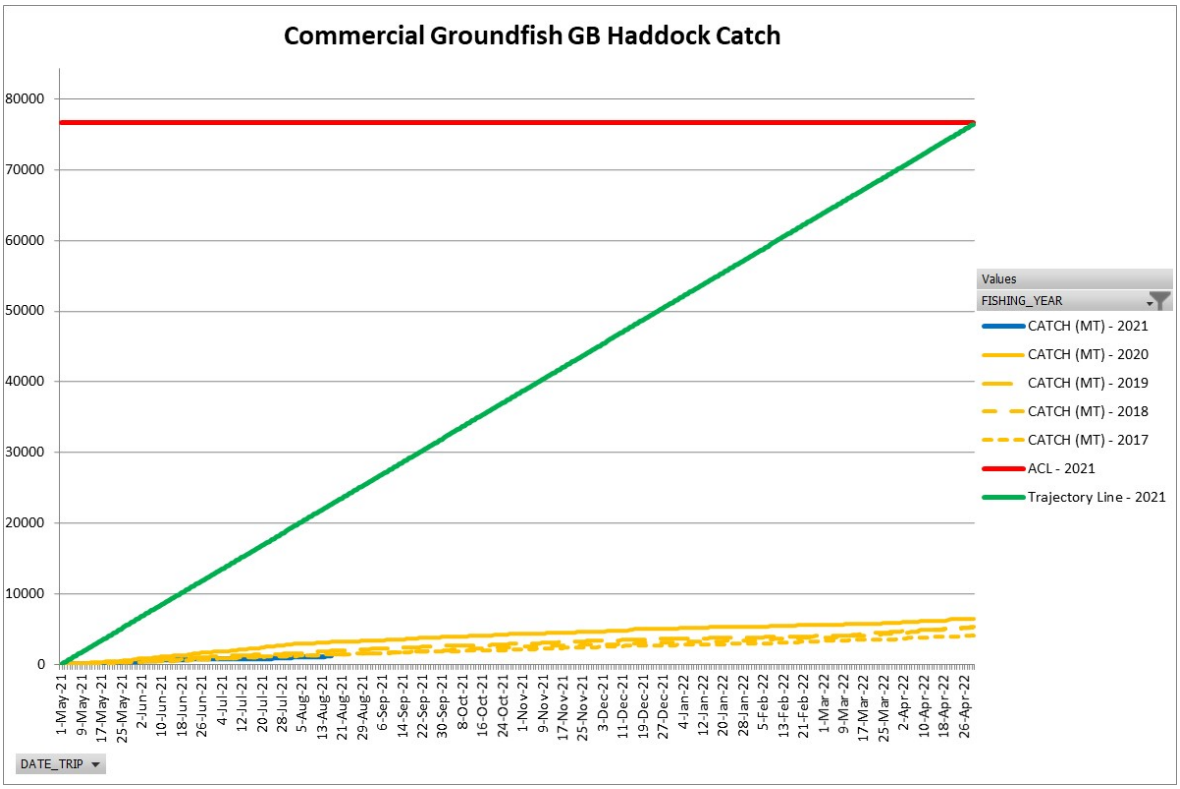
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021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26-Jun-21
4-Jul-21
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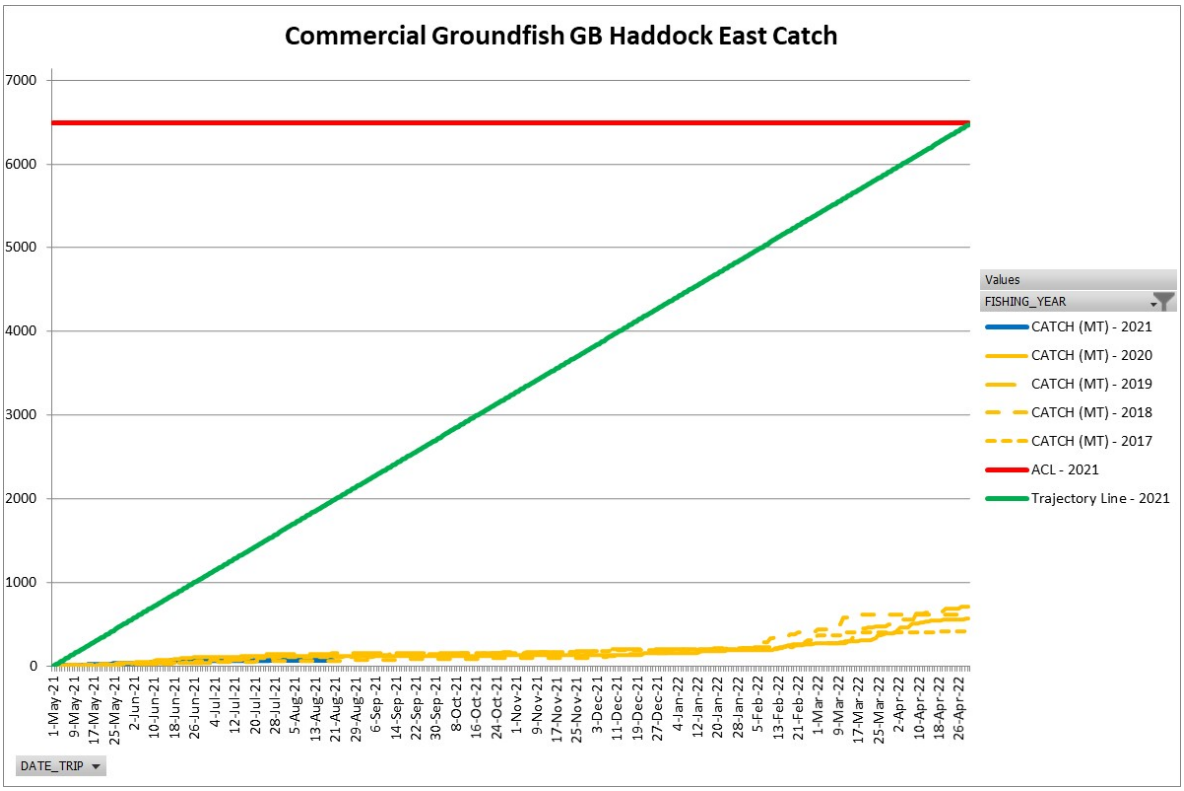
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021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5000
4000
3000
2000
1000
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25-May-21
2-Jun-21
10-Jun-21
18-Jun-21
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DATE_TRIP
Values
FISHING_YEAR
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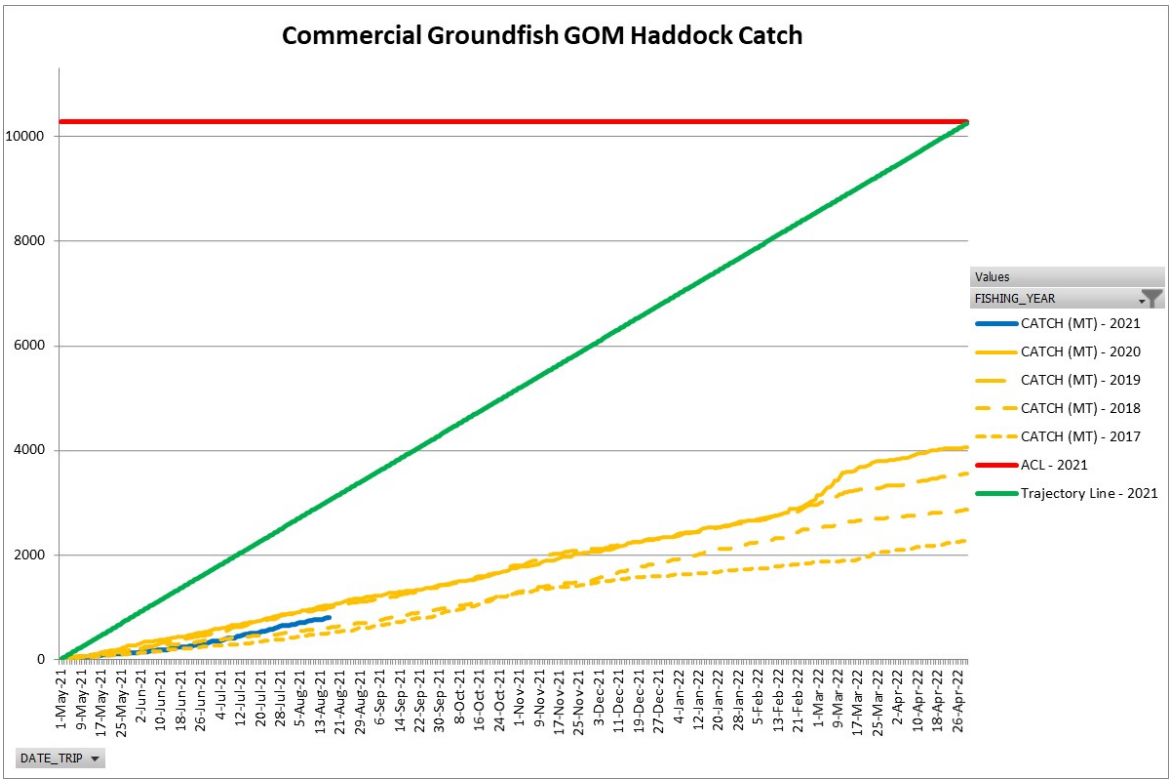
CATCH (MT) - 2020
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021


Commercial Groundfish GOM Haddock Catch
10000
8000
6000
4000
2000
0
1-May-21
9-May-21
17-May-21
25-May-21
2-Jun-21
10-Jun-21
18-Jun-21
26-Jun-21
4-Jul-21
12-Jul-21
20-Jul-21
28-Jul-21
5-Aug-21
13-Aug-21
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29-Aug-21
6-Sep-21
14-Sep-21
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30-Sep-21
8-Oct-21
16-Oct-21
24-Oct-21
1-Nov-21
9-Nov-21
17-Nov-21
25-Nov-21
3-Dec-21
11-Dec-21
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9-Mar-22
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18-Apr-22
26-Apr-22
DATE_TRIP
Values
FISHING_YEAR
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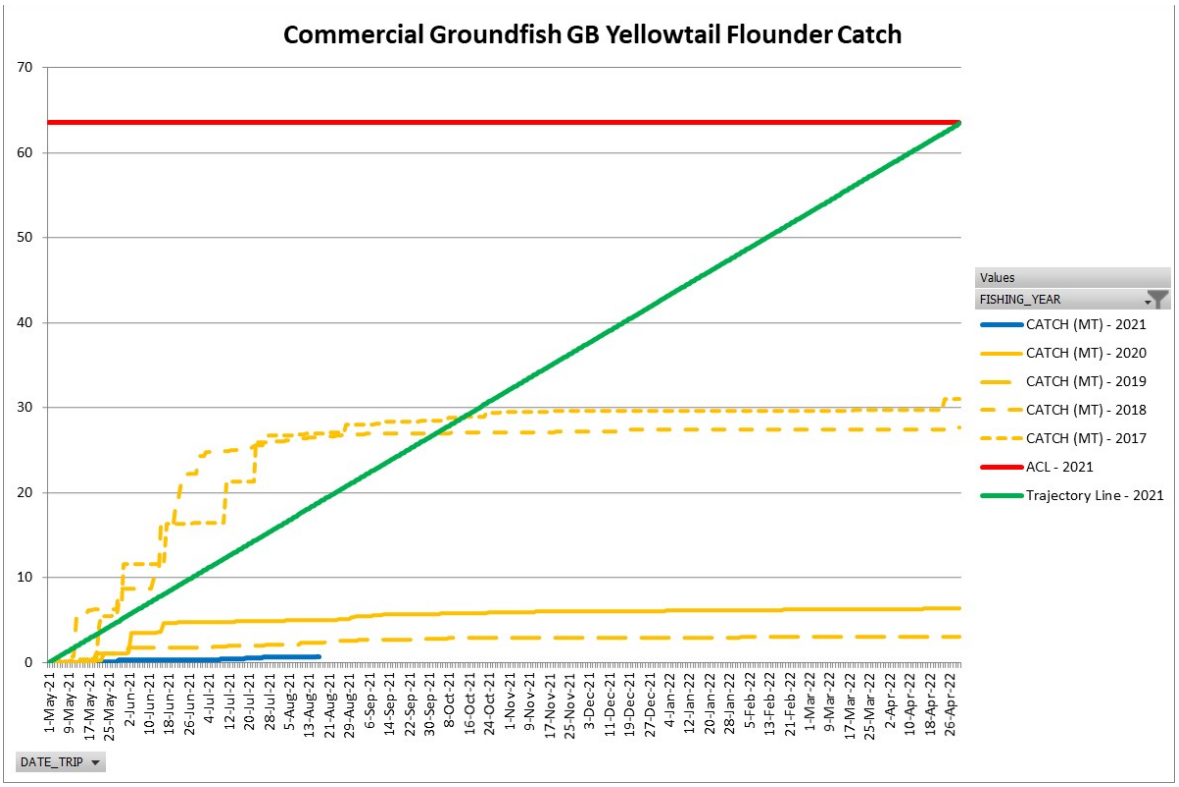
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021


Commercial Groundfish GB Yellowtail Flounder Catch
70
60
50
40
30
20
10
0
1-May-21
9-May-21
17-May-21
25-May-21
2-Jun-21
10-Jun-21
18-Jun-21
26-Jun-21
4-Jul-21
12-Jul-21
20-Jul-21
28-Jul-21
5-Aug-21
13-Aug-21
21-Aug-21
29-Aug-21
6-Sep-21
14-Sep-21
22-Sep-21
30-Sep-21
8-Oct-21
16-Oct-21
24-Oct-21
1-Nov-21
9-Nov-21
17-Nov-21
25-Nov-21
3-Dec-21
11-Dec-21
19-Dec-21
27-Dec-21
4-Jan-22
12-Jan-22
20-Jan-22
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21-Feb-22
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9-Mar-22
17-Mar-22
25-Mar-22
2-Apr-22
10-Apr-22
18-Apr-22
26-Apr-22
DATE_TRIP
Values
FISHING_YEAR
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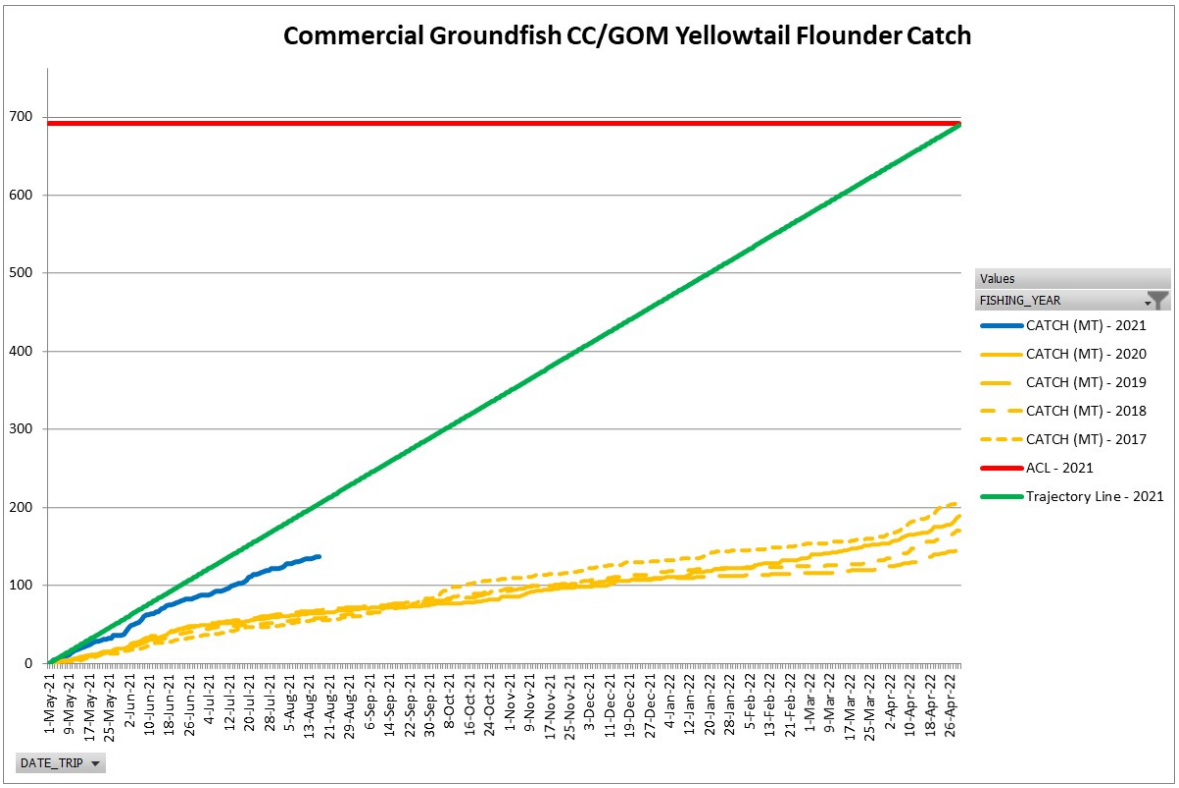
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021


Commercial Groundfish CC/GOM Yellowtail Flounder Catch
700
600
500
400
300
200
100
0
1-May-21
9-May-21
17-May-21
25-May-21
2-Jun-21
10-Jun-21
18-Jun-21
26-Jun-21
4-Jul-21
12-Jul-21
20-Jul-21
28-Jul-21
5-Aug-21
13-Aug-21
21-Aug-21
29-Aug-21
6-Sep-21
14-Sep-21
22-Sep-21
30-Sep-21
8-Oct-21
16-Oct-21
24-Oct-21
1-Nov-21
9-Nov-21
17-Nov-21
25-Nov-21
3-Dec-21
11-Dec-21
19-Dec-21
27-Dec-21
4-Jan-22
12-Jan-22
20-Jan-22
28-Jan-22
5-Feb-22
13-Feb-22
21-Feb-22
1-Mar-22
9-Mar-22
17-Mar-22
25-Mar-22
2-Apr-22
10-Apr-22
18-Apr-22
26-Apr-22
DATE_TRIP
Values
FISHING_YEAR
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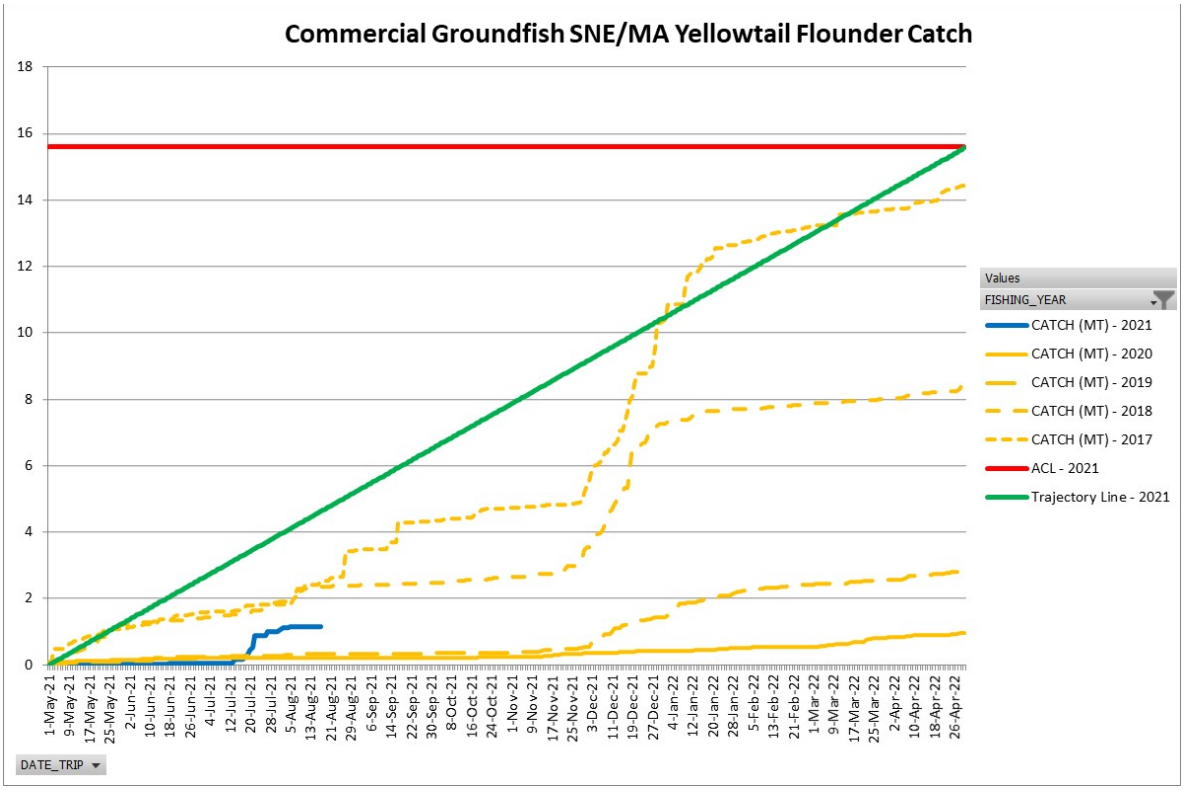
CATCH (MT) - 2020
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021


Commercial Groundfish SNE/MA Yellowtail Flounder Catch
18
16
14
12
10
8
6
4
2
0
1-May-21
9-May-21
17-May-21
25-May-21
2-Jun-21
10-Jun-21
18-Jun-21
26-Jun-21
4-Jul-21
12-Jul-21
20-Jul-21
28-Jul-21
5-Aug-21
13-Aug-21
21-Aug-21
29-Aug-21
6-Sep-21
14-Sep-21
22-Sep-21
30-Sep-21
8-Oct-21
16-Oct-21
24-Oct-21
1-Nov-21
9-Nov-21
17-Nov-21
25-Nov-21
3-Dec-21
11-Dec-21
19-Dec-21
27-Dec-21
4-Jan-22
12-Jan-22
20-Jan-22
28-Jan-22
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21-Feb-22
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17-Mar-22
25-Mar-22
2-Apr-22
10-Apr-22
18-Apr-22
26-Apr-22
DATE_TRIP
Values
FISHING_YEAR
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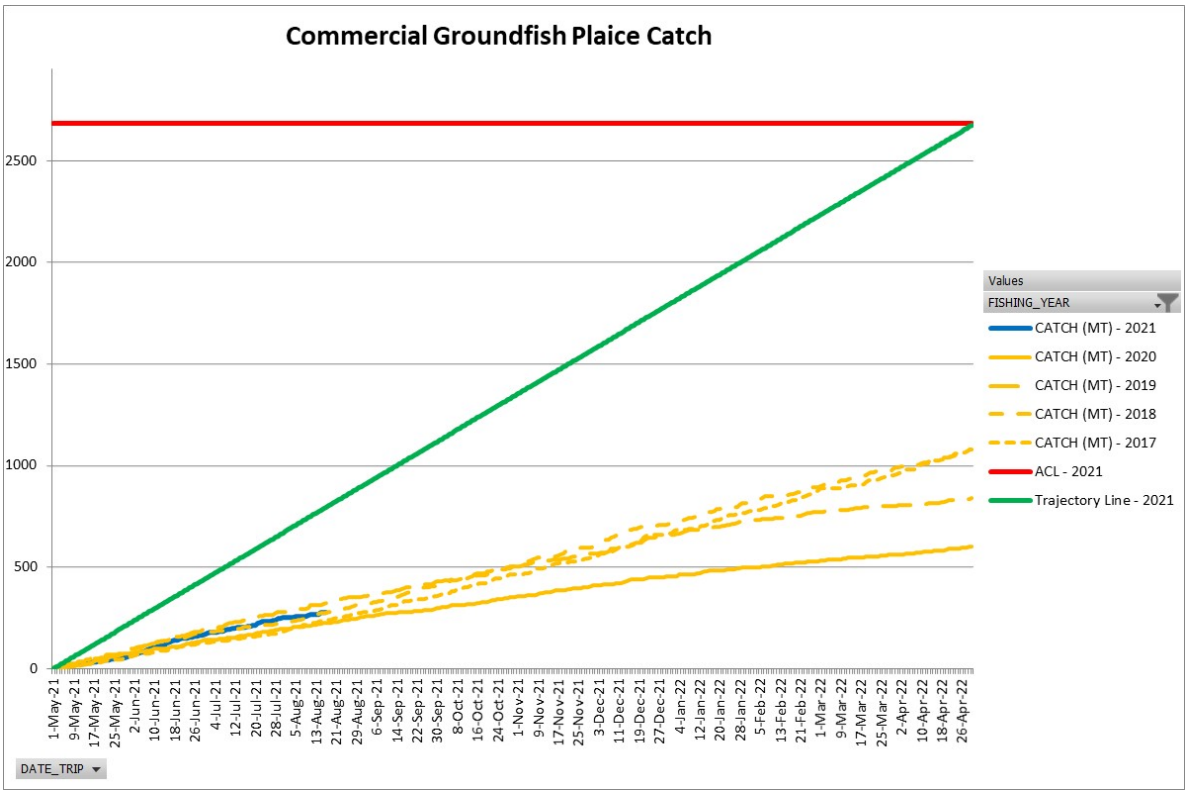
CATCH (MT) - 2020
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021


Commercial Groundfish Plaice Catch
2500
2000
1500
1000
500
0
1-May-21
9-May-21
17-May-21
25-May-21
2-Jun-21
10-Jun-21
18-Jun-21
26-Jun-21
4-Jul-21
12-Jul-21
20-Jul-21
28-Jul-21
5-Aug-21
13-Aug-21
21-Aug-21
29-Aug-21
6-Sep-21
14-Sep-21
22-Sep-21
30-Sep-21
8-Oct-21
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24-Oct-21
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9-Nov-21
17-Nov-21
25-Nov-21
3-Dec-21
11-Dec-21
19-Dec-21
27-Dec-21
4-Jan-22
12-Jan-22
20-Jan-22
28-Jan-22
5-Feb-22
13-Feb-22
21-Feb-22
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DATE_TRIP
Values
FISHING_YEAR
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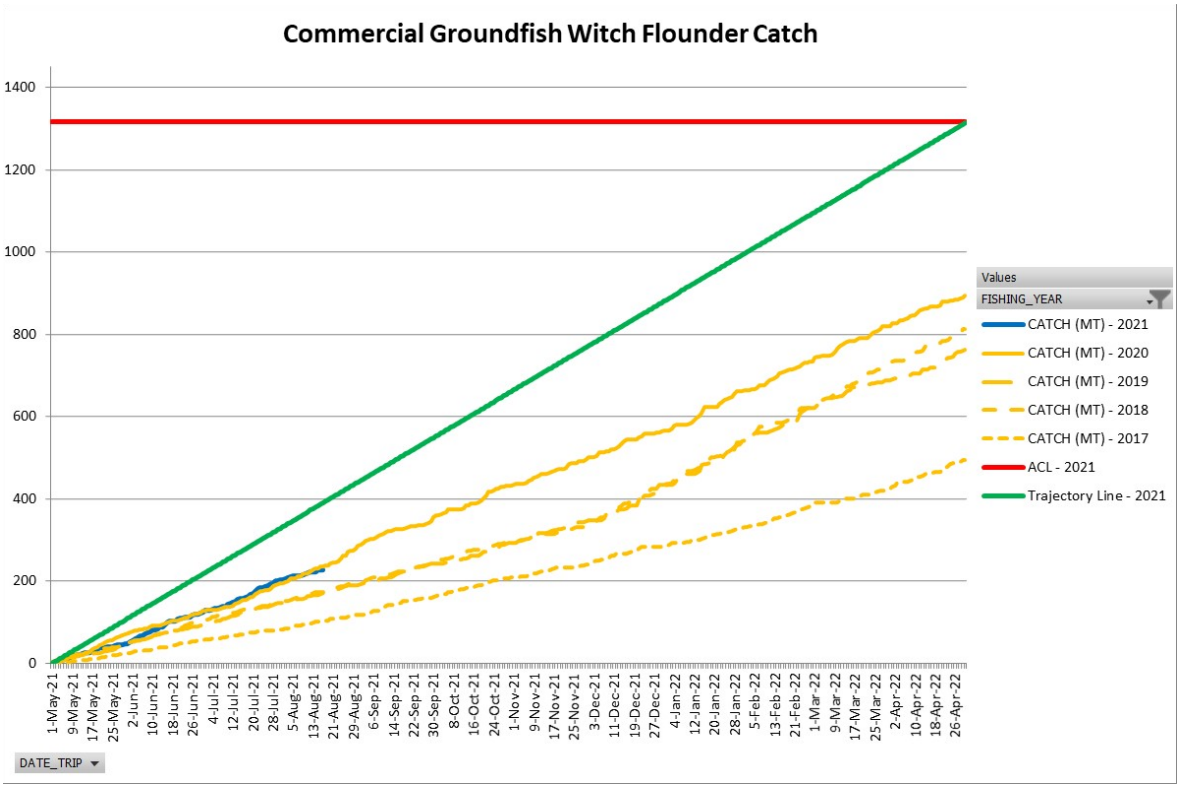
CATCH (MT) - 2020
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021


Commercial Groundfish Witch Flounder Catch
1400
1200
1000
800
600
400
200
0
1-May-21
9-May-21
17-May-21
25-May-21
2-Jun-21
10-Jun-21
18-Jun-21
26-Jun-21
4-Jul-21
12-Jul-21
20-Jul-21
28-Jul-21
5-Aug-21
13-Aug-21
21-Aug-21
29-Aug-21
6-Sep-21
14-Sep-21
22-Sep-21
30-Sep-21
8-Oct-21
16-Oct-21
24-Oct-21
1-Nov-21
9-Nov-21
17-Nov-21
25-Nov-21
3-Dec-21
11-Dec-21
19-Dec-21
27-Dec-21
4-Jan-22
12-Jan-22
20-Jan-22
28-Jan-22
5-Feb-22
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9-Mar-22
17-Mar-22
25-Mar-22
2-Apr-22
10-Apr-22
18-Apr-22
26-Apr-22
DATE_TRIP
Values
FISHING_YEAR
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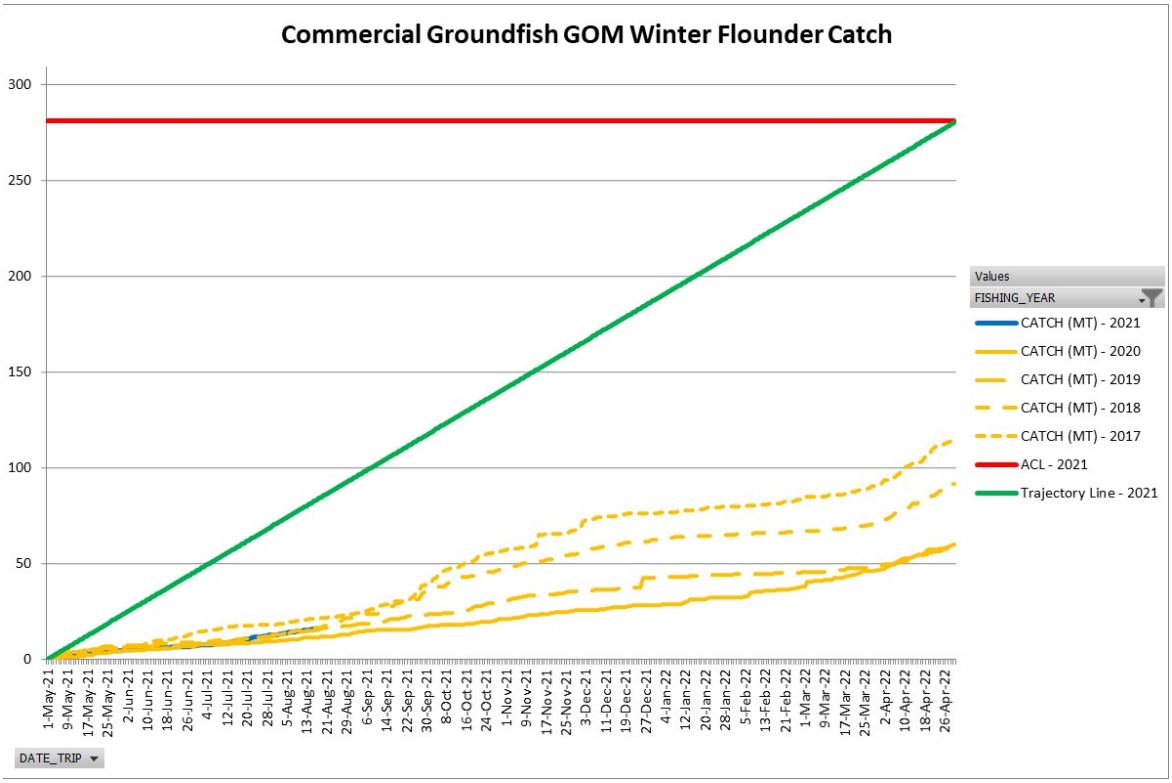
CATCH (MT) - 2020
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021


Commercial Groundfish GOM Winter Flounder Catch
300
250
200
150
100
50
0
1-May-21
9-May-21
17-May-21
25-May-21
2-Jun-21
10-Jun-21
18-Jun-21
26-Jun-21
4-Jul-21
12-Jul-21
20-Jul-21
28-Jul-21
5-Aug-21
13-Aug-21
21-Aug-21
29-Aug-21
6-Sep-21
14-Sep-21
22-Sep-21
30-Sep-21
8-Oct-21
16-Oct-21
24-Oct-21
1-Nov-21
9-Nov-21
17-Nov-21
25-Nov-21
3-Dec-21
11-Dec-21
19-Dec-21
27-Dec-21
4-Jan-22
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20-Jan-22
28-Jan-22
5-Feb-22
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21-Feb-22
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17-Mar-22
25-Mar-22
2-Apr-22
10-Apr-22
18-Apr-22
26-Apr-22
DATE_TRIP
Values
FISHING_YEAR
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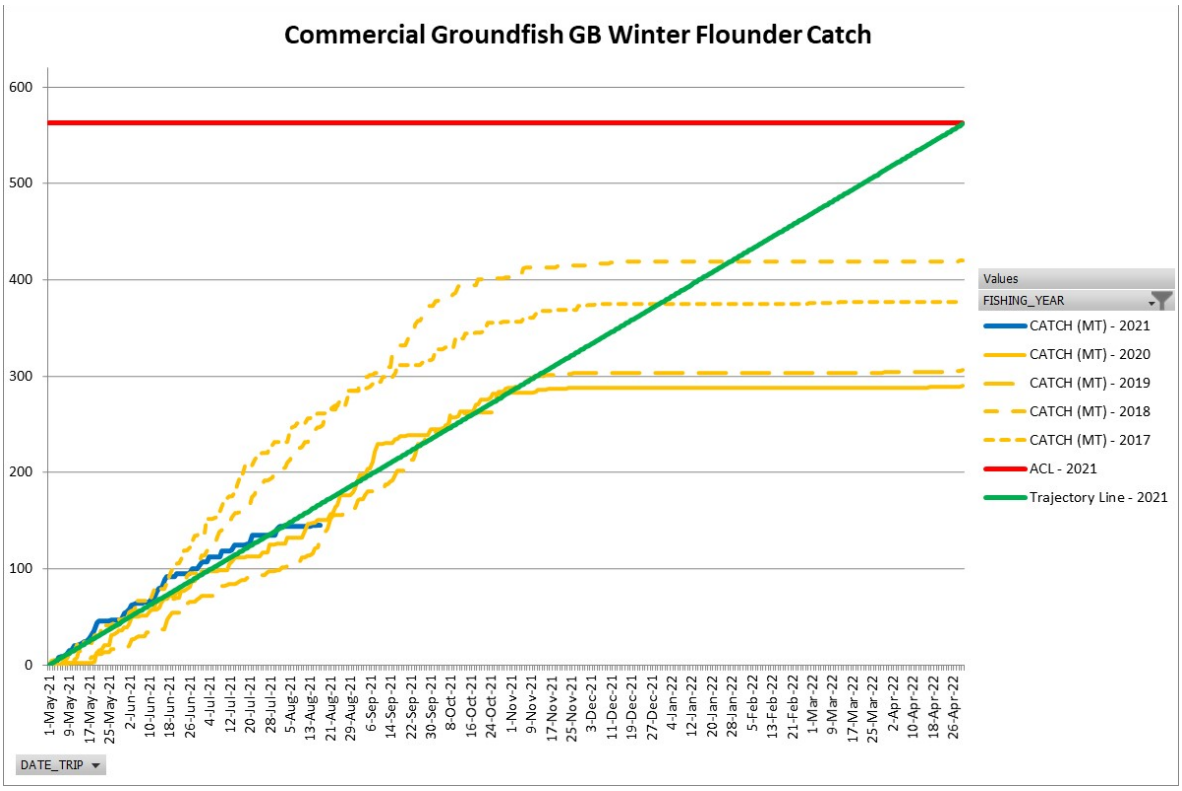
CATCH (MT) - 2020
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021


Commercial Groundfish GB Winter Flounder Catch
600
500
400
300
200
100
0
1-May-21
9-May-21
17-May-21
25-May-21
2-Jun-21
10-Jun-21
18-Jun-21
26-Jun-21
4-Jul-21
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28-Jul-21
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13-Aug-21
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29-Aug-21
6-Sep-21
14-Sep-21
22-Sep-21
30-Sep-21
8-Oct-21
16-Oct-21
24-Oct-21
1-Nov-21
9-Nov-21
17-Nov-21
25-Nov-21
3-Dec-21
11-Dec-21
19-Dec-21
27-Dec-21
4-Jan-22
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20-Jan-22
28-Jan-22
5-Feb-22
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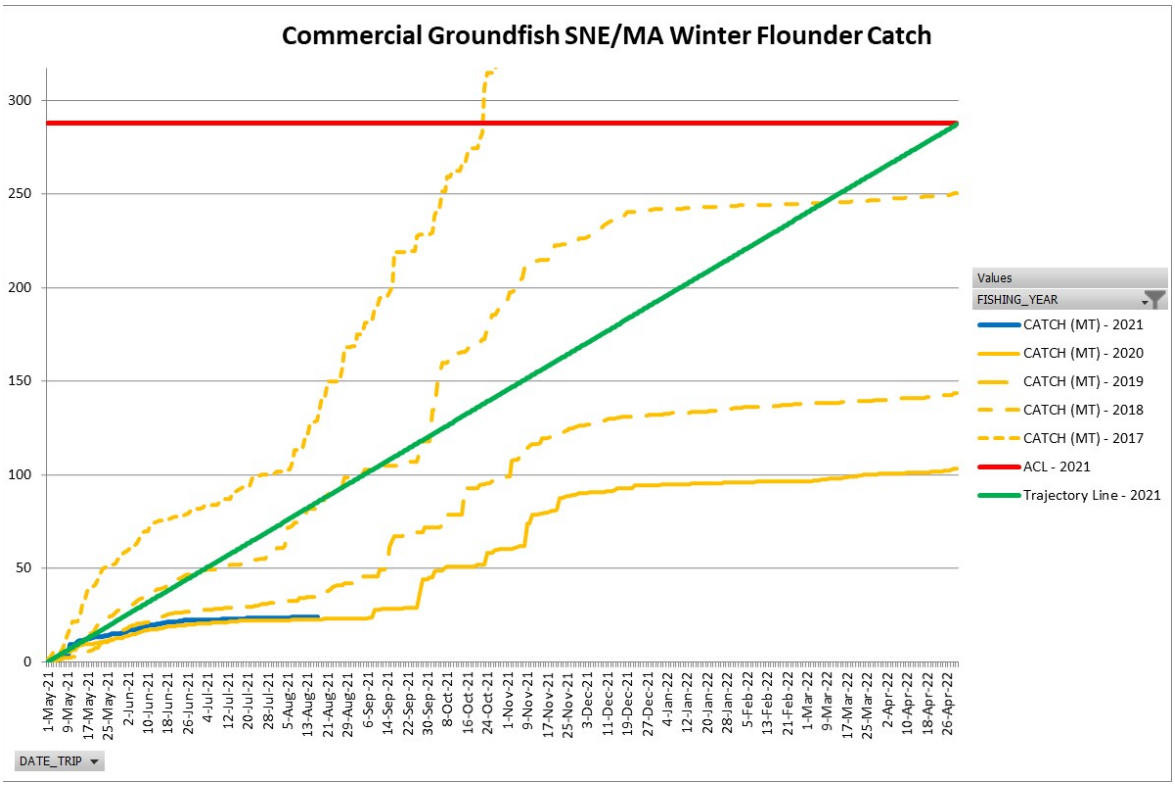
9-Mar-22
17-Mar-22
25-Mar-22
2-Apr-22
10-Apr-22
18-Apr-22
26-Apr-22
DATE_TRIP
Values
FISHING_YEAR
CATCH (MT) - 2021
CATCH (MT) - 2020
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021


Commercial Groundfish SNE/MA Winter Flounder Catch
300
250
200
150
100
50
0
1-May-21
9-May-21
17-May-21
25-May-21
2-Jun-21
10-Jun-21
18-Jun-21
26-Jun-21
4-Jul-21
12-Jul-21
20-Jul-21
28-Jul-21
5-Aug-21
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21-Aug-21
29-Aug-21
6-Sep-21
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22-Sep-21
30-Sep-21
8-Oct-21
16-Oct-21
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1-Nov-21
9-Nov-21
17-Nov-21
25-Nov-21
3-Dec-21
11-Dec-21
19-Dec-21
27-Dec-21
4-Jan-22
12-Jan-22
20-Jan-22
28-Jan-22
5-Feb-22
13-Feb-22
21-Feb-22
1-Mar-22
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17-Mar-22
25-Mar-22
2-Apr-22
10-Apr-22
18-Apr-22
26-Apr-22
DATE_TRIP
Values
FISHING_YEAR
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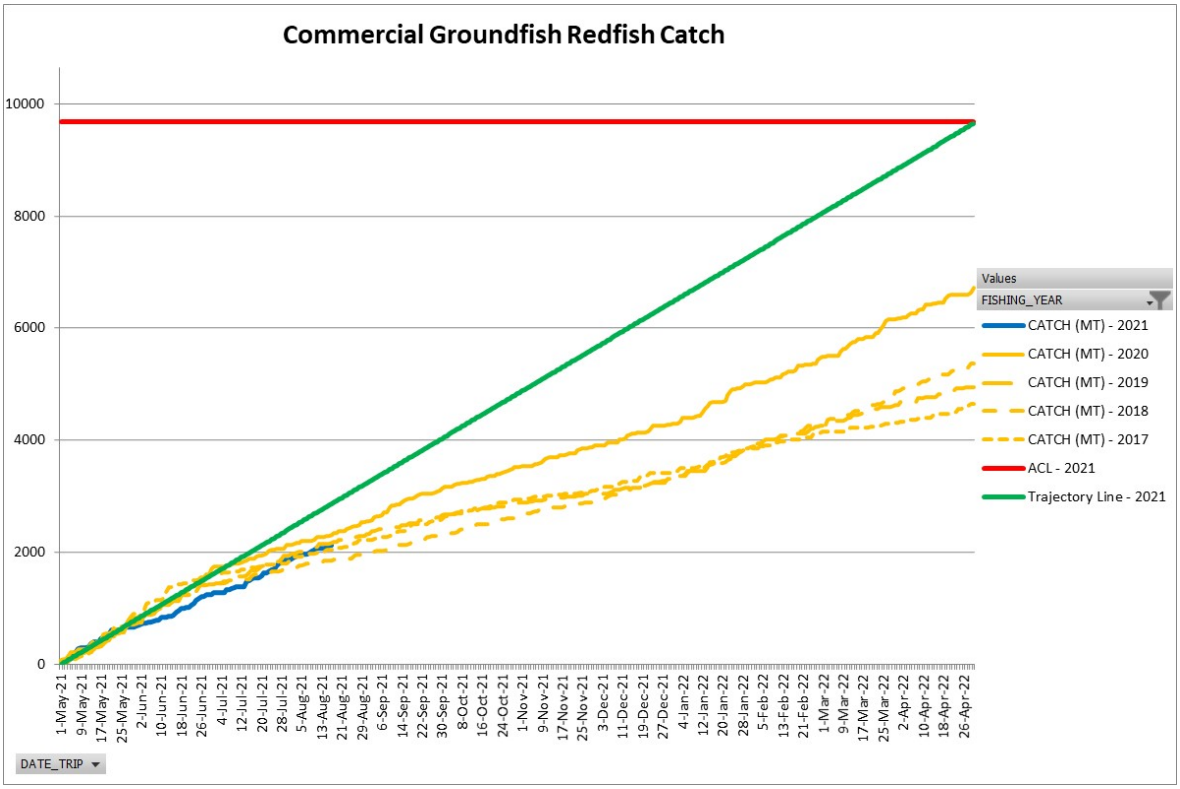
CATCH (MT) - 2020
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021


Commercial Groundfish Redfish Catch
10000
8000
6000
4000
2000
0
1-May-21
9-May-21
17-May-21
25-May-21
2-Jun-21
10-Jun-21
18-Jun-21
26-Jun-21
4-Jul-21
12-Jul-21
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28-Jul-21
5-Aug-21
13-Aug-21
21-Aug-21
29-Aug-21
6-Sep-21
14-Sep-21
22-Sep-21
30-Sep-21
8-Oct-21
16-Oct-21
24-Oct-21
1-Nov-21
9-Nov-21
17-Nov-21
25-Nov-21
3-Dec-21
11-Dec-21
19-Dec-21
27-Dec-21
4-Jan-22
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5-Feb-22
13-Feb-22
21-Feb-22
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10-Apr-22
18-Apr-22
26-Apr-22
DATE_TRIP
Values
FISHING_YEAR
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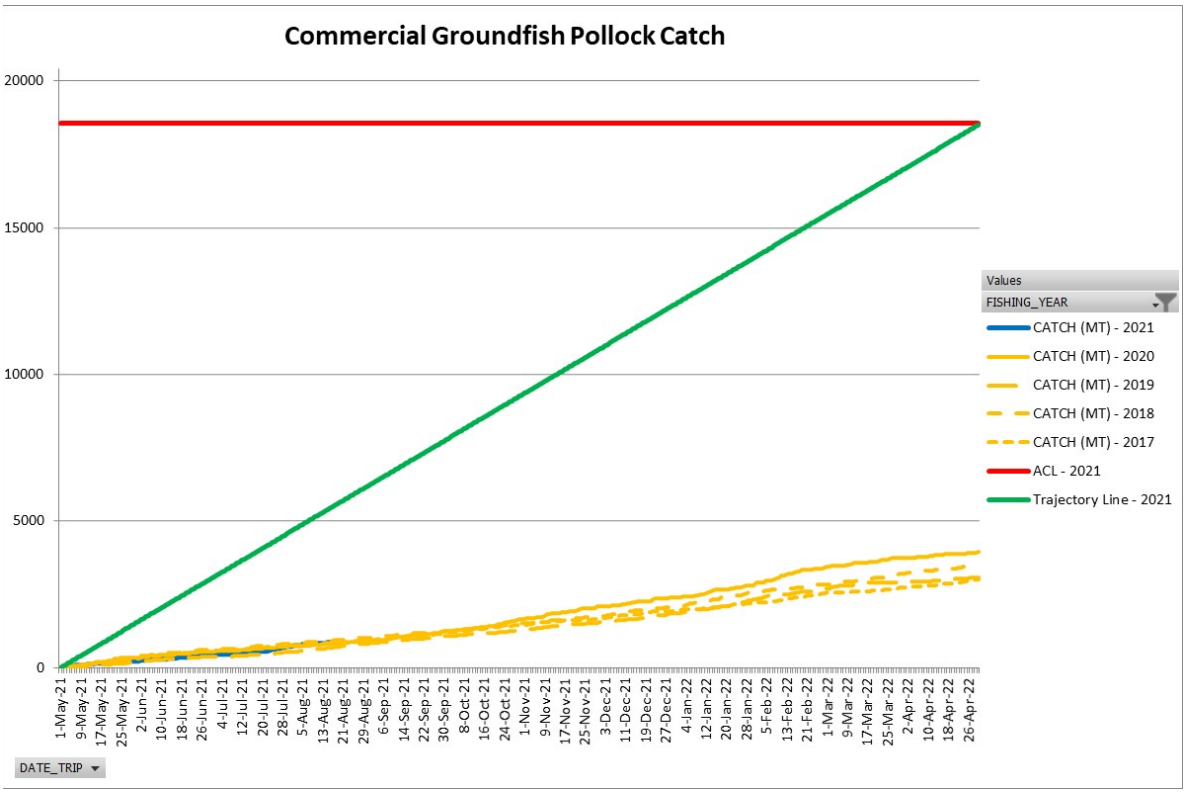
CATCH (MT) - 2020
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021


Commercial Groundfish Pollock Catch
20000
15000
10000
5000
0
1-May-21
9-May-21
17-May-21
25-May-21
2-Jun-21
10-Jun-21
18-Jun-21
26-Jun-21
4-Jul-21
12-Jul-21
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5-Aug-21
13-Aug-21
21-Aug-21
29-Aug-21
6-Sep-21
14-Sep-21
22-Sep-21
30-Sep-21
8-Oct-21
16-Oct-21
24-Oct-21
1-Nov-21
9-Nov-21
17-Nov-21
25-Nov-21
3-Dec-21
11-Dec-21
19-Dec-21
27-Dec-21
4-Jan-22
12-Jan-22
20-Jan-22
28-Jan-22
5-Feb-22
13-Feb-22
21-Feb-22
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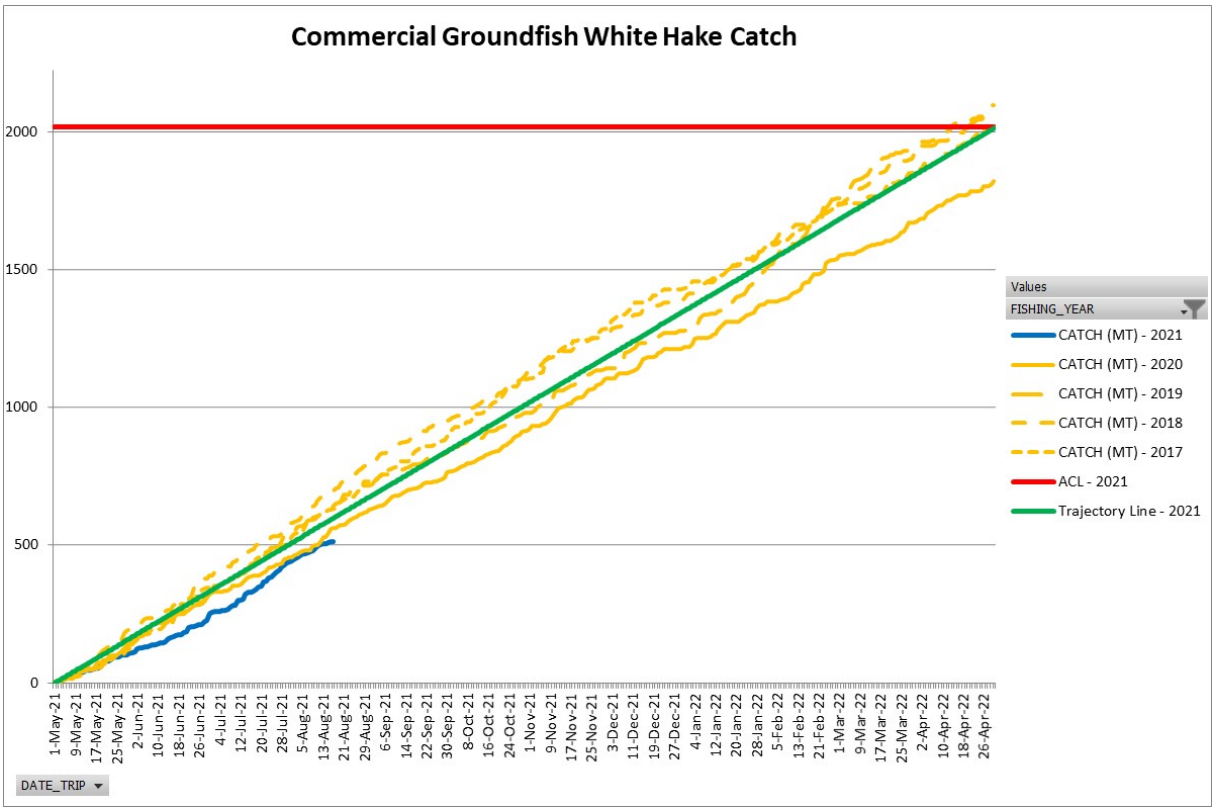
9-Mar-22
17-Mar-22
25-Mar-22
2-Apr-22
10-Apr-22
18-Apr-22
26-Apr-22
DATE_TRIP
Values
FISHING_YEAR
CATCH (MT) - 2021
CATCH (MT) - 2020
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021


Commercial Groundfish White Hake Catch
2000
1500
1000
500
0
1-May-21
9-May-21
17-May-21
25-May-21
2-Jun-21
10-Jun-21
18-Jun-21
26-Jun-21
4-Jul-21
12-Jul-21
20-Jul-21
28-Jul-21
5-Aug-21
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21-Aug-21
29-Aug-21
6-Sep-21
14-Sep-21
22-Sep-21
30-Sep-21
8-Oct-21
16-Oct-21
24-Oct-21
1-Nov-21
9-Nov-21
17-Nov-21
25-Nov-21
3-Dec-21
11-Dec-21
19-Dec-21
27-Dec-21
4-Jan-22
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20-Jan-22
28-Jan-22
5-Feb-22
13-Feb-22
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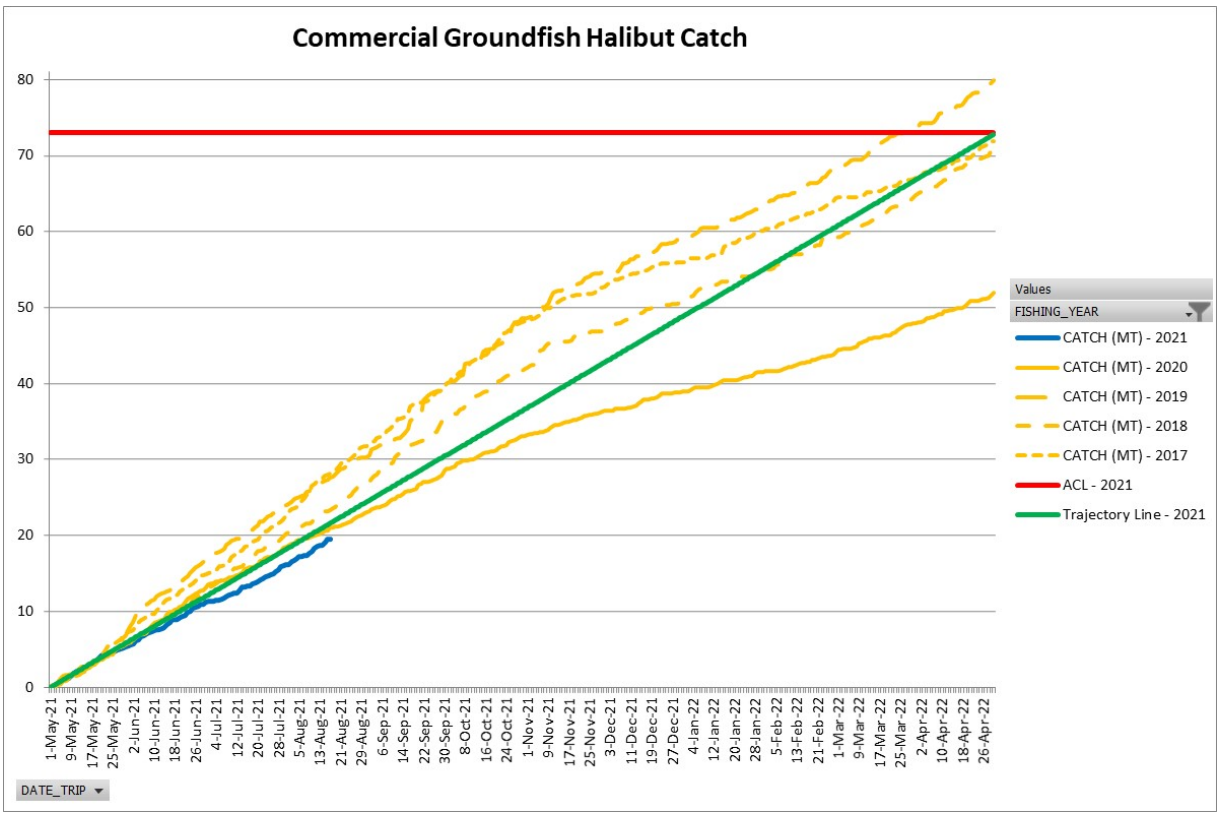
Values
FISHING_YEAR
CATCH (MT) - 2021
CATCH (MT) - 2020
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021


Commercial Groundfish Halibut Catch
80
70
60
50
40
30
20
10
0
1-May-21
9-May-21
17-May-21
25-May-21
2-Jun-21
10-Jun-21
18-Jun-21
26-Jun-21
4-Jul-21
12-Jul-21
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5-Aug-21
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21-Aug-21
29-Aug-21
6-Sep-21
14-Sep-21
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25-Nov-21
3-Dec-21
11-Dec-21
19-Dec-21
27-Dec-21
4-Jan-22
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20-Jan-22
28-Jan-22
5-Feb-22
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21-Feb-22
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9-Mar-22
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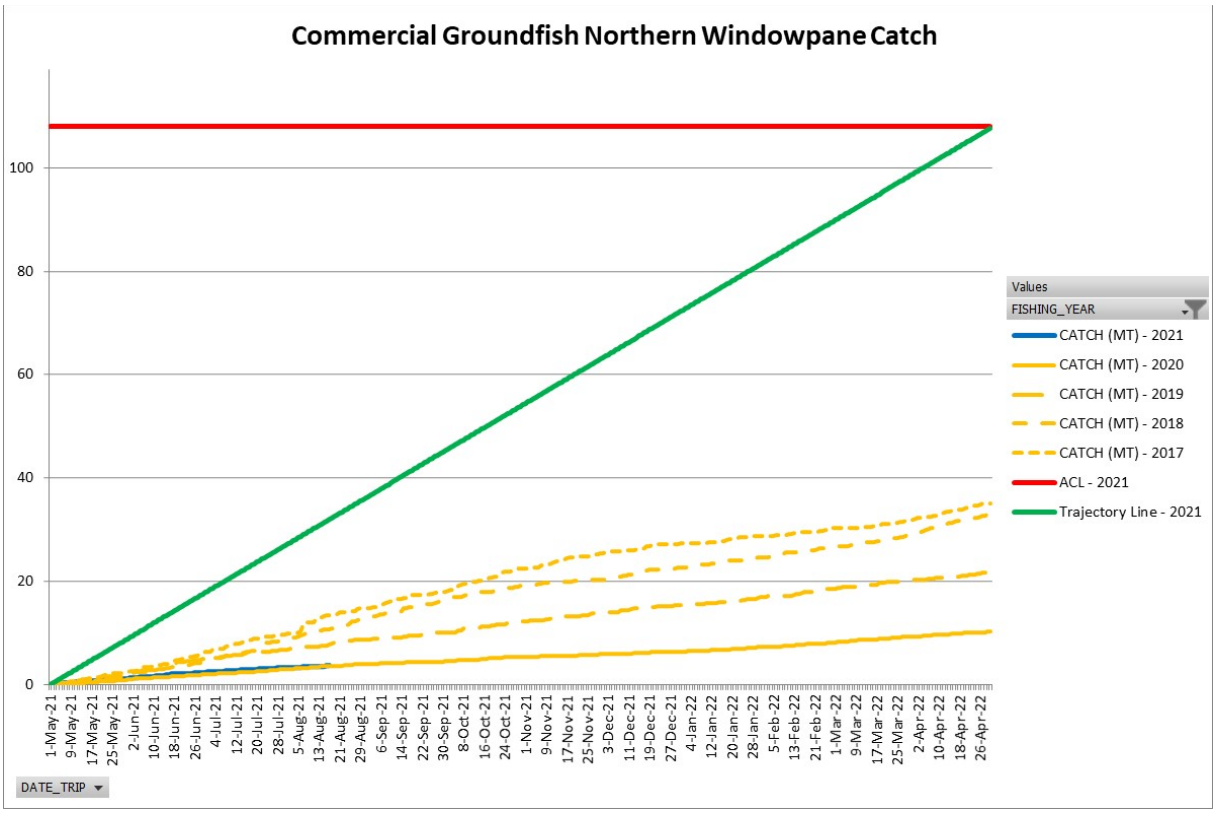
25-Mar-22
2-Apr-22
10-Apr-22
18-Apr-22
26-Apr-22
DATE_TRIP
Values
FISHING_YEAR
CATCH (MT) - 2021
CATCH (MT) - 2020
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021


Commercial Groundfish Northern Windowpane Catch
100
80
60
40
20
0
1-May-21
9-May-21
17-May-21
25-May-21
2-Jun-21
10-Jun-21
18-Jun-21
26-Jun-21
4-Jul-21
12-Jul-21
20-Jul-21
28-Jul-21
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29-Aug-21
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27-Dec-21
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5-Feb-22
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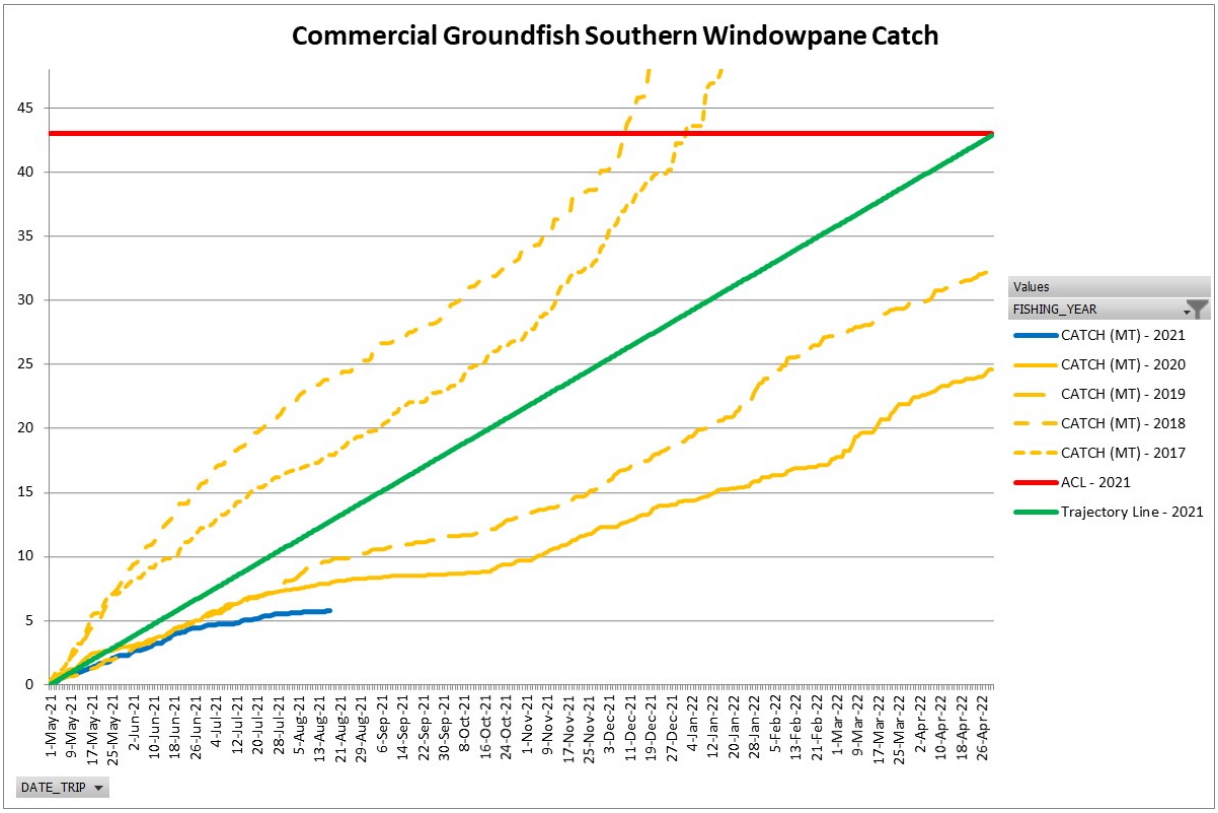
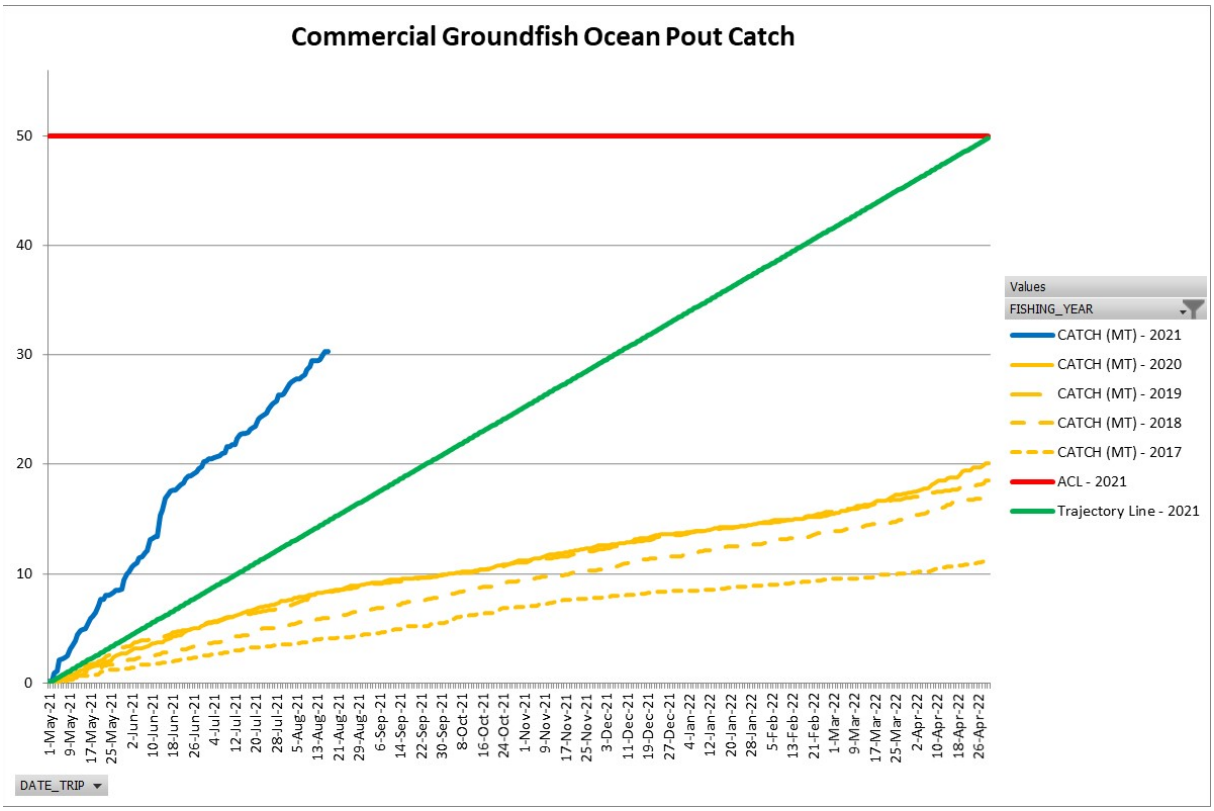
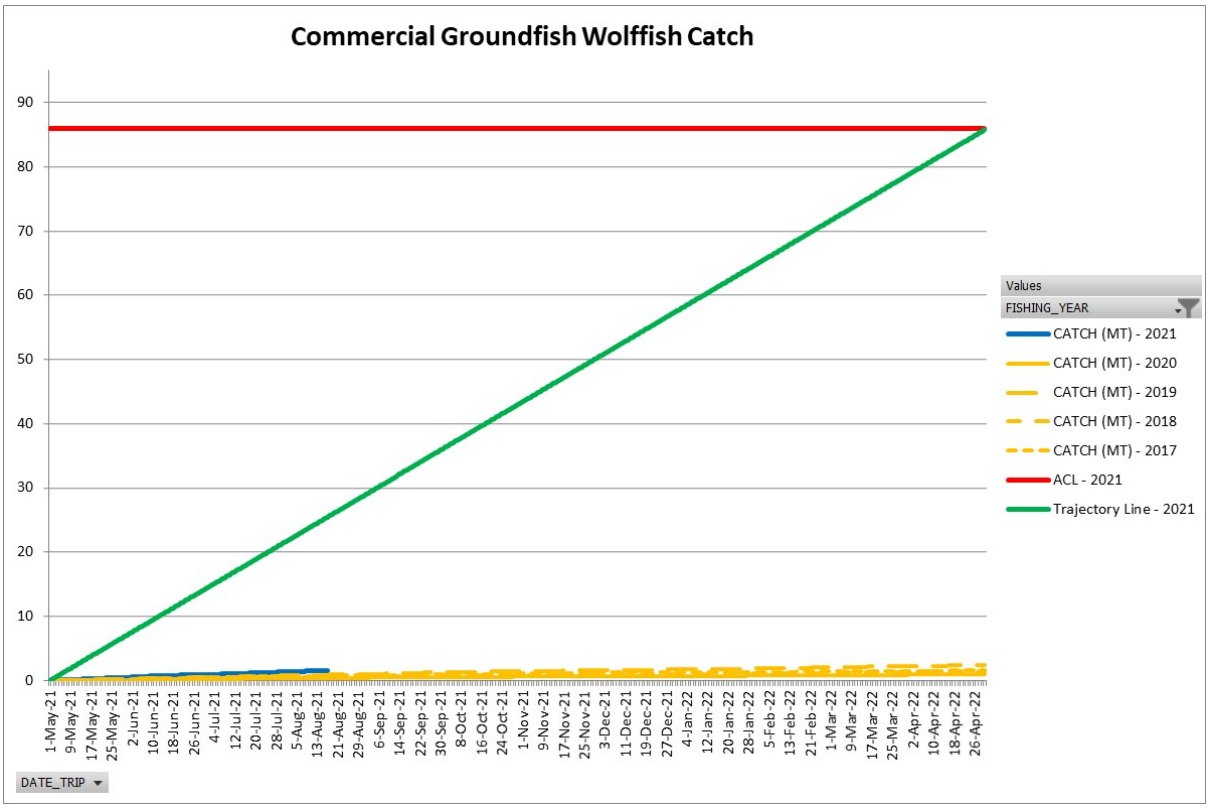
10-Apr-22
18-Apr-22
26-Apr-22
DATE_TRIP
Values
FISHING_YEAR
CATCH (MT) - 2021
CATCH (MT) - 2020
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021


Commercial Groundfish Southern Windowpane Catch
45
40
35
30
25
20
15
10
5
0
1-May-21
9-May-21
17-May-21
25-May-21
2-Jun-21
10-Jun-21
18-Jun-21
26-Jun-21
4-Jul-21
12-Jul-21
20-Jul-21
28-Jul-21
5-Aug-21
13-Aug-21
21-Aug-21
29-Aug-21
6-Sep-21
14-Sep-21
22-Sep-21
30-Sep-21
8-Oct-21
16-Oct-21
24-Oct-21
1-Nov-21
9-Nov-21
17-Nov-21
25-Nov-21
3-Dec-21
11-Dec-21
19-Dec-21
27-Dec-21
4-Jan-22
12-Jan-22
20-Jan-22
28-Jan-22
5-Feb-22
13-Feb-22
21-Feb-22
1-Mar-22
9-Mar-22
17-Mar-22
25-Mar-22
2-Apr-22
10-Apr-22
18-Apr-22
26-Apr-22
DATE_TRIP
Values
FISHING_YEAR
CATCH (MT) - 2021
CATCH (MT) - 2020
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021


Commercial Groundfish Ocean Pout Catch
50
40
30
20
10
0
1-May-21
9-May-21
17-May-21
25-May-21
2-Jun-21
10-Jun-21
18-Jun-21
26-Jun-21
4-Jul-21
12-Jul-21
20-Jul-21
28-Jul-21
5-Aug-21
13-Aug-21
21-Aug-21
29-Aug-21
6-Sep-21
14-Sep-21
22-Sep-21
30-Sep-21
8-Oct-21
16-Oct-21
24-Oct-21
1-Nov-21
9-Nov-21
17-Nov-21
25-Nov-21
3-Dec-21
11-Dec-21
19-Dec-21
27-Dec-21
4-Jan-22
12-Jan-22
20-Jan-22
28-Jan-22
5-Feb-22
13-Feb-22
21-Feb-22
1-Mar-22
9-Mar-22
17-Mar-22
25-Mar-22
2-Apr-22
10-Apr-22
18-Apr-22
26-Apr-22
DATE_TRIP
Values
FISHING_YEAR
CATCH (MT) - 2021
CATCH (MT) - 2020
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021

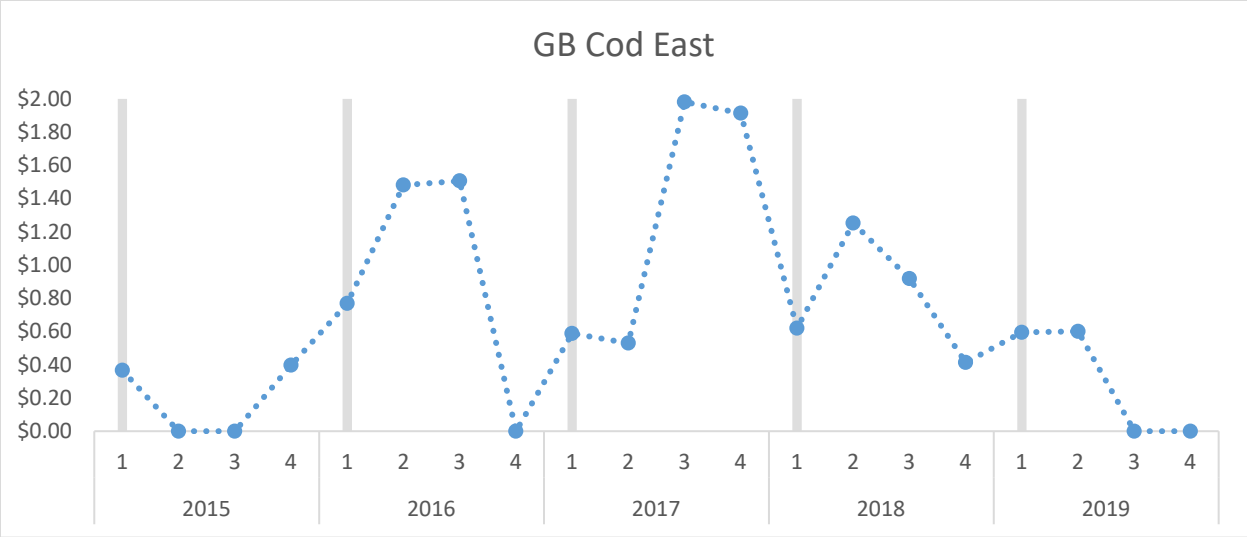

Commercial Groundfish Wolffish Catch
90
80
70
60
50
40
30
20
10
0
1-May-21
9-May-21
17-May-21
25-May-21
2-Jun-21
10-Jun-21
18-Jun-21
26-Jun-21
4-Jul-21
12-Jul-21
20-Jul-21
28-Jul-21
5-Aug-21
13-Aug-21
21-Aug-21
29-Aug-21
6-Sep-21
14-Sep-21
22-Sep-21
30-Sep-21
8-Oct-21
16-Oct-21
24-Oct-21
1-Nov-21
9-Nov-21
17-Nov-21
25-Nov-21
3-Dec-21
11-Dec-21
19-Dec-21
27-Dec-21
4-Jan-22
12-Jan-22
20-Jan-22
28-Jan-22
5-Feb-22
13-Feb-22
21-Feb-22
1-Mar-22
9-Mar-22
17-Mar-22
25-Mar-22
2-Apr-22
10-Apr-22
18-Apr-22
26-Apr-22
DATE_TRIP
Values
FISHING_YEAR
CATCH (MT) - 2021
CATCH (MT) - 2020
CATCH (MT) - 2019
CATCH (MT) - 2018
CATCH (MT) - 2017
ACL - 2021
Trajectory Line - 2021

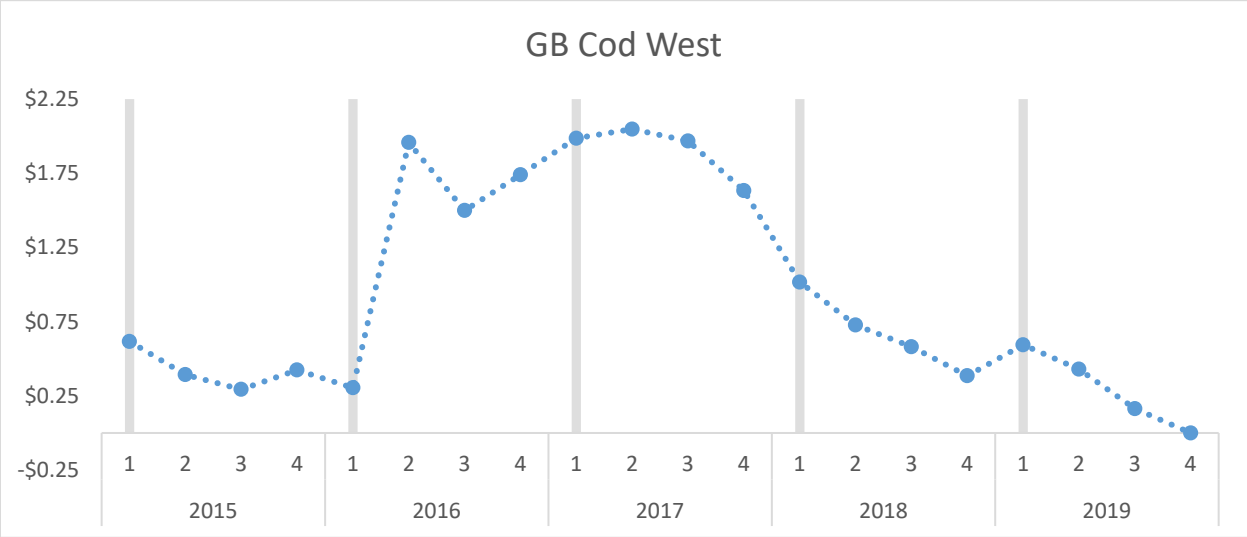
Attachment 2

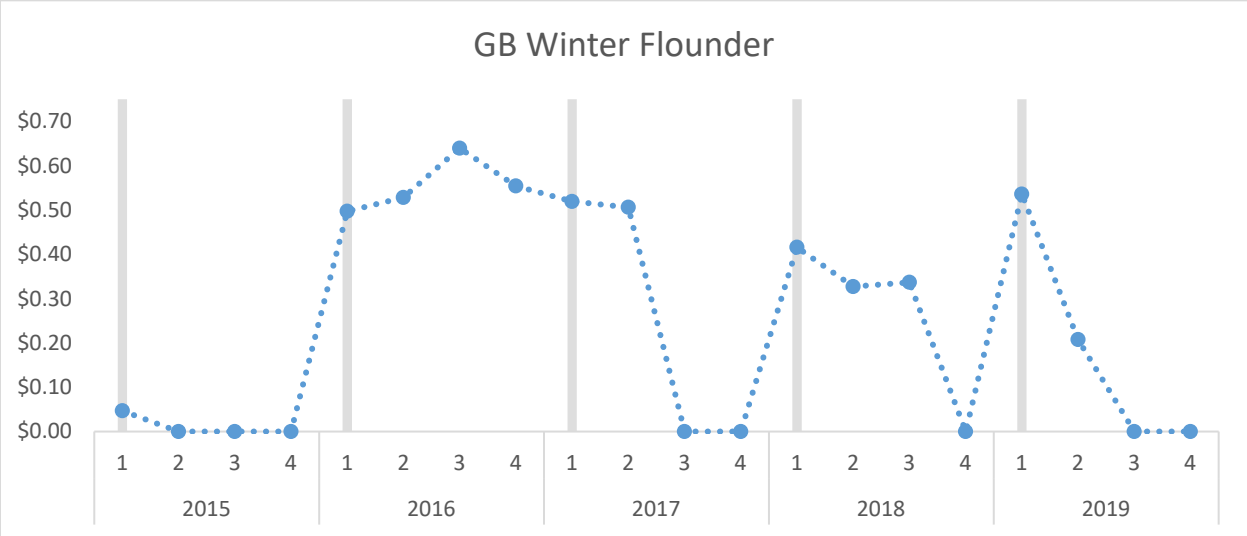
ACE lease prices were estimated for 11 allocated groundfish stocks over fishing years 2015-2019 using a hedonic price model. Input data into the model is comprised of 5,169 inter-sector ACE leases over the FY2015-2019 period. Six stocks not presented (GB haddock east, GB haddock West, GB yellowtail flounder, GOM winter flounder, pollock, and redfish) were traded at a price not statistically different from $0.00. First quarter (May-July) lease prices are indicated by the vertical gray bars in the figures.

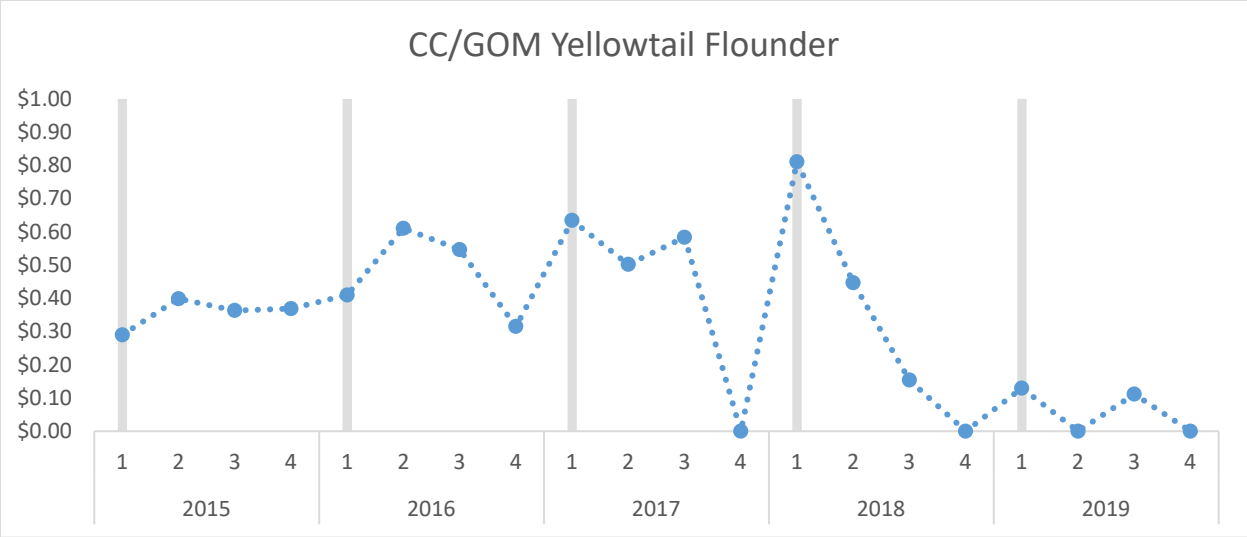
In general, no clear trends emerge in comparing first quarter prices to prices later in the fishing year. GB cod East has been noted as a stock which has higher utilization rates early in the fishing year; quota lease prices have generally peaked later in the year. GB winter flounder, another stock with high earlier season utilization rates, has also had high ACE lease prices early in the year. For fishing years 2015, 2017, 2018, and 2019, the highest ACE lease prices were in the first quarter.

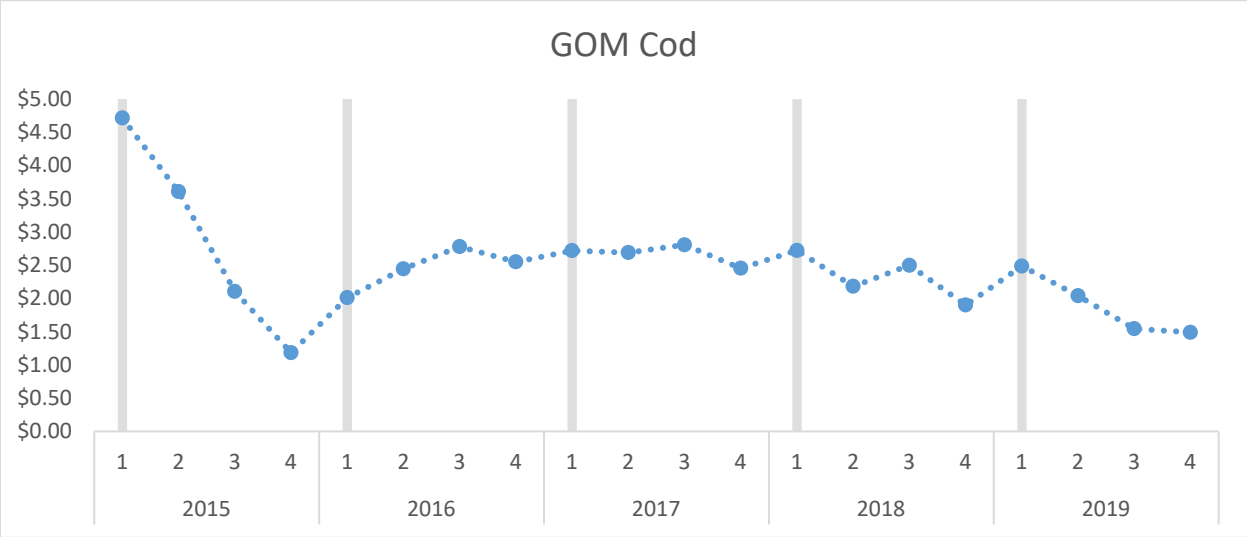
The extent to which the current default specifications process, implemented through FW53, starting in FY2015, has impacted ACE lease prices is difficult to assess. The commercial groundfish fishery has operated under default specifications for several stocks for portions of fishing years 2017, 2019, 2020, and 2021. In those cases, there is the potential for quota scarcity with a 35% default ACL. However, first quarter quota prices may also be high because of anticipated quota scarcity later in the fishing year, after final quotas are implemented.

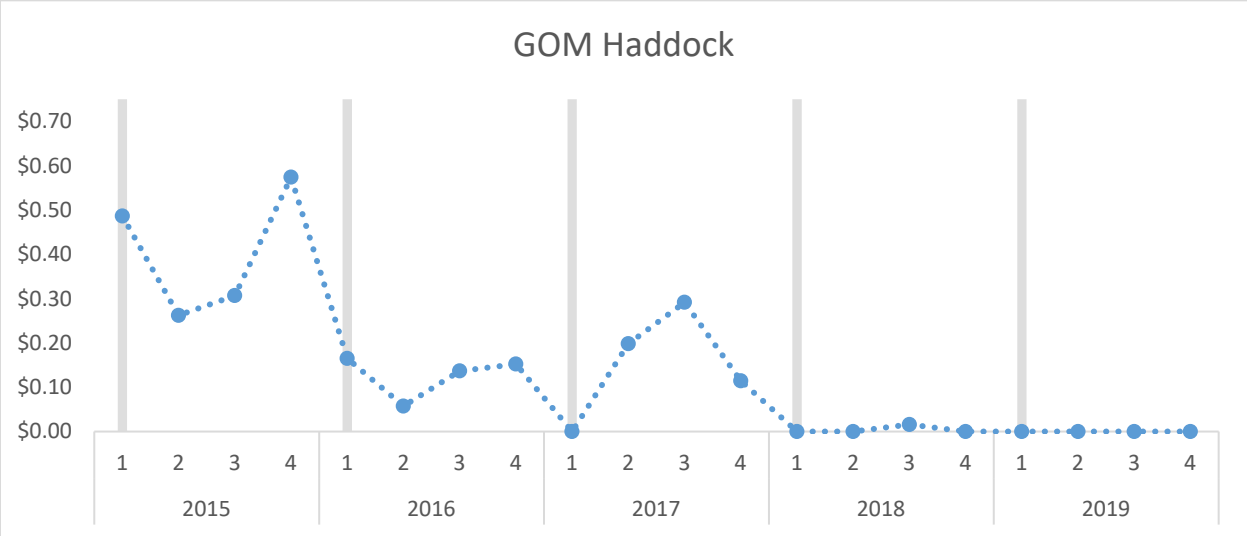

GB Cod East
$2.00
$1.80
$1.60
$1.40
$1.20
$1.00
$0.80
$0.60
$0.40
$0.20
$0.00
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
2015
2016
2017
2018
2019

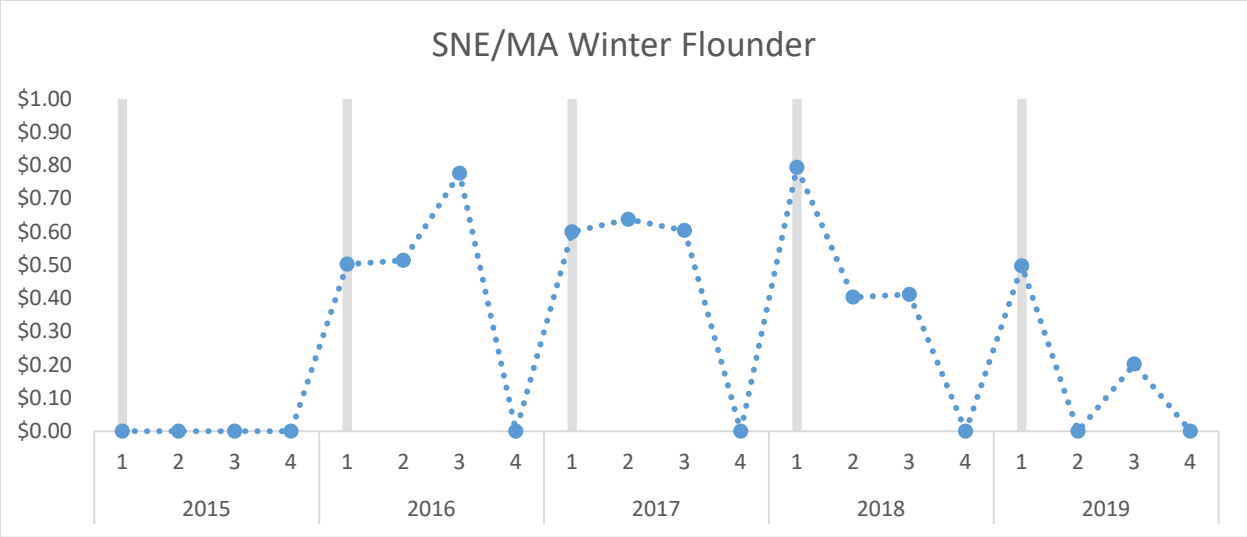

GB Cod West
$2.25
$1.75
$1.25
$0.75
$0.25
-$0.25
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
2015
2016
2017
2018
2019

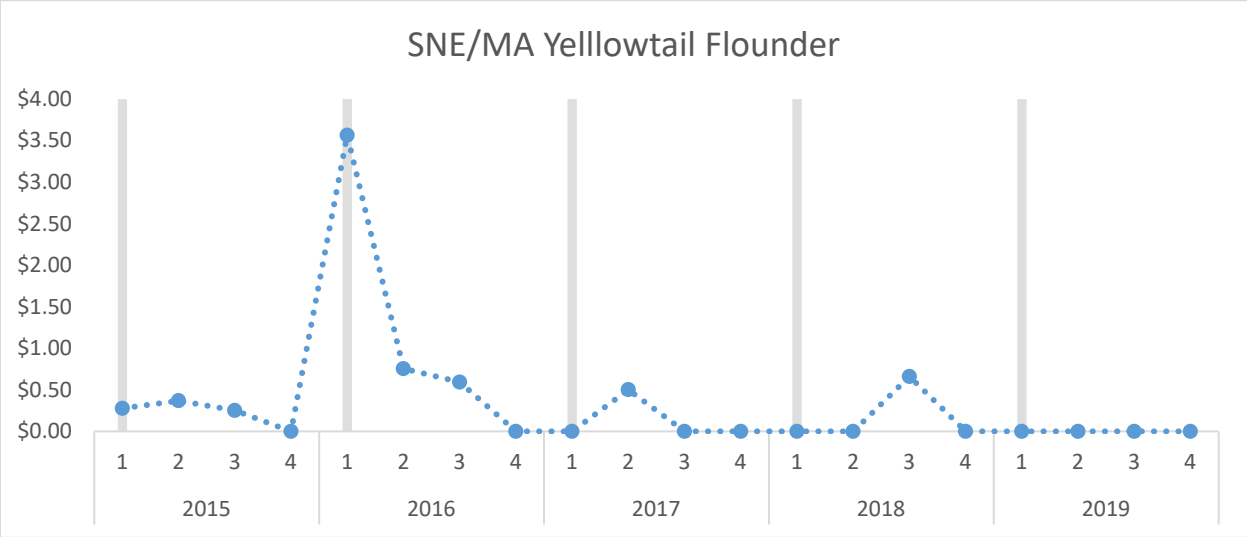

GB Winter Flounder
$0.70
$0.60
$0.50
$0.40
$0.30
$0.20
$0.10
$0.00
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
2015
2016
2017
2018
2019

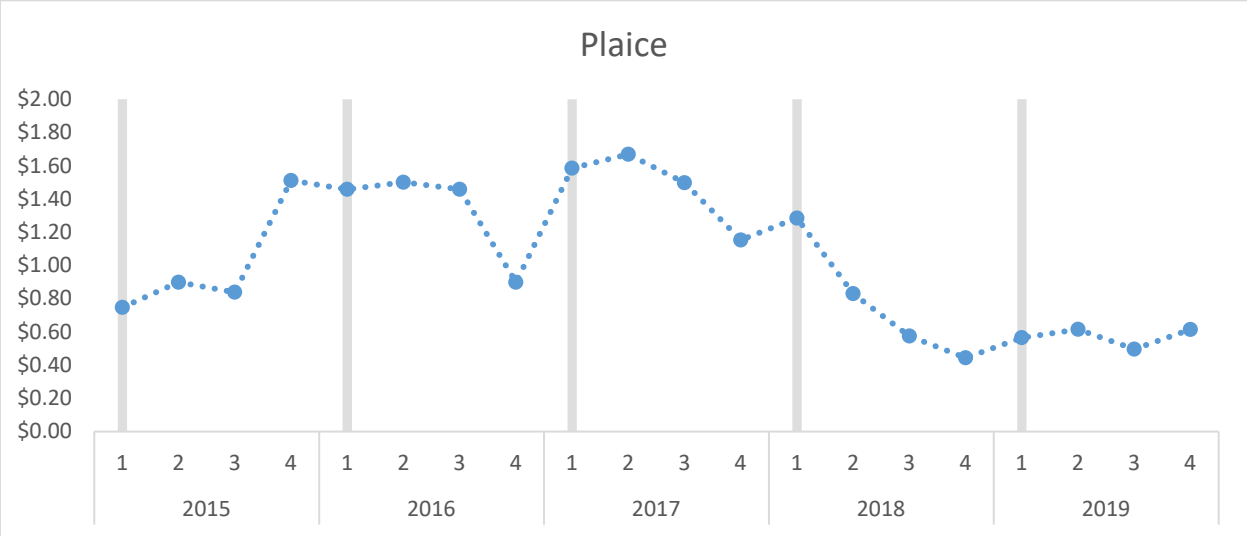

CC/GOM Yellowtail Flounder
$1.00
$0.90
$0.80
$0.70
$0.60
$0.50
$0.40
$0.30
$0.20
$0.10
$0.00
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
2015
2016
2017
2018
2019

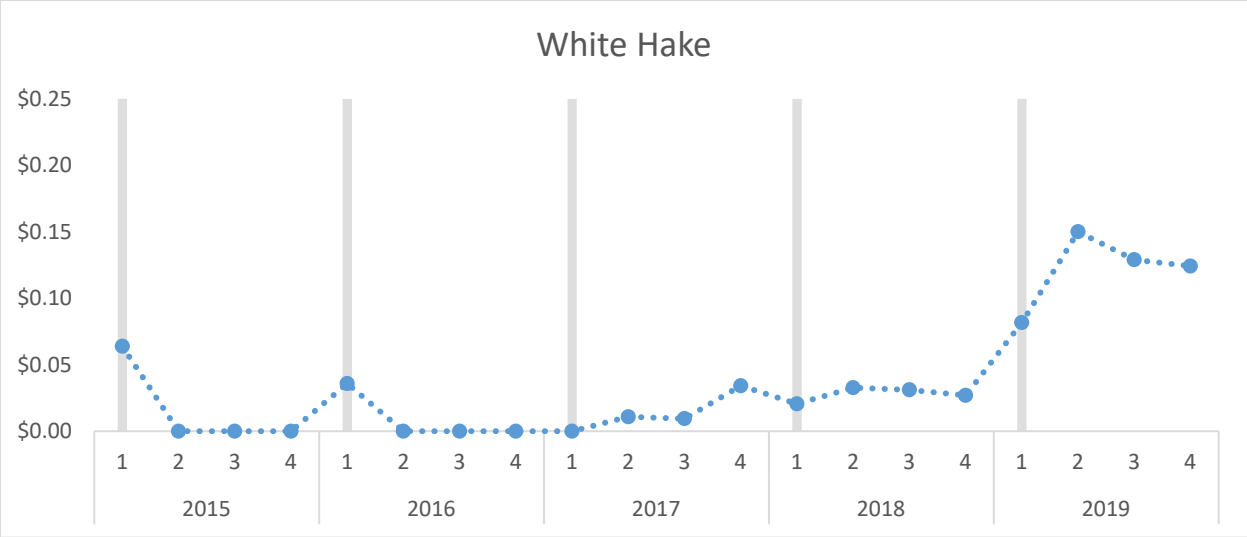

GOM Cod
$5.00
$4.50
$4.00
$3.50
$3.00
$2.50
$2.00
$1.50
$1.00
$0.50
$0.00
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
2015
2016
2017
2018
2019

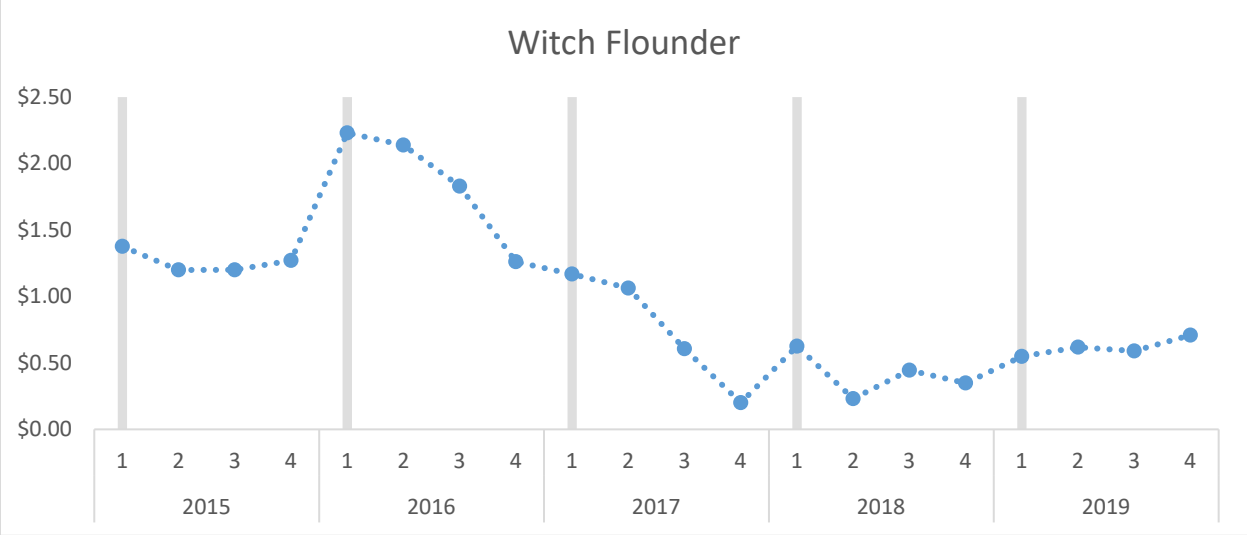

GOM Haddock
$0.70
$0.60
$0.50
$0.40
$0.30
$0.20
$0.10
$0.00
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
2015
2016
2017
2018
2019


SNE/MA Winter Flounder
$1.00
$0.90
$0.80
$0.70
$0.60
$0.50
$0.40
$0.30
$0.20
$0.10
$0.00
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
2015
2016
2017
2018
2019


SNE/MA Yelllowtail Flounder
$4.00
$3.50
$3.00
$2.50
$2.00
$1.50
$1.00
$0.50
$0.00
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
2015
2016
2017
2018
2019


Plaice
$2.00
$1.80
$1.60
$1.40
$1.20
$1.00
$0.80
$0.60
$0.40
$0.20
$0.00
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
2015
2016
2017
2018
2019


White Hake
$0.25
$0.20
$0.15
$0.10
$0.05
$0.00
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
2015
2016
2017
2018
2019


Witch Flounder
$2.50
$2.00
$1.50
$1.00
$0.50
$0.00
1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4 1 2 3 4
2015
2016
2017
2018
2019