

# C1: ANALYSIS OF MANAGEMENT MEASURES FOR THE AREA 2C AND 3A CHARTER HALIBUT FISHERIES FOR 2022

SARAH WEBSTER - DECEMBER 2022



# FISHERY REVIEW THROUGH 2021



# PRELIMINARY CHARTER ESTIMATES FOR 2021

Area	Mean Weight (lb)	Harvest (no. fish)	Yield (lb)	Release Mortality (lb)	Total Removals (lb)	Allocation (lb)	Overage (lb)	Overage %
2C	14.48	77,287	1,119,442	34,737	1,154,179	810,000	344,179	42.5%
3A	13.23	184,160	2,436,779	17,622	2,454,401	1,950,000	504,401	25.9%

## 2021 Regulations:

### 2C –

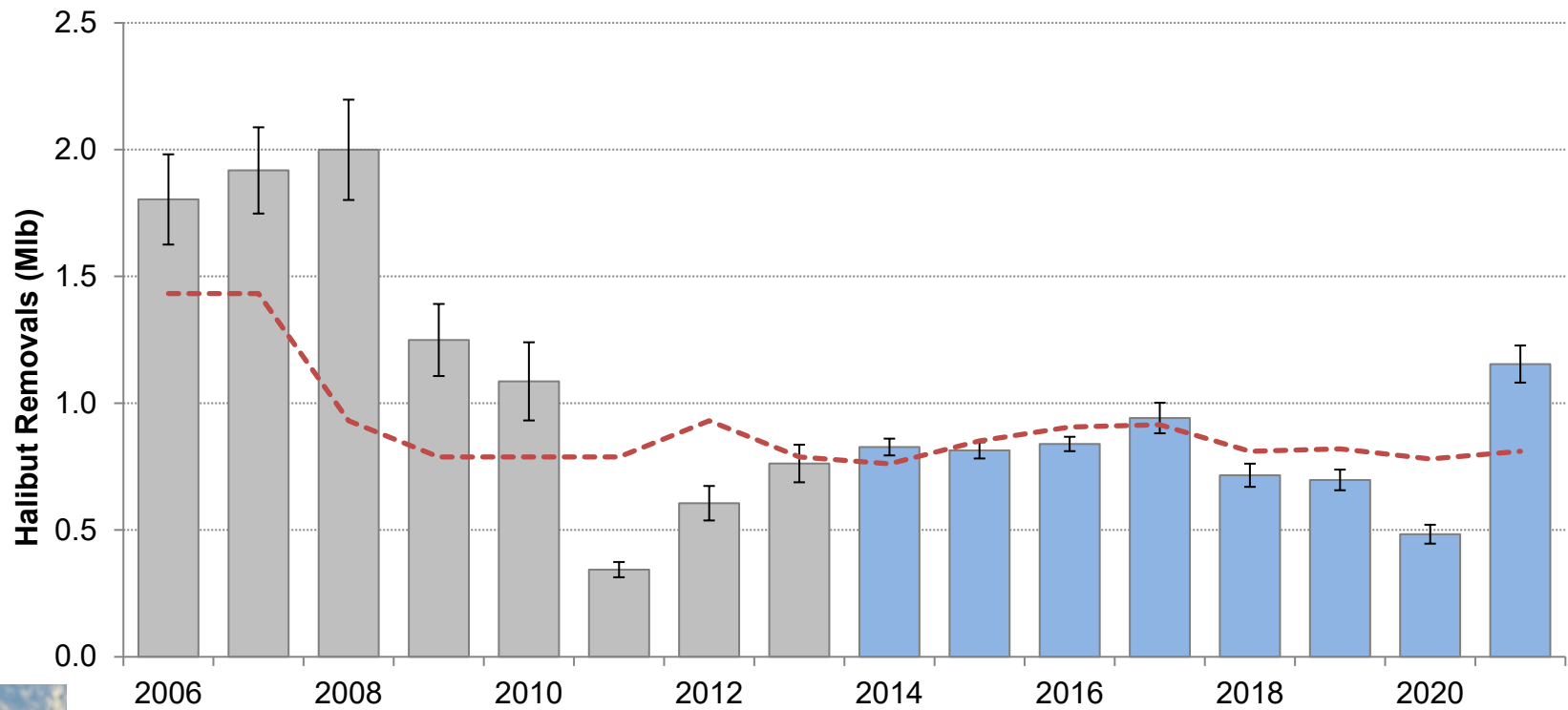
- One fish bag limit
- Reverse slot size limit of less than or equal to 50 inches or greater than or equal to 72 inches

### 3A –

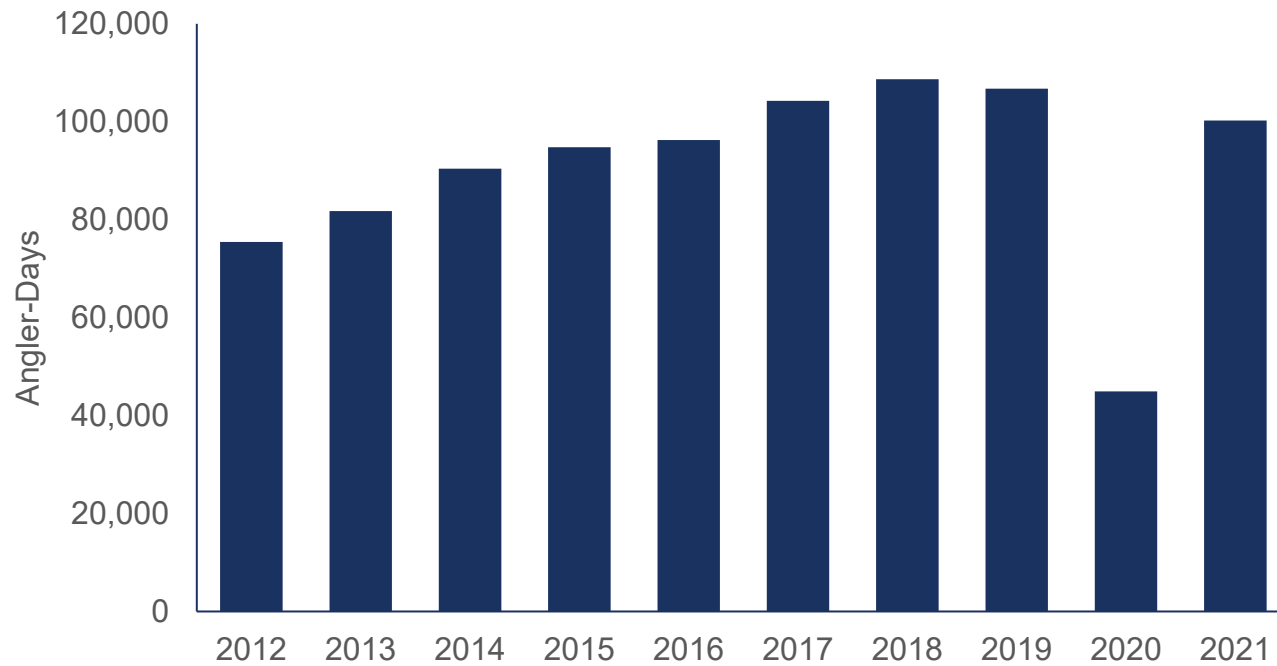
- Two fish bag limit: one fish of any size, one fish less than or equal to 32 inches
- One trip per vessel per day and per charter halibut permit per day
- Wednesdays closed to retention of halibut



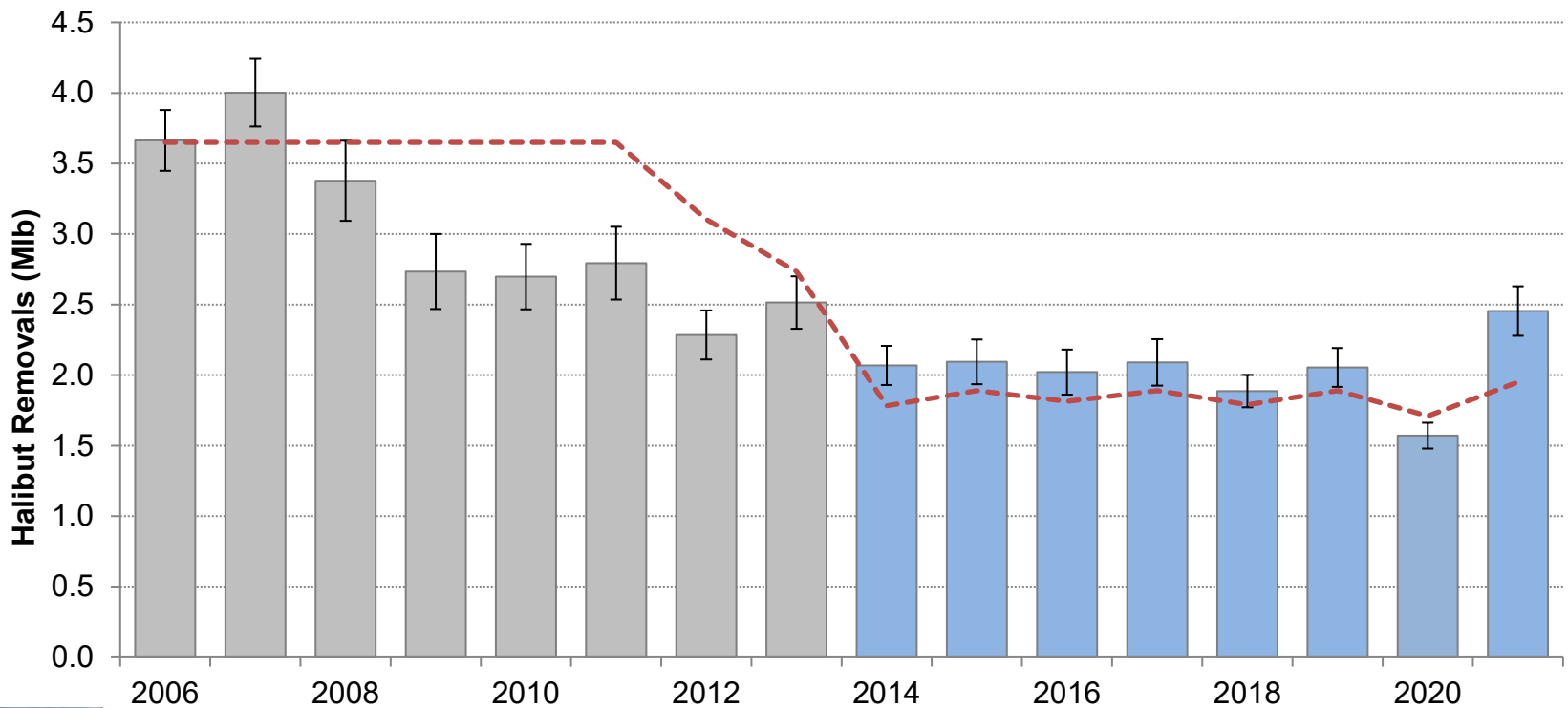
# 2C CHARTER HALIBUT REMOVALS



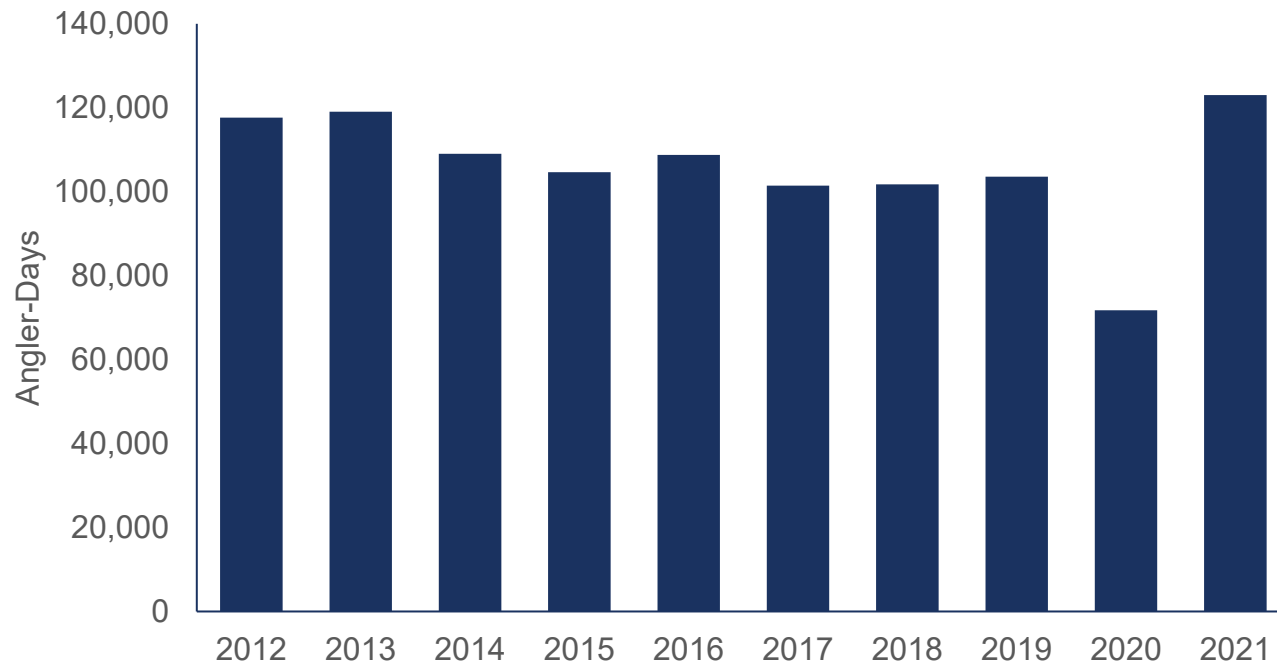
# 2C EFFORT



# 3A CHARTER HALIBUT REMOVALS



# 3A EFFORT



# BUSINESSES AND VESSELS HARVESTING HALIBUT

## 2C

	Businesses	Vessels
<b>2012</b>	255	498
<b>2013</b>	250	501
<b>2014</b>	246	520
<b>2015</b>	241	515
<b>2016</b>	248	532
<b>2017</b>	248	537
<b>2018</b>	244	534
<b>2019</b>	256	545
<b>2020</b>	192	386
<b>2021</b>	227	492

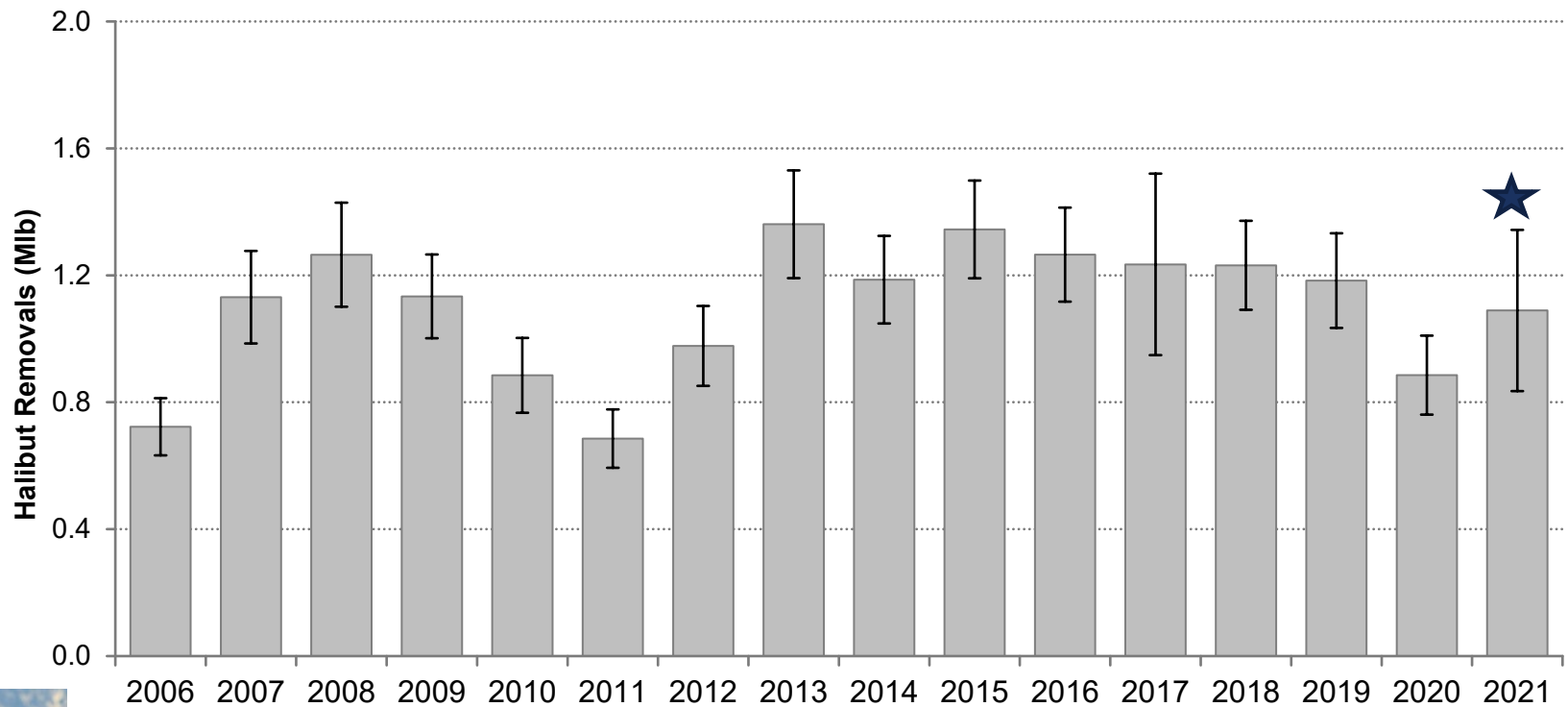
## 3A

	Businesses	Vessels
<b>2012</b>	284	405
<b>2013</b>	255	386
<b>2014</b>	259	399
<b>2015</b>	250	407
<b>2016</b>	240	388
<b>2017</b>	227	374
<b>2018</b>	232	391
<b>2019</b>	226	399
<b>2020</b>	203	343
<b>2021</b>	225	384



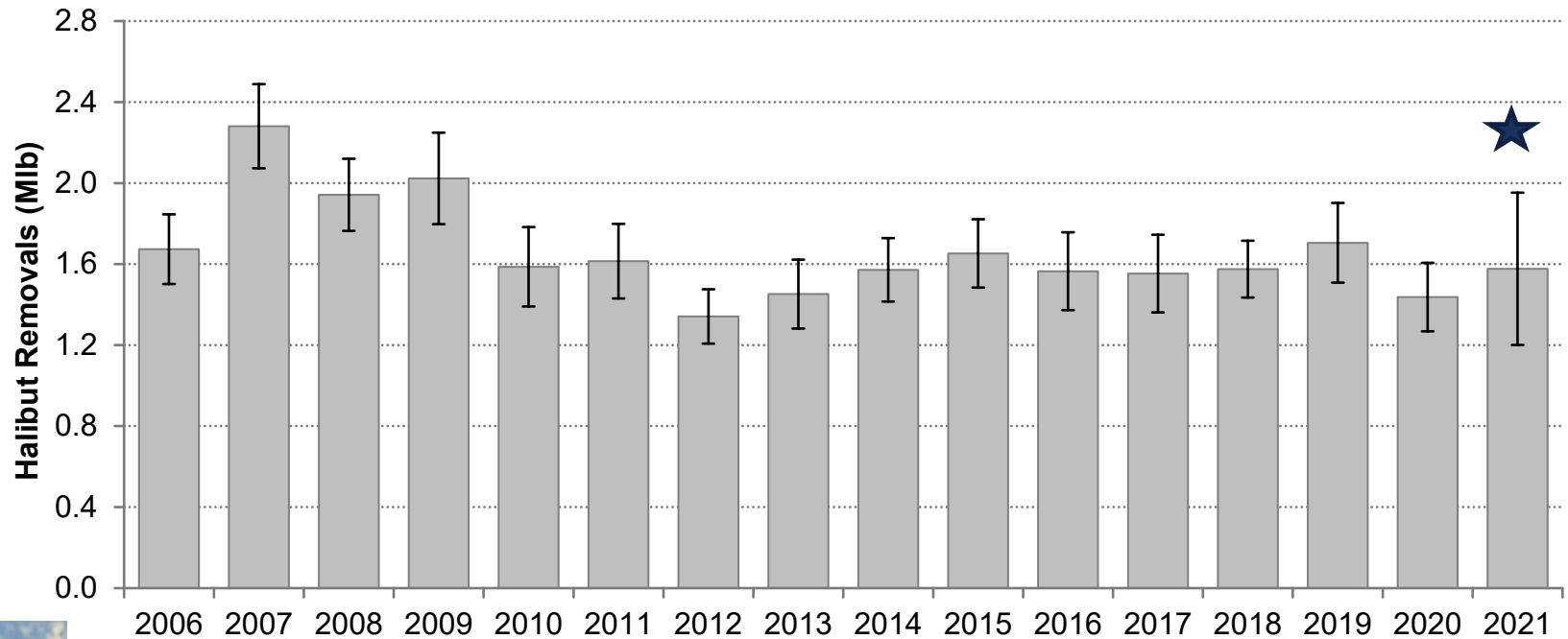


# 2C – UNGUIDED HALIBUT REMOVALS



# 3A – UNGUIDED HALIBUT REMOVALS

Area 3A - unguided



# ANALYSIS OF MANAGEMENT MEASURES FOR 2022



# CHARTER ALLOCATION FOR 2022

- Allocations are currently unknown
- Reference allocations based on IPHC's interim management procedure
- Should have contingencies for higher or lower allocations

	Reference Allocation	2021 Allocation
2C	0.60	0.81
3A	2.05	1.95



# 2C – STATUS QUO FORECAST

- All forecasts under “normal” conditions
- 72,865 halibut
  - 95% confidence interval 60,075 – 81,655 halibut
  - Effort used data from 2009 – 2019 and 2021
    - Except for Juneau and Ketchikan where 2021 was excluded
    - 2020 excluded from all forecasts
  - HPUE used data through 2019
    - Substantial increases in 2020 and 2021, likely related to changes in size limits and changes to fleet dynamics due to COVID-19
    - Including these years increases projection to 81,800 halibut  $\pm$  8,766 fish
- Figure 2



# 2C – STATUS QUO FORECAST

## Status Quo Regulations:

- One fish bag limit
- Reverse slot limit of less than or equal to 50 or greater than or equal to 72 inches

**Status Quo  
Regulations  
Projection**

**1.095 Mlb**



## 2C – MANAGEMENT MEASURES FOR 2022

- **Status quo (one fish bag limit with reverse slot limit allowing harvest of a fish less than or equal to 50 inches or greater than or equal to 72 inches)**
- Additional reverse slot limits, with lower limits of the protected slot ranging from 35 to 50 inches and upper limits ranging from 50 to 80 inches
- Additional reverse slot limits with lower limits of the protected slot ranging from 35 to 50 inches and an upper limit of 80 inches with a closed day of the week starting on September 17th and adding closed days to May 15th or for the entire season, analyzed for each day of the week.
- Additional reverse slot limit with lower limits of the protected slot ranging from 35 to 50 inches and an upper limit of 80 inches with a closed day of the week for the entire season (analyzed for each day of the week) and an additional closed day of the week starting on September 17th and adding closed days to May 15th or for the entire season, analyzed for each day of the week.
- Annual limits of two to four fish, in combination with each of the above options



# 2C – SUMMARY

Management Measures	Options Below Reference Allocation (0.60 Mlb)?	Options Below 2021 Allocation (0.81 Mlb)?
Status Quo (reverse slot with lower limit of 50 inches and upper limit of 72 inches)	No	No
Additional reverse slot limits, with lower limits of the protected slot ranging from 35 to 50 inches and upper limits ranging from 50 to 80 inches	No	Yes
Additional reverse slot limits with lower limits of the protected slot ranging from 35 to 50 inches and an upper limit of 80 inches with a closed day of the week starting on September 17th and adding closed days to May 15th or for the entire season, analyzed for each day of the week.	Yes	Yes
Additional reverse slot limit with lower limits of the protected slot ranging from 35 to 50 inches and an upper limit of 80 inches with a closed day of the week for the entire season (analyzed for each day of the week) and an additional closed day of the week starting on September 17th and adding closed days to May 15th or for the entire season, analyzed for each day of the week.	Yes	Yes
Additional reverse slot limits, with lower limits of the protected slot ranging from 35 to 50 inches and upper limits ranging from 50 to 80 inches with annual limits of two to four fish	Yes	Yes
Additional reverse slot limits with lower limits of the protected slot ranging from 35 to 50 inches and an upper limit of 80 inches with a closed day of the week starting on September 17th and adding closed days to May 15th or for the entire season, analyzed for each day of the week, with annual limits of two to four fish	Yes	Yes





# 2C – IMPLEMENTATION CONSIDERATIONS AND SUMMARY

- Day of the week closures
- Annual limits
- A lot of uncertainty in harvest forecasts for 2022
- Recommend more specific requests for future analyses
- Many options within likely range of allocations for 2022
- Management measures will need to be more restrictive than 2021



# 3A – STATUS QUO FORECAST

- All forecasts under “normal” conditions
- 164,382 halibut
  - 95% confidence interval 136,222 – 192,542 halibut
  - Used 2021 effort for forecasts
  - HPUE used data through 2019
    - Substantial increases in 2020 and 2021, likely related to changes in size limits and may also have been impacted by removal of annual limit
    - Including these years increases projection to 184,254 halibut  $\pm$  11,027 fish
- Figure 3



# 3A – STATUS QUO FORECAST

## Status Quo Regulations:

- Two fish bag limit: one any size, one less than or equal to 32 inches
- One trip per vessel per day and per charter halibut permit per day
- Wednesdays closed to retention of halibut

**Status Quo  
Regulations  
Projection**

**2.302**



# 3A – MANAGEMENT MEASURES FOR 2022

- **Status quo (two-fish bag limit with a 32-inch maximum size limit on one fish, one trip per vessel and one trip per CHP per day, and a Wednesday closure all year)**
- Additional size limits on one fish ranging from 26 to 32 inches combined with one or more Tuesday closures from June 1st to August 31st or for the entire season
- Additional size limits on one fish ranging from 26 to 32 inches with Tuesdays closed for the entire season combined with one or more Monday or Thursday closures from June 1st to August 31st or for the entire season
- Additional size limits on one fish ranging from 26 to 32 inches combined with annual limits of two to four fish
- Additional size limits on one fish ranging from 26 to 32 inches combined with annual limits of two to four fish and one or more Tuesday closures from June 1st to August 31st or for the entire season
- A one-fish bag limit with no size limit with or without a Wednesday closure for the entire season
- A one-fish bag limit with reverse slot limits with lower limits of the protected slot ranging from 35 to 60 inches and upper limits ranging from 60 to 80 inches combined with one or more Wednesday closures from June 1st to August 31st or for the entire season or all Wednesdays closed with one or more Tuesday closures from June 1st to August 31st or for the entire season
- A seasonal closure prior to May 16th and after July 31st or prior to June 1st and after July 31st with all days of the week open and other status quo management measures



# 3A – SUMMARY

Management Measures	Options Below Reference Allocation (2.05 Mlb)?	Options Below 2021 Allocation (1.95 Mlb)?
Status quo (two-fish bag limit with a 32-inch maximum size limit on one fish, one trip per vessel and one trip per CHP per day, and a Wednesday closure all year)	No	No
Additional size limits on one fish ranging from 26 to 32 inches combined with one or more Tuesday	Yes	Yes
Additional size limits on one fish ranging from 26 to 32 inches with Tuesdays closed for the entire season combined with one or more Monday or Thursday closures	Yes	Yes
Additional size limits on one fish ranging from 26 to 32 inches combined with annual limits of two to four fish	Yes	Yes
Additional size limits on one fish ranging from 26 to 32 inches combined with annual limits of two to four fish and one or more Tuesday	Yes	Yes
A one-fish bag limit with no size limit with or without a Wednesday closure for the entire season	Maybe	No
A one-fish bag limit with reverse slot limits with lower limits of the protected slot ranging from 35 to 60 inches and upper limits ranging from 60 to 80 inches combined with one or more Wednesday closures or all Wednesdays closed with one or more Tuesday closures	Yes	Yes
A seasonal closure prior to May 16th and after July 31st or prior to June 1st and after July 31st with all days of the week open	Yes	Yes



# 3A – IMPLEMENTATION CONSIDERATIONS AND SUMMARY

- Day of the week closures
- Annual limits
- One fish bag limit with no size limit
- Release mortality
- A lot of uncertainty in harvest forecasts for 2022
- Recommend more specific requests for future analyses
- Many options within likely range of allocations for 2022
- Management measures will need to be more restrictive than 2021



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