



Spiny Dogfish 2023 Specifications

(May 1, 2023 – April 30, 2024)

October 2022

Spiny Dogfish Current (2022)

- ABC of 17,498 MT (38.6 million pounds)
-built off 2018 assessment
- 29.6 million pound quota
- Open access, 7,500-pound federal trip limit, regional/state quotas & trip limits via ASMFC

Spiny Dogfish 2022 Current

- Research track assessment
 - December 2022 review but
 - Landings trends down + indices down...
 - Usually doesn't end well
- 2023 management track assessment – determines stock status and future ABCs

From Fishery Info Doc

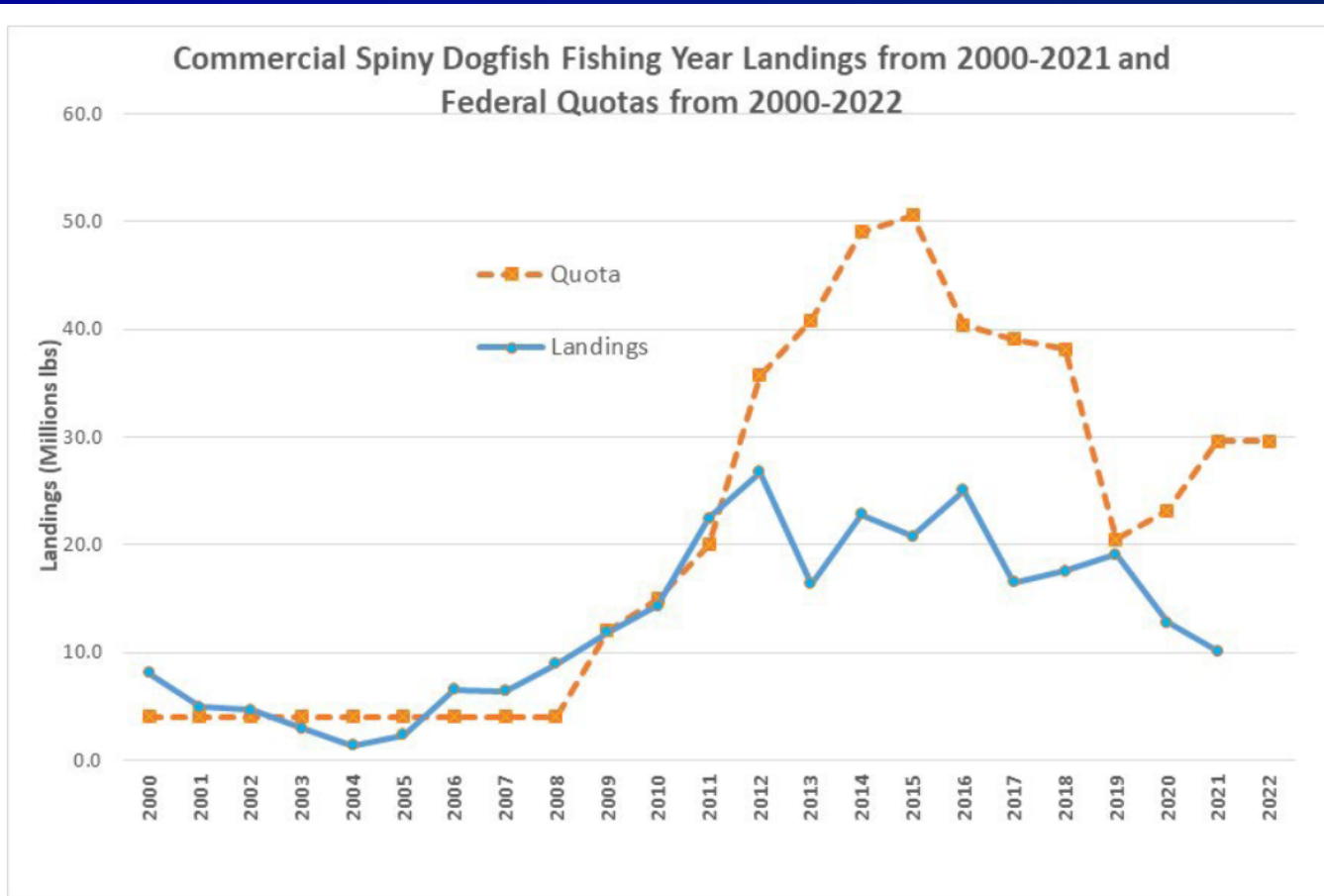


Figure 3. Annual spiny dogfish landings and federal quotas since 2000 Source: NMFS unpublished dealer data.³

From Fishery Info Doc

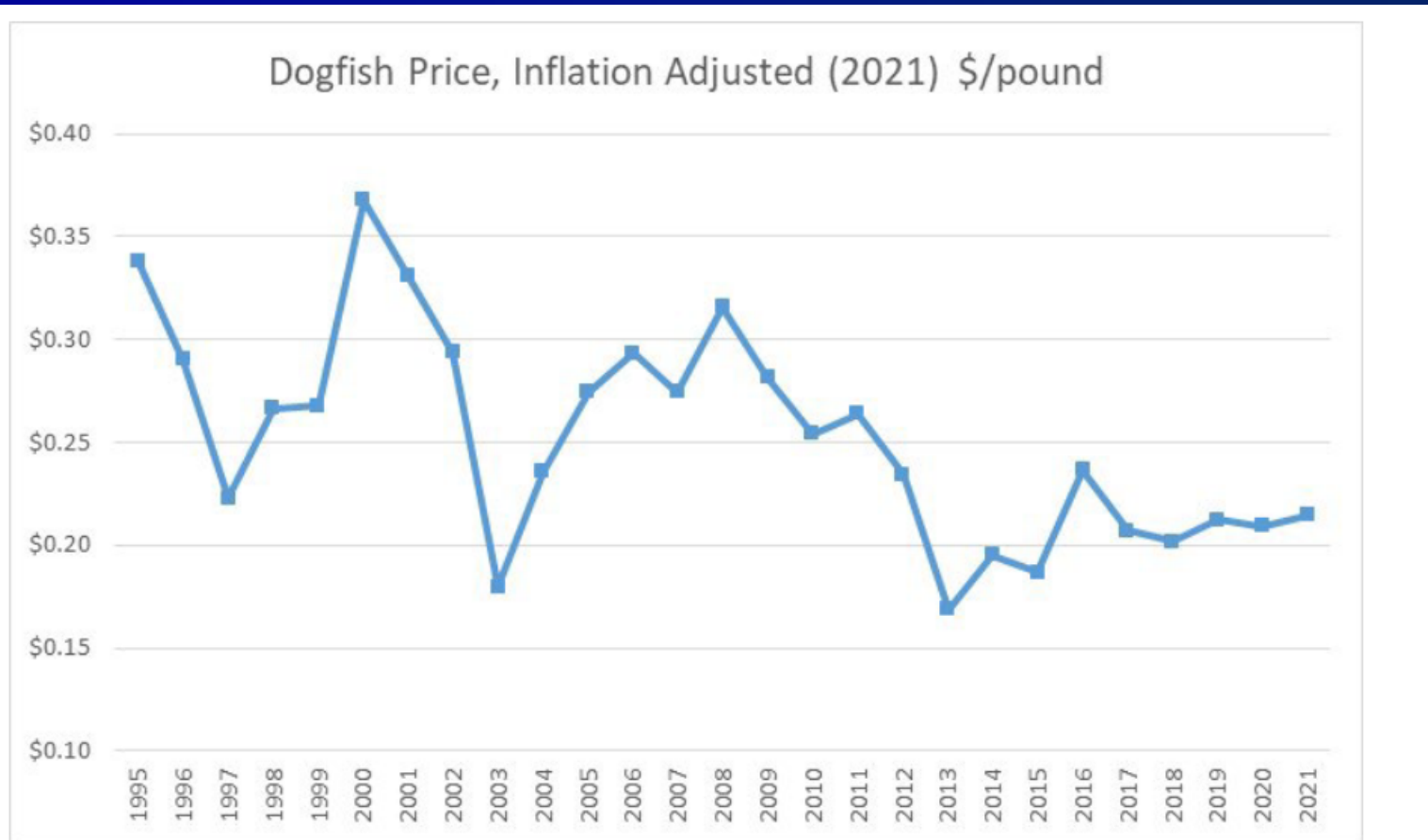
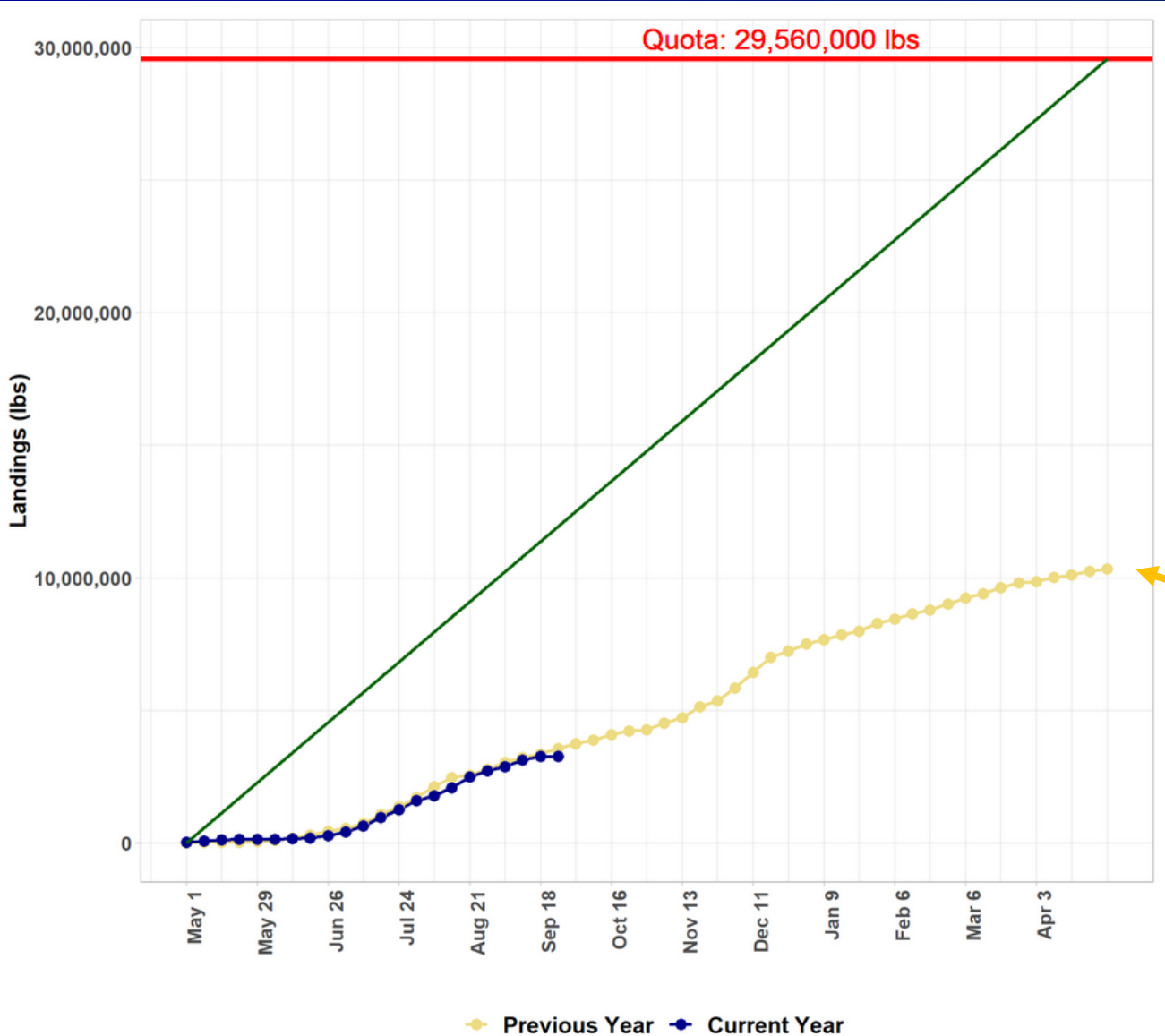


Figure 4. Price of spiny dogfish (\$/live pound) (adjusted to 2021 “real” dollars using the GDP deflator, 1995-2021 fishing years. Given the difference between fishing year and the calendar year used for inflation adjusting, adjusted prices are approximate. Source: NMFS unpublished dealer data.³

From GARFO QM Website 10/3

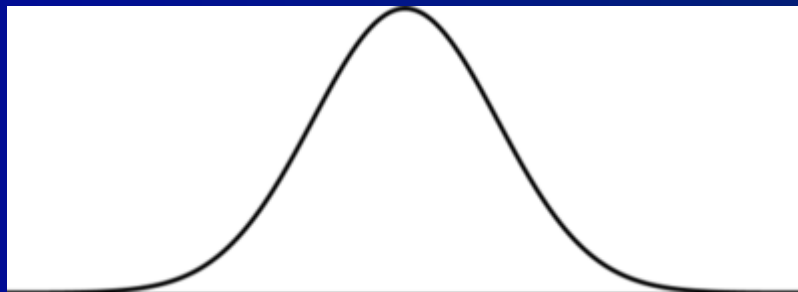


2021: 10.4 million pounds

Approximate state activity...

2018-2020 Fishing Years Combined

- RI - MA - NH (mostly MA)
 - Mostly late June-early October
- NJ – MD
 - Mostly Late Oct-Dec, some spring
- VA
 - Mostly late Nov-early April



From Fishery Info Doc

Table 5. Participation by fishing year of federally-permitted vessels. State-only vessels are not included.
Source: NMFS unpublished dealer data.³

YEAR	Vessels 200,000+	Vessels 100,000 - 199,999	Vessels 50,000 - 99,999	Vessels 10,000 - 49,999	Total with at least 10,000 pounds landings
2000	16	10	8	43	77
2001	4	12	10	33	59
2002	2	14	8	31	55
2003	4	5	3	17	29
2004	0	0	0	42	42
2005	0	0	1	67	68
2006	0	4	11	114	129
2007	1	2	21	72	96
2008	0	5	20	119	144
2009	0	11	42	166	219
2010	0	26	54	124	204
2011	1	48	73	135	257
2012	25	55	56	146	282
2013	10	27	45	87	169
2014	27	38	38	81	184
2015	31	33	36	59	159
2016	52	26	14	45	137
2017	28	27	24	32	111
2018	28	26	20	35	109
2019	29	25	21	29	104
2020	23	27	15	22	87
2021	15	27	11	26	79

Fishery Performance Report

- COVID-19 did not have a large impact on this fishery
- Similar market issues persist as with previous years – demand low but stable
- market could support more landings than in most recent year if participation/production at the vessel level increases.

Fishery Performance Report

- Better opportunities in other fisheries
 - E.g. oysters and shrimp in Virginia
- Continued interest by some to increase trip limit to 10,000 to get more vessels participating

Fishery Performance Report

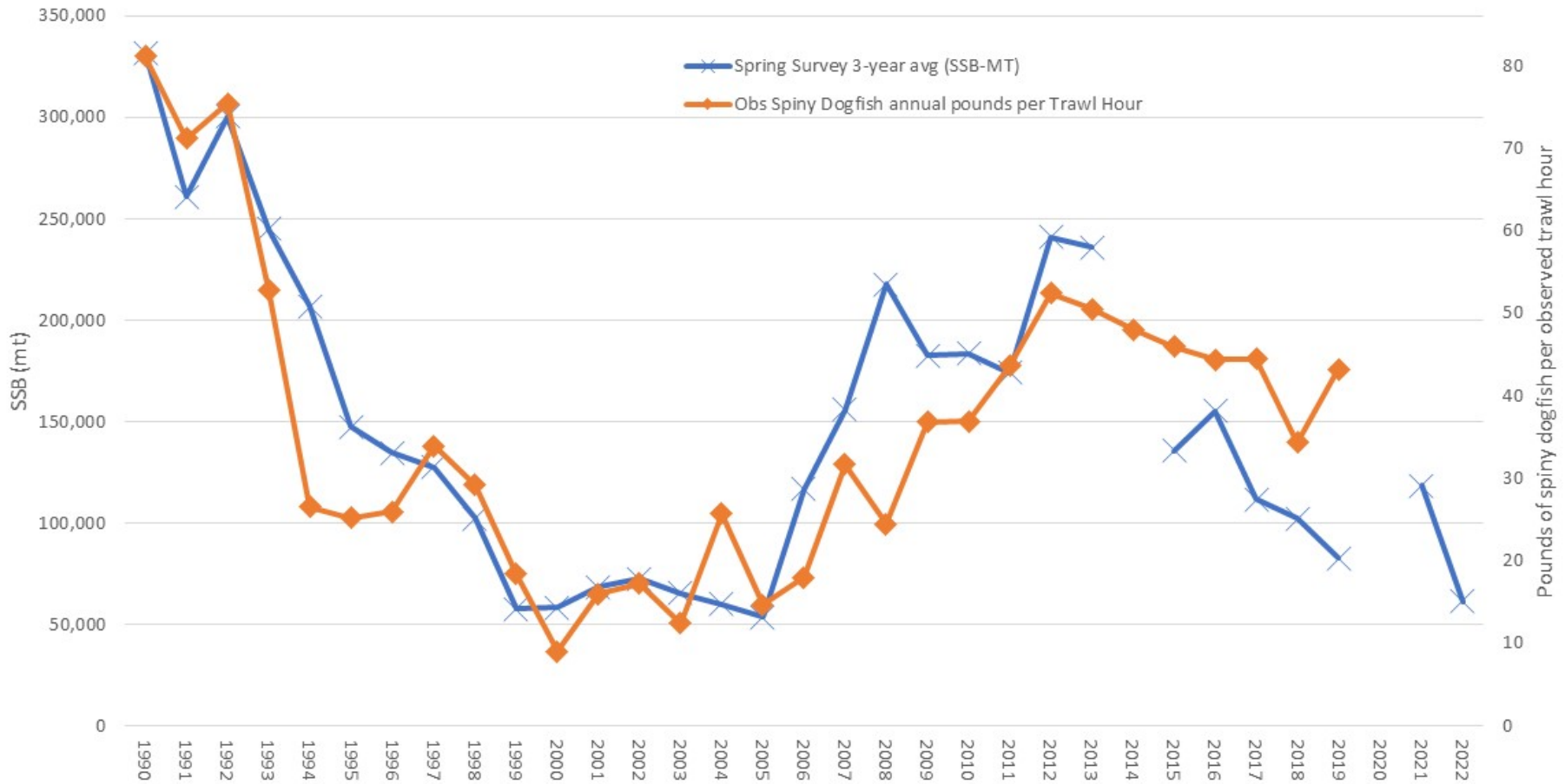
- Lots of concern that we aren't getting good data on spiny dogfish biomass
 - Survey coverage
 - Survey performance
 - Fish behavior – migration and time spent off bottom

Staff observer analysis

- Non-directed catch in trawl fisheries. Credit to Andy Jones - CPUE work for assessment
- Staff calculated simple catch per observed trawl hour after some filtering
- Similar pattern as trawl survey...
- Just to 2019 – 2020/2021 Covid...
- 16K-28K observed tow hours annually last 10 years...

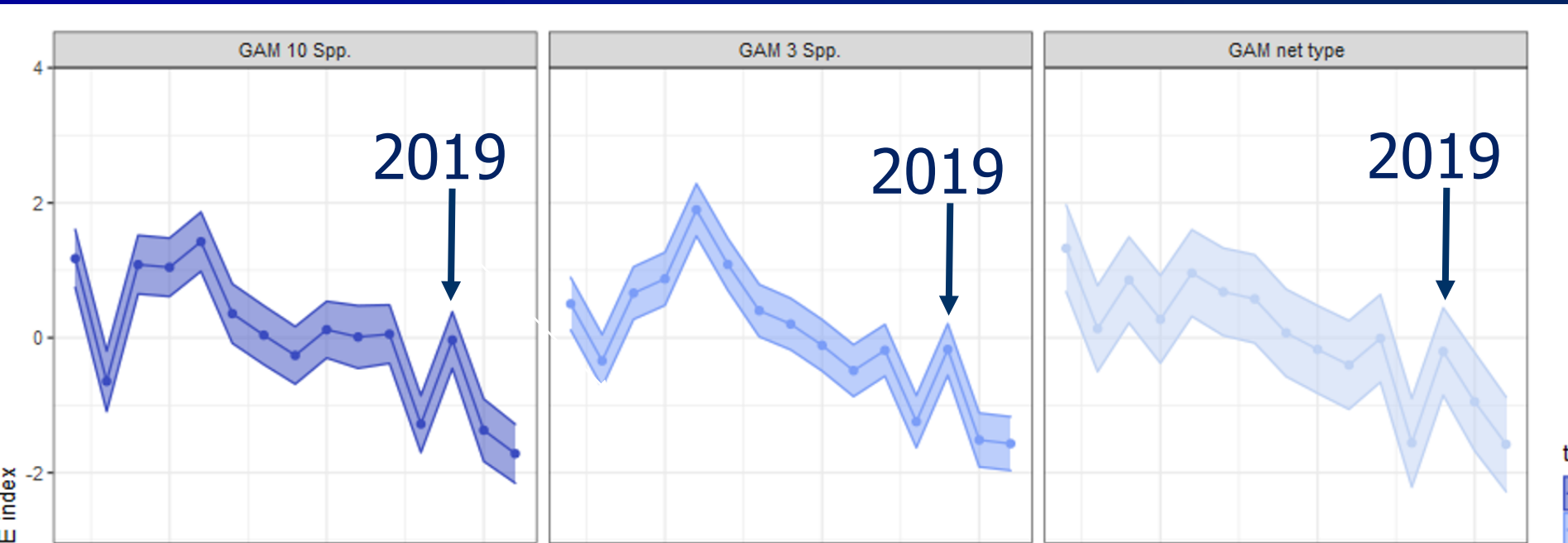
Staff observer analysis

Spring Survey and Trawl Observer Data Trends

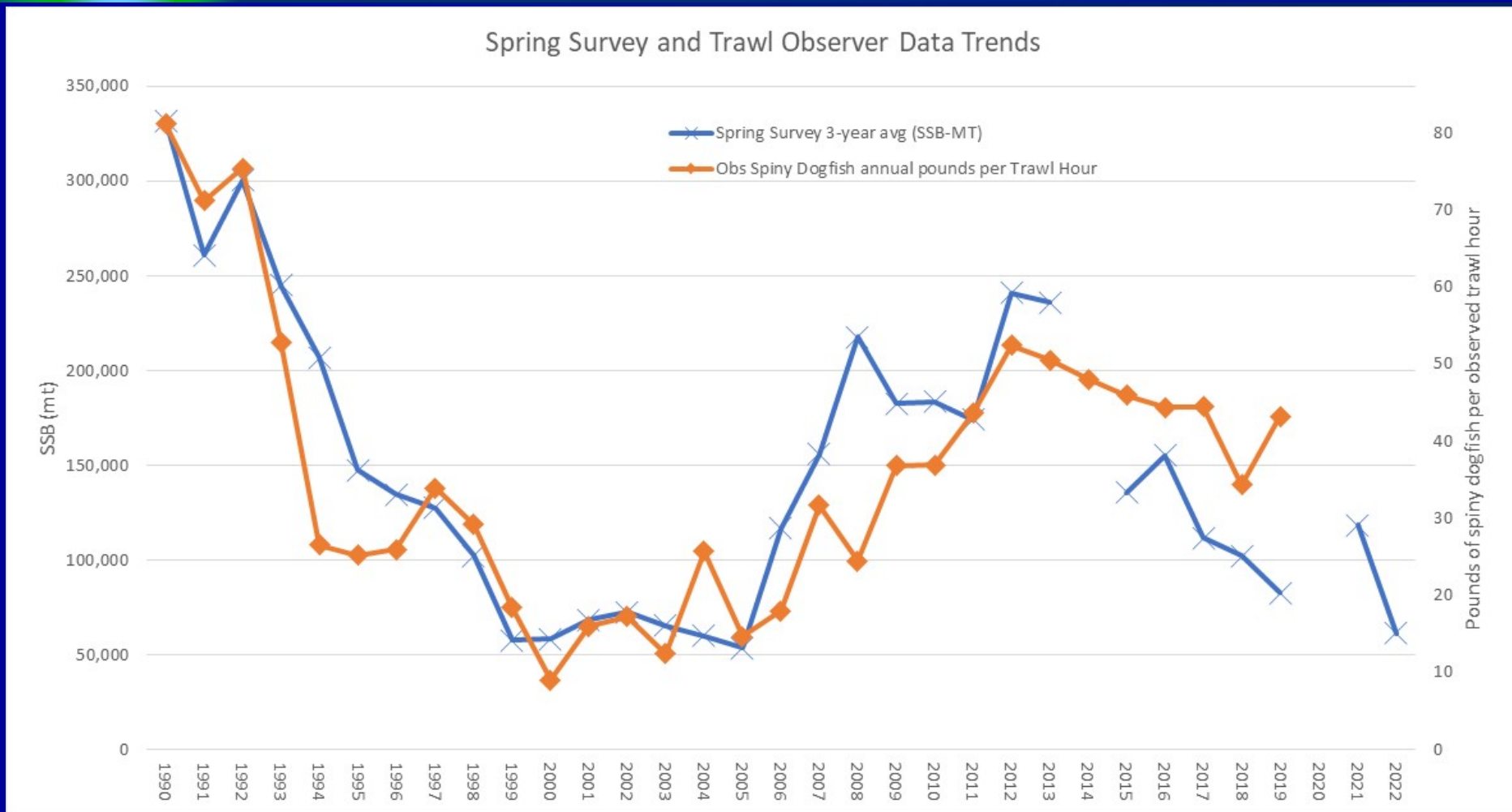


CPUE from assessment – observer data and study fleet...preliminary...

Continued decline **after 2019** (study fleet less impacted by Covid in terms of data collection)



Staff observer analysis



SSC ABC Overview...

- Biomass appears to have dropped 40% from 2016/17/18 average to 2021/2022 average.
 - Spring trawl survey data
 - 11% per year decline for 4.5 years = 40%
- **2019** ABC with current risk policy...
 - *12,978 metric tons*
 - Reduce by 40%...
 - 7,788 MT = 2023 ABC
 - 55.5% less than 2022 (ABCs up since 2019)

Dogfish Slides for Oct. 5,
2022
MAFMC Council Meeting

SSC Process for ABC Determination

- Key Factors
 - Trends in female spawning stock biomass despite catches below ABC
 - Relatively low incoming pup production
 - Evidence of slower growth from most recent aging study
 - Staff analyses of LPUE trends
 - Literature suggests declines in availability occur when ocean is cooler, but recent trends are warmer
- Adjust ABC or OFL?
- Consistent with Council Risk Policy?
- Transparent, reproducible adjustment to ABC
 - Based on ratio of recent average (2021—2022) to previous average (2016-2018)
 - Trend confirmed by regression analyses

Why use an ad hoc approach?

- Status quo not appropriate given set of signals
- Approach based on ratios is conceptually similar to “Plan B Smooth”
- Complications of delayed Research Track Assessment (RTA)
 - Difficulty of supporting both RTA and MAFMC need for regulations simultaneously
 - Need for advice under MSA

Computation of 2023 ABC= 7,788 mt

- Adjust ABC in 2019 to account for current Council Risk Policy. New value = 12,978 mt
- Compute 2021-2022 female SSB = 61.413
- Compute 2016-2018 female SSB= 102.345
- ABC for 2023= $ABC(2019) * SSB(2021-2022) / SSB(2016-2018)$
- $= 12,978 * 61.413 / 102.345$
- **= 7,788 mt**

- **This represents a 55% decrease from the 2022 ABC of 17,498 mt.**

Sources of Uncertainty

- Lack of an updated stock assessment
- Lack of a survey data in 2020 due to COVID
- Changes in size distribution of mature female dogfish may reflect changes in growth and reductions in stock productivity
- **SSC Recommendation: Greater investment in stock assessment capacity is required**

From ABC to Specifications...

- 2023 ABC = 7,788 MT (17.2 million pounds)
- Deduct Canada land (37 MT = 2019)
- Deduct Rec land (214 MT = 2021 MRIP)
 - based on history, 2023 will probably be somewhat less

From ABC to Specifications...

- Deduct discards - Recall observer analysis...
 - Trawl discarding trends appear to follow the survey...
- If survey down, so also discards (hopefully?)
- 2016-2018 avg = 3,479 MT
- 40% less = 2,088 MT
- “Reasonable” but substantial uncertainty...
 - Would be lower than all previous estimates

Speaking of Uncertainty...

- Don't want to exceed ACL
 - Potential damage to stock
 - Potential paybacks
- 2023 paybacks would occur in 2025
- Hard to predict the future but...
 - Staff not anticipating higher 2025 ABC
 - Probably not huge overages with 18% buffer
 - Could have substantial 2023 overages with no or minimal buffer

Pros of bigger buffers

- Don't damage stock
- Avoid big overage, don't affect 2025
 - Quota stability

Cons of bigger buffers

- May force closure of last processor and collapse industry
- Hard to catch OY – lots of potential quota set aside/unavailable...

Pros of smaller buffers

- More likely to utilize full ABC
- Industry says they can “hold on” with a quota around 12 million pounds

Cons of smaller buffers

- More likely to substantially exceed ACL
 - Damage stock
 - Overage deductions affect 2025

Staff Recommendation

- Discard specification is uncertain
- Repayments more painful if 2025 ABC lower

But...

- Industry says they won't be here in 2025 with large buffer now

So...

- 5% buffer, but still risk of major overage...

Staff Recommendation

- With 5% buffer, quota would be around 2021 landings...
 - 11.2 million pounds
 - Likely some other buffering due to state allocations and transfer challenges
 - *Assumes ASMFC follows along...*
 - If assessments raise red flags either way +/-, could seek emergency action...

Table 1. 2023 Specification Options with Different Management Uncertainty Buffers

Specifications	2023		2023		2023		2023	
	mil pounds	metric tons	mil pounds	metric tons	mil pounds	metric tons	mil pounds	metric tons
OFL (from SSC)	na	na	na	na	na	na	na	na
ABC (from SSC)	17.2	7,788	17.2	7,788	17.2	7,788	17.2	7,788
Canadian Landings	0.1	37	0.1	37	0.1	37	0.1	37
Domestic ABC	17.1	7,751	17.1	7,751	17.1	7,751	17.1	7,751
ACL = ABC	17.1	7,751	17.1	7,751	17.1	7,751	17.1	7,751
Mgmt Uncert Buffer	0%	0%	5%	5%	13%	13%	18%	18%
Amount of buffer	0	0	0.9	388	2.2	1,008	3.1	1,395
ACT (minus buffer)	17.1	7,751	16.2	7,363	14.9	6,743	14.0	6,356
U.S. Discards	4.6	2,088	4.6	2,088	4.6	2,088	4.6	2,088
TAL (minus discards)	12.5	5,663	11.6	5,275	10.3	4,655	9.4	4,268
U.S. Rec Landings	0.5	214	0.5	214	0.5	214	0.5	214
Com Quota (Minus Rec)	12.0	5,449	11.2	5,061	9.8	4,441	8.9	4,054
Rationale for Management Uncertainty Buffer	No buffer: other buffers effectively built in; concern that further reduced quota will collapse infrastructure.		Some explicit buffer included (discard uncertainty primary concern); other factors will limit landings below the specified quota.		A 13% buffer could absorb a realized 2023 discard estimate that is 50% higher than specified even if other specified catches occur.		An 18% buffer fully offsets the reduction in specified discards; least likely to result in large 2023 overages and large 2025 paybacks if discards don't decrease as predicted.	

Committee Recommendation

- 5% buffer
- 11.2 million pound quota
- Rationale:
 - uncertainty in discards
 - threat of substantial re-payments in 2025
 - 5% balances re-payment issue with 2023 industry viability, considering there's some additional buffering from state allocations