



Longfin Squid

2024-2026 Specifications

August 2023 Council Meeting

Overview

- Management
- Assessments
- Recent performance
- Advisory Panel (AP) Input
- Scientific and Statistical Committee (SSC)
- Monitoring Committee
- Council discussion

Management

- T1: Jan-April 43%
 - T2: May-Aug 17%
 - T3: Sept-Dec 40%
- Trimesters since 2007
- Some rollover allowed T1 → T2
 - Max increase is 1.5*original
 - Full rollover into T3
 - Butterfish discard cap

Management

- First FMP for longfin squid was 1978
- *Limited Access* directed fishery
 - 3 Limited Access Tiers
 - 1: no trip limit
 - 2: 5,000 pounds; 3: 2,500 pounds
 - Open access/Incidental: 250 pounds
 - Gear: 2 1/8" mesh T1/T3; 1 7/8" mesh T2

2023 Specifications

“Longfin A” – 2021-23 Specifications Same as 2020/Current (No action and Preferred)

Table 9. Longfin A Specifications

Specification	Longfin 2021-2023 (MT)	Rationale
(a) Overfishing Limit (OFL)	Not available	unknown
(b) Acceptable Biological Catch (ABC)	23,400	from SSC
(c) Commercial Discard Set-Aside	2.00%	from recent observations
(d) Initial Optimum Yield (IOY)/DAH/DAP	22,932	ABC - discard set-aside

- Catch in the year of the highest exploitation ratio (1993) from the 2010 assessment. (23,950 MT now due to revised discards)

"Assessments"

- Biomass trends look OK
- Survey scaled up, double averaged
 - Spring/fall, 2-year moving average
- Unclear how informative current assessment is given short lifespan
- Varying perspectives on biomass trends in historical assessments.

"Assessments"

- Staff perspective...
- No concerning survey trends, we keep catching longfin including some banner seasons so generally doing OK, probably not best possible...
- Possible that we always do the wrong thing during extremes – close when squid are super abundant, don't limit fishing when super scarce
- Research track upcoming...

Stock Status to 2022 "B"

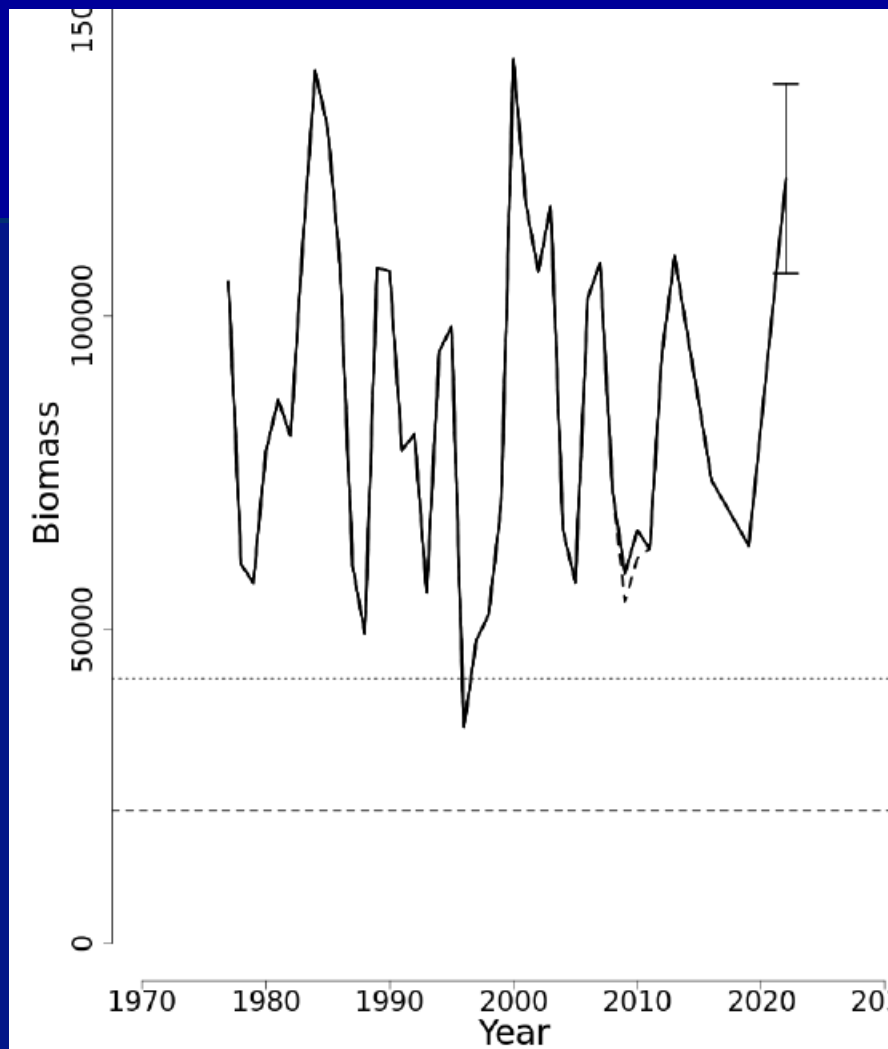
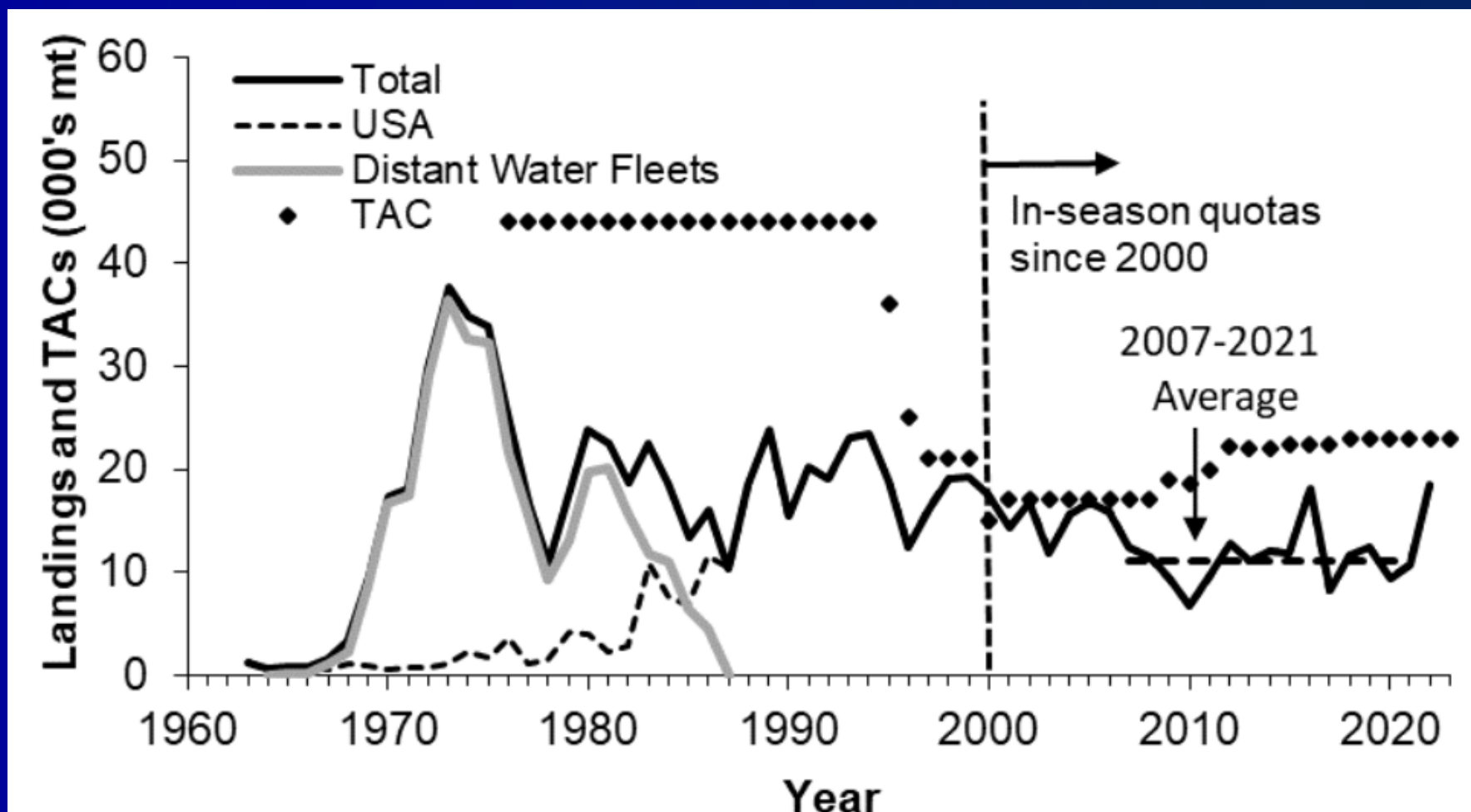


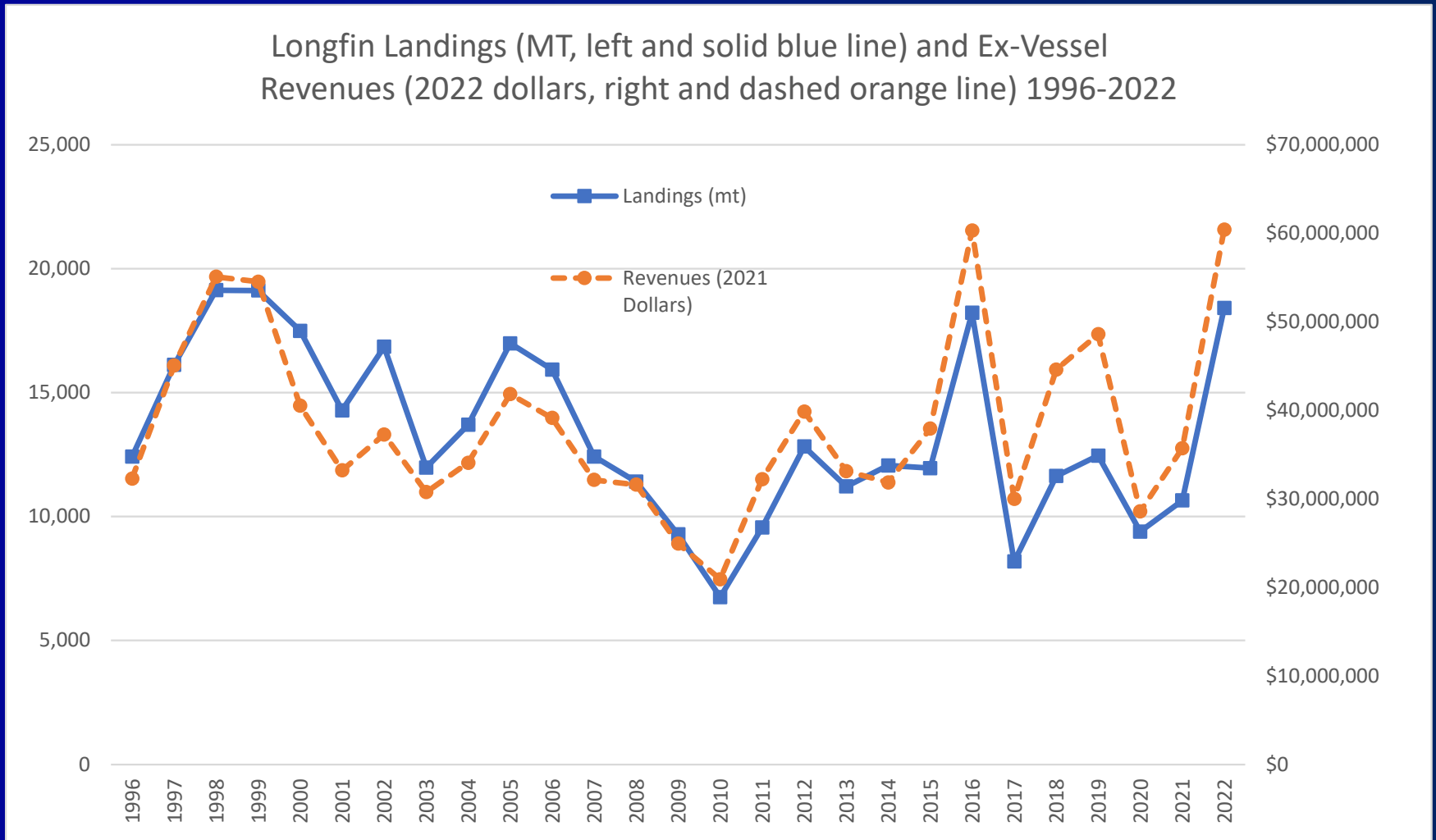
Figure 1: Trends in the two-year moving averages of annualized q-adjusted, swept-area biomass (i.e., annually averaged NEFSC spring and fall survey biomasses, in mt) of longfin inshore squid from the current assessment (solid line) and the 2020 assessment updates (dashed line). Biomass estimates are shown as interpolated values for years where biomass could not be estimated due to inadequate survey sampling coverage of longfin squid habitat (i.e., 2014 and 2020 spring and 2017 and 2020 fall surveys). The 80% confidence limits (106,748, 136,923) are shown for the 2022 biomass estimate (121,836 mt) in relation to the BMSY proxy (42,405 mt) and $B_{Threshold}$ (21,203 mt).

Recent Performance...

Catch 1989-2022



Landings/Revenues 1996-2022

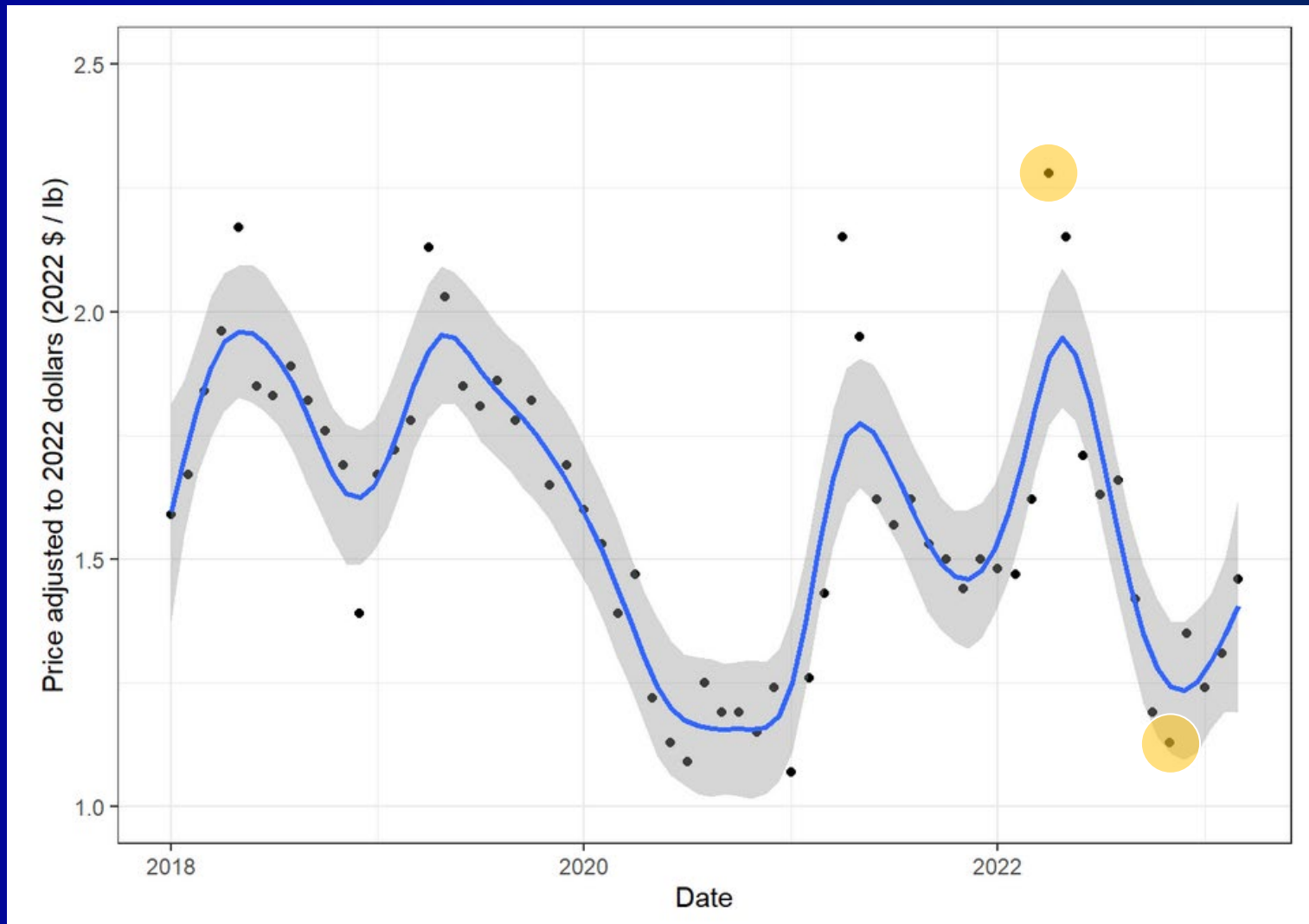


Prices 1996-2022

Longfin Inflation-Adjusted Price \$/MT



Prices 2018-March 2023



2022 Landings Details

State	Metric Tons
RI	11,787
NJ	2,258
NY	2,059
MA	1,680
CT	456
Other	165
Total	18,406

2021		2022	
Stat Area	Metric Tons	Stat Area	Metric Tons
537	2,267	537	4,516
613	2,115	613	2,862
616	1,574	616	2,481
622	1,216	622	1,821
626	472	626	1,609
539	408	631/632	978
526	340	538	590
538	264	539	465
611	254	526	388
525	230	611	306
612	152	623	305
167	124	612	217
Other	725	525	176
Total	10,141	562	143
		Other	744
		Total	17,601

2021/2022 (blue)

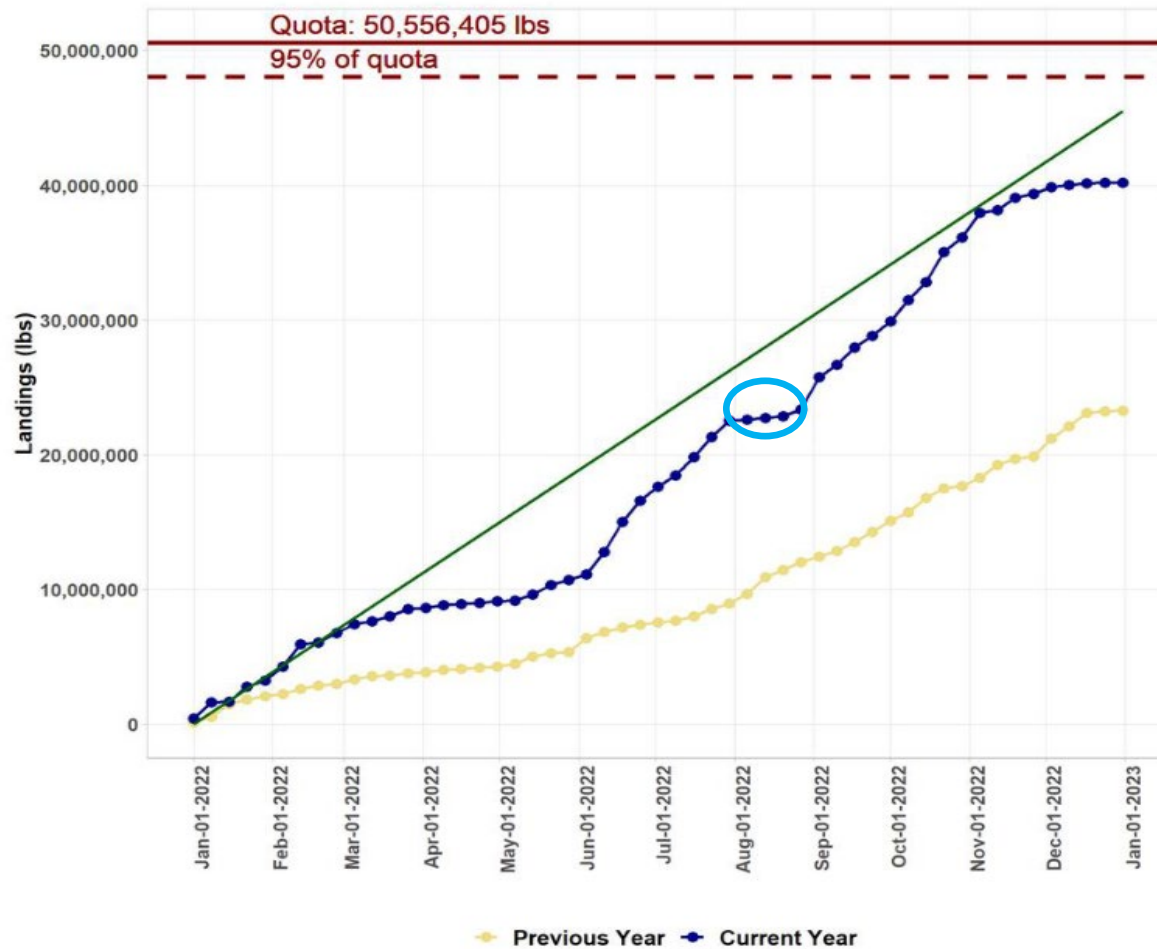


Figure 6. U.S. Preliminary Weekly Longfin landings; 2022 in blue, 2021 in yellow-orange. Source: <https://www.fisheries.noaa.gov/new-england-mid-atlantic/commercial-fishing/quota-monitoring-greater-atlantic-region>.

2023 T1 (blue)

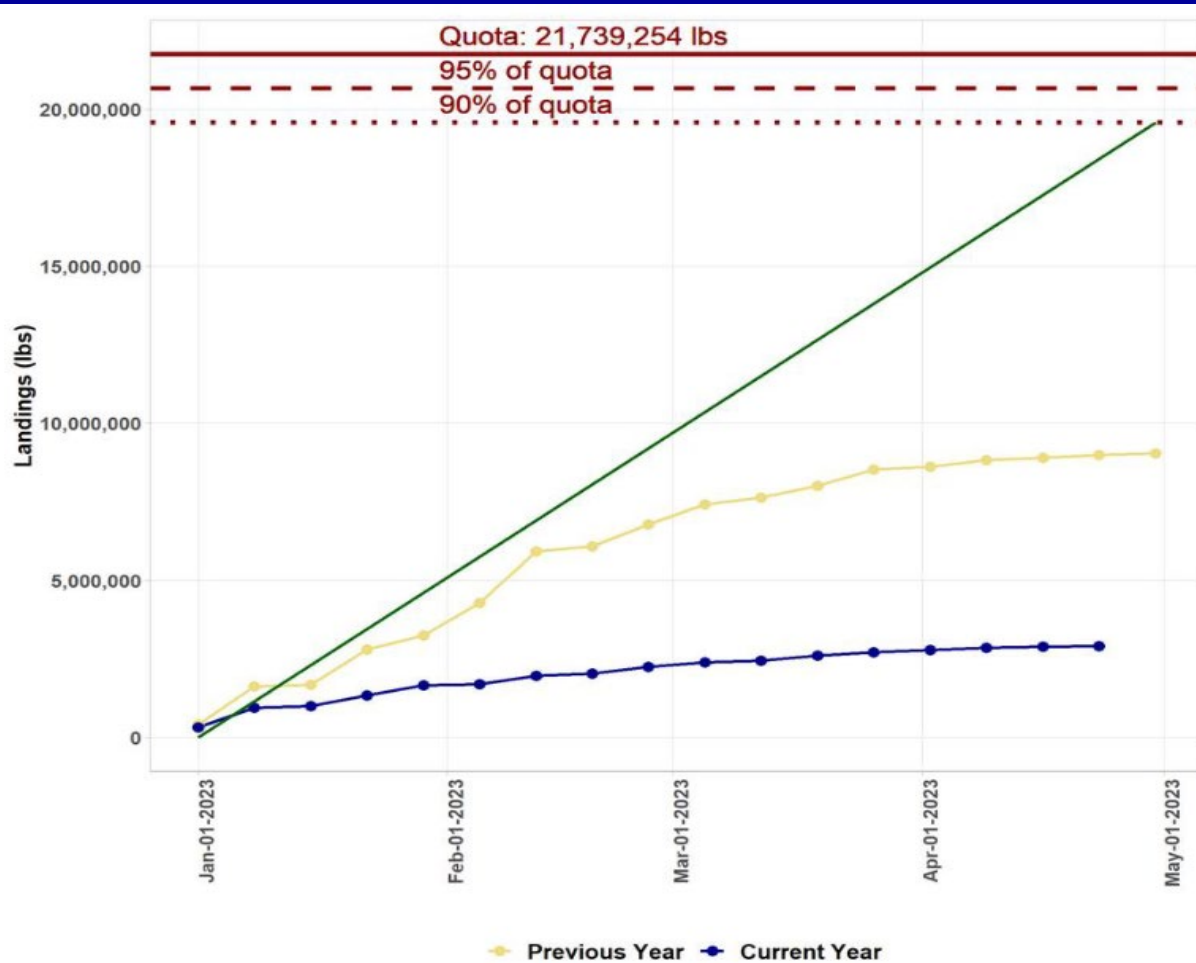
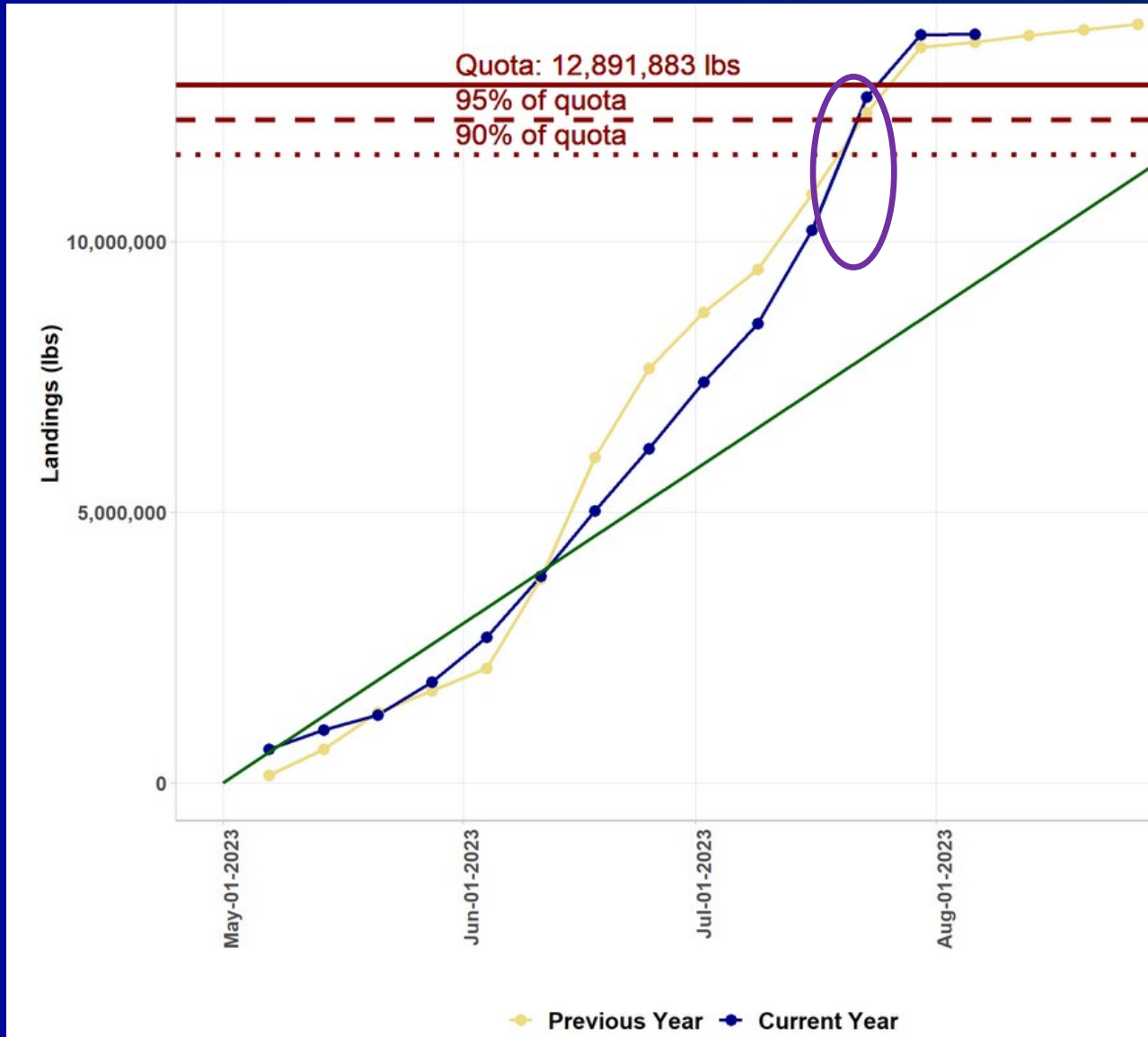


Figure 7. U.S. Preliminary Weekly Trimester 1 Longfin landings; 2023 Trimester 1 in blue, 2022 Trimester 1 in yellow-orange. Source: <https://www.fisheries.noaa.gov/new-england-mid-atlantic/commercial-fishing/quota-monitoring-greater-atlantic-region>.

2023 – T2 (blue)



AP Fishery Performance Reports (FPR)

- **Insight from advisors:**
 - On the water observations
 - Factors influencing recent catch and landings
 - Research recommendations
 - Other issues or concerns
- **Purpose:**
 - Bring advisor perspectives and recommendations to the Scientific and Statistical Committee, Monitoring Committee, and Council/Board when setting or reviewing catch limits and other measures

2020-2025 Research Priorities

LONGFIN SQUID

SHORT-TERM/SMALLER SCALE

72. Further develop practicable ways to reduce bycatch.

73. Refine understanding of availability and catchability in surveys (e.g., fall NEAMAP-Bigelow comparisons and conversion factors).

74. Collect more age, sex and maturity data for each seasonal cohort.

75. Evaluate effectiveness of current mesh regulations.

LONG-TERM/LARGER SCALE

76. Quantify escapement over the headrope and wings of the NEFSC survey trawl.

77. Determine what portion of stock is outside current research trawl surveys.

Until real-time assessment is feasible, expand cohort analysis to refine stock assessments and their incorporation of seasonal indices (currently spring and fall are just averaged).

78. Evaluate approaches to real time management including expanding age and growth studies to better estimate average growth patterns and to discern seasonal productivity/catchability patterns.

79. Evaluate methods of incorporating ecological relationships, predation, and oceanic events that influence abundance and availability.

80. Refine understanding of stock range and structure.

Longfin – FPR

- High production early in 2022 + some sluggish sales = higher inventory
- Higher inventory = Lower prices and dealers demand higher quality squid
- High diesel costs

So...Less incentive to fish late 2022/early 2023

Longfin – FPR

- Various area-based and/or gear restrictions reduce landings and/or increase costs
- Windfarm concerns
- Discard concerns including Trimester 2 mesh
 - Tables in Fishery Information Document
 - Different perspectives

Bycatch (top)

NE Fisheries Science Center Common Name	Pounds Observed Caught	Pounds Observed Discarded	Of all discards observed, percent that comes from given species	Percent of given species that was discarded	Pounds of given species caught per mt longfin Kept	Pounds of given species discarded per mt longfin Kept	Rough Annual Catch (pounds) based on 2-year (2021-2022) average of longfin landings (14,624 mt)	Rough Annual Discards (pounds) based on 3-year (2021-2022) average of longfin landings (14,624 mt)
SQUID, ATL LONG-FIN	3,611,912	112,343	6%	3%	2,275	71	33,275,343	1,034,980
BUTTERFISH	608,147	579,258	29%	95%	383	365	5,602,659	5,336,512
SCUP	196,035	164,263	8%	84%	123	103	1,806,008	1,513,303
SQUID, SHORT-FIN	193,786	128,182	6%	66%	122	81	1,785,284	1,180,897
SEA ROBIN, NORTHERN	154,652	154,652	8%	100%	97	97	1,424,757	1,424,757
HAKE, SILVER (WHITING)	105,192	62,946	3%	60%	66	40	969,096	579,902
SKATE, LITTLE	102,443	100,907	5%	99%	65	64	943,777	929,625
HAKE, SPOTTED	94,096	93,250	5%	99%	59	59	866,877	859,077
DOGFISH, SMOOTH	64,557	56,898	3%	88%	41	36	594,741	524,183
SKATE, WINTER (BIG)	62,081	57,322	3%	92%	39	36	571,928	528,091
DOGFISH, SPINY	61,795	61,735	3%	100%	39	39	569,296	568,743
FLOUNDER, SUMMER	54,327	25,611	1%	47%	34	16	500,495	235,949
SEA BASS, BLACK	46,526	36,259	2%	78%	29	23	428,630	334,039
HAKE, RED (LING)	45,971	43,986	2%	96%	29	28	423,517	405,228
SCALLOP, SEA	30,049	26,851	1%	89%	19	17	276,833	247,366
BASS, STRIPED	29,741	28,621	1%	96%	19	18	273,993	263,679

Longfin – FPR

- Some new participants entering from scallops and/or groundfish
- Don't change management before research track assessment

Longfin – FPR

■ Research

- Escapement-based approaches
 - Wary of sub-annual assessment/management
- Dynamic natural mortality in cohorts
- Catchability

SSC Recommendation

Longfin Squid Specifications 2024-26

- The SSC reviewed results received a Level 2 MTA of the updated assessment through 2022.
- Survey indices do not show any trends and catch levels have been stable.
- Seasonal differences (fall vs spring) in survey abundances and catch levels between survey, and evidence of seasonal growth difference, suggest need for finer temporal scale models.
- No analytical stock assessment models have been developed to date.
- Trimester system seems to balance effects of seasonal spatial variations.
- **The SSC recommended ABCs of 23,400 mt each year for 2024, 2025 and 2026.** (relies on period of apparent low exploitation(1976-2009).
- The SSC looks forward to the results of the Research Track Assessment in 2026 and its application for determination of future ABCs.

Monitoring Committee

- Slight change recommended for discards:
- Update the discard set aside to 506.3 metric tons (MT) based on the average of the annual discard percents of catch from 2007-2022 (since trimester-based management).
- ABC would be 23,400 MT, and Initial Optimum Yield (IOY)/Domestic Annual Harvest (DAH)/Domestic Annual Processing (DAP) = 22,893.7 MT.

Monitoring Committee

- Email communications noted Trimester 2 exceeded Trimester quota in 2022 and likely in 2023...
- Potential item to look at in future, not clear to Council staff if any biological issue from slight Trimester 2 overages...

?s/ Discussion / Motions