

# Annual Monitoring Report for Fishing Year 2017

**Andrew Applegate**  
**NEFMC Staff**

**Council meeting** **Whiting PDT Chair**  
**September 24, 2018**



New England  
Fishery Management Council

# Purpose

- Prepared by GARFO and NEFSC, reviewed by Whiting PDT
- Mandated by Amendment 19
- First report since 2018-2020 specifications, but covers terminal year of 2015-2017 specifications



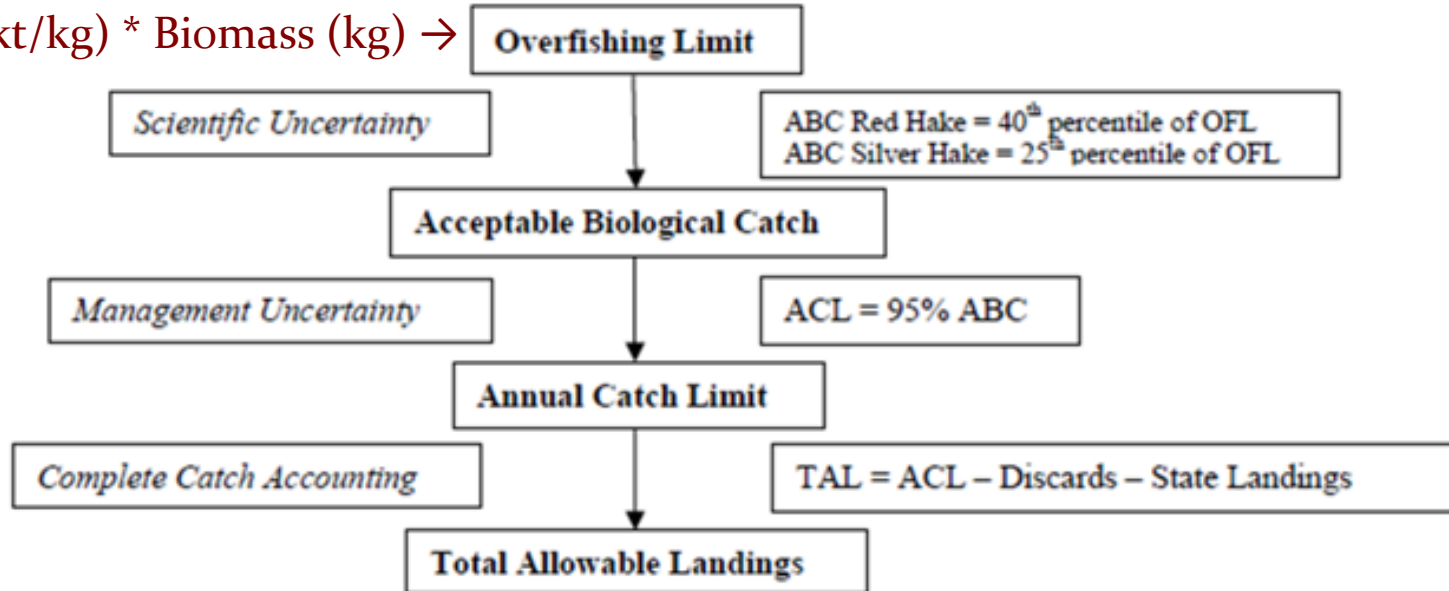
# Purpose

- Catch vs. specifications
  - Landings
  - Estimated bycatch
  - Trigger post-season accountability measures (AMs)
- Alert Council to changes in the fishery
  - Survey biomass trends vs. thresholds and targets
  - Bycatch estimates
  - Effort and economic trends

Figure 1. Small-mesh fishery specification framework adopted and approved in Amendment 19.

## ACL Framework

$F_{msy} \text{ proxy (kt/kg)} * \text{Biomass (kg)} \rightarrow$



# 2018-2020 Specifications

Stock	OFL (mt)	ABC (mt)	ACL (mt)	Change from 2016-2017	TAL (mt)
Northern silver hake	58,350	31,030	29,475	+27%	26,604
Northern red hake	840	721	685	+45%	274
Southern whiting	31,180	19,395	18,425	-35%	14,465
Southern red hake	1,150	1,060	1,007	-38%	305



# 2017 Whiting Catch

Table 6. Estimated FY 2017 catches of whiting (silver and offshore hakes) by management area, compared to specifications. Data current as of July 20, 2018

	Pounds	Metric tons	Percent of ACL (23,161 mt)	Percent of total catch
Northern silver hake commercial landings	5,885,728	2,670	11.5%	91.4%
Northern silver hake state-permitted only vessel landings	122,458	56	0%	2%
Northern silver hake estimated discard	433,154	196	0.8%	6.7%
Northern silver hake recreational catch (MRIP)	n/a	n/a	n/a	n/a
<b>Northern silver hake catch*</b>	<b>6,441,340</b>	<b>2,922</b>	<b>12.6%</b>	<b>100.0%</b>
	Pounds	Metric tons	Percent of ACL (29,621 mt)	Percent of total catch
Southern whiting landings	5,991,459	2,718	9.2%	87.3%
Southern whiting state-permitted only vessel landings	39,675	18	0.1%	0.6%
Southern whiting estimated discard	831,848	377	1.3%	12.1%
Southern whiting hake recreational catch (MRIP)	n/a	n/a	n/a	n/a
<b>Southern whiting catch*</b>	<b>6,862,981</b>	<b>3,113</b>	<b>10.5%</b>	<b>100.0%</b>



# 2017 Red hake Catch

Table 7. Estimated FY 2017 catches of red hake by management area, compared to specifications. Data current as of July 20, 2018

	Pounds	Metric tons	Percent of ACL (471 mt)	Percent of total catch
Northern red hake commercial landings	188,247	85	18.1%	40.6%
Northern red hake state-permitted only vessel landings	6	0	0%	0%
Northern red hake estimated discard	275,627	125	26.5%	59.4%
Northern red hake recreational catch (MRIP)	40,987	18.6	n/a	n/a
<b>Northern red hake catch*</b>	<b>463,880</b>	<b>210</b>	<b>44.7%</b>	<b>100.0%</b>
	Pounds	Metric tons	Percent of ACL (1631 mt)	Percent of total catch
Southern red hake landings	720,171	327	20.0%	31.9%
Southern red hake state-permitted only vessel landings	23,650	11	0.7%	1.0%
Southern red hake estimated discard	1,514,678	687	42.1%	67.1%
Southern red hake recreational catch (MRIP)	288,818	131	n/a	n/a
<b>Southern red hake catch*</b>	<b>2,258,499</b>	<b>1,024</b>	<b>62.8%</b>	<b>100.0%</b>



# Northern silver hake

## Survey biomass

Figure 4. Updated survey biomass trend (stratified mean weight per tow in FSV Albatross units) for northern silver hake, compared to biological reference points. The horizontal dash line represents the biomass threshold and the solid horizontal line is the biomass target.

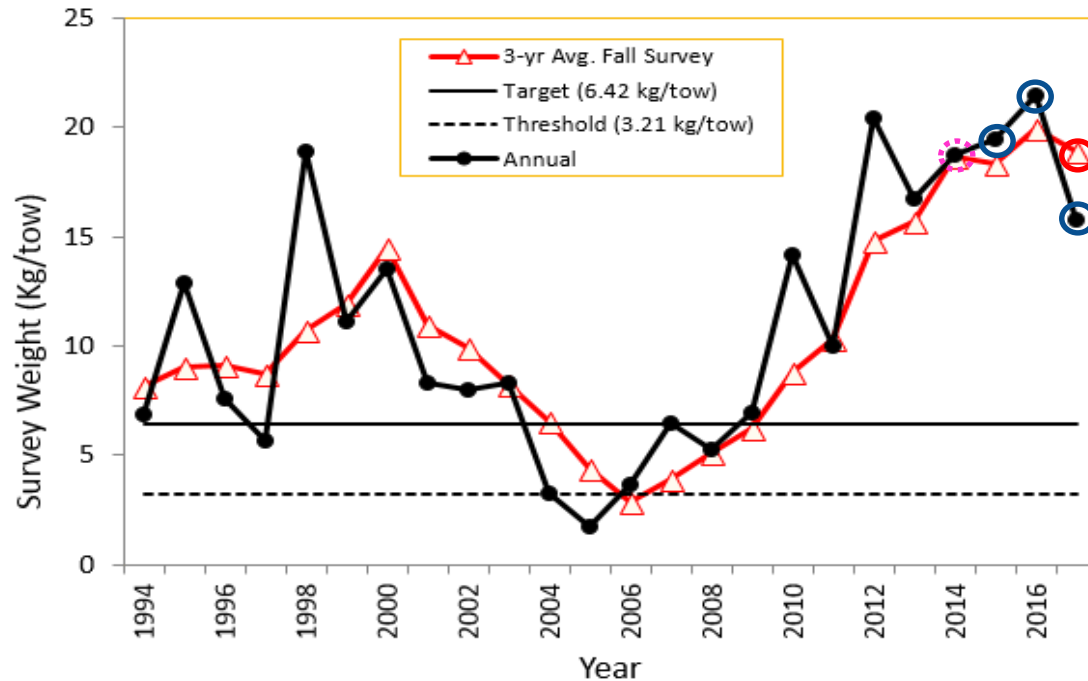
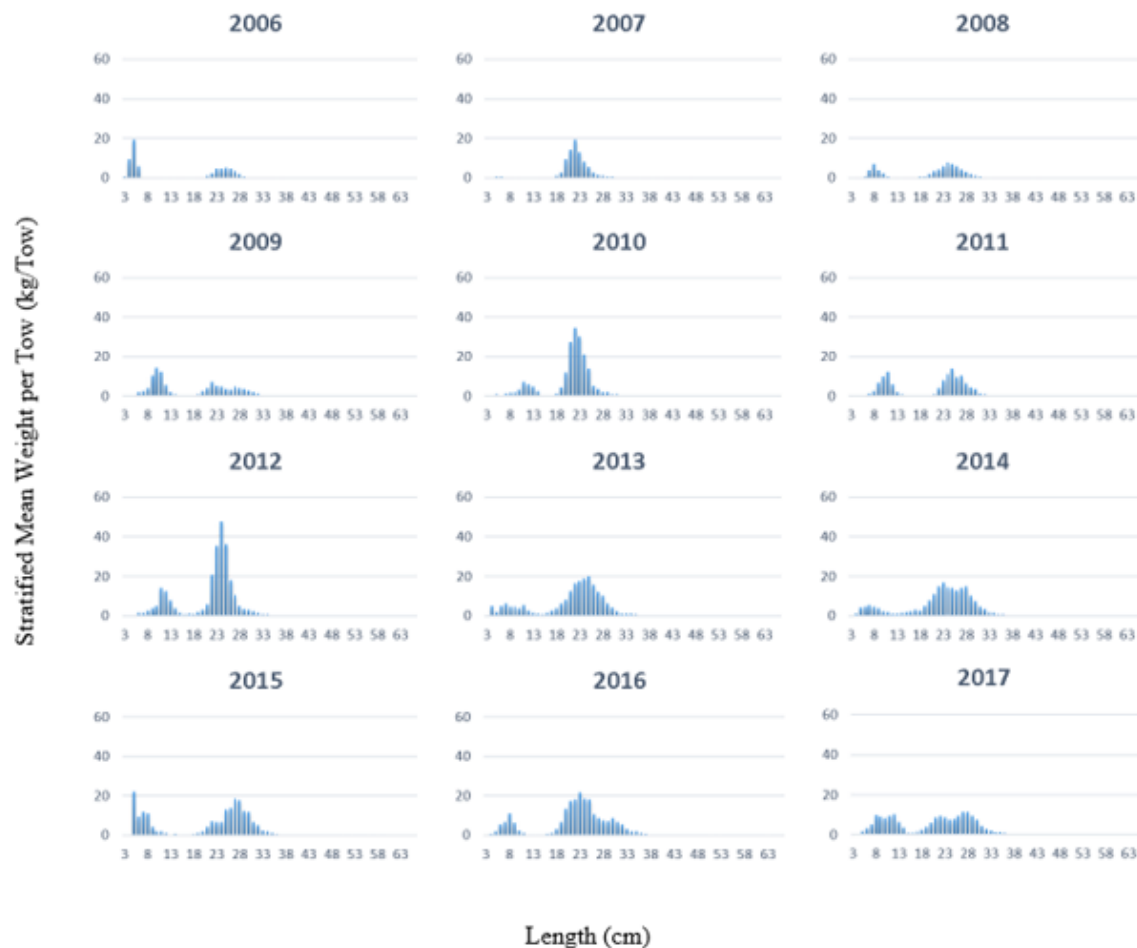




Figure 5. Northern silver hake NEFSC fall survey size distribution in stratified mean numbers per tow (Albatross units) from 2006-2017.



# Southern silver hake

## Survey biomass

Figure 6. Survey biomass trend for southern silver hake, compared to biological reference point

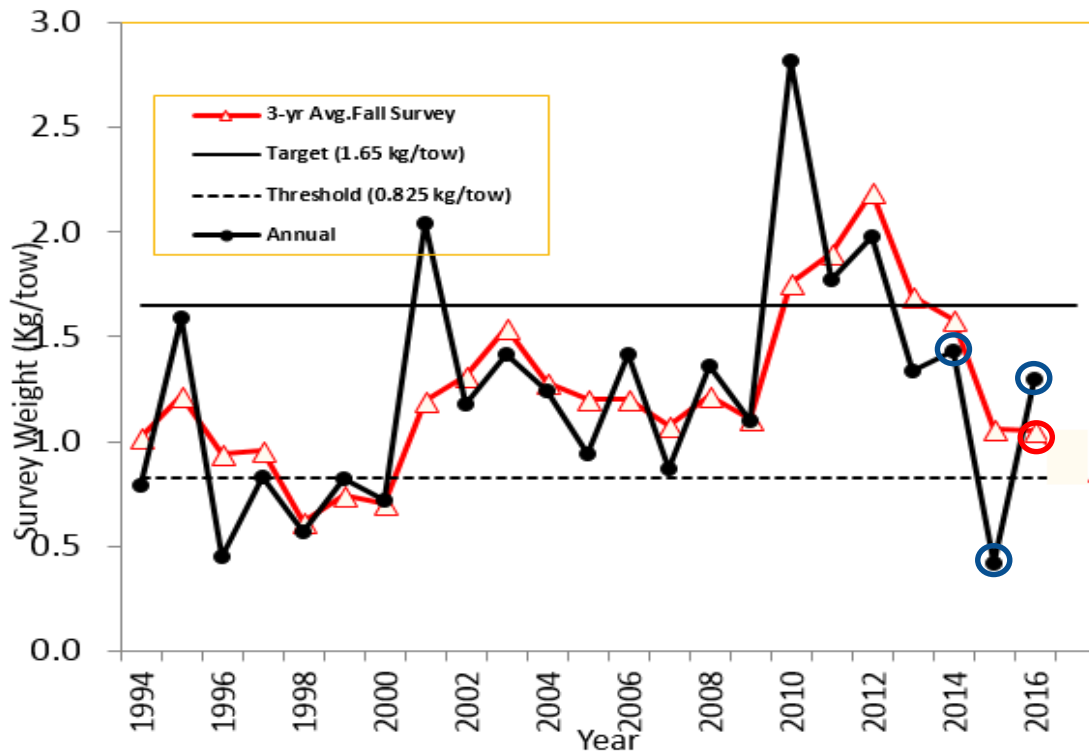
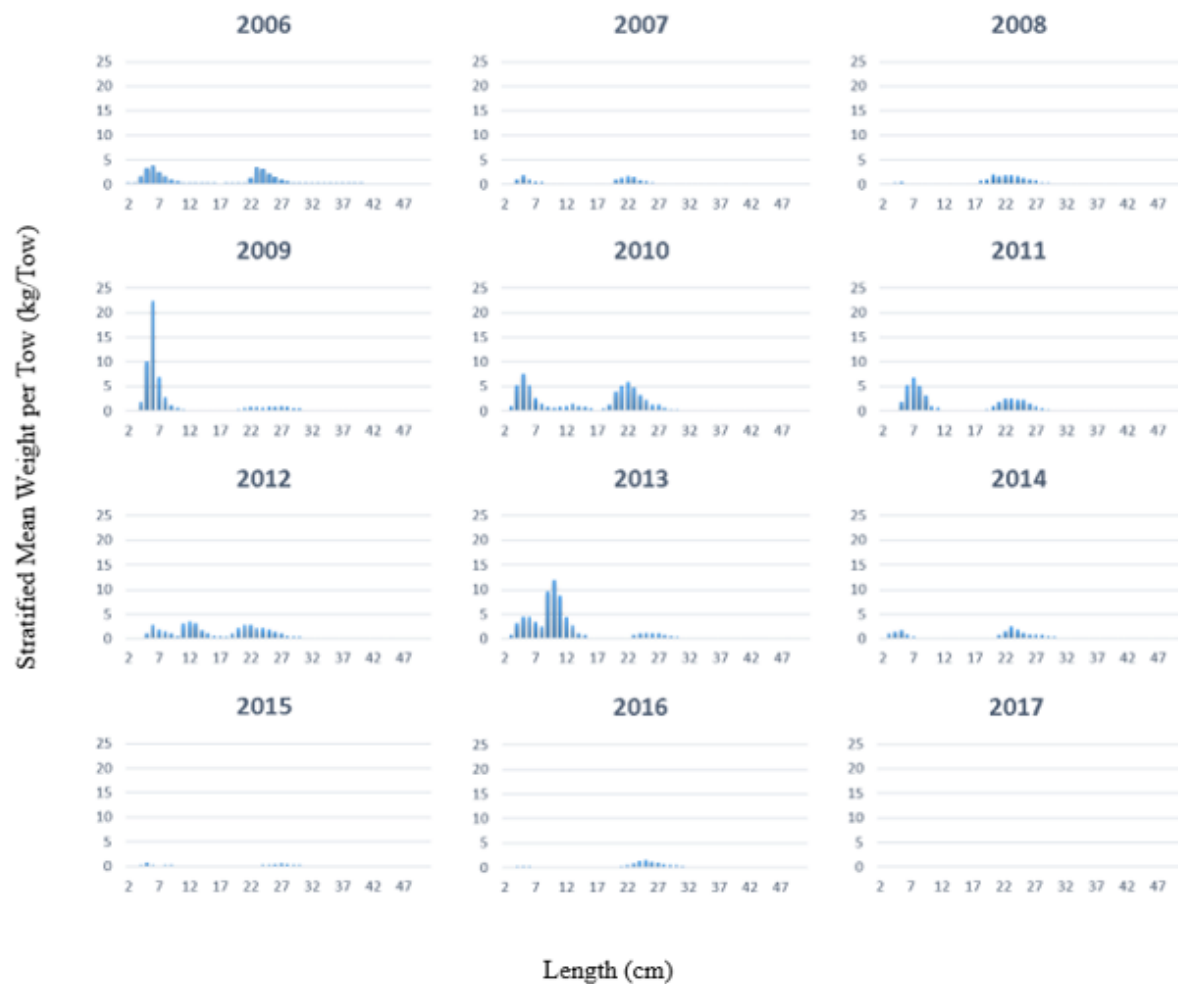


Figure 7. Southern silver hake NEFSC fall survey size distribution in stratified mean numbers per tow (Albatross units) from 2006-2017.



# Northern red hake

## Survey biomass

Figure 8. Updated survey biomass trend (stratified mean weight per tow in FSV Albatross units) for northern red hake, compared to biological reference points. The horizontal dash line represent the biomass threshold and the solid horizontal line is the biomass target.

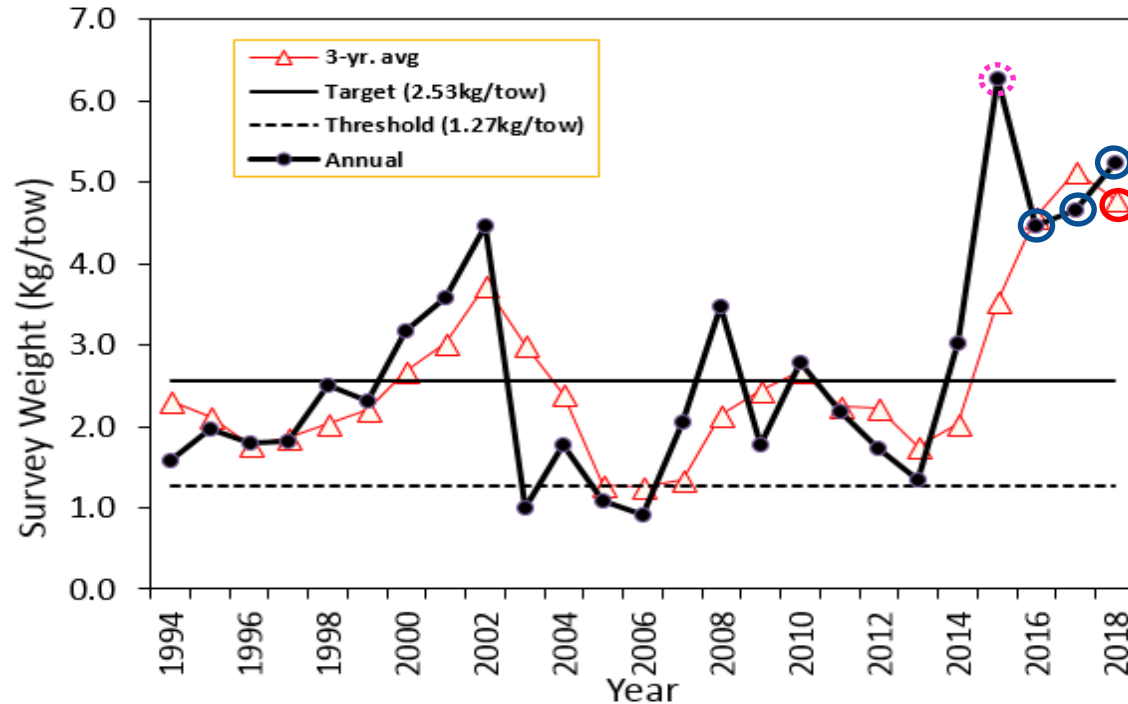
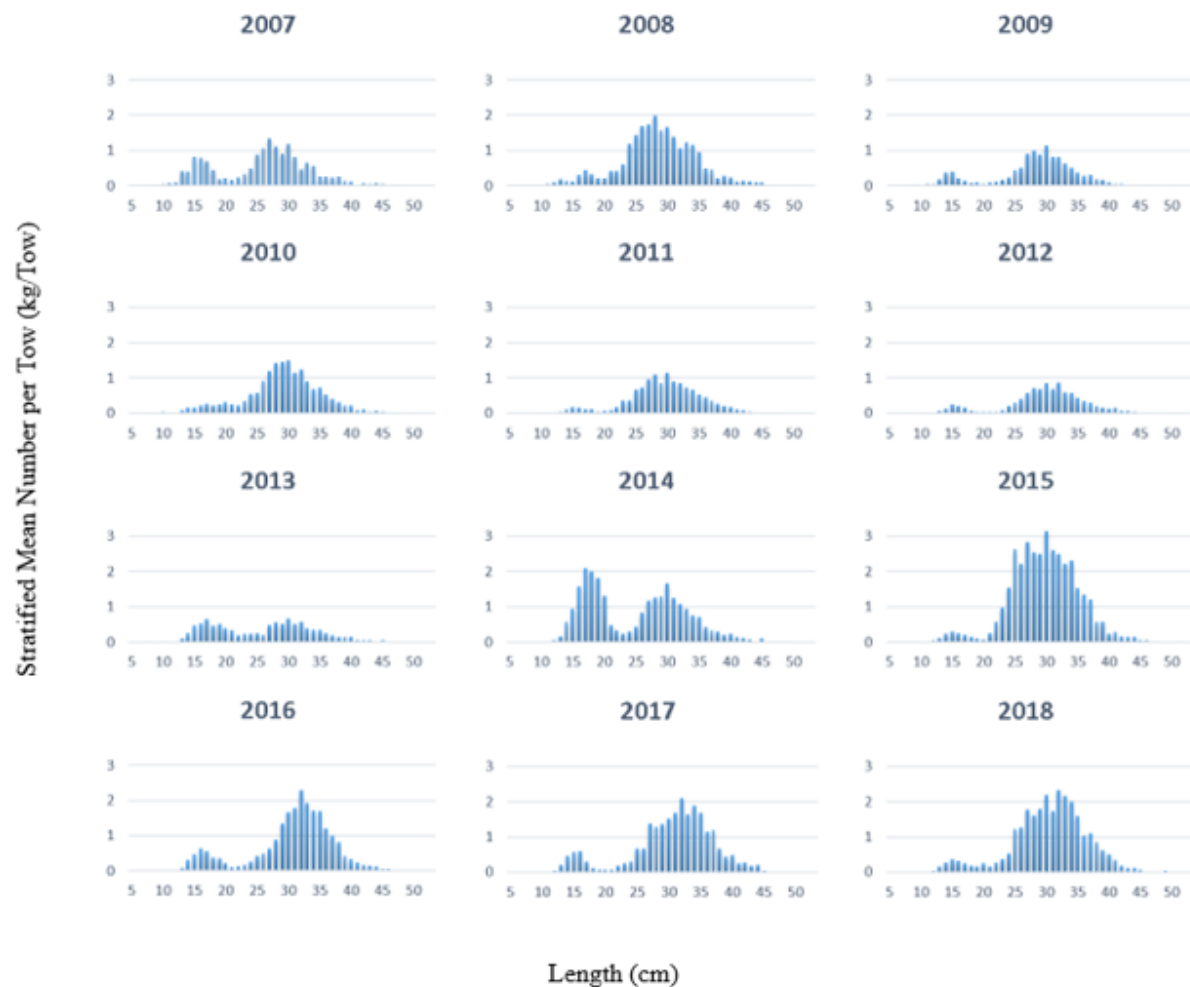


Figure 9. Northern red hake NEFSC spring survey size distribution in stratified mean numbers per tow (Albatross units) from 2006-2018



# Southern red hake

## Survey biomass

Figure 10. Updated survey biomass trend (stratified mean weight per tow in FSV Albatross units) for southern red hake, compared to biological reference points. The horizontal dash line represents the biomass threshold and the solid horizontal line is the biomass target.

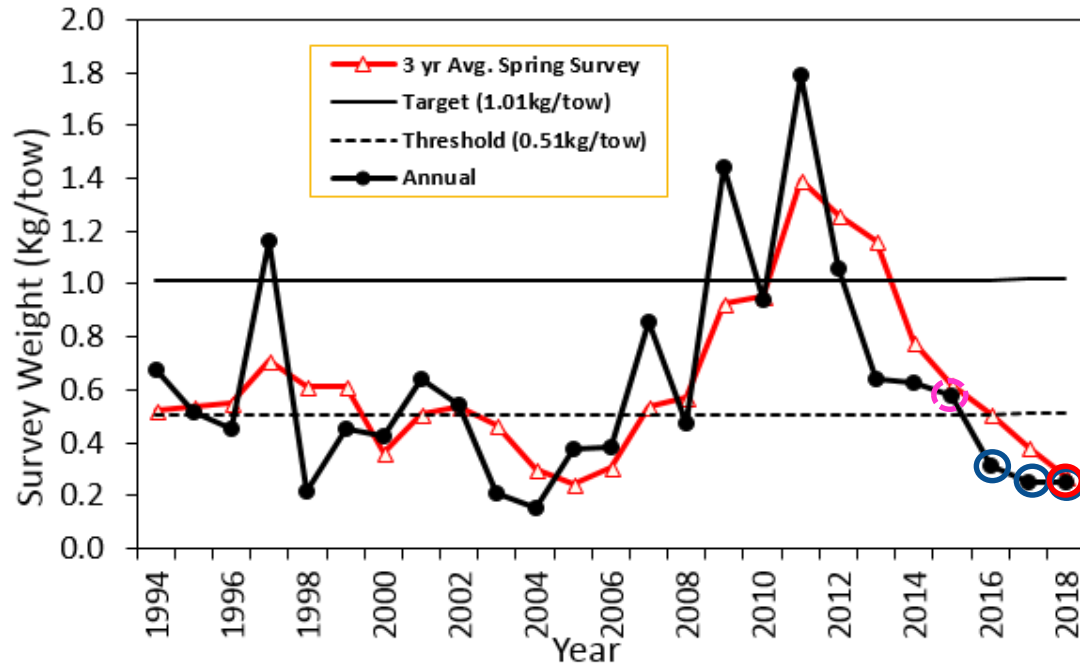
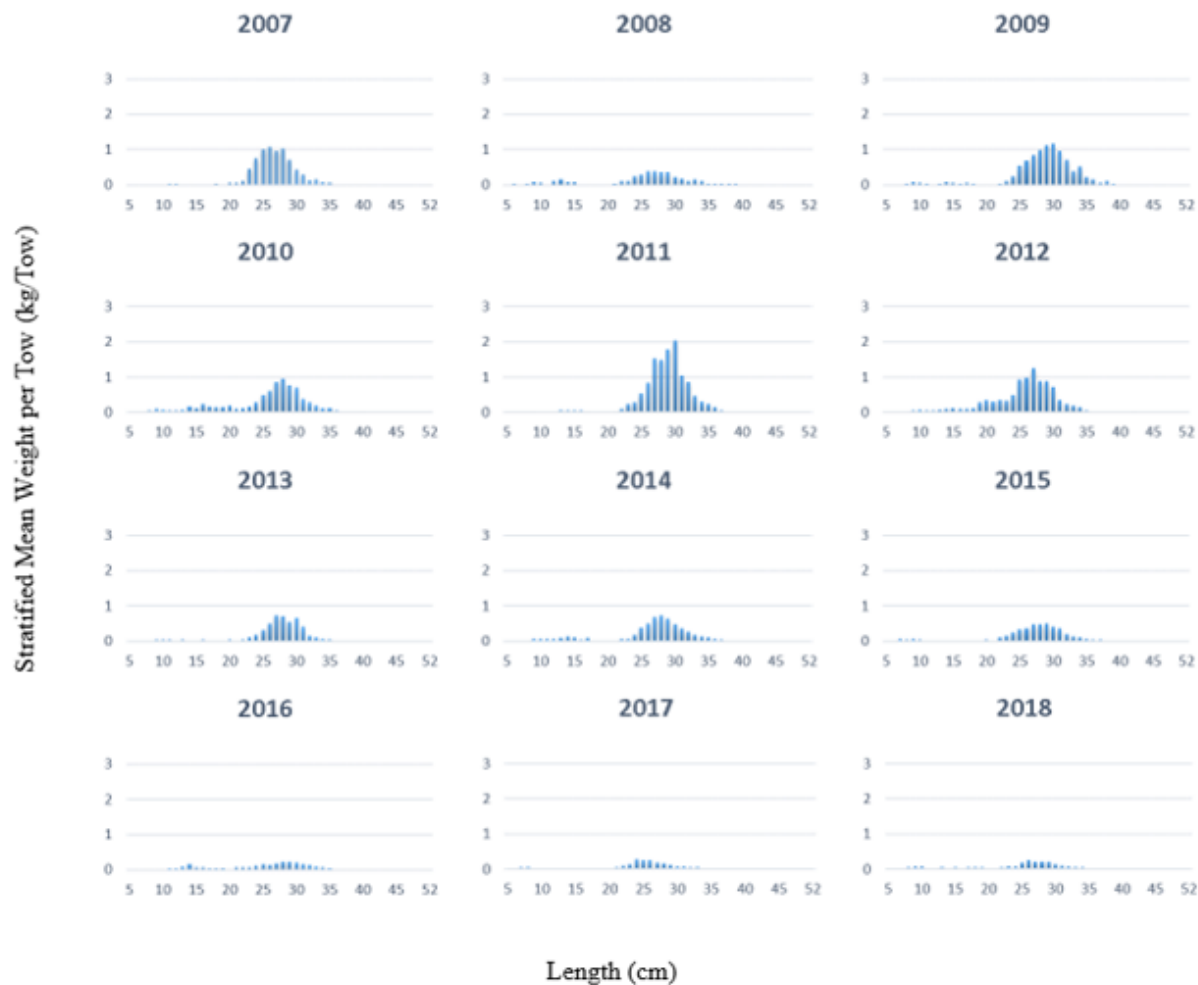


Figure 11. Southern red hake NEFSC spring survey size distribution in stratified mean numbers per tow (Albatross units) from 2006-2018



Length (cm)

# Effort and economic trends

- Landings, revenue, and prices
- Effort – permits, permits with landings, trips
- Effort by management area
- Catch per trip
- Dependency on small-mesh multispecies revenue



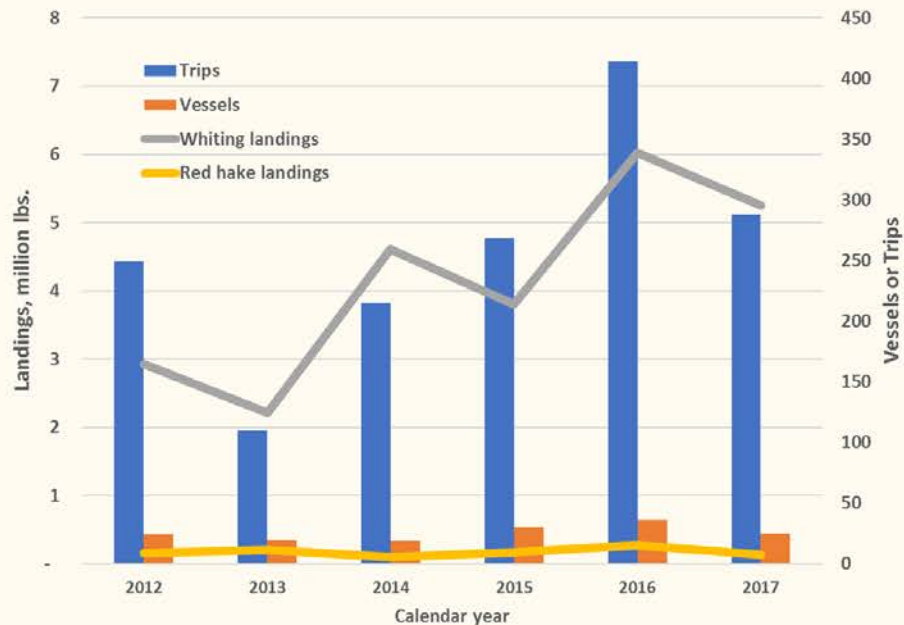
# Effort and economic trends

Table 10. Vessels, landings, revenue and prices for small-mesh multispecies.

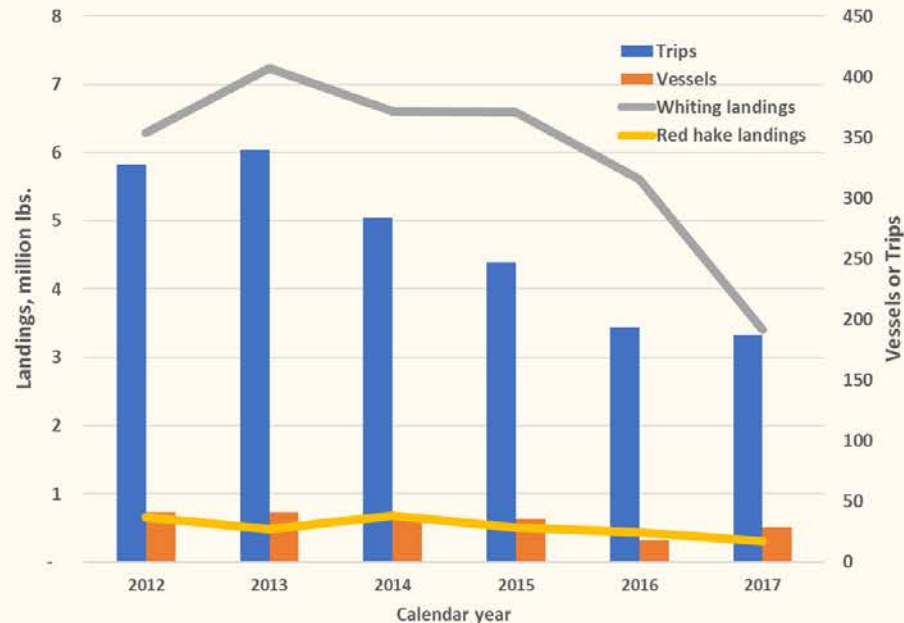
Years	Landings, Revenues, Prices, Efforts, and Ratio of SMSS to Permit\$						Percent change from previous year				
	2012	2013	2014	2015	2016	2017	2013	2014	2015	2016	2017
No. of Permits (Boats)	4326	4260	4176	4143	4306	4352	-1.53%	-1.97%	-0.79%	3.93%	1.07%
No. of Permits (w/ SMS landing)	356	357	352	321	324	325	0.28%	-1.40%	-8.81%	0.93%	0.31%
No. of Trips (for all boats)	276,054	266,709	253,031	251,637	270,882	253,166	-3.39%	-5.13%	-0.55%	7.65%	-6.54%
Permit landing lbs. (All fish)	967,080,459	800,414,845	760,518,847	748,812,956	753,145,546	834,143,701	-17.23%	-4.98%	-1.54%	0.58%	10.75%
Permit Revenue NS (All fish)	1,173,562,544	1,082,223,701	1,101,414,026	1,139,134,833	1,248,657,898	1,199,237,565	-7.78%	1.77%	3.42%	9.61%	-3.96%
SMS Revenue NS	11,285,228	9,236,682	11,992,497	10,983,740	11,180,295	9,432,866	-18.15%	29.84%	-8.41%	1.79%	-15.63%
SMS landing lbs (dealer)	17,585,622	14,734,033	17,453,137	15,142,148	15,117,066	12,602,677	-16.22%	18.45%	-13.24%	-0.17%	-16.63%
SMS landing lbs (VTR)	16,857,188	14,261,999	16,969,855	14,929,933	14,998,282	12,296,952	-15.40%	18.99%	-12.02%	0.46%	-18.01%
Price_SMSNS/lb	0.6417	0.6269	0.6871	0.7254	0.7396	0.7485	-2.31%	9.60%	5.57%	1.96%	1.20%
Price_NonSMSNS/lb	1.2241	1.3657	1.4661	1.5377	1.6767	1.4483	11.57%	7.35%	4.88%	9.04%	-13.62%
Ratio of SMSS to Permit\$	0.0096	0.0085	0.0109	0.0096	0.009	0.0079	-11.46%	28.24%	-11.93%	-6.25%	-12.22%
Revenues and Prices in 2017\$											
CPI	0.933	0.948	0.963	0.962	0.976	1.00					
Permit Revenue RS (All fish)	1,094,933,854	1,025,948,069	1,060,661,707	1,095,847,709	1,218,690,108	1,199,237,565	-6.30%	3.38%	3.32%	11.21%	-1.60%
SMS Revenue RS	10,529,118	8,756,375	11,548,775	10,566,358	10,911,968	9,432,866	-16.84%	31.89%	-8.51%	3.27%	-13.55%
Price_SMS2017RS/lb	0.60	0.59	0.66	0.70	0.72	0.75	-0.74%	11.34%	5.46%	3.44%	3.69%
Price_NonSMS2017RS/lb	1.14	1.29	1.41	1.48	1.64	1.45	13.36%	9.05%	4.77%	10.63%	-11.50%

# Whiting effort and landings by area

Northern Management Area



Southern Management Area



# Silver and red bycatch

## Landings by declared trip

Table 8. Reported small-mesh multispecies landings by fishery group. These totals were used as the kept-all for the fishery to estimate discards.

Fishery group	Primary mesh or gear	Northern red hake (lb, % of total)		Southern red hake (lb, % of total)		Northern silver hake (lb, % of total)		Southern whiting (lb, % of total)	
Butterfish	Small	400	0.2	14,906	2.1	567	0.0	71,993	1.2
Summer flounder	Large	-	-	7,488	1.0	-	-	16,011	0.3
Groundfish	Large	4,882	2.6	10,766	1.5	229,422	3.9	24,080	0.4
Hagfish	Other	-	-	-	-	-	-	-	-
Herring	Small	30,479	16.2	81	0.0	196,423	3.3	1,266	0.0
Lobster/crab	Traps	-	-	21,745	3.0	15	0.0	-	-
Mackerel	Small	-	-	346	0.0	-	-	2,928	0.0
Menhaden	Small	-	-	-	-	-	-	-	-
Monkfish	Large	-	-	12	0.0	272	0.0	634	0.0
Other	Other	-	-	23	0.0	-	-	2	0.0
Research	Research	40	0.0	-	-	6,375	0.1	-	-
Scallop	Dredge	-	-	31	0.0	-	-	30	0.0
Scup	Small	345	0.2	27,519	3.8	4,680	0.1	117,599	2.0
Shrimp	Small	-	-	460	0.1	-	-	1,210	0.0
Squid	Small	19,086	10.1	220,241	30.6	1,825,790	31.0	2,605,668	43.5
Squid/Whiting	Small	53,626	28.5	309,185	42.9	3,095,248	52.6	2,906,028	48.5
Surf clam	Dredge	-	-	-	-	-	-	-	-
Unknown	Unknown	16,127	8.6	103,073	14.3	53,022	0.9	235,984	3.9
Whelk/Conch	Dredge	-	-	-	-	-	-	-	-
Whiting	Small	63,262	33.6	4,294	0.6	473,913	8.1	8,025	0.1
<b>Total</b>		<b>188,247</b>	<b>100.0</b>	<b>720,171</b>	<b>100.0</b>	<b>5,885,728</b>	<b>100.0</b>	<b>5,991,459</b>	<b>100.0</b>

# Estimated discards by fishery

Table 9. Estimated discards of small-mesh multispecies by fishery group, applying the discard to kept-all ratios for red hake and silver hake/whiting on observed trips in FY 2017 to the total

Fishery group	Primary mesh or gear	Northern red hake (lb, % of total)		Southern red hake (lb, % of total)		Northern silver hake (lb, % of total)		Southern whiting (lb, % of total)	
Butterfish	Small	60	0.0	15,587	1.0	31	0.0	9,272	1.1
Summer flounder	Large	-	-	5,001	0.3	-	-	9,648	1.2
Groundfish	Large	147,374	53.5	9,274	0.6	369,027	85.2	17,306	2.1
Hagfish	Other	-	-	-	-	-	-	-	-
Herring	Small	9,503	3.4	85,210	5.6	4,897	1.1	45,638	5.5
Lobster/crab	Traps	9,926	3.6	347,728	23.0	26	0.0	0	0.0
Mackerel	Small	-	-	354	0.0	0	0.0	261	0.0
Menhaden	Small	1	0.0	-	-	-	-	-	-
Monkfish	Large	1	0.0	381	0.0	71	0.0	804	0.1
Other	Other	-	-	2	0.0	-	-	1	0.0
Research	Research	43	0.0	45	0.0	115	0.0	45	0.0
Scallop	Dredge	5,789	2.1	162,366	10.7	4,366	1.0	42,579	5.1
Scup	Small	80	0.0	51,328	3.4	172	0.0	33,055	4.0
Shrimp	Small	34	0.0	17,774	1.2	22	0.0	12,063	1.5
Squid	Small	32,173	11.7	652,318	43.1	16,815	3.9	538,570	64.7
Squid/Whiting	Small	48,350	17.5	59,718	3.9	25,645	5.9	43,121	5.2
Surf clam	Dredge	-	-	2	0.0	-	-	-	-
Unknown	Unknown	11,103	4.0	107,390	7.1	6,185	1.4	79,346	9.5
Whelk/Conch	Dredge	-	-	-	-	-	-	-	-
Whiting	Small	11,189	4.1	200	0.0	5,782	1.3	140	0.0
<b>Total</b>		<b>275,627</b>	<b>100.0</b>	<b>1,514,678</b>	<b>100.0</b>	<b>433,154</b>	<b>100.0</b>	<b>831,848</b>	<b>100.0</b>