

## **Black Sea Bass Recreational Fishery Catch Estimates**

### **New York - Nov/Dec (Wave 6) 2016**

#### Conclusion from APAIS and Effort Survey Data Review

There were no errors in data collections, survey data obtained, or catch and effort estimation that would lead to inaccurate landings estimates of black sea bass in New York in wave 6, 2016. Rather, the apparent ubiquitous occurrence of black sea bass in the recreational fishery, and the higher than normal Private/Rental boat fishing effort in federal waters led to the unusually high estimated harvest of black sea bass during this period. The following report summarizes the detailed review of the survey results. Note that all numbers and estimates are preliminary at the time of this report preparation (30 March 2017).

#### Introduction

The Marine Recreational Information Program produces catch and effort estimates for the recreational fisheries of the coastal Atlantic States by 2-month sample periods, or waves. This program uses multiple complementary surveys to estimate number of angler trips and numbers of fish caught by fishing mode and waters fished. All fishes encountered in the land-based angler intercept survey are included in the catch estimates.

The New York black sea bass harvest estimate in Wave 6, 2016 was considerably higher than previous catch estimates for the same period (Table 1). The majority of the 2016 landings were caught by Private or Rental Boat (PR) anglers (Table 2), and most of those fish were caught on angler trips that fished primarily in federal waters (Table 3). Our investigation of the large landings estimate for black sea bass in New York will focus on this cell (PR anglers fishing in federal waters) in the surveys' data and data collections.

#### Effort Estimates

PR boat angler effort in NY in wave 6 has been variable, but in 2016 was higher than any year since 2010 (Fig. 1), and PR effort in all three areas -- Inland waters, state-ocean ( $\leq 3$  mi), and federal-ocean ( $> 3$  mi) -- were higher than in 2015 and

the majority of years since 2010. Fishing effort in federal waters increased by the largest factor (Fig. 2).

In the context of a somewhat longer time series, the New York wave 6 2016 effort estimate was still high but not at all out of line with other wave 6 estimates going back to 2000 (Fig 3). While the effort increase from 2015 to 2016 was striking in New York, a similarly large increase in PR effort was also observed in Connecticut. However, large increases were not observed in all neighboring states. Of note, the 2016 New York estimate was also very similar in magnitude to the New Jersey effort estimate for PR boats in wave 6, a situation commonly observed in the time series as well. Anecdotal reports from field interviewers suggest a milder weather period during wave 6, 2016 than recent early winters.

### Angler Catch Estimates

New York Department of Environmental Conservation (DEC) staff conducted the Access-Point Angler Intercept Survey (APAIS) for the first time in 2016 under a cooperative agreement with the NMFS and ACCSP and obtained similar results in wave 6, 2016 that were achieved by previous contractors conducting the survey in NY. All selected survey assignments (sample day/site/time interval) were completed as scheduled and produced angler-interviews from a similar proportion, or better, than in the previous 3 years (Table 4a). The total number of angler-interviews obtained was similar among years, 2014-2016, but in 2016 a larger proportion of the PR angler trip interviews were from anglers who fished primarily in federal waters (Table 4b). This proportional distribution is used to allocate the PR mode fishing effort from the effort survey results, so the combination of the higher than usual proportion of angler-trips intercepted from federal waters and the higher than usual total fishing effort by PR boat anglers in wave 6, 2016 resulted in the relatively high effort estimate for PR boat anglers in NY in wave 6, 2016.

The catch of all PR boat anglers included many black sea bass, as did many of the intercepted Charter boat (CH) anglers, but none exceeded the legal creel limits in NY (Table 5). Although many of the PR angler intercepts were obtained from Charter mode sampling assignments in 2016, the appropriate sample weights and survey design provide unbiased pooling of all PR mode interviews within area-fished cells for statistical analyses. A general observation of these catch data

shows the overall occurrence of black sea bass in the catches, along with tautog, scup, and Atlantic cod, all seasonal fisheries associated with bottom fishing, like black sea bass.

Looking at annual landings of black sea bass, it is clear that the New York 2016 estimate represents a large increase of over 1.8 times the 2015 estimate (Fig. 4). This increase does appear to be consistent with a recent trend in increasing landings of black sea bass in New York, Connecticut, and Rhode Island. The 2016 annual landings estimate for Connecticut was also quite a bit larger than previous years and over 1.6 times the 2015 estimate. However, there is not an increasing trend or large absolute increases in the 2016 estimates in all neighboring states. New Jersey has not shown a clear recent trend in increasing landings, and the 2016 landings estimate (just over 145 thousand fish) was one of the lowest estimates in the time series despite also being a large relative increase (2.7 times) from the 2015 estimate (over 53 thousand fish).

#### Site sampling in NY, wave 6, 2016 vs earlier years

Many of the black sea bass landings from federal waters were sampled in interviews obtained at site no. 37 in Montauk and this site was sampled on several dates in 2016, wave 6. However, the Montauk site was not drawn any more frequently, as a proportion of total CH-group site/interval draws in 2016. The CH sample size of drawn site-day-intervals was increased in 2016 from 10 to 19 in Nov. and from 10 to 22 in Dec. in an attempt to increase Charter boat mode interview production. Similar incidences of sampling site no. 37 were the result of the weighted random draws in 2014 & 2015, suggesting no site-biased sampling in 2016:

- In 2014 site 37 drawn 6 days in Peak interval (0 in B or C) of 10 CH assignments drawn (6/10);
- In 2015 site 37 drawn 3 days in Peak and 1 day in B of 10 CH assignments drawn (4/10);
- In 2016 site 37 drawn 7 days in Peak and 1 day in C of 19 CH assignments drawn (8/19).

### Effort Survey Sampling in NY, wave 6, 2014-2016.

The number of trips in the Private-Rental mode for New York is currently derived from the Coastal Household Telephone Survey (CHTS). Table 6 includes information on the Wave 6 New York CHTS sample sizes for 2014, 2015, and 2016. The table includes the "Total CHTS sample", which is the number of sampled telephone numbers identified by the contractor as "eligible" (excludes out-of-service numbers, business phones, wrong numbers, etc., but does include numbers classified as busy, no answer, not available for screening and answering machines), as well as completed interviews and fishing interviews. "Completed Interviews" is the number of completed household interviews, and "Fishing Interviews" is the number of households that reported fishing during the wave. The 2016 annual sample sizes are not substantially different from the previous two years.

### Additional Conclusions

- Black sea bass availability appeared higher than in recent years in Nov/Dec;
- Anglers targeted black sea bass more in wave 6, 2016 than recently (summer flounder closed in NY in wave 6);
- No “outlier” influence on the higher than usual estimated harvest;
- Sample weights were not particularly high;

Table 1. New York – all modes combined, all areas fished

Estimate Status	Year	Common Name	Information	Wave 1	PSE	Wave 2	PSE	Wave 3	PSE	Wave 4	PSE	Wave 5	PSE	Wave 6	PSE	Cumulative	PSE
FINAL	2010	BLACK SEA BASS	Total Harvest (A+B1)	.	.	.	.	85,520	54.4	141,906	31.4	314,512	35.8	1,306	102.6	543,243	23.9
FINAL	2011	BLACK SEA BASS	Total Harvest (A+B1)	.	.	.	.	40,352	55	65,065	44.4	113,301	45.7	55,754	60.1	274,473	26.1
FINAL	2012	BLACK SEA BASS	Total Harvest (A+B1)	.	.	0.0	.	69,322	46.9	201,181	39.9	49,619	33	1,393	99.5	321,516	27.4
FINAL	2013	BLACK SEA BASS	Total Harvest (A+B1)	.	.	.	.	0.0	.	256,313	30.7	88,130	32.9	8,592	88.8	353,036	23.8
FINAL	2014	BLACK SEA BASS	Total Harvest (A+B1)	*	*	*	*	0.0	*	234,753	28.6	129,408	26.6	1,969	88	366,131	20.6
FINAL	2015	BLACK SEA BASS	Total Harvest (A+B1)	*	*	*	*	1,192	83.3	288,942	20.5	211,013	27.3	15,822	13.8	516,968	16
FINAL	2016	BLACK SEA BASS	Total Harvest (A+B1)	.	.	.	.	0.0	.	525,326	19.6	201,505	20.9	305,772	38.5	1,032,604	15.7

Table 2. New York - Private/Rental Boat Mode Only, all areas fished

Estimate Status	Year	Common Name	Information	Wave 1	PSE	Wave 2	PSE	Wave 3	PSE	Wave 4	PSE	Wave 5	PSE	Wave 6	PSE	Cumulative	PSE
FINAL	2010	BLACK SEA BASS	Total Harvest (A+B1)	.	.	.	.	11,797	72.9	83,513	48.7	308,862	36.4	1,306	102.6	405,479	29.6
FINAL	2011	BLACK SEA BASS	Total Harvest (A+B1)	.	.	.	.	21,242	84	53,740	52.5	86,007	57	48,665	68.4	209,653	32.4
FINAL	2012	BLACK SEA BASS	Total Harvest (A+B1)	.	.	.	.	31,835	63.1	127,871	59.1	34,382	44.4	0.0	.	194,088	41.1
FINAL	2013	BLACK SEA BASS	Total Harvest (A+B1)	.	.	.	.	0.0	.	237,239	33.1	59,814	47.9	8,409	90.8	305,462	27.5
FINAL	2014	BLACK SEA BASS	Total Harvest (A+B1)	.	.	.	.	0.0	.	225,267	29.7	100,155	34.2	1,756	98.3	327,177	23
FINAL	2015	BLACK SEA BASS	Total Harvest (A+B1)	.	.	.	.	1,192	83.3	259,634	22.4	194,673	29.3	1,529	96.7	457,028	17.9
FINAL	2016	BLACK SEA BASS	Total Harvest (A+B1)	.	.	.	.	0.0	.	426,154	24	131,092	30.2	287,170	40.9	844,417	19

Table 3. New York - Private/Rental Boat Mode Only, Exclusive Economic Zone Only (Ocean, federal)

Estimate Status	Year	Common Name	Information	Wave 1	PSE	Wave 2	PSE	Wave 3	PSE	Wave 4	PSE	Wave 5	PSE	Wave 6	PSE	Cumulative	PSE
FINAL	2010	BLACK SEA BASS	Total Harvest (A+B1)	.	.	.	.	.	.	25,214	95.6	.	.	.	.	25,214	95.6
FINAL	2011	BLACK SEA BASS	Total Harvest (A+B1)	.	.	.	.	.	.	10,081	100.9	.	.	.	.	10,081	100.9
FINAL	2012	BLACK SEA BASS	Total Harvest (A+B1)	.	.	.	.	0.0	.	0.0	.	.	.	.	.	0.0	.
FINAL	2013	BLACK SEA BASS	Total Harvest (A+B1)	.	.	.	.	.	.	104,916	52.4	8,706	74.1	.	.	113,623	48.7
FINAL	2014	BLACK SEA BASS	Total Harvest (A+B1)	.	.	.	.	0.0	.	50,165	48.3	23,912	53.7	.	.	74,076	37
FINAL	2015	BLACK SEA BASS	Total Harvest (A+B1)	.	.	.	.	.	.	50,688	44.8	6,722	104.2	0.0	.	57,410	41.4
FINAL	2016	BLACK SEA BASS	Total Harvest (A+B1)	.	.	.	.	0.0	.	129,417	33.3	51,653	53	219,886	50.2	400,956	30.4

Figure 1. New York Angler Effort (MRIP) – Wave 6, Private/Rental Boat Mode

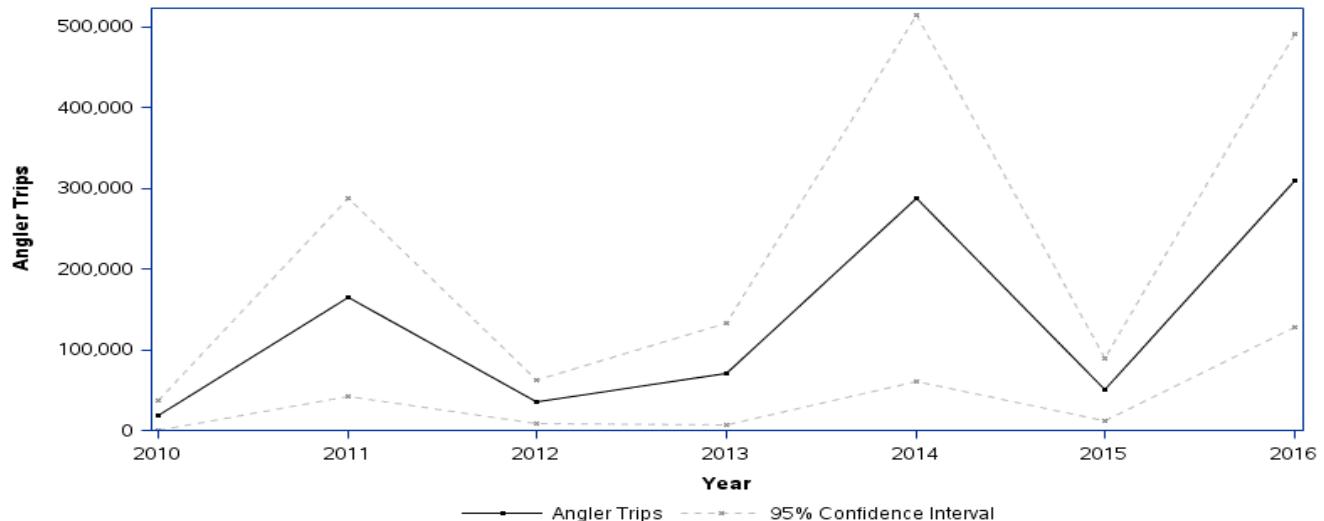


Figure 2. New York Angler Effort (MRIP) – Wave 6, Private/Rental Boat Mode x Area-Fished

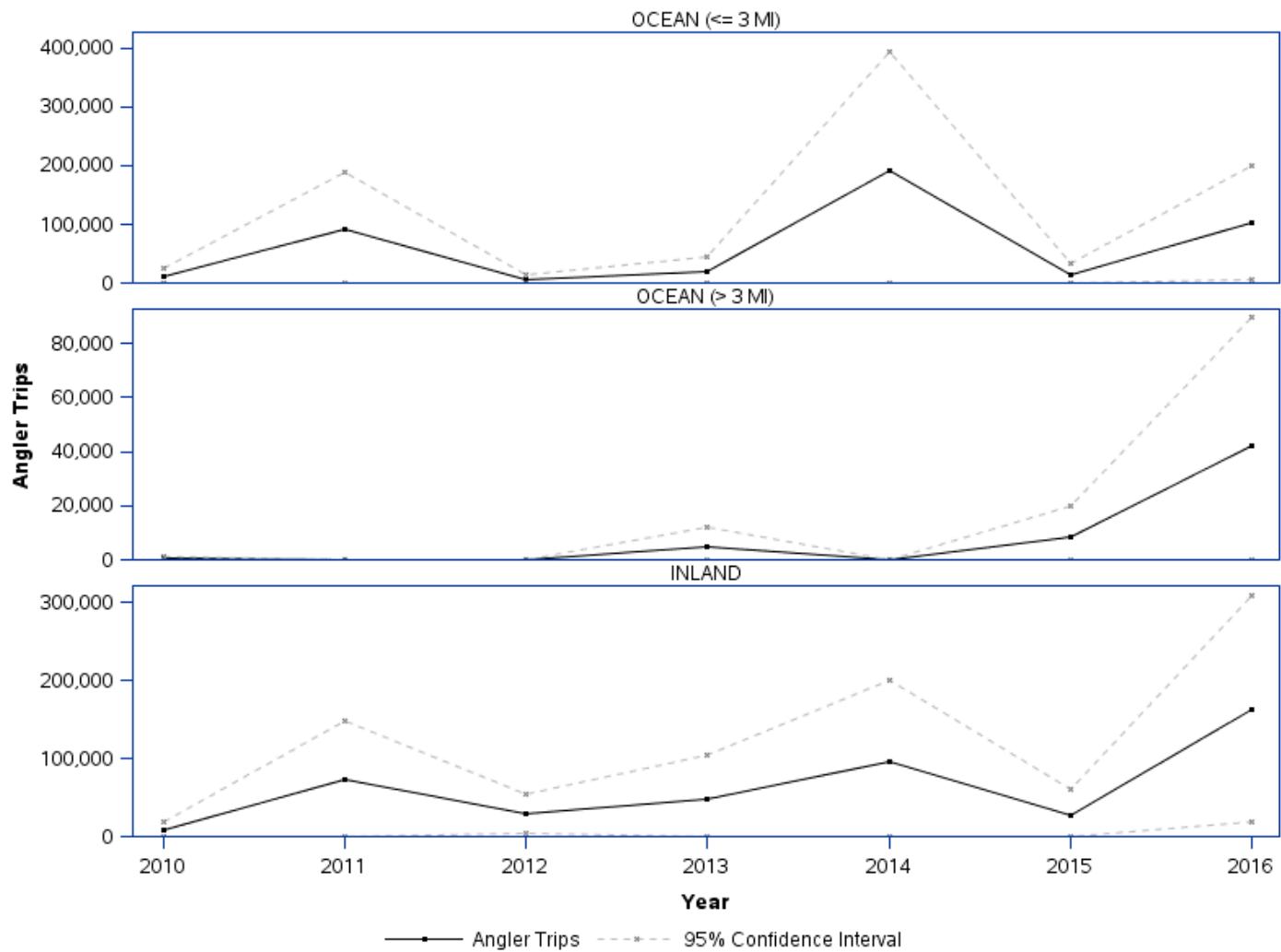
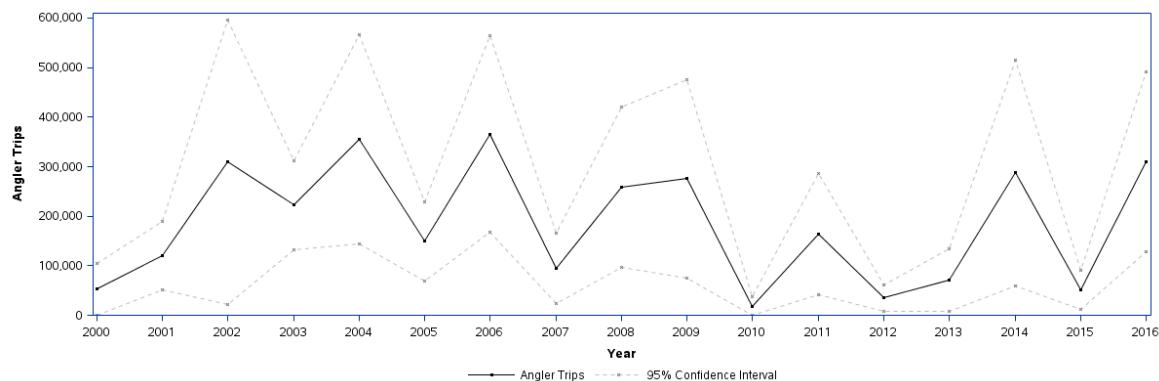
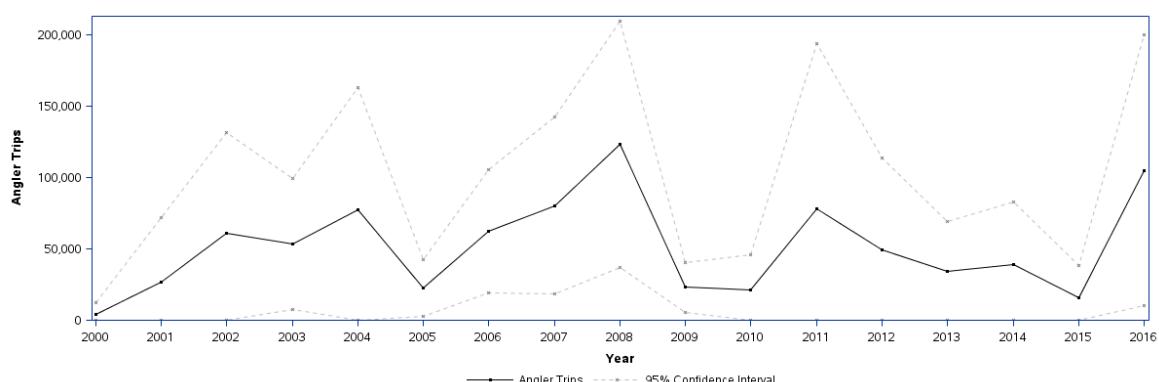


Figure 3. Angler Effort (MRIP) – Wave 6, Private/Rental Boat Mode

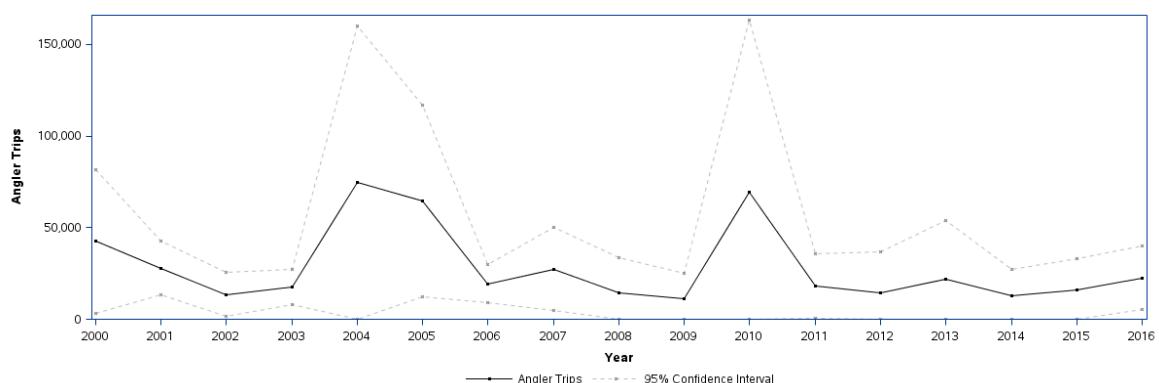
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State=CONNECTICUT



State=RHODE ISLAND



State=NEW JERSEY

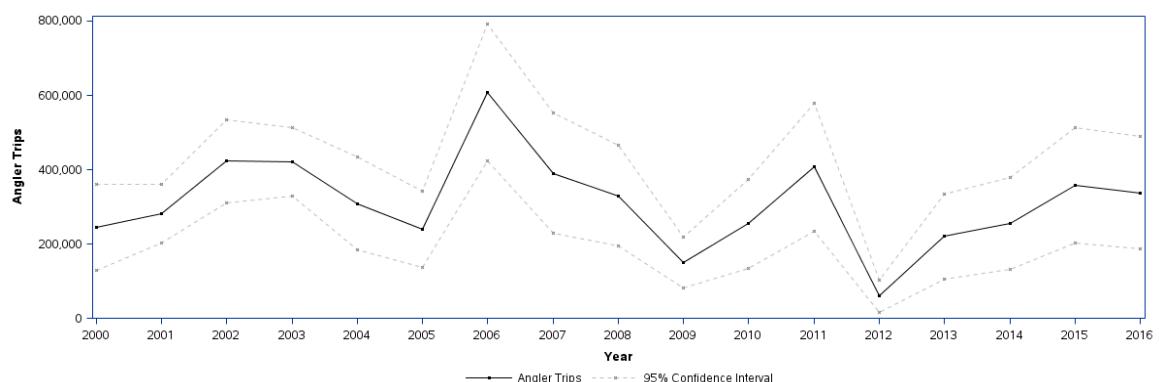
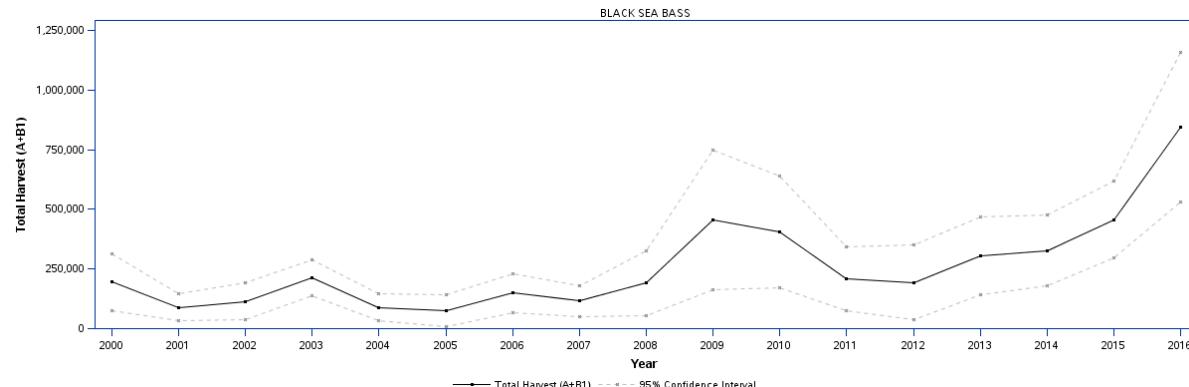
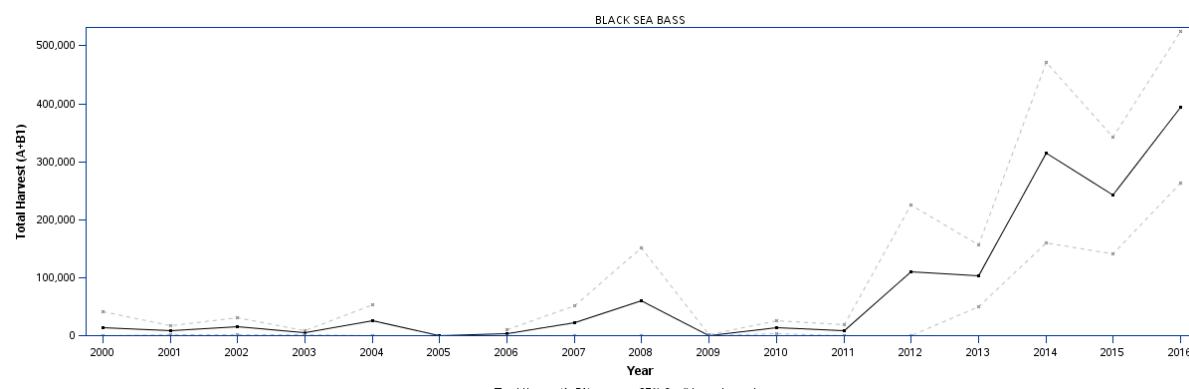


Figure 4. Black Sea Bass Landings (MRIP) – Annual, Private/Rental Boat Mode

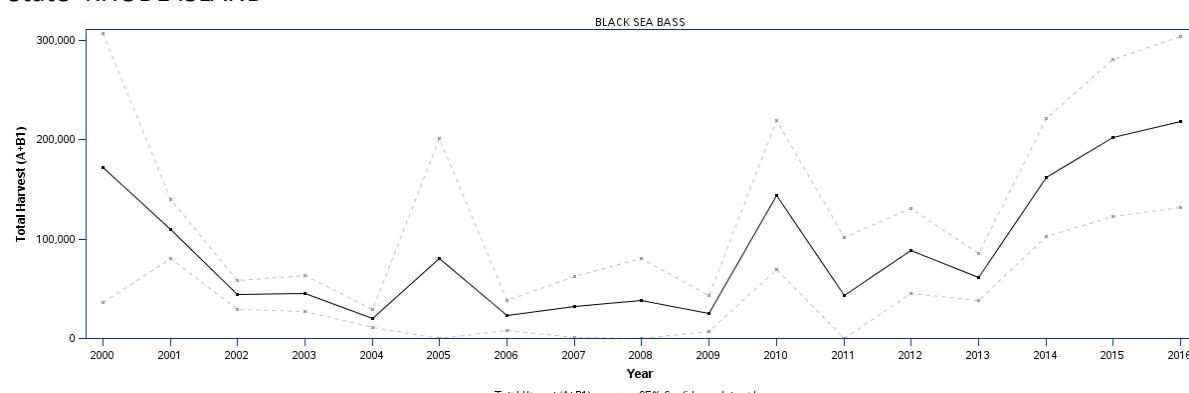
State=NEW YORK



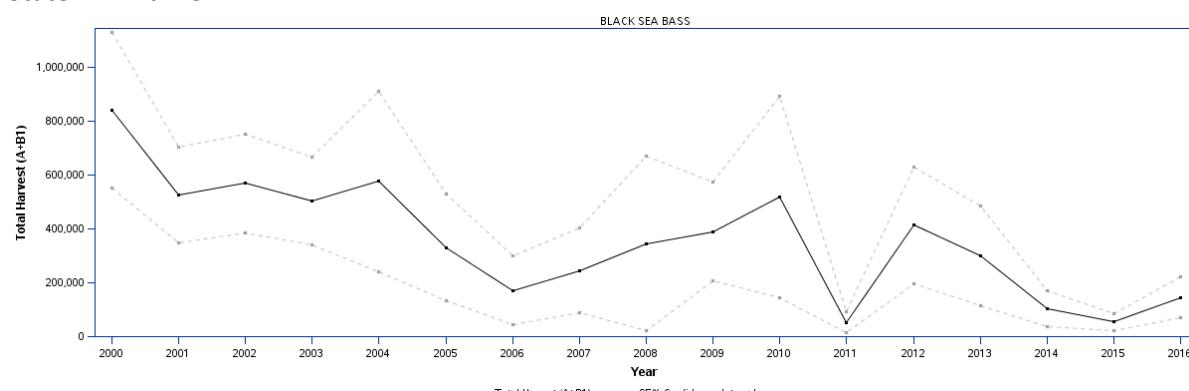
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State=NEW JERSEY



**Table 4a. WAVE 6 APAIS SAMPLING SUCCESS****STATE NEW YORK**

		ASGN SITE-GRP					
		CH		PR		SH	
		>0 INT OBTAINED		>0 INT OBTAINED		>0 INT OBTAINED	
		N	Y	N	Y	N	Y
		NUMBER ASGN CMPLTD					
YEAR	MONTH						
2014	11	8	2	45	13	14	10
	12	10	.	58	.	17	6
2015	11	7	3	40	34	13	11
	12	9	1	52	6	10	13
2016	11	11	8	30	17	13	11
	12	20	2	44	4	14	9

**Table 4b. NUMBER APAIS INTERVIEWS OBTAINED IN WAVE 6  
FISHING MODE PER ASGN MODE-GROUP**

STATE NEW YORK

			ASGN SITE-GRP			
			CH		PR	SH
			FISH MODE		FISH MODE	FISH MODE
			CH	PR	PR	PR
			NUM INTVWS	NUM INTVWS	NUM INTVWS	NUM INTVWS
YEAR	MONTH	AREA FISHED				
2014	11	INL	.	3	73	.
		STS	.	1	7	.
		ALL	.	4	80	.
2015	11	INL	3	2	71	.
		STS	.	.	33	.
		EEZ	.	1	3	.
		ALL	3	3	107	.
	12	INL	.	9	3	.
		STS	.	2	10	.
		EEZ	.	.	6	.
		ALL	.	11	19	.
2016	11	INL	.	5	38	.
		STS	8	9	11	.
		EEZ	14	18	1	.
		ALL	22	32	50	.
	12	STS	.	8	.	1
		EEZ	.	.	2	.
		ALL	.	8	2	1

Table 5. NY Private-Rental Boat Angler Intercept Data - Wave 6, 2016

M	a	s	I	N	I	D	w	P	P	C	H	R	
O	O	A	g	S	T	—	—	A	o	L	A	E	
D	R	n	S	I	I	C	—	R	m	V	R	L	
E	E	m	I	I	S	T	—	A	m	A	E	A	
O	—	A	o	T	I	k	I	O	m	L	V	E	
b	S	F	—	d	E	E	T	o	M	D	I	S	
s	T	X	X	e	1	2	E	d	E	E	M	S	
1	36	PR	STS	PR	449	1290	449	we	1424	17248201611119001	23,550	2	0.0 0 0
2	36	PR	STS	PR	449	1290	449	we	1426	17248201611119002	23,550	2	0.0 0 0
3	36	PR	STS	PR	623	3152	623	wd	1645	17320201611110001	611	2	0.0 0 0
4	36	PR	STS	PR	623	3152	623	wd	1646	17320201611110002	611	2	0.0 0 0
5	36	PR	STS	PR	1780	332	1780	we	1231	17320201611119001	2,114	4	BLUEFISH 0.0 0 1
6	36	PR	STS	PR	1780	332	1780	we	1232	17320201611119002	2,114	4	0.0 0 0
7	36	PR	STS	PR	1780	332	1780	we	1233	17320201611119003	2,114	4	BLUEFISH 0.0 0 1
8	36	PR	STS	PR	1780	332	1780	we	1234	17320201611119004	2,114	4	0.0 0 0
9	36	PR	STS	CH	58	.	58	we	1421	1732020161204001	2,323	1	0.0 0 0
10	36	PR	STS	CH	58	.	58	we	1655	1732020161204002	2,323	3	SKATE GENUS 0.0 0 3
11	36	PR	STS	CH	58	.	58	we	1655	1732020161204002	2,323	3	STRIPED BASS 0.0 0 3
12	36	PR	STS	CH	58	.	58	we	1656	1732020161204003	2,323	3	SKATE GENUS 0.0 0 3
13	36	PR	STS	CH	58	.	58	we	1656	1732020161204003	2,323	3	STRIPED BASS 0.0 0 2
14	36	PR	STS	CH	58	.	58	we	1657	1732020161204004	2,323	3	0.0 0 0
15	36	PR	STS	.	.	623	we	1154	1732020161211003	9,719	2	TAUTOG 0.0 0 13	
16	36	PR	STS	CH	133	.	133	we	1623	1746720161126008	2,440	2	ATLANTIC COD 0.0 3 2
17	36	PR	STS	CH	133	.	133	we	1623	1746720161126008	2,440	2	POLLOCK 0.0 0 1
18	36	PR	STS	CH	133	.	133	we	1623	1746720161126008	2,440	2	BLACK SEA BASS 0.0 5 4
19	36	PR	STS	CH	133	.	133	we	1623	1746720161126008	2,440	2	TAUTOG 0.0 4 5
20	36	PR	STS	CH	133	.	133	we	1623	1746720161126008	2,440	2	CUNNER 0.0 0 8
21	36	PR	STS	CH	133	.	133	we	1624	1746720161126009	2,440	2	ATLANTIC COD 0.0 2 11
22	36	PR	STS	CH	133	.	133	we	1624	1746720161126009	2,440	2	BLACK SEA BASS 0.0 5 4
23	36	PR	STS	CH	133	.	133	we	1624	1746720161126009	2,440	2	TAUTOG 0.0 3 5
24	36	PR	STS	CH	133	.	133	we	1624	1746720161126009	2,440	2	CUNNER 0.0 0 7
25	36	PR	STS	CH	589	80	80	we	1458	1746720161204001	1,326	4	SPINY DOGFISH 5.0 0 10
26	36	PR	STS	CH	589	80	80	we	1458	1746720161204001	1,326	4	ATLANTIC COD 1.0 0 0
27	36	PR	STS	CH	589	80	80	we	1458	1746720161204001	1,326	4	TAUTOG 6.0 0 5
28	36	PR	STS	CH	589	80	80	we	1500	1746720161204002	1,326	4	SPINY DOGFISH 0.0 0 3
29	36	PR	STS	CH	589	80	80	we	1500	1746720161204002	1,326	4	TAUTOG 0.0 0 15
30	36	PR	STS	CH	589	80	80	we	1508	1746720161204003	1,326	4	SPINY DOGFISH 0.0 0 1
31	36	PR	STS	CH	589	80	80	we	1508	1746720161204003	1,326	4	WINTER SKATE 0.0 0 1
32	36	PR	STS	CH	589	80	80	we	1508	1746720161204003	1,326	4	TAUTOG 0.0 0 5
33	36	PR	STS	CH	589	80	80	we	1508	1746720161204003	1,326	4	WINTER FLOUNDER 0.0 0 1
34	36	PR	STS	CH	589	80	80	we	1521	1746720161204004	1,326	4	SPINY DOGFISH 0.0 0 4
35	36	PR	STS	CH	589	80	80	we	1521	1746720161204004	1,326	4	TAUTOG 0.0 0 30
36	36	PR	STS	PR	58	397	58	we	1150	17575201611119001	2,729	2	BLACK SEA BASS 0.0 0 2
37	36	PR	STS	PR	58	397	58	we	1150	17575201611119001	2,729	2	TAUTOG 0.0 0 10
38	36	PR	STS	PR	58	397	58	we	1151	17575201611119002	2,729	2	TAUTOG 0.0 0 5
39	36	PR	STS	PR	58	397	58	we	1310	17575201611119004	4,374	2	TAUTOG 0.0 0 4
40	36	PR	STS	CH	133	134	134	wd	1414	1764920161108004	967	2	TAUTOG 0.0 4 12
41	36	PR	STS	CH	133	134	134	wd	1415	1764920161108005	967	2	TAUTOG 0.0 4 8
42	36	PR	STS	CH	37	.	37	we	1520	1764920161112001	1,143	2	SPINY DOGFISH 0.0 0 10
43	36	PR	STS	CH	37	.	37	we	1520	1764920161112001	1,143	2	ATLANTIC COD 1.0 0 0
44	36	PR	STS	CH	37	.	37	we	1520	1764920161112001	1,143	2	BLACK SEA BASS 20.0 0 15
45	36	PR	STS	CH	37	.	37	we	1520	1764920161112001	1,143	2	SCUP 1.0 0 0
46	36	PR	STS	CH	37	.	37	we	1520	1764920161112001	1,143	2	CUNNER 1.0 0 0
47	36	PR	STS	CH	37	.	37	we	1521	1764920161112002	1,143	2	SPINY DOGFISH 0.0 0 10
48	36	PR	STS	CH	37	.	37	we	1521	1764920161112002	1,143	2	BLACK SEA BASS 0.0 0 15
49	36	PR	STS	CH	37	.	37	we	1320	17649201611119003	1,155	2	TAUTOG 0.0 4 15
50	36	PR	STS	CH	37	.	37	we	1321	17649201611119004	1,155	2	TAUTOG 0.0 4 15
51	36	PR	STS	CH	37	.	37	we	1430	17649201611119005	1,226	2	0.0 0 0
52	36	PR	EEZ	PR	625	1300	625	wd	1234	1732020161206001	2,944	2	SMOOTH DOGFISH 0.0 0 3
53	36	PR	EEZ	PR	625	1300	625	wd	1234	1732020161206001	2,944	2	SKATE GENUS 0.0 0 1
54	36	PR	EEZ	PR	625	1300	625	wd	1234	1732020161206001	2,944	2	STRIPED SEAROBIN 0.0 0 1
55	36	PR	EEZ	CH	203	37	37	wd	1737	1746720161101001	4,032	3	SPINY DOGFISH 0.0 0 1
56	36	PR	EEZ	CH	203	37	37	wd	1737	1746720161101001	4,032	3	BLACK SEA BASS 0.0 4 10
57	36	PR	EEZ	CH	203	37	37	wd	1737	1746720161101001	4,032	3	SCUP 0.0 0 10

## Wave 6 2016 - NY APAIS DATA

			a			I		I		w		c		H	R	
M	O	D	A	s	N	D		D		p	P	o		A	E	
O	E	E	R	n	S	T		T		C		A		R	L	
b	—	A	E	m	I	I	S	I		—		m		L	V	
s	S	F	—	A	o	T	T	k	I	O	i	m		A	E	
T	X	X	d	E	E	T	o	M	D	n	T	o		I	S	
X	e	1	2	E	d	E	E	E	E	t	Y	n		M	T	
58	36	PR	EEZ	CH	203	37	37	wd	1737	1746720161101001	4,032	3	TAUTOG	0.0	4	10
59	36	PR	EEZ	CH	37	.	37	we	1424	1746720161105001	1,311	4	BLACK SEA BASS	15.3	0	150
60	36	PR	EEZ	CH	37	.	37	we	1424	1746720161105001	1,311	4	SCUP	1.0	0	10
61	36	PR	EEZ	CH	37	.	37	we	1424	1746720161105001	1,311	4	CUNNER	0.0	0	3
62	36	PR	EEZ	CH	37	.	37	we	1428	1746720161105002	1,311	4	BLACK SEA BASS	0.0	0	75
63	36	PR	EEZ	CH	37	.	37	we	1428	1746720161105002	1,311	4	SCUP	0.0	0	40
64	36	PR	EEZ	CH	37	.	37	we	1430	1746720161105003	1,311	4	BLACK SEA BASS	0.0	0	30
65	36	PR	EEZ	CH	37	.	37	we	1430	1746720161105003	1,311	4	SCUP	0.0	0	10
66	36	PR	EEZ	CH	133	.	133	we	1656	1746720161126010	5,152	3	ATLANTIC COD	0.0	1	0
67	36	PR	EEZ	CH	133	.	133	we	1656	1746720161126010	5,152	3	BLACK SEA BASS	0.0	2	20
68	36	PR	EEZ	CH	133	.	133	we	1656	1746720161126010	5,152	3	TAUTOG	0.0	4	0
69	36	PR	EEZ	PR	1308	146	146	we	1535	1746720161211001	4,001	1	ATLANTIC COD	2.0	0	0
70	36	PR	EEZ	PR	1308	146	146	we	1535	1746720161211001	4,001	1	BLACK SEA BASS	8.0	0	10
71	36	PR	EEZ	PR	1308	146	146	we	1535	1746720161211001	4,001	1	SCUP	0.0	0	1
72	36	PR	EEZ	PR	180	1780	1780	wd	1548	1764720161107001	2,425	3	STRIPED BASS	2.0	0	0
73	36	PR	EEZ	CH	133	134	133	wd	1352	1764920161108003	5,588	1	BLACK SEA BASS	10.0	0	10
74	36	PR	EEZ	CH	37	.	37	we	1530	1764920161112003	1,143	2	BLACK SEA BASS	0.0	6	10
75	36	PR	EEZ	CH	37	.	37	we	1531	1764920161112004	1,143	2	BLACK SEA BASS	0.0	6	10
76	36	PR	EEZ	CH	37	.	37	we	1531	1764920161112004	1,143	2	SCUP	0.0	0	1
77	36	PR	EEZ	CH	37	.	37	we	1620	1764920161118003	1,250	2	ATLANTIC COD	3.0	0	3
78	36	PR	EEZ	CH	37	.	37	we	1620	1764920161118003	1,250	2	BLACK SEA BASS	0.0	8	12
79	36	PR	EEZ	CH	37	.	37	we	1620	1764920161118003	1,250	2	TAUTOG	0.0	6	6
80	36	PR	EEZ	CH	37	.	37	we	1621	1764920161118004	1,250	2	ATLANTIC COD	0.0	0	2
81	36	PR	EEZ	CH	37	.	37	we	1621	1764920161118004	1,250	2	BLACK SEA BASS	0.0	8	12
82	36	PR	EEZ	CH	37	.	37	we	1621	1764920161118004	1,250	2	TAUTOG	0.0	6	6
83	36	PR	EEZ	CH	37	.	37	we	1315	1764920161119001	1,155	2	BLACK SEA BASS	2.0	0	7
84	36	PR	EEZ	CH	37	.	37	we	1315	1764920161119001	1,155	2	SCUP	2.0	0	3
85	36	PR	EEZ	CH	37	.	37	we	1316	1764920161119002	1,155	2	BLACK SEA BASS	0.0	0	10
86	36	PR	EEZ	CH	37	.	37	we	1316	1764920161119002	1,155	2	SCUP	0.0	0	1
87	36	PR	EEZ	CH	37	.	37	we	1615	1764920161119015	1,155	2	ATLANTIC COD	6.0	0	2
88	36	PR	EEZ	CH	37	.	37	we	1615	1764920161119015	1,155	2	BLACK SEA BASS	15.0	0	5
89	36	PR	EEZ	CH	37	.	37	we	1615	1764920161119015	1,155	2	TAUTOG	8.0	0	3
90	36	PR	EEZ	CH	37	.	37	we	1616	1764920161119016	1,155	2	ATLANTIC COD	0.0	0	2
91	36	PR	EEZ	CH	37	.	37	we	1616	1764920161119016	1,155	2	BLACK SEA BASS	0.0	0	5
92	36	PR	EEZ	CH	37	.	37	we	1616	1764920161119016	1,155	2	TAUTOG	0.0	0	3
93	36	PR	EEZ	CH	37	.	37	we	1400	1764920161125001	1,141	1	SPINY DOGFISH	0.0	0	4
94	36	PR	EEZ	CH	37	.	37	we	1400	1764920161125001	1,141	1	BLACK SEA BASS	1.0	0	10
95	36	PR	EEZ	CH	37	.	37	we	1400	1764920161125001	1,141	1	SCUP	1.0	0	6
96	36	PR	EEZ	CH	37	.	37	we	1642	1764920161125002	1,141	3	SPINY DOGFISH	0.0	0	1
97	36	PR	EEZ	CH	37	.	37	we	1642	1764920161125002	1,141	3	ATLANTIC COD	4.0	0	2
98	36	PR	EEZ	CH	37	.	37	we	1642	1764920161125002	1,141	3	BLACK SEA BASS	26.0	0	6
99	36	PR	EEZ	CH	37	.	37	we	1642	1764920161125002	1,141	3	SCUP	0.0	0	1
100	36	PR	EEZ	CH	37	.	37	we	1642	1764920161125002	1,141	3	TAUTOG	10.0	0	0
101	36	PR	EEZ	CH	37	.	37	we	1642	1764920161125002	1,141	3	CUNNER	2.0	0	0
102	36	PR	EEZ	CH	37	.	37	we	1643	1764920161125003	1,141	3	ATLANTIC COD	0.0	0	2
103	36	PR	EEZ	CH	37	.	37	we	1643	1764920161125003	1,141	3	BLACK SEA BASS	0.0	0	6
104	36	PR	EEZ	CH	37	.	37	we	1644	1764920161125004	1,141	3	ATLANTIC COD	0.0	0	2
105	36	PR	EEZ	CH	37	.	37	we	1644	1764920161125004	1,141	3	BLACK SEA BASS	0.0	0	6
106	36	PR	INL	PR	449	1290	1290	we	1713	1724820161119003	23,550	2	STRIPED BASS	0.0	0	10
107	36	PR	INL	PR	449	1290	1290	we	1714	1724820161119004	23,550	2	STRIPED BASS	0.0	1	10
108	36	PR	INL	PR	32	416	32	we	1122	1731820161106001	2,851	2	TAUTOG	0.0	0	1
109	36	PR	INL	PR	32	416	32	we	1123	1731820161106002	2,851	2	TAUTOG	0.0	0	1
110	36	PR	INL	PR	32	416	32	we	1123	1731820161106002	2,851	2	CUNNER	0.0	0	1
111	36	PR	INL	PR	456	258	258	wd	1657	1731820161108001	5,229	1	TAUTOG	0.0	0	2
112	36	PR	INL	PR	496	502	502	we	1546	1732020161105001	2,057	1	STRIPED BASS	0.0	0	3
113	36	PR	INL	PR	496	502	502	we	1613	1732020161105002	2,057	1	STRIPED BASS	0.0	0	2
114	36	PR	INL	PR	496	502	502	we	1620	1732020161105003	2,057	2	SCUP	0.0	0	2
115	36	PR	INL	PR	496	502	502	we	1620	1732020161105003	2,057	2	TAUTOG	0.0	0	3

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M	O	A	s	N	D			D		p	P	o		A	E	
D	R	n	S	T	-			C		-	A	m		R	L	
E	E	m	I	S	T			O		i	R	m		V	E	
O	-	A	o	T	I	k	I	D		n	T	o		A	E	
b	S	F	-	d	E	T	o	M		t	Y	n		I	S	
s	T	X	X	e	1	2	E	d	E					M	T	
116	36	PR	INL	PR	496	502	502	we	1621	1732020161105004	2,057	2	BLACK SEA BASS	0.0	0	1
117	36	PR	INL	PR	496	502	502	we	1621	1732020161105004	2,057	2	SCUP	0.0	0	3
118	36	PR	INL	PR	496	502	502	we	1621	17320201611105004	2,057	2	TAUTOG	0.0	0	3
119	36	PR	INL	PR	3223	1293	1293	we	1533	1732020161111001	8,283	2		0.0	0	0
120	36	PR	INL	PR	3223	1293	1293	we	1534	1732020161111002	8,283	2		0.0	0	0
121	36	PR	INL	PR	3168	456	456	we	1529	17320201611112001	4,631	1		0.0	0	0
122	36	PR	INL	PR	1780	332	1780	we	1246	17320201611119005	2,114	1	ATLANTIC MENHADEN	0.0	3	0
123	36	PR	INL	PR	1780	332	1780	we	1246	17320201611119005	2,114	1	STRIPED BASS	1.0	0	2
124	36	PR	INL	CH	203	37	37	wd	1754	1746720161101002	2,688	2	BLACK SEA BASS	0.0	0	8
125	36	PR	INL	CH	203	37	37	wd	1754	1746720161101002	2,688	2	TAUTOG	0.0	8	24
126	36	PR	INL	CH	203	37	37	wd	1806	1746720161101003	2,688	2	BLACK SEA BASS	0.0	3	5
127	36	PR	INL	CH	203	37	37	wd	1806	1746720161101003	2,688	2	SCUP	0.0	6	5
128	36	PR	INL	CH	203	37	37	wd	1806	1746720161101003	2,688	2	TAUTOG	0.0	4	40
129	36	PR	INL	PR	276	472	472	wd	1444	17467201611110001	8,333	2		0.0	0	0
130	36	PR	INL	PR	276	472	472	wd	1445	17467201611110002	8,333	2		0.0	0	0
131	36	PR	INL	PR	228	.	228	we	1420	17575201611118001	1,202	2	SCUP	0.0	0	1
132	36	PR	INL	PR	228	.	228	we	1421	17575201611118002	1,202	2		0.0	0	0
133	36	PR	INL	PR	228	.	228	we	1430	17575201611118003	1,261	3	BLACK SEA BASS	0.0	0	5
134	36	PR	INL	PR	228	.	228	we	1430	17575201611118003	1,261	3	TAUTOG	0.0	0	40
135	36	PR	INL	PR	228	.	228	we	1430	17575201611118003	1,261	3	SUMMER FLOUNDER	0.0	0	1
136	36	PR	INL	PR	228	.	228	we	1431	17575201611118004	1,261	3	BLACK SEA BASS	0.0	0	8
137	36	PR	INL	PR	228	.	228	we	1431	17575201611118004	1,261	3	TAUTOG	0.0	0	43
138	36	PR	INL	PR	228	.	228	we	1431	17575201611118004	1,261	3	CUNNER	0.0	0	1
139	36	PR	INL	PR	228	.	228	we	1515	17575201611118005	1,320	2	BLACK SEA BASS	0.0	0	10
140	36	PR	INL	PR	228	.	228	we	1515	17575201611118005	1,320	2	TAUTOG	0.0	0	4
141	36	PR	INL	PR	228	.	228	we	1538	17575201611118006	1,437	3	SCUP	0.0	0	1
142	36	PR	INL	PR	228	.	228	we	1538	17575201611118006	1,437	3	TAUTOG	0.0	4	20
143	36	PR	INL	PR	228	.	228	we	1545	17575201611118007	1,202	1	STRIPED SEAROBIN	0.0	0	1
144	36	PR	INL	PR	228	.	228	we	1545	17575201611118007	1,202	1	TAUTOG	1.0	0	20
145	36	PR	INL	PR	228	.	228	we	1545	17575201611118007	1,202	1	CUNNER	0.0	0	20
146	36	PR	INL	PR	228	.	228	we	1600	17575201611118008	1,202	2	TAUTOG	2.0	0	25
147	36	PR	INL	PR	228	.	228	we	1601	17575201611118009	1,202	2	TAUTOG	3.0	0	25
148	36	PR	INL	PR	228	.	228	we	1620	17575201611118010	1,320	2	TAUTOG	0.0	6	14
149	36	PR	INL	PR	228	.	228	we	1658	17575201611118011	1,320	2	BLACK SEA BASS	0.0	0	10
150	36	PR	INL	PR	228	.	228	we	1658	17575201611118011	1,320	2	TAUTOG	0.0	0	25
151	36	PR	INL	PR	58	397	58	we	1235	17575201611119003	4,374	2	STRIPED BASS	1.0	0	1
152	36	PR	INL	PR	228	.	228	we	1200	17575201611125001	2,340	3	STRIPED BASS	0.0	0	3
153	36	PR	INL	PR	228	.	228	we	1220	17575201611125002	2,758	4	TAUTOG	0.0	4	12
154	36	PR	INL	PR	228	.	228	we	1235	17575201611125003	1,921	2	TAUTOG	0.0	0	30
155	36	PR	INL	PR	228	.	228	we	1315	17575201611125004	1,921	2	TAUTOG	0.0	3	4
156	36	PR	INL	PR	228	.	228	we	1350	17575201611125005	2,340	3	TAUTOG	2.2	0	3
157	36	PR	INL	PR	228	.	228	we	1613	17575201611127001	1,213	2	TAUTOG	0.0	0	30
158	36	PR	INL	PR	228	.	228	we	1614	17575201611127002	1,213	2	TAUTOG	0.0	0	30
159	36	PR	INL	PR	606	1300	606	we	1138	17647201611105001	5,063	3		0.0	0	0
160	36	PR	INL	PR	606	1300	606	we	1139	17647201611105002	5,063	3		0.0	0	0
161	36	PR	INL	PR	606	1300	606	we	1140	17647201611105003	5,063	3		0.0	0	0
162	36	PR	INL	PR	228	.	228	we	1625	17647201611112001	1,645	2		0.0	0	0
163	36	PR	INL	CH	37	.	37	we	1535	17649201611119012	1,155	3	BLACK SEA BASS	0.0	3	4
164	36	PR	INL	CH	37	.	37	we	1535	17649201611119012	1,155	3	TAUTOG	0.0	2	25
165	36	PR	INL	CH	37	.	37	we	1536	17649201611119013	1,155	3	BLACK SEA BASS	0.0	3	7
166	36	PR	INL	CH	37	.	37	we	1536	17649201611119013	1,155	3	TAUTOG	0.0	4	25
167	36	PR	INL	CH	37	.	37	we	1537	17649201611119014	1,155	3	BLACK SEA BASS	0.0	4	6
168	36	PR	INL	CH	37	.	37	we	1537	17649201611119014	1,155	3	TAUTOG	0.0	3	25

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M	O	D	O	A	R	n	S	S	T	N	D	w	P	C	A	E	
	E	E	E	m	i	I	I	S	T	T	C	p	A	o	R	L	
O	-	A	-	A	o	T	T	I	k	I	O	-	A	m	L	V	
b	S	F	b	S	F	d	E	E	T	o	M	D	i	R	m	A	E
s	T	X	s	T	X	e	1	2	E	d	E	E	n	T	o	I	S
												t	Y	n	M	T	
1	36	CH	STS	CH	133	134	133	134	wd	1135	1764920161108001	409	2	STRIPED BASS	0.0	0 10	
2	36	CH	STS	CH	133	134	133	134	wd	1135	1764920161108001	409	2	BLUEFISH	0.0	0 1 0	
3	36	CH	STS	CH	133	134	133	134	wd	1136	1764920161108002	409	2	STRIPED BASS	0.0	0 10	
4	36	CH	STS	CH	133	134	133	134	wd	1136	1764920161108002	409	2	BLUEFISH	0.0	1 0	
5	36	CH	STS	CH	37	.	37	we	1520	1764920161119006	18	8	BLACK SEA BASS	0.0	8 10		
6	36	CH	STS	CH	37	.	37	we	1520	1764920161119006	18	8	SCUP	0.0	0 2		
7	36	CH	STS	CH	37	.	37	we	1520	1764920161119006	18	8	TAUTOG	0.0	2 0		
8	36	CH	STS	CH	37	.	37	we	1521	1764920161119007	18	8	ATLANTIC COD	0.0	0 4		
9	36	CH	STS	CH	37	.	37	we	1521	1764920161119007	18	8	BLACK SEA BASS	0.0	6 10		
10	36	CH	STS	CH	37	.	37	we	1521	1764920161119007	18	8	TAUTOG	0.0	2 10		
11	36	CH	STS	CH	37	.	37	we	1522	1764920161119008	18	8	BLACK SEA BASS	0.0	6 12		
12	36	CH	STS	CH	37	.	37	we	1522	1764920161119008	18	8	TAUTOG	0.0	3 4		
13	36	CH	STS	CH	37	.	37	we	1523	1764920161119009	18	8	BLACK SEA BASS	0.0	4 8		
14	36	CH	STS	CH	37	.	37	we	1523	1764920161119009	18	8	TAUTOG	0.0	1 3		
15	36	CH	STS	CH	37	.	37	we	1524	1764920161119010	18	8	BLACK SEA BASS	0.0	5 8		
16	36	CH	STS	CH	37	.	37	we	1524	1764920161119010	18	8	SCUP	0.0	0 1		
17	36	CH	STS	CH	37	.	37	we	1524	1764920161119010	18	8	TAUTOG	0.0	2 0		
18	36	CH	STS	CH	37	.	37	we	1525	1764920161119011	18	8	BLACK SEA BASS	0.0	3 6		
19	36	CH	STS	CH	37	.	37	we	1525	1764920161119011	18	8	TAUTOG	0.0	2 3		
20	36	CH	EEZ	CH	37	.	37	we	1528	1746720161105004	12	10	SMOOTH DOGFISH	0.0	0 6		
21	36	CH	EEZ	CH	37	.	37	we	1528	1746720161105004	12	10	SPINY DOGFISH	0.0	0 1		
22	36	CH	EEZ	CH	37	.	37	we	1528	1746720161105004	12	10	BLACK SEA BASS	0.0	10 4		
23	36	CH	EEZ	CH	37	.	37	we	1528	1746720161105004	12	10	SCUP	0.0	30 12		
24	36	CH	EEZ	CH	37	.	37	we	1528	1746720161105004	12	10	CUNNER	0.0	0 2		
25	36	CH	EEZ	CH	37	.	37	we	1531	1746720161105005	12	10	ATLANTIC COD	0.0	0 3		
26	36	CH	EEZ	CH	37	.	37	we	1531	1746720161105005	12	10	BLACK SEA BASS	0.0	10 15		
27	36	CH	EEZ	CH	37	.	37	we	1531	1746720161105005	12	10	SCUP	0.0	20 10		
28	36	CH	EEZ	CH	37	.	37	we	1539	1746720161105006	12	10	SMOOTH DOGFISH	0.0	0 3		
29	36	CH	EEZ	CH	37	.	37	we	1539	1746720161105006	12	10	SPINY DOGFISH	0.0	0 3		
30	36	CH	EEZ	CH	37	.	37	we	1539	1746720161105006	12	10	BLACK SEA BASS	0.0	9 15		
31	36	CH	EEZ	CH	37	.	37	we	1539	1746720161105006	12	10	SCUP	0.0	15 15		
32	36	CH	EEZ	CH	37	.	37	we	1544	1746720161105007	12	10	ATLANTIC COD	0.0	0 1		
33	36	CH	EEZ	CH	37	.	37	we	1544	1746720161105007	12	10	BLACK SEA BASS	0.0	4 1		
34	36	CH	EEZ	CH	37	.	37	we	1544	1746720161105007	12	10	SCUP	0.0	10 2		
35	36	CH	EEZ	CH	37	.	37	we	1544	1746720161105007	12	10	CUNNER	0.0	0 1		
36	36	CH	EEZ	CH	37	.	37	we	1601	1746720161105008	12	10	UNIDENTIFIED (SHARKS)	0.0	0 1		
37	36	CH	EEZ	CH	37	.	37	we	1601	1746720161105008	12	10	ATLANTIC COD	0.0	1 0		
38	36	CH	EEZ	CH	37	.	37	we	1601	1746720161105008	12	10	BLACK SEA BASS	0.0	0 4		
39	36	CH	EEZ	CH	37	.	37	we	1601	1746720161105008	12	10	SCUP	0.0	0 6		
40	36	CH	EEZ	CH	37	.	37	we	1601	1746720161105008	12	10	CUNNER	0.0	1 0		
41	36	CH	EEZ	CH	133	.	133	we	1155	1746720161126001	46	4	ATLANTIC COD	0.9	0 0		
42	36	CH	EEZ	CH	133	.	133	we	1155	1746720161126001	46	4	BLACK SEA BASS	3.7	0 4		
43	36	CH	EEZ	CH	133	.	133	we	1156	1746720161126002	46	4	BLACK SEA BASS	0.0	0 4		
44	36	CH	EEZ	CH	133	.	133	we	1157	1746720161126003	46	4	BLACK SEA BASS	0.0	0 1		
45	36	CH	EEZ	CH	133	.	133	we	1448	1746720161126004	122	6	SPINY DOGFISH	0.0	0 8		
46	36	CH	EEZ	CH	133	.	133	we	1448	1746720161126004	122	6	ATLANTIC COD	1.3	0 0		
47	36	CH	EEZ	CH	133	.	133	we	1448	1746720161126004	122	6	BLACK SEA BASS	11.0	0 6		
48	36	CH	EEZ	CH	133	.	133	we	1448	1746720161126004	122	6	SCUP	1.0	0 1		
49	36	CH	EEZ	CH	133	.	133	we	1448	1746720161126004	122	6	TAUTOG	0.8	0 0		
50	36	CH	EEZ	CH	133	.	133	we	1550	1746720161126005	57	5	BLACK SEA BASS	0.0	0 4		
51	36	CH	EEZ	CH	133	.	133	we	1550	1746720161126005	57	5	TAUTOG	0.0	1 0		
52	36	CH	EEZ	CH	133	.	133	we	1550	1746720161126005	57	5	CUNNER	0.0	0 1		
53	36	CH	EEZ	CH	133	.	133	we	1553	1746720161126006	57	5	ATLANTIC COD	0.0	1 0		
54	36	CH	EEZ	CH	133	.	133	we	1553	1746720161126006	57	5	BLACK SEA BASS	0.0	2 4		

NY CHARTER BOAT APAIS DATA - WAVE 6, 2016

Table 6. Wave 6, New York Private-Rental Boat Fishing Effort: Coastal Household Telephone Survey Sample Sizes, 2014-2016

Year	Total CHTS sample	Completed Interviews	Fishing Interviews
2014	10,610	908	20
2015	8,982	673	9
2016	10,250	761	16