



Rhode Island Department of Environmental Management
Division of Marine Fisheries

Office 401.423.1920 | Fax 401.423.1925 | dem.ri.gov/marine

Fort Wetherill Marine Laboratory
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Coastal Fisheries Laboratory
1231 Succotash Road, Wakefield, RI 02879



To:

From: Conor McManus, Ph.D.
Chief, Division of Marine Fisheries

Date: December 22, 2023

Re: A summary of the Rhode Island historical quahog wild harvest landings and the quahog fishery fleet demographics

In response to the Special Legislative Quahog Commission tasked with studying and providing recommendations on the issues relating to the reduced catch of quahogs in Narragansett Bay, the RI DEM Division of Marine Fisheries has compiled and summarized relevant quahog fishery dependent data to evaluate the historical changes to the fishery.

Quahogs are one of the top five most valuable commercial species in Rhode Island (\$4.7 million in 2022, a 9% increase from 2021).

Executive Summary:

- Quahog wild harvest and fishery demographics during 2006-2022 are summarized.
- Total number of quahog harvest licenses increased from 472 licenses (2006) to 527 licenses (2022).
- Number of MPURP (multipurpose) and PEL (principal effort) licenses declined.
- Number of SFO65 (over 65 shellfish license) licenses increased from 4 (2006) to 59 (2022).
- Number of CFL (commercial fishing) licenses increased from 31 during 2006 to 102 during 2022.



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- Average number of fishing trips per license peaked in 2012 (61 trips per license per year) and number of trips per year were sustained at 43 to 61 trips per license per year during 2007 to 2019.
- Trips per license per year declined sharply coincident with the 2020 pandemic and in 2021, 2022.
- During 2022 the average number of quahogs harvested per trip varied from 562 to 644 pieces per trip for Student and Over 65 licenses with 1,176 to 1,203 quahogs harvested per trip for PEL and MPURP licenses respectively.
- During 2022 most licenses (405 or approximately 79%) reported fishing on 1 to 51 days per year; 38 licenses (approximately 7%) reported fishing 100 or more days during 2022.
- The RI quahog fleet is aging. The majority (approximately 73%) of active harvesters are greater than 50 years old and the dominant age group (124 individuals, approximately 24% of licensees) is between 63-70 years old. Only 56 individuals (approximately 11% of harvesters) were born during or after 1990.

1. Licensing

Rhode Island's commercial fishing license was retracted in 2003 and most recently in 2023. Between 2003 and 2023 there were five commercial fishing license types, three of these license types were standalone licenses, which means that they don't have any endorsements required to fish them. They are the multipurpose (MPURP) license which allows for the harvest of all marine species in state waters, the student shellfish (STUDSF) and the Over 65 Shellfish license (SF065), both of which allow for the commercial harvest of quahogs at a 3-bushel limit. The other two license types require endorsements to allow for the harvest of specific species groupings in state waters. They are the commercial fishing license (CFL) and the principal effort license (PEL). Since 2003, there have been several changes to the endorsements available for each license based on fishery management needs.

In Figure 1 the number of licenses issued per year only includes licenses that are harvesting quahogs. Between 2006 and 2022. There has been a steady increase in the number of SF065 licenses issued per year with only 4 in 2006 compared with 59 in 2022 (Table 2). With the total number of MPURP and PEL licenses fishing quahogs decreasing between 2006 and 2022 there has been a simultaneous increase in the number of CFL and SF065 licenses harvesting quahogs during the same time period.



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Overall, the total license count harvesting quahogs has increased from 472 in 2006 to 527 in 2022 (Table 1).

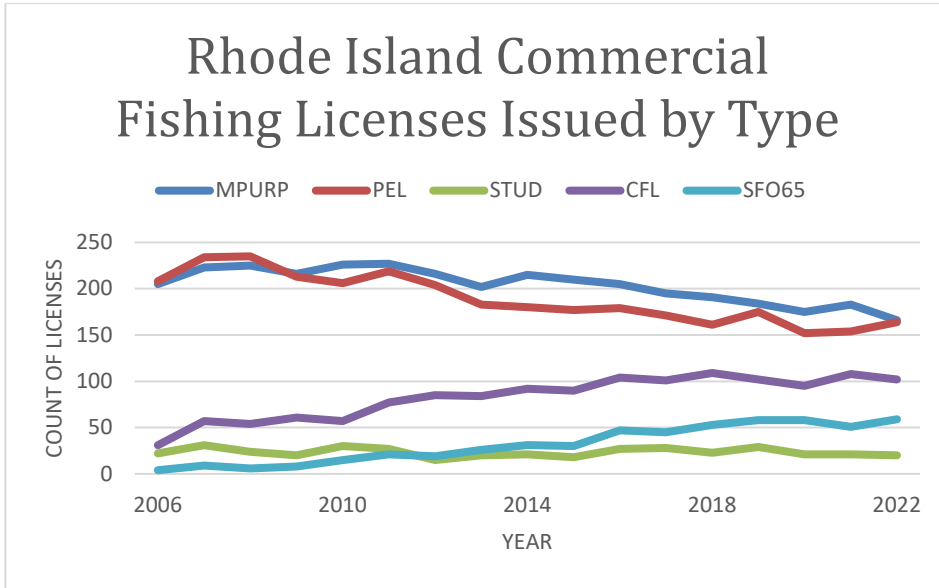


Figure 1. Commercial fishing licenses by year between 2006 and 2022 (only includes licenses that fished quahogs).

Table 1. Number of licenses harvesting quahog by license type between 2006 and 2022.

Landing Year	License Type				
	MPURP	PEL	STUDSF	CFL	SFO65
2006	205	208	22	31	4
2007	223	234	31	57	9
2008	225	235	24	54	6
2009	216	213	20	61	8
2010	226	206	30	57	15
2011	227	219	27	77	21
2012	216	204	15	85	19
2013	202	183	20	84	26



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2014	215	180	21	92	31
2015	210	177	18	90	30
2016	205	179	27	104	47
2017	195	171	28	101	45
2018	191	161	23	109	53
2019	184	175	29	102	58
2020	175	152	21	95	58
2021	183	154	21	108	51
2022	166	164	20	102	59

Table 2. Annual trip counts and license counts for quahogs only. These are total trips taken by license using a unique ID (license number and landing date) so as to minimize duplication of landings in a single day (i.e., if someone sells to two dealers in a single day). These totals are all licenses that fished for quahogs during any given year.

Landing Year	Yearly Trip Count	License Count	Ave. Trip/License Annually
2006	12682	472	26.87
2007	26390	555	47.55
2008	23501	546	43.04
2009	22215	520	42.72
2010	24982	536	46.61
2011	26724	571	46.80
2012	32988	540	61.09
2013	29691	517	57.43
2014	29462	540	54.56
2015	28808	525	54.87
2016	31094	562	55.33
2017	27976	540	51.81
2018	26944	538	50.08
2019	27076	548	49.41
2020	18702	502	37.25
2021	17056	520	32.8
2022	16355	527	31.69



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2. Fishing Effort

Figure 2 depicts the annual average number of trips made by license to harvest quahogs between 2006 and 2022. The average number of trips ranged from 26.8 in 2006 to 61.1 in 2012 (Table 2) with the lowest average number of trips corresponding to the lowest total number of licenses that fished quahogs (472 licenses in 2006). Of those licenses the Principal Effort License (PEL) had the most trips to harvest quahogs over the data series (Table 3 and Figure 3). There was a peak in the average number of trips per license during 2012 and since then there has been a decrease in the average number of annual trips with regards to quahog harvest. A more recent drop in annual trips correlates with the 2020 pandemic, when most fisheries saw a drastic decrease in total landings.

When the average number of trips for quahog harvest is organized by license type (Table 3 and Figure 3) the Principal Effort License (PEL) has the highest number of annual trips during most years followed by the Multi Purpose (MPURP) license (Figure 3). Since 2006 the number of Student Shellfish Licenses (STUD) has decreased but the Shellfish Over 65 (SFO65) licenses has increased. All of the license types had a decrease in the average annual trips in 2020 during the start of the pandemic.

Although there has been an increasing number of SFO65 licenses between 2006 and 2022, the percent quahog fishing activity ($\frac{\text{Active Licenses}}{\text{Total Licenses}} \times 100 = \% \text{ Active Licenses}$) in 2022 shows that the SFO65 license has the lowest fishing activity (Table 4) at 14% activity out of 401 total licenses in 2022 compared to the MPURP with 58% activity out of a total of 264 licenses. Additionally, the average number of quahogs harvested per fishing trip was highest for MPURP and PEL license holders (Figure 4 and Table 5).

In an effort to equate the number of “full time” quahog fishers, we looked at the number of licenses actively harvest over the total number of days per year that they were actively fishing in 2022 (Figure 5). Most licenses (405) only fished between 1 and 51 days out of the year in 2022 (approximately 79%). If a “full time” fisher were to be someone that fished 45 or more days per year, then a total of 128 out of a fleet of 514 active licenses is harvesting quahogs “full time” (approximately 25%). A total of 38 licenses fished 100 or more days in 2022 (approximately 7%).



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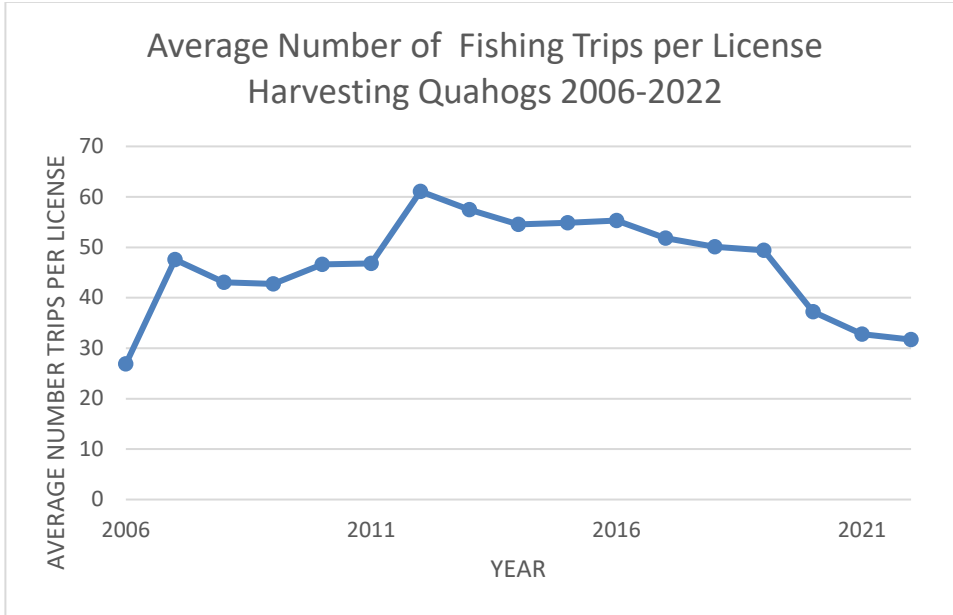


Figure 2. The average number of trips per license by year for quahog only from 2006 to 2022. Average number of trips

Table 3. Average trips per year by license type for quahog only

Landing Year	License Type				
	MPURP	PEL	STUDSF	CFL	SFO65
2006	25.69	31.83	17.5	11.45	1.75
2007	48.76	47.72	17.68	13.3	6.56
2008	44.35	50.66	24.25	18.33	6.16
2009	41.79	53.06	33.9	18.16	11.13
2010	46.98	57.98	19.73	30.04	7.73
2011	51.78	54.59	13.7	31.65	9.76
2012	66.91	69.29	18.8	44.62	17
2013	63.05	70.39	14	38.76	20.12
2014	56.52	69.53	25.62	38.53	22.94
2015	57.73	68.19	21.67	38.83	24.27
2016	62.37	67.16	19.15	41	32.04
2017	60.76	62.22	13.57	34.18	36.82
2018	57.76	65.33	15.09	31.25	30.77
2019	56.75	63.87	10.28	31.21	34.05
2020	45.04	46.09	13.48	21.8	25.14
2021	39.19	41.67	7.62	20.44	21.43
2022	39.78	36.87	8.75	21.53	22.15



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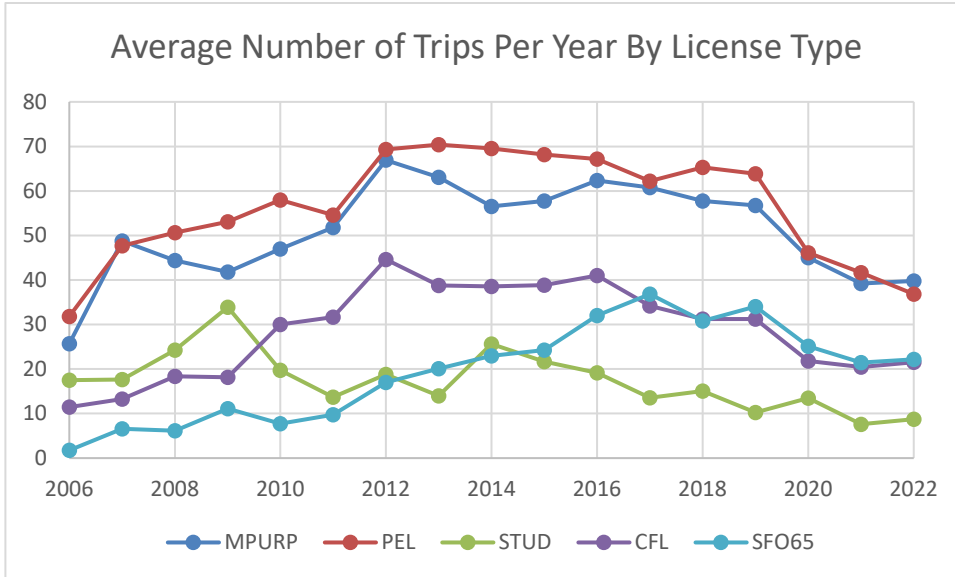


Figure 3. Average trips per year for quahog harvest by license type between 2006 and 2022. These data are displayed in Table 2 and represent the average trips per year for quahog harvest by license type.

Table 4. Summary by license type in 2022 of the percent quahog fishing activity based on the number of days fished (Active Licenses/Total Licenses*100 = % Active)

Row Labels	Sum of Days Fished	Sum of Total Count	Active Licenses	Total Licenses	% Active Licenses
CFL	2196	1719944.5	102	264	38.6
MPURP	6603	7943155.9	166	285	58.2
PEL	6046	7112059.2	164	285	57.5
SFO65	1307	842019	59	401	14.7
STUDSF	175	98297.1	20	41	48.8
Grand Total	16340	17721800.9	527	1276	



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Table 5. Summary of the 2022 license activity with regards to quahog harvest.

License	Average number of days fished	Ave number Quahogs	Ave number Quahogs/day Fished
CFL	21.5	16862.2	783.2
MPURP	39.8	47850.3	1202.9
PEL	36.9	43366.2	1176.3
SFO65	22.2	14271.5	644.2
STUDSF	8.8	4914.9	561.7

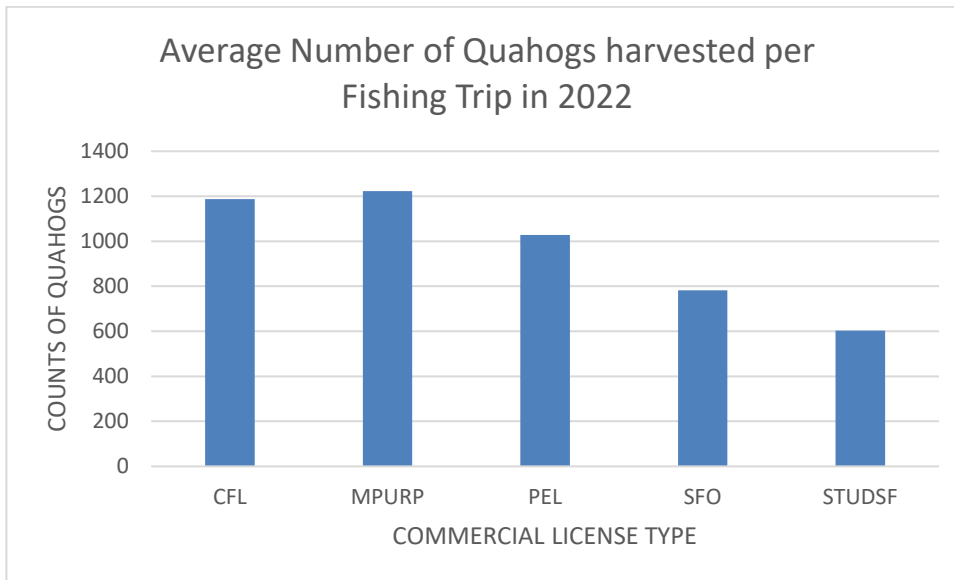


Figure 4. Average number of quahogs harvested per day in 2022 by commercial fishing license type.



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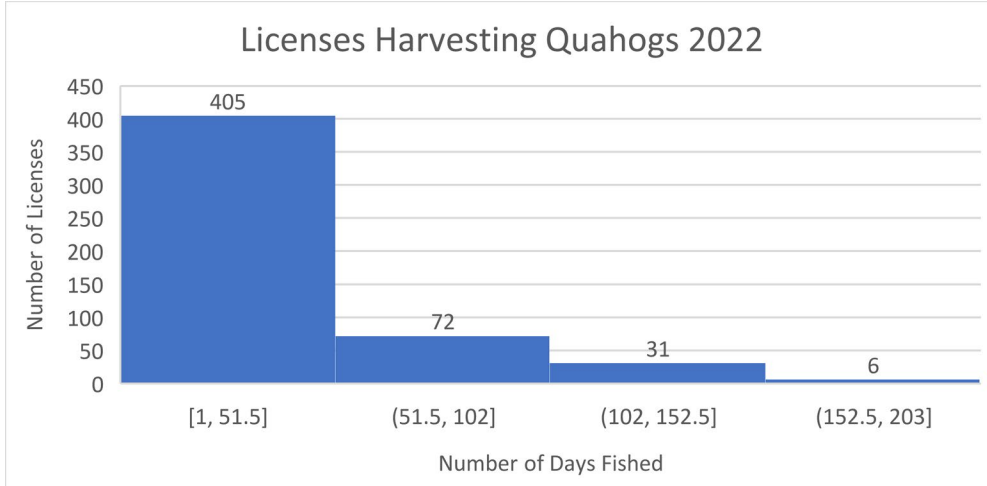


Figure 5. Number of licenses binned by the number of days of active fishing in 2022.

3. Quahog Fleet Age

The quahog fishery in Rhode Island consists of harvesters mostly between the age of 63 – 70 (124 individuals) (Figure 6). The majority of harvesters were born before 1974, which makes them over the age of 50. The number of harvesters born during or after 1990 is 56 individuals and only 11 of them fished 45 days or more in 2022.



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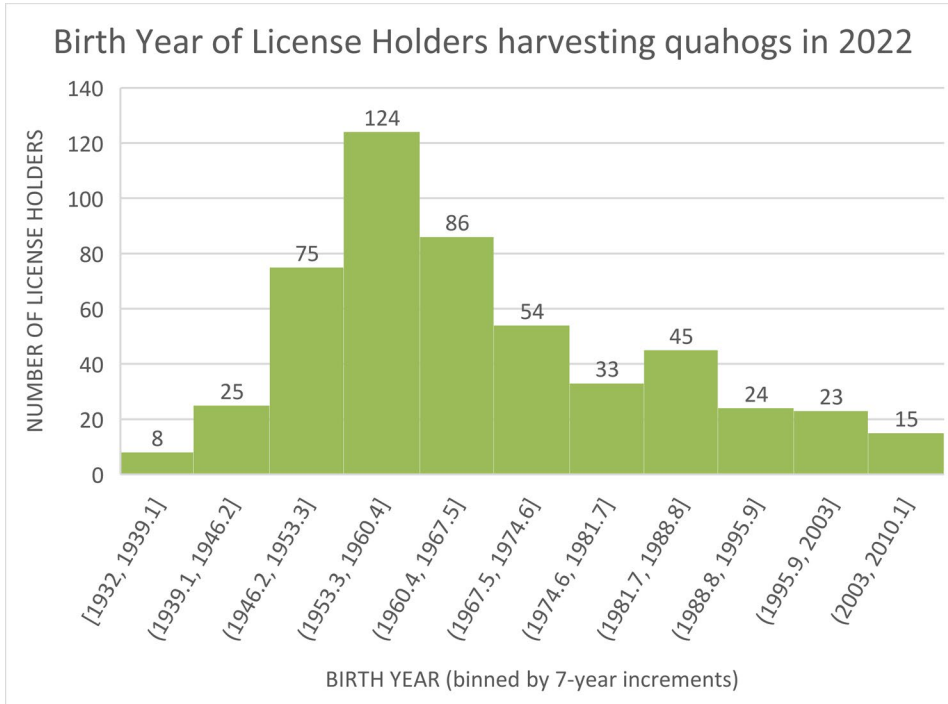


Figure 6. The birth year of license holders harvesting quahogs in 2022 binned by increments of 7 years.