

RECREATIONAL SHELLFISH SURVEY

Town of Falmouth Marine and Environmental Services

Purpose

- Recommended following a meeting between Chris Schillachi (Massachusetts Division of Marine Fisheries Aquaculture Specialist) and MES Deputy Director to obtain a snapshot of a recreational harvesting season
- Quantify an estimate of how much is being harvested recreationally per year
 - Nitrogen removal purposes

Objectives

Main Objective: Quantify an estimate of how much is being harvested recreationally per year

Supplementary Objectives:

- ▣ Calculate department approval rating
- ▣ Shellfish Division feedback and suggestions
- ▣ Volunteer recruitment



Survey Questions

2017 Recreational Shellfishing Survey

Marine & Environmental Services

180 Scanton Ave
Falmouth, MA 02540



The Marine & Environmental Services Department is looking to gather information about shellfishing experiences in the Town of Falmouth. Please complete this short survey to help us learn more about the recreational shellfishing experience.

1. How many times last year did you go shellfishing?

- Once a year Once a month A few times a month Every week

2. On average, each time you went shellfishing, what was your take?

- ¼ peck ½ peck ¾ peck 1 full peck

3. What was the primary species you fished for last year?

- Oysters Quahogs Scallops Softshell clams

4. From which location did you harvest the most shellfish last year?

- Waquoit Bay Eel River East / Eel River West Bourne Pond Green Pond
 Great Pond Little Harbor Woods Hole Great Harbor Woods Hole Quisset
 West Falmouth Megansett / Rand's Canal / Fiddler's Cove

5. How do you rate the availability of shellfish last year (with 1 being totally unsatisfactory amount of available shellfish and 10 being totally satisfactory availability of shellfish)?

- 1 2 3 4 5 6 7 8 9 10

6. Additional Comments:

Methods

- Survey handed out to residents registering for a 2018 license
- Surveys picked up and entered into excel to quantify amount of shellfish harvested from March 1, 2017 – March 1 2018
- Amount of licenses sold last year obtained
 - ▣ Converted survey data to fit the amount of licenses sold to acquire the estimated recreational take
- Data manipulated to visualize take per pond, per frequency, etc.

Data Extrapolation Example

Shellfish Take (after everything was added together and converted to bushels)

Oysters	314.4
Quahogs	1,668.1
Scallops	91.6
Softshell Clams	205.7
Total Shellfish	2,279.8

Licenses sold March 1, 2017 – February 28, 2018

Senior	921
Non-resident	160
Resident	1071
Total	2,152
Total Surveys	847

$$\frac{\text{Shellfish Harvest} \times \text{Total Licenses Sold}}{\text{Total Surveys}} = \text{Estimated Shellfish Take}$$

Estimated Recreational Harvest (bushels)

Oysters	798.8
Quahogs	4,238.2
Scallops	232.7
Softshell Clams	522.6
Total Shellfish	5,792.3

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$$\frac{2,279.8 \text{ bushels} \times 2,152 \text{ licenses}}{847 \text{ surveys}} = 5,792.3 \text{ bushels}$$

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Results

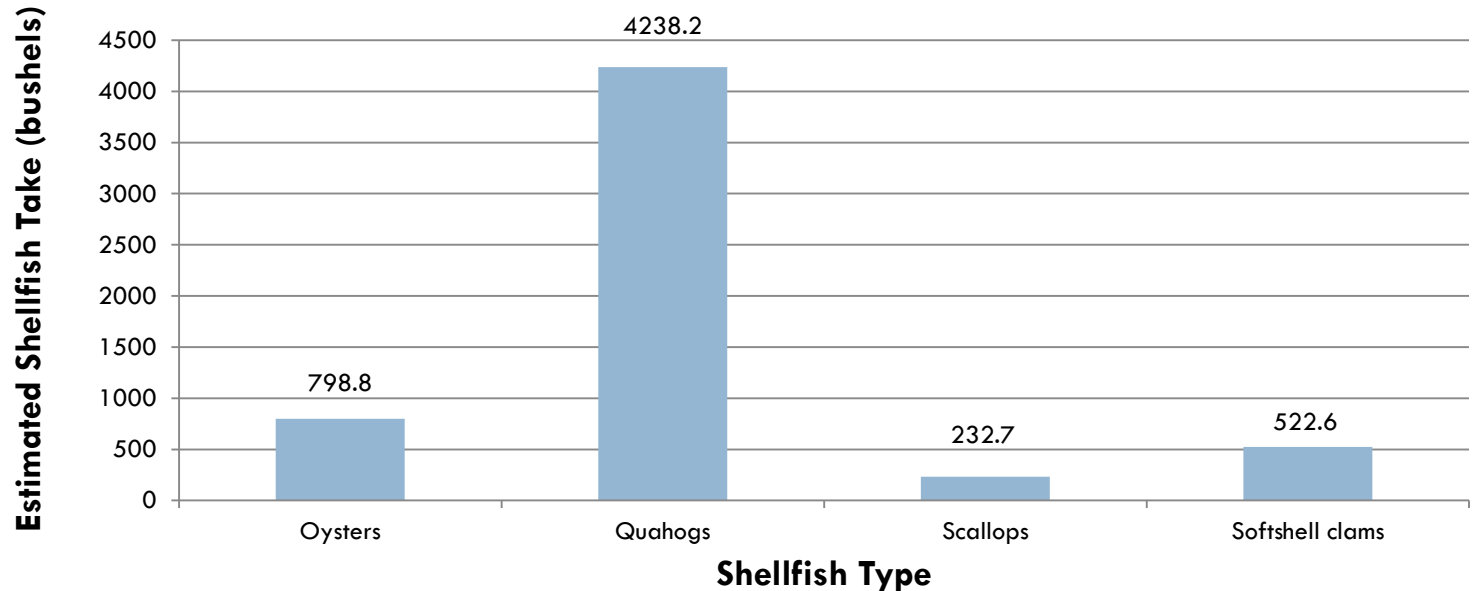
Total Licenses Sold
March 1, 2017 – February 28, 2018

Total Surveys
Recorded – 847

Senior 921
Non-Resident 60
Resident 1071

Total 2,152

Estimated Recreational Shellfish Take March 1, 2017 - February 28, 2018



Estimated total bushels harvested recreationally: 5,792.3

Approval Ratings

Approval Rating of the Department

- Average Rating: 6.91
 - Out of 847 surveys taken
- Based on amount and variety of shellfish available (scale of 1-10)
 - 1: Completely Unsatisfactory
 - 10: Completely Satisfied

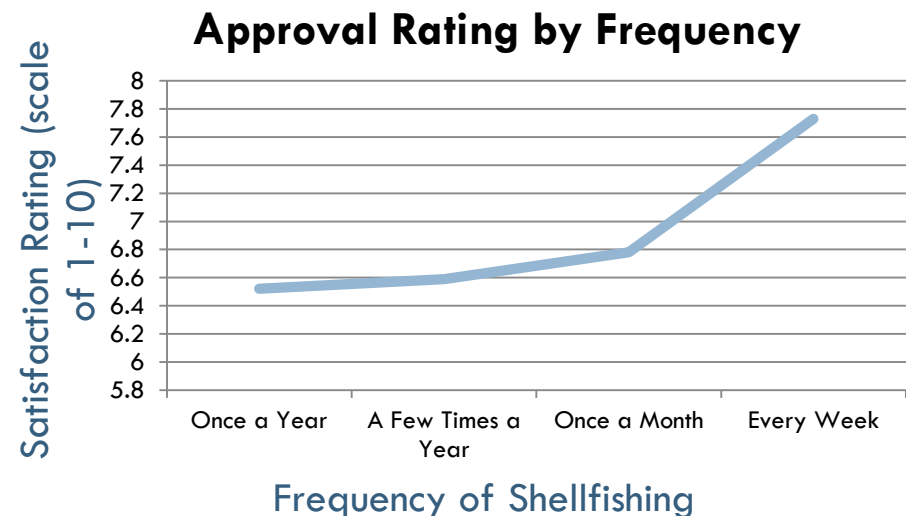
Approval Rating by Pond	
Pond	Approval Rating
Bournes Pond	6.78
Eel River	6.94
Great Pond	7.27
Great Harbor	7.71
Green Pond	7.51
Little Harbor	6
Megansett/Rand's /Fiddler's	6.42
Quisset	6.87
Waquoit Bay	6.7
West Falmouth	6.66

Approval Ratings Continued

Approval Rating by Frequency of Shellfishing per Year

- Once a Year, A Few Times a Year, Once a Month, Every Week
- Approval rating seemed to increase with frequency

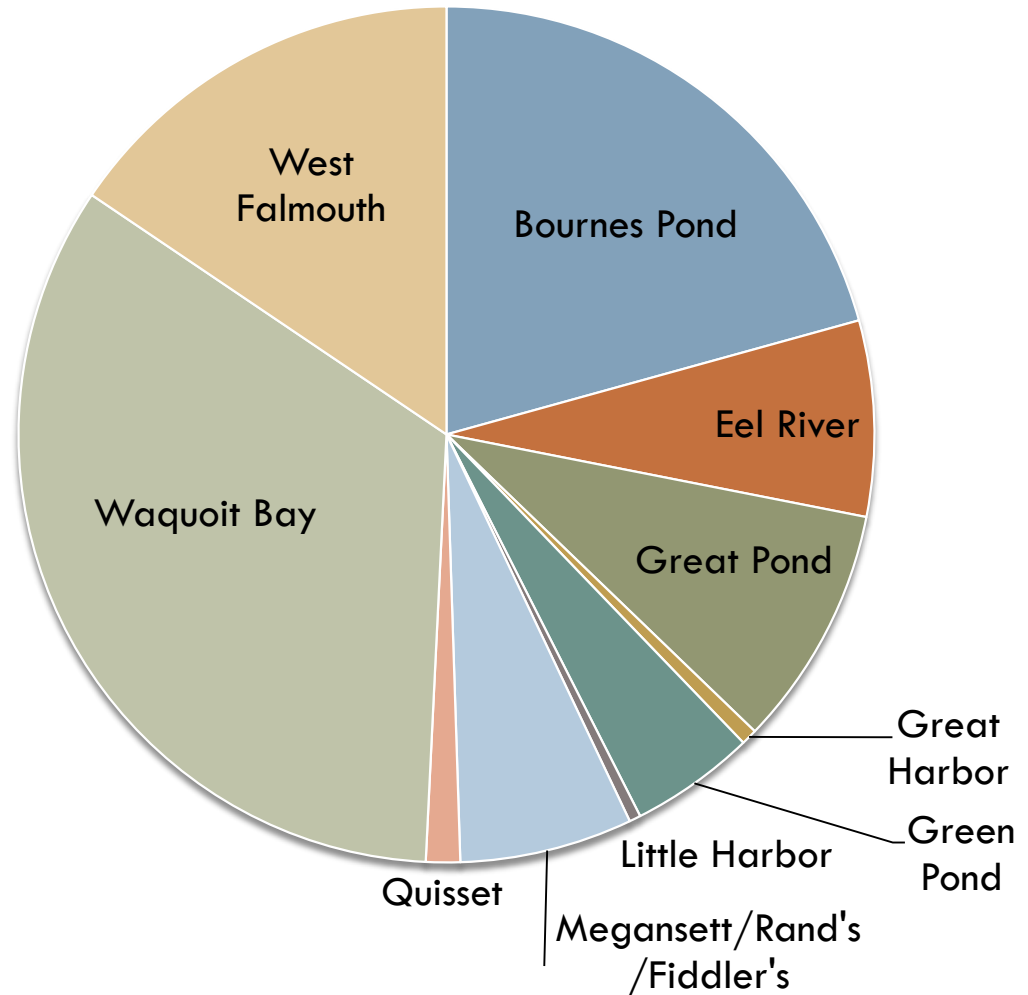
Approval Rating by Frequency	
Frequency	Approval Rating
Once a Year	6.52
A Few Times a Year	6.59
Once a Month	6.78
Every Week	7.73



Most Fished Areas (all shellfish)

Most fished ponds by number of people

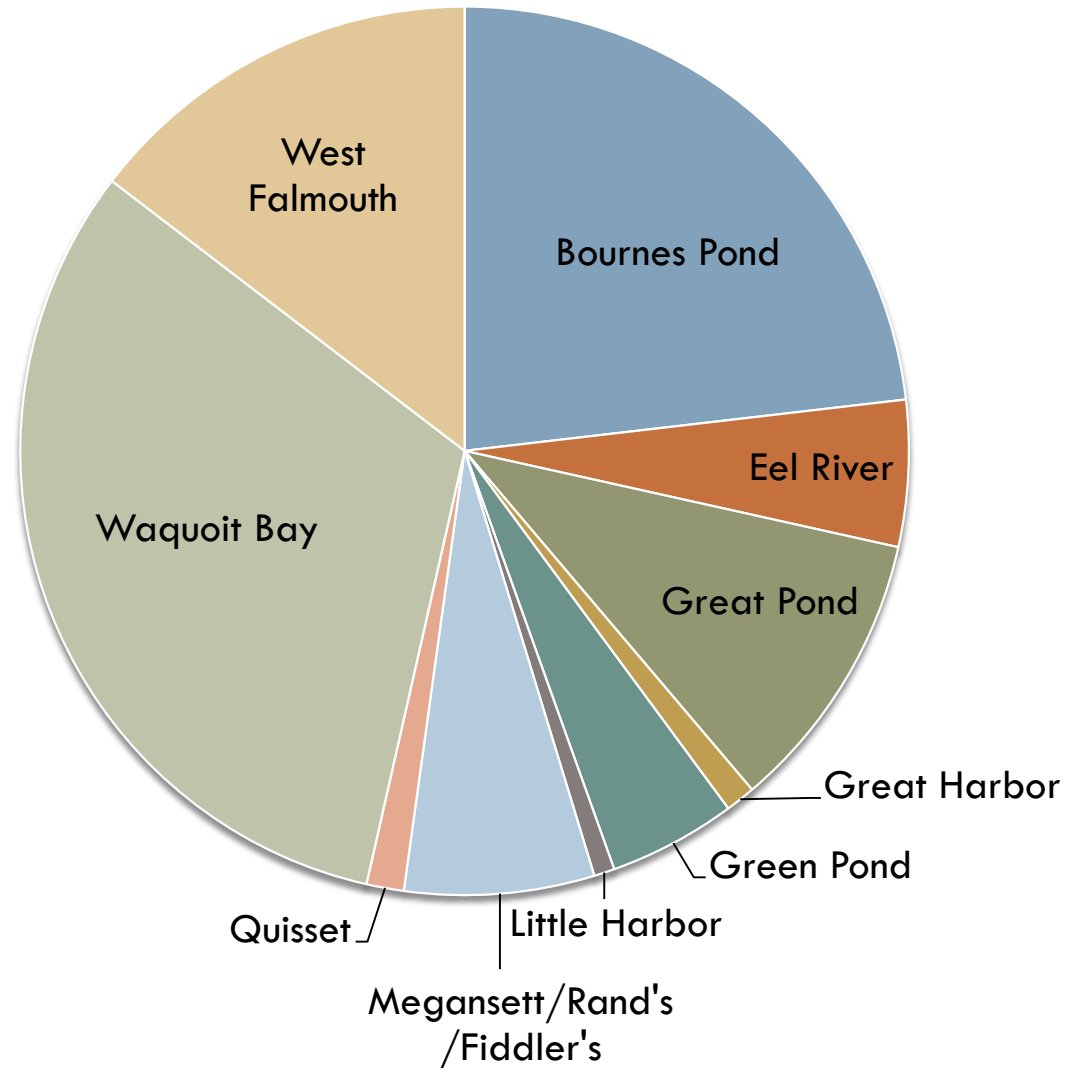
1. Waquoit Bay (392 individuals)
2. Bournes Pond (241 individuals)
3. West Falmouth (181 individuals)



Most Fished Areas (all shellfish)

Most fished ponds by the amount of shellfish taken:

1. Waquoit Bay (~ 726 bushels)
2. Bournes Pond (~527.9 bushels)
3. West Falmouth Harbor (~333 bushels)



Comments & Suggestions

- Out of 847 surveys,
 - ▣ 72 survey takers wrote additional comments
 - 10 program suggestions
 - 17 complaints
 - Lack of shellfish (scallops, softshell clams)
 - Lack of enforcement
 - 12 neutral comments/questions
 - 33 positive comments

Comment Breakdown - Suggestions

- “Classes to learn how to shellfish would be great!”
- “More scallops seeded would be nice”
- “Wishing for steamers”

Comment Breakdown - Complaints

- “Hope the scallop season improves as it was terrible last year.”
- “Hard to find softshell clams.”
- “The word document explaining open areas could be improved upon with maps.”
- “The commercial plungers kill off an awful lot of softies – frustrating.”
- “Illegal clamming is rampant.”
- “Need more shellfish in Great Pond, it’s a great location and it would help with the water quality!”

Comment Breakdown – Positive Feedback

- “Thank you for your hard work. Great to read about your seeding activity.”
- “Keep up the good work!”
- “Great job managing beds!”
- “Thank you for all that you do!”
- “Thank you for the excellent shellfishing in Falmouth!”
- “Loved the seeded oysters in West Falmouth!”
- “Shellfish wardens are terrific.”
- “Great job to all involved – thank you.”

Volunteer Recruitment

- 32.3% of survey participants were interested in volunteering with the shellfish division
 - Those interested left contact information on survey
 - All potential volunteers were contacted
- 38 signed up to join our volunteer notification list
 - 5 of those who signed up, volunteer on a regular basis and have dedicated 141.5 hours to the shellfish program since April 2018



Unexpected Issues

- Survey went out a month late; missed some data points (the most aggressive recreational shellfishermen)
- On survey, area to include information for volunteering includes a place for phone numbers and email instead of just email – makes it difficult to contact everyone (time)
- Clerks have to remember to give out survey; missed some data points

Recommendations for Improvement

- Have surveys ready at the beginning of the year
 - ▣ To not miss a month of valuable data
- Only include an area for email in the volunteer interest section
 - ▣ Can help with contacting volunteers in a timely manner
- Create an easy to use data entry template to use every year
 - ▣ Use a lot less time moving data around and trying to find the best way to enter it

Recommendations for Improvement

- For the harvest of scallops, option for survey takers to check a full bushel amount in addition to $\frac{1}{4}$ peck, $\frac{1}{2}$ peck, $\frac{3}{4}$ peck, and 1 peck.

Actions Taken from Survey Feedback

- Town propagation of bay scallops
 - ▣ Continuation of partnership with local scallop growers
- Development of new visual detailing shellfish area openings/closings dates
 - ▣ Actively working on new maps as well



Questions ?