

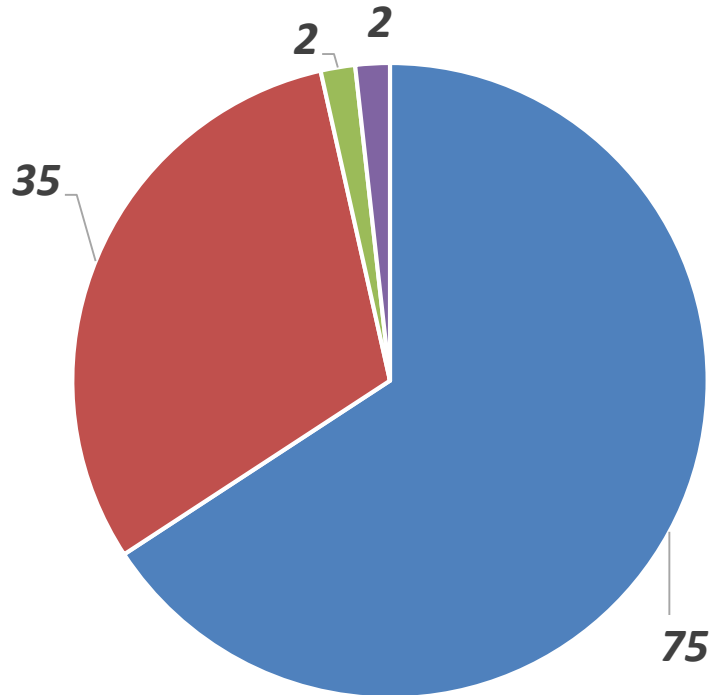
***2020 Annual Meeting***  
***Welcome!***

# Welcome and President's Remarks

~ Seth Garfield, MAA President  
Cuttyhunk Shellfish Farms, Gosnold, MA

# 2019 MAA Email Communications

## *2019 Constant Contact Email*



- Membership
- Trustees
- Committee
- Previous Members

### **By the numbers:**

- 114 Total
- 62.67% average open rate
- 11.9% improvement over 2018!
- Top 10 subjects range 70% - 86% open rate include:
  - MSI updates
  - Regulation Updates/comments
  - Legislation updates
  - Workshops and Meeting Announcements

# ...Communications...Web Page

**MAAquaculture.org**

- Web Committee: Mike Besse, Seth Garfield , Dan Martino and Rick Sawyer

**Massachusetts Aquaculture  
Association**

[HOME](#)

[ABOUT MAA](#)

[RESOURCES](#)

[CONTACT MAA](#)

[MORE ▼](#)

## The Massachusetts Aquaculture Association

MAA is the primary trade association for businesses and organizations directly or indirectly associated with MA aquaculture.

[JOIN MAA](#)



# ...Communications...Web Page

- New and improved communications capacity

## Stay Fresh with MAA's Facebook Feed



## Other Sections:

- ✓ Who we are and contact information
- ✓ Advisories & Announcements
- ✓ Events
- ✓ Resources
- ✓ Membership
- ✓ More???

**Will be seeking your input!**



# ...Communications

## ...Social Media

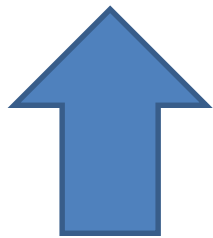


@MASSAQUAASSOC

- 226 Total posts
- Cumulative Post reach of over 61,000
- People want to know more about YOU!
- Very important communications tool!

# Exceeded 1,000 FB followers and over 950 “likes”!

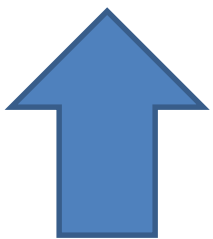
Total Page Followers as of Today: 1,037



**28%**  
followers



Total Page Likes as of Today: 953



**19%**  
likes



# Communications...outreach in 2019

- ✓ **Massachusetts Agriculture Day at the Statehouse**
  - March 27, 2019
  - Seth Garfield, Alex Hay, Michele Insley, John Reeve, Chris Sherman, Steve Wright, Scott Soares
- ✓ **Massachusetts Seafood Day at the Statehouse**
  - Oct. 10, 2019
  - Seth Garfield, Mike Besse, Alex Hay, Scott Soares
- ✓ **MA Farm Bureau Annual Meeting**
  - Dec. 5, 2019
  - Seth Garfield, Kerian Fennelly, Scott Soares
- ✓ **State regulations and Agency communications**
  - 322 CMR 16.00
  - 16.06: Aquaculture (Reserved)?
- ✓ **Local, State and Federal Legislation**
  - Interaction with ECSGA – Federal Legislators
  - New Bedford Aquaculture Regulations

# MSI Update

- **Now Chaired by Dan McKiernan, MDMF**
  - *Had been Co-Chaired EEA Secretary Beaton and Sea Grant Director Charette*
- **Final report now projected for summer 2020**
  - *Had been projected for January 2020*
- **3 Committees**
  - *Assessment, Scoping and Steering*
- **Assessment and Scoping Committee Reports likely in 1-2 months**
- **Next Task Force Meeting TBD**
- **PLEASE Consider Committee Participation**

***[massshellfishinitiative.org/participate.html](https://massshellfishinitiative.org/participate.html)***

# ***MAA MSI Objectives***

- ✓ A statement of priority for commercial aquaculture—its economic, social, and environmental benefits—from the Governor and Legislature with subsequent investment in building a stronger foundation to safeguard the growth achieved by shellfish farmers over the last two decades.
- ✓ Agency funding for research and monitoring—shellfish genetics and breeding; animal health/ disease; food safety; water quality.
- ✓ Enhanced regulatory framework for non-profit and municipal aquaculture projects to prevent siting issues, increased disease pressure, and to eliminate market impact by such projects.

# **HB746**

## **An Act Relative to Shellfish Aquaculture Licensing**

- Rep. Josh Cutler on behalf of MAA
- Significant unanticipated push-back
  - Misperceptions of intent
  - Infringement on “home rule” authority
- Communications efforts to correct not effective
- Requested the Bill be “tabled” pending further discussion (Including via MSI)
- Take Home Lesson:
  - ***COMMUNICATE EARLY, BROADLY AND OFTEN!***

# Stay tuned...Upcoming in 2020

## ✓ **Industry Events**

- WGBY Food & Wine Lovers Weekend – March 6, 2020
- MA Ag Day at the Statehouse – March 25, 2020
- MA Seafood Day at the Statehouse – Oct 2020 TBD

## ✓ **MAA 2020 Committee formation**

- State Policy/Legislation
- Research Guidance
- Finance and Membership

## ✓ **Workshop topics and membership surveys**

- Web page
- Workshop session(s)

## ✓ **MSI**



# Treasurer's Report

- Dave Ryan, MAA Treasurer

# MAA 2018, 2019 Actual, 2020 Targeted Profit and Loss

Actual, Projected and Targeted Profit and Loss	Actual Jan - Dec 18	Target Jan - Dec 19
<u>Income</u>	<u>As of</u>	
Associate Membership Income	\$ 325.00	\$ 650.00
Individual Growers Membership	\$ 4,725.00	\$ 9,450.00
Corporate Membership Income	\$ 6,150.00	\$ 12,300.00
PEARLS		
Contributions		
Grant Income/equity	\$ 29,076.00	\$ 60,000.00
Uncategorized Income	\$ 40.00	\$ 20,000.00
<b>Total Income</b>	<b>\$ 40,316.00</b>	<b>\$ 102,400.00</b>
<u>Expense</u>		
Fees Total		\$ 1,500.00
Bank Service Charges Fees	\$ 40.50	\$ 1,500.00
Credit Card Processing Fees	\$ 38.28	
Annual Report Filing	\$ 15.00	
Dues and Subscriptions	\$ 5,050.00	\$ 11,600.00
Marketing Expense	\$ 892.56	\$ 20,000.00
Meeting Costs Total		
MAA/MSI Admin Travel/Expenses		\$ 3,000.00
MAA Admin	\$ 14,515.00	\$ 20,000.00
MAA Support (Research,Scholarships, etc)		\$ 25,000.00
MSI Project	\$ 14,515.00	\$ 20,000.00
Office Supplies		
Professional Fees	\$ 650.00	
Legal		
Website Expense		
<b>Total Expense</b>	<b>\$ 35,066.34</b>	<b>\$ 101,100.00</b>
<b>Total Income</b>	<b>\$ 5,249.66</b>	<b>\$ 1,300.00</b>

# MAA 2018, 2019 Actual, 2020 Targeted Profit and Loss

Actual, Projected and Targeted Profit and Loss	Actual Jan - Dec 18	Target Jan - Dec 19	Actual Jan - Nov 2019
<u>Income</u>	<u>As of</u>		
Associate Membership Income	\$ 325.00	\$ 650.00	275.00
Individual Growers Membership	\$ 4,725.00	\$ 9,450.00	4,950.00
Corporate Membership Income	\$ 6,150.00	\$ 12,300.00	5,700.00
PEARLS			920.00
Contributions			5,000.00
Grant Income/equity	\$ 29,076.00	\$ 60,000.00	\$ 59,076.00
Uncategorized Income	\$ 40.00	\$ 20,000.00	
<b>Total Income</b>	<b>\$ 40,316.00</b>	<b>\$ 102,400.00</b>	<b>\$ 75,921.00</b>
<u>Expense</u>			
Fees Total		\$ 1,500.00	\$ 153.71
Bank Service Charges Fees	\$ 40.50	\$ 1,500.00	\$ 114.18
Credit Card Processing Fees	\$ 38.28		\$ 9.53
Annual Report Filing	\$ 15.00		\$ 30.00
Dues and Subscriptions	\$ 5,050.00	\$ 11,600.00	\$ 5,065.00
Marketing Expense	\$ 892.56	\$ 20,000.00	\$ 818.18
Meeting Costs Total			\$ 749.91
MAA/MSI Admin Travel/Expenses		\$ 3,000.00	
MAA Admin	\$ 14,515.00	\$ 20,000.00	
MAA Support (Research,Scholarships, etc)		\$ 25,000.00	
MSI Project	\$ 14,515.00	\$ 20,000.00	\$ 42,768.87
Office Supplies			\$ 70.13
Professional Fees	\$ 650.00		
Legal			\$ 1,130.00
Website Expense			\$ 66.68
<b>Total Expense</b>	<b>\$ 35,066.34</b>	<b>\$ 101,100.00</b>	<b>\$ 51,572.39</b>
<b>Total Income</b>	<b>\$ 5,249.66</b>	<b>\$ 1,300.00</b>	<b>\$ 24,348.61</b>

**88% increase  
(Total Income)**

# MAA 2018, 2019 Actual, 2020 Targeted Profit and Loss

Actual, Projected and Targeted Profit and Loss	Actual Jan - Dec 18	Target Jan - Dec 19	Actual Jan - Nov 2019
<u>Income</u>	<u>As of</u>		
Associate Membership Income	\$ 325.00	\$ 650.00	275.00
Individual Growers Membership	\$ 4,725.00	\$ 9,450.00	4,950.00
Corporate Membership Income	\$ 6,150.00	\$ 12,300.00	5,700.00
PEARLS			920.00
Contributions			5,000.00
Grant Income/equity	\$ 29,076.00	\$ 60,000.00	\$ 59,076.00
Uncategorized Income	\$ 40.00	\$ 20,000.00	
<b>Total Income</b>	<b>\$ 40,316.00</b>	<b>\$ 102,400.00</b>	<b>\$ 75,921.00</b>
<u>Expense</u>			
Fees Total		\$ 1,500.00	\$ 153.71
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Marketing Expense	\$ 892.56	\$ 20,000.00	\$ 818.18
Meeting Costs Total			\$ 749.91
MAA/MSI Admin Travel/Expenses		\$ 3,000.00	
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MAA Support (Research,Scholarships, etc)		\$ 25,000.00	
MSI Project	\$ 14,515.00	\$ 20,000.00	\$ 42,768.87
Office Supplies			\$ 70.13
Professional Fees	\$ 650.00		
Legal			\$ 1,130.00
Website Expense			\$ 66.68
<b>Total Expense</b>	<b>\$ 35,066.34</b>	<b>\$ 101,100.00</b>	<b>\$ 51,572.39</b>
<b>Total Income</b>	<b>\$ 5,249.66</b>	<b>\$ 1,300.00</b>	<b>\$ 24,348.61</b>

6% increase  
(PEARLS)

120% increase  
(Grants &  
Contributions)

# MAA 2018, 2019 Actual, 2020 Targeted Profit and Loss

Actual, Projected and Targeted Profit and Loss	Actual Jan - Dec 18	Target Jan - Dec 19	Actual Jan - Nov 2019	Target Jan - Dec 2020	Conditions to achieve target
<u>Income</u>	<u>As of</u>				
Associate Membership Income	\$ 325.00	\$ 650.00	275.00	\$ 750.00	44% increase
Individual Growers Membership	\$ 4,725.00	\$ 9,450.00	4,950.00	\$ 7,500.00	
Corporate Membership Income	\$ 6,150.00	\$ 12,300.00	5,700.00	\$ 7,500.00	
PEARLS			920.00		
Contributions			5,000.00		22% increase
Grant Income/equity	\$ 29,076.00	\$ 60,000.00	\$ 59,076.00	\$ 28,076.00	
Uncategorized Income	\$ 40.00	\$ 20,000.00		\$ 50,000.00	
<b>Total Income</b>	<b>\$ 40,316.00</b>	<b>\$ 102,400.00</b>	<b>\$ 75,921.00</b>	<b>\$ 93,826.00</b>	
<u>Expense</u>					
Fees Total		\$ 1,500.00	\$ 153.71	\$ 962.65	
Bank Service Charges Fees	\$ 40.50	\$ 1,500.00	\$ 114.18	\$ 750.00	
Credit Card Processing Fees	\$ 38.28		\$ 9.53	\$ 100.00	
Annual Report Filing	\$ 15.00		\$ 30.00	\$ 15.00	
Dues and Subscriptions	\$ 5,050.00	\$ 11,600.00	\$ 5,065.00	\$ 11,600.00	
Marketing Expense	\$ 892.56	\$ 20,000.00	\$ 818.18	\$ 10,000.00	
Meeting Costs Total			\$ 749.91	\$ 1,000.00	
MAA/MSI Admin Travel/Expenses		\$ 3,000.00		\$ 5,000.00	
MAA Admin	\$ 14,515.00	\$ 20,000.00		\$ 48,000.00	
MAA Support (Research,Scholarships, etc)		\$ 25,000.00		\$ 10,000.00	
MSI Project	\$ 14,515.00	\$ 20,000.00	\$ 42,768.87	\$ -	
Office Supplies			\$ 70.13	\$ 200.00	
Professional Fees	\$ 650.00			\$ 650.00	
Legal			\$ 1,130.00		
Website Expense			\$ 66.68	\$ 500.00	
<b>Total Expense</b>	<b>\$ 35,066.34</b>	<b>\$ 101,100.00</b>	<b>\$ 51,572.39</b>	<b>\$ 88,815.00</b>	
<b>Total Income</b>	<b>\$ 5,249.66</b>	<b>\$ 1,300.00</b>	<b>\$ 24,348.61</b>	<b>\$ 5,011.00</b>	

# MA State Updates

- *Tom Shields*  
*MA Division of Marine Fisheries*
- *Sean Bowen and Bonita Oehlke*  
*MA Department of Agricultural Resources*
- *Dan Martino*  
*MA Commission on Ocean Acidification*

# MA State Updates

- *Tom Shields*

*MA Division of Marine Fisheries*

# Massachusetts Aquaculture Association

## Division of Marine Fisheries

### Update

**TOM SHIELDS**  
**DIVISION OF MARINE FISHERIES**  
**MASSACHUSETTS DEPARTMENT OF FISH & GAME**



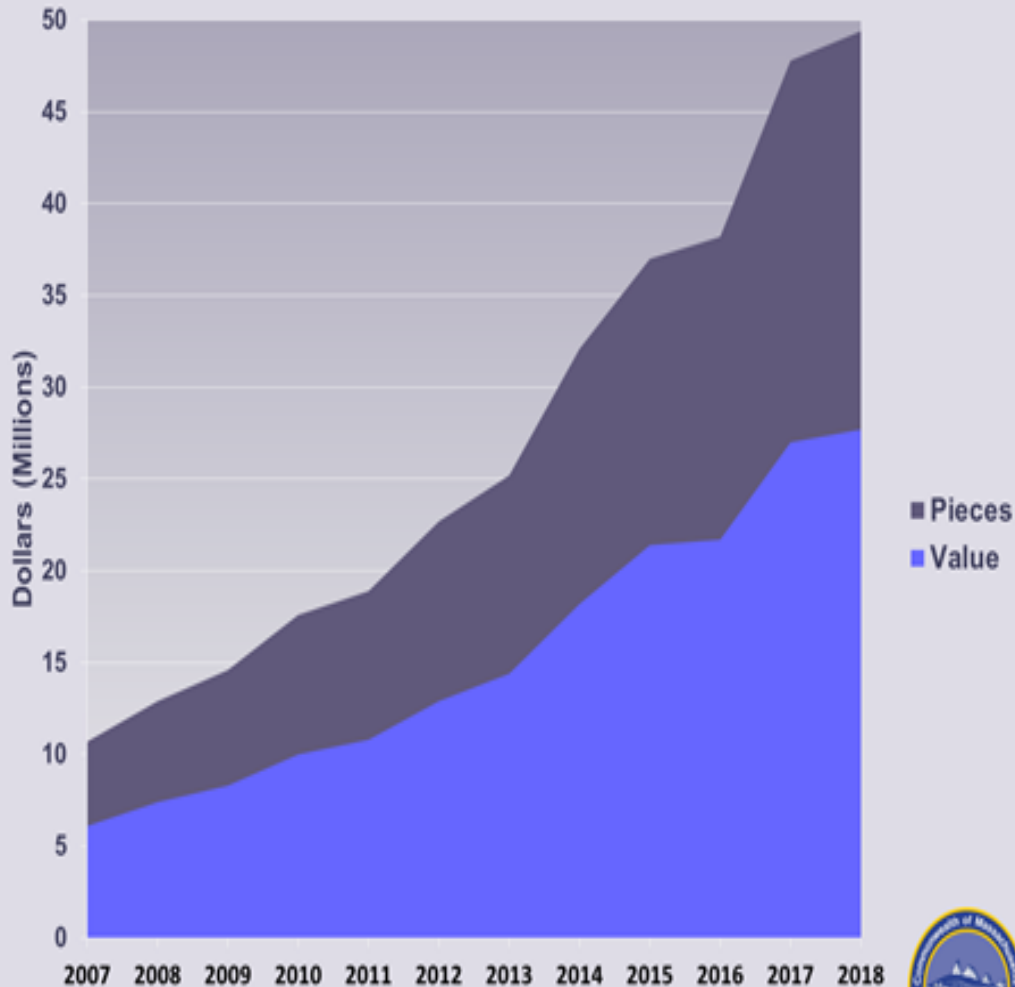


## 2019 private shellfish propagation permits and acreage under cultivation, by municipality

Municipality	# Growers	Total Acres	Species Grown
Aquinnah	1	1.6	Quahog
Barnstable	49	156	Oyster, Quahog, Soft Shell Clam, Surf Clam
Bourne	7	9	Oyster, Quahog, Soft Shell Clam
Brewster	11	10.5	Oyster, Quahog
Chatham	2	7	Oyster, Quahog, Soft Shell Clam, Razor Clam, Sugar Kelp
Chilmark	9	23	Oyster, Blue Mussel, Sugar Kelp
Dartmouth	2	1	Oyster
Dennis	26	32	Oyster
Duxbury	28	77.5	Oyster, Quahog, Surf Clam
Eastham	25	27.6	Oyster, Quahog
Edgartown	13	17	Oyster
Essex	1	8.5	Oyster
Fairhaven	2	38	Oyster, Quahog
Falmouth	9	45	Oyster, Quahog
Gosnold	1	32	Oyster
Ipswich	2	2	Soft Shell Clam
Kingston	3	8.5	Oyster
Marion	4	2.5	Oyster, Quahog
Mashpee	4	18	Oyster, Quahog
Mattapoisett	2	7	Oyster, Bay Scallop
Nantucket	8	73	Oyster, Quahog
Oak Bluffs	2	2	Oyster, Sugar Kelp
Orleans	14	17.5	Oyster, Quahog, Blue Mussel, Surf Clam
Plymouth	30	81.5	Oyster, Quahog, Surf Clam, Bay Scallop
Provincetown	16	30	Oyster, Quahog, Soft Shell Clam, Razor Clam
Rowley	3	4	Oyster, Soft Shell Clam, Razor Clam
Truro	5	20	Oyster
Wareham	7	83	Oyster, Quahog
Wellfleet	93	261	Oyster, Quahog, Soft Shell, Surf Clam, Razor Clam, Blood Arc
Westport	5	80	Oyster, Quahog
Yarmouth	4	27	Oyster, Quahog
Grand Total	391	1202.7	

In 2019, DMF issued shellfish propagation permits to 391 private aquaculture license site holders and 25 municipalities (for public propagation activities) operating shellfish aquaculture projects in over 30 coastal municipalities throughout the Commonwealth.

## Massachusetts Cultured Oysters Landings and Values



Data from SAFIS harvester reported and dealer reported data (some data has been converted from pounds to counts for reporting purposes).



3<sup>rd</sup> most valuable fishery in Mass

Species	Landings (whole pounds)	Value
Sea scallop	336,345,572	\$373,801,862
American lobster	17,495,554	\$87,944,957
Eastern oyster	8,685,949	\$28,384,509

Covers 1,200 acres (0.07%) of state waters

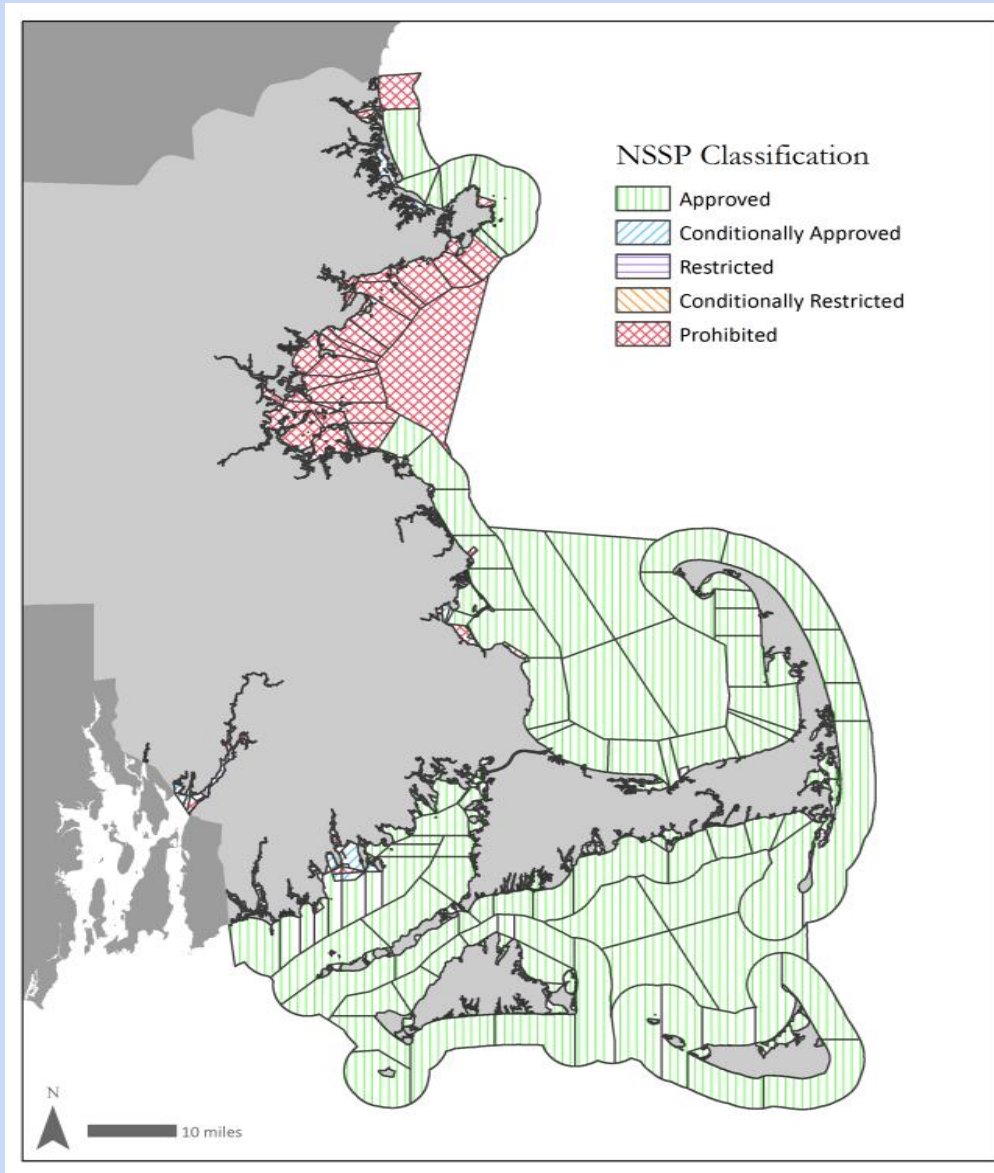


## 2018 Aquaculture Landings and Value. (Source: SAFIS Dealer Reports.)

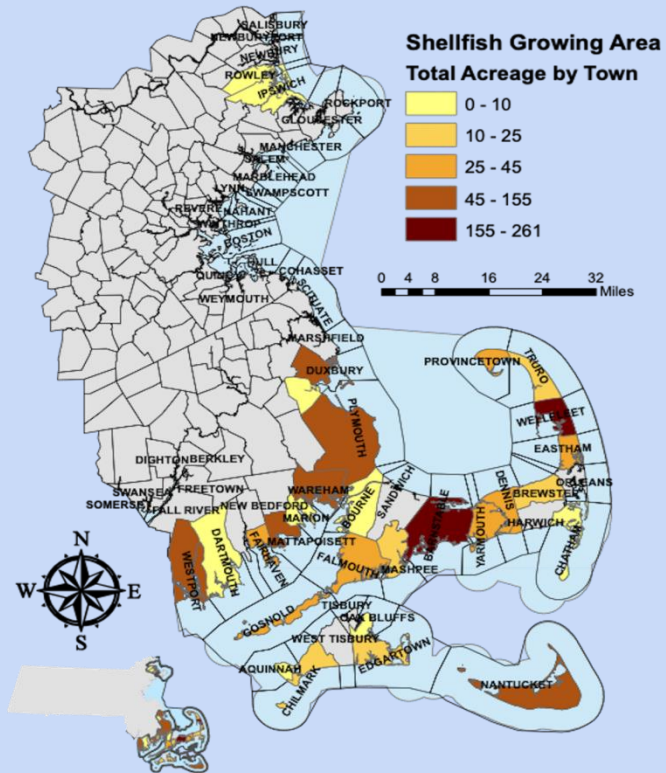
American Oyster		
Town or Region	Pieces	Reported Value
Barnstable	10,685,995	\$5,970,081
Bourne/Falmouth	775,741	\$441,710
Brewster	391,200	\$223,380
Dennis	2,200,411	\$1,248,374
Duxbury	12,038,250	\$6,677,261
Eastham/ Orleans	1,839,710	\$1,037,434
Edgartown	2,620,151	\$1,629,713
Islands	720,399	\$599,019
Kingston	308,440	\$173,186
Marion	70,087	\$33,296
Mashpee	182,400	\$105,585
Outer Cape	789,094	\$463,992
Plymouth	2,029,250	\$1,072,383
South Coast	1,739,420	\$934,544
Wareham	1,550,900	\$896,489
Wellfleet	10,742,506	\$5,756,181
Yarmouth	677,777	\$370,350
Total	49,361,732	\$27,632,978
Quahog		
Town or Region	Pieces	Reported Value
Barnstable	948,731	\$252,810
Eastham/Orleans	50,913	\$12,116
Other areas	66,432	\$15,608
Wellfleet	2,704,270	\$681,433
Total	3,770,347	\$961,966
Total Aquaculture Landings Value		\$28,594,944

**Sole source *Vibrio* cases related to the consumption of MA-harvested shellfish.**

Year	# of Cases
2011	2
2012	9
2013	33
2014	11
2015	28
2016	10
2017	14
2018	10



## New License Certifications in 2019



Town	License Sites	Acres
Barnstable	1	2
Bourne	4	6
Brewster	1	1
Eastham	12	12
Falmouth	6	9
Ipswich	1	1
Mashpee	1	1
Orleans	3	1
Provincetown	4	4
Total	33	37

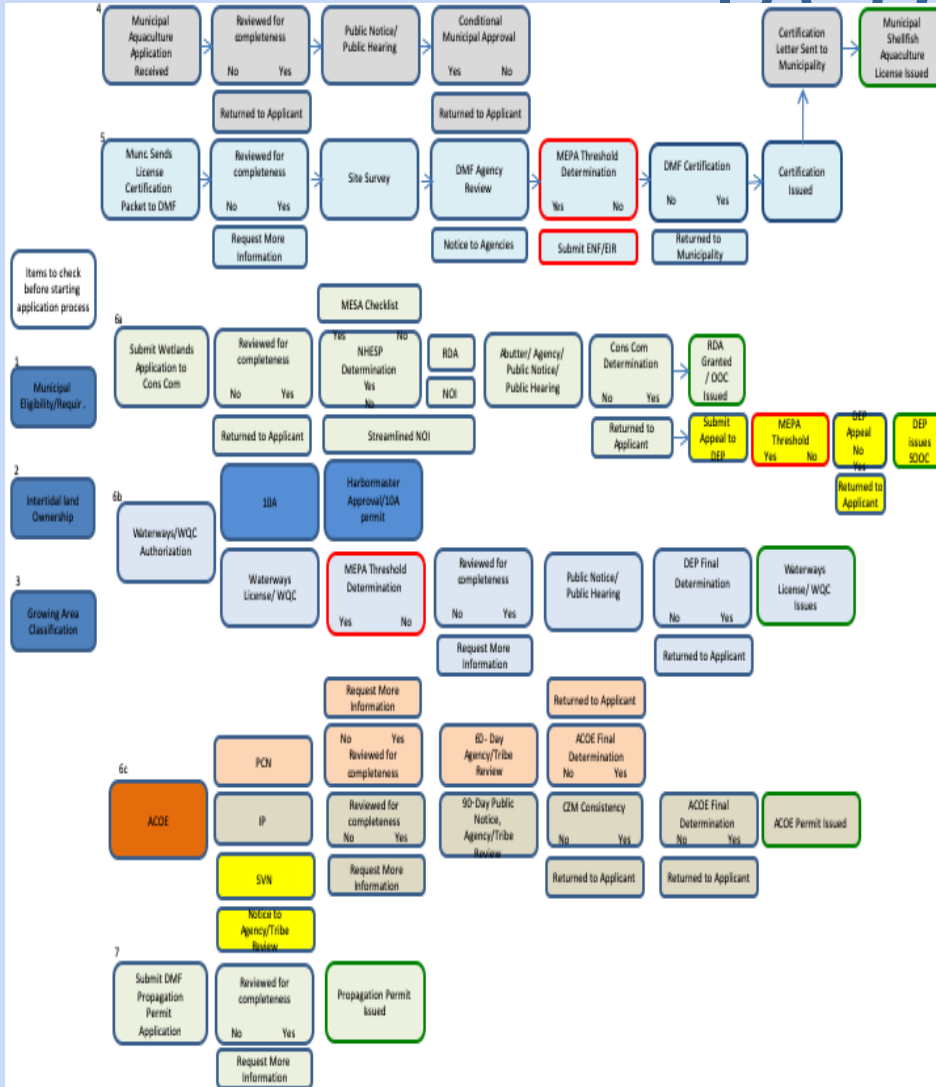
# MAPP in a nutshell

How the state is permitting and managing aquaculture for public health safety, permitting efficiency, and sustainability.

- **Audience:** state resource managers and regulators, aquaculture and propagation project proponents
- **Goals:**
  1. Describe permitting
  2. Identify best management practices and performance criteria for “run-of-the-mill” aquaculture activities
  3. Address cumulative impacts associated with aquaculture



To This:







## Permitting Tool

### START HERE

STEP 1: MUNICIPAL  
ELIGIBILITY

STEP 2: LOCATION OF  
PROPOSED SITE

STEP 3: GROWING  
AREA

STEP 3A:  
CONDITIONALLY  
APPROVED GROWING  
AREA

STEP 4: LAND  
OWNERSHIP

STEP 5: REGULATED  
AREAS/PROTECTED  
RESOURCE AREAS

STEP 6: MUNICIPAL  
LICENSE ISSUANCE

STEP 7: DMF LICENSE  
CERTIFICATION

STEP 8: MEPA

STEP 9: WPA FILING  
(NOI)

STEP 9A: 401 WATER  
QUALITY  
CERTIFICATION

STEP 10: NHESP FILING

STEP 11: CHAPTER 91 &  
SECTION 10A  
WATERWAYS  
PERMITTING

STEP 12: ACOE

STEP 13: DMF  
AQUACULTURE PERMIT

## Description of the Permitting Tool

This section of the website is designed to help growers navigate the permitting pathway in Massachusetts for new farms. It is organized in a step-by-step manner in the order in which various actions are taken to license a site and apply for state and federal permits.

A step-by-step approach suggests that the permitting process is sequential. To some extent it is, but many actions can be taken at the same time (for example, submitting multiple permit applications) or actions can be initiated prior to the completion of previous steps.

*Note: the permitting required for each jurisdiction (municipal, state, and federal) as well as within a jurisdiction (e.g. Mass DEP and Mass DMF) is separate. There are intersections and redundancies in the permitting processes, and the agencies endeavor to work together to provide coherent guidance. However, each permit application to an agency is unique. Larger and more novel projects (or gear types) typically involve more permitting review.*

We recommend reviewing each step before beginning the permitting process. This will help you become more familiar with the process and identify information needs that overlap across different permit applications. Also, you will be able to identify various permit thresholds and costs which could be relevant to your project planning.

I'M READY FOR STEP ONE



# Next Steps - MAPP

- Continue to redraft current document
  - Incorporate comments from agencies
  - Meet with agencies 1 on 1

## Next Steps - Website

- Content needs to be edited – looking for volunteers!  
<https://www.massaquaculturepermitting.org/>
- Outreach to growers
  - Is the format intuitive?
  - Does the website provide the information you need?







# MA State Updates

- *Tom Shields*

*MA Division of Marine Fisheries*

- *Sean Bowen and Bonita Oehlke*

*MA Department of Agricultural Resources*

# **MDAR Update**

## **MAA Annual Meeting**

**Jan 14, 2020**

Sean Bowen, Aquaculture Specialist

[Sean.Bowen@state.ma.us](mailto:Sean.Bowen@state.ma.us)

617-626-1724

Bonita Oehlke, Market Development

[Bonita.Oehlke@state.ma.us](mailto:Bonita.Oehlke@state.ma.us)

617-626-1753



# **Grant Programs**

**Agricultural Environmental Enhancement Program (AEEP)**

**Agricultural Energy Grant Program (ENER)**

**Matching Enterprise Grants for Agriculture (MEGA)**

## **Agricultural Environmental Enhancement Program (AEEP)**

- Competitive, reimbursement program
- Funds conservation practices that reduce or prevent negative impacts to natural resources – air or water quality - that may result from agricultural practices.
- \$25,000 awarded on a competitive basis

## **Agricultural Environmental Enhancement Program (AEEP)**

Commonly help fund more efficient outboard motors, but could apply to other efforts to improve water quality.

2015-2020    \$28,750



# **Agricultural Environmental Enhancement Program (AEEP)**

Contact: Laura Maul

617-626-1739

[Laura.maul@mass.gov](mailto:Laura.maul@mass.gov)

## **Agricultural Energy Grant Program (ENER)**

- \*Reimbursement grants of up to \$25,000
- Awarded on a competitive basis
- Funds projects to improve energy efficiency and adoption of alternative energy for agricultural operation.
- Goal to make farms more sustainable

\*Special projects can have a higher limit

## **Agricultural Energy Grant Program (ENER)**

- Examples of priority projects include; photovoltaics, wind, and solar thermal
- Have funded energy efficient cooler and HVAC systems, various PV applications including Solar PV Canopies over raceways, roof mounted, battery storage, upwellers, etc.

**2015-2020: \$237,505**

# **Agricultural Energy Grant Program (ENER)**

Contact: Gerry Palano

617-626-1706

[gerald.palano@mass.gov](mailto:gerald.palano@mass.gov)

## **Matching Enterprise Grants for Agriculture**

- Beginning farmers – 1-5 years
- Provides business planning and farm improvement strategies
- Grant funding \$10,000 with 1:1 match
- Used for infrastructure or equipment purchases



- **Matching Enterprise Grants for Agriculture**

Funding 2015-2020: \$54,425

# Matching Enterprise Grants for Agriculture

**MEGA Contact:**

Deanna Levanti

[beginningfarmercoordinator@gmail.com](mailto:beginningfarmercoordinator@gmail.com)

## Aquaculture Center Funding

- FY 20 - \$50,000
- 2018 Env Bond Funding \$300K
- Work into 2021 EEA Spending Plan
- Multi-year contract?
- Hoping to have Centers meeting in February.



# EU Market Access

Nothing new really.

Slow progress. No target dates.

Trade wars making progress unlikely.

Current administration has 25% tariffs on EU seafood.

USTR: dissatisfaction re: trade imbalance in processed shellfish products to the US.

# Seafood Buyers Mission

## SEAFOOD EXPO NORTH AMERICA

Sat, MARCH 14, 2020 | BOSTON

International buyers interested in northeast seafood products including oysters.

Register early - meeting slots are scheduled first come, first served.

**Early Registration: Jan. 17, Final: Feb 7, 2020**

## SEAFOOD EXPO NORTH AMERICA

MARCH 15 – 17, 2020 | BOSTON

MDAR & DMF are organizing 2nd Mass Ave at SENA

The USDA cost share offsets 50% of eligible expenses including the booth & equipment

DMF funds support Mass Ave promotion & merchandising

# 2<sup>nd</sup> annual Mass Ave

Who's where:

#2989 (20-feet) Intershell International

#2987 Plymouth Rock Oyster Co.

#2985 John Nagel

#2981 North Atlantic Pacific Seafood

#2979 Red's Best

#2977 Cape Seafood

#2975 Cape Ann's Lobstermen

#2973 OPEN

Across the Aisle: Channel Fish



# Oyster Video

Oct 2019. Using ATP funds, PR firm filmed oyster farms & buyers in MA, CT & RI

Objective: educate international buyers re: regional shellfish products, nuanced flavor profiles & attributes

Production is ongoing - will keep you posted

B-roll film available soon to participants

# Oyster Market Research

Food Export, (of which MDAR is a member) has contracted for Northeast oyster research re: new markets & opportunities.

Research from Hong Kong, China & n. Europe (even though that market's still closed) is at:  
<https://www.foodexport.org/programs-services/seafood-program/oyster-research-presentations>

Next: Taiwan and s. Europe.

## Rep Finder Program

Distribution Analysis: brand names, packages, sizes, retail prices, & shelf space allotments for similar products.

Competitive Products: samples of competing products

Importation Analysis: Import regulations & restrictions

Distributor Referrals: Importer feedback on package size, label, taste, appearance, price & marketability.

Importer list: contacts, importers' profile summary.



# Ag Day at the statehouse

**March 25, 2020**

Contact Farm Bureau, Doug Gillespie:  
[doug@massfarmbureau.com](mailto:doug@massfarmbureau.com)



# Thank you!

Sean Bowen, Aquaculture Specialist

[Sean.Bowen@state.ma.us](mailto:Sean.Bowen@state.ma.us)

617-626-1724

Bonita Oehlke, Market Development

[Bonita.Oehlke@state.ma.us](mailto:Bonita.Oehlke@state.ma.us)

617-626-1753

# MA State Updates

- *Tom Shields*  
*MA Division of Marine Fisheries*
- *Sean Bowen and Bonita Oehlke*  
*MA Department of Agricultural Resources*
- *Dan Martino*  
*MA Commission on Ocean Acidification*

# Lawyer's Corner; Legal Considerations for you Farm

- *Chris Davidson,*  
*Berluti McLaughlin & Kutchin LLP*

Christopher J. Davidson, Esq.  
Berluti McLaughlin & Kutchin LLP  
44 School St Boston, MA 02108  
T: (617)557-3030  
([cdavidson@bmklegal.com](mailto:cdavidson@bmklegal.com))



# STARTING YOUR BUSINESS

# FIRST STEP

- ▶ 1. DEVELOP YOUR A –TEAM
- ▶ 2. HAVE A PLAN



I love it  
when a  
plan  
comes  
together

# YOUR TEAM

- ▶ 1. EXPERIENCED FARMER
- ▶ 2. AN ACCOUNTANT FAMILIAR WITH THE INDUSTRY
- ▶ 3. ATTORNEY
- ▶ 4. INSURANCE AGENT



# WHAT BUSINESS ENTITY SHOULD I FORM

## ▶ CONSIDERATIONS:

- ▶ Tax advantages
- ▶ Liability
- ▶ Succession Plan (restricting interests)

# OPTIONS

- ▶ 1. Partnership
- ▶ 2. Corporations and LLC's
- ▶ 3. Sole Proprietor

# PARTNERSHIP

- ▶ Ways to create a partnership:
  - ▶ Written agreement
  - ▶ By conduct
    - ▶ Sharing profits and losses
    - ▶ Exception: pay profits to compensate for debt

# TERMINATION OF PARTNERSHIP

- ▶ Termination by:
  - ▶ Death, retirement, withdrawal, expulsion, incapacity, bankruptcy, court order
- ▶ If one person terminates, IT DOES NOT terminate partnership among others, unless there is a death

# LIABILITY IN A PARTNERSHIP

- ▶ NO LIMITED LIABILITY
- ▶ Generally liable for all conduct committed by your partner

# CORPORATIONS AND LLC'S

- ▶ OPTIONS:

- ▶ C-Corp
  - ▶ S-Corp (limited number of shareholders)
  - ▶ LLC
- ▶ Selection typically driven by tax benefits

# CREATION AND TERMINATION

- ▶ Creation

- ▶ By agreement only
  - ▶ Compliance with state law

- ▶ Termination

- ▶ No annual registration renewal
  - ▶ By agreement OR by court order



# LIABILITY IN A CORPORATION

- ▶ Protected by corporation unless you pierce the corporate veil:
  - ▶ Intermingling funds, funds used for personal expenses wholly unrelated to business expenses

# SOLE PROPRIETOR

▶ NO LIABILITY PROTECTION

# PART II

## AM I GOING TO HAVE EMPLOYEES?

# CONSIDERATIONS

## INDEPENDENT CONTRACTOR

### VS.

## EMPLOYEE

# LABELS DO NOT MATTER

- ▶ Understand the relationship
- ▶ In Massachusetts, the presumption is that you have an employee

# TEST – INDEPENDENT CONTRACTOR STATUTE

- ▶ A person is presumed to be an employee unless:
  - ▶ Free from direction or control;
  - ▶ Service performed is outside the usual course of employment; and
  - ▶ The employee is customarily employed in that profession or service



# EXAMPLES OF TRUE INDEPENDENT CONTRACTORS

- ▶ Hiring an accountant for a carpet cleaning company
- ▶ Hiring a property manager for a building that you own
- ▶ TIP: every case is different, you must look at all the facts

# CONSEQUENCES OF MISCLASSIFYING AN INDEPENDENT CONTRACTOR

- ▶ 1. Minimum wage (\$12.75/hour)
- ▶ 2. Overtime (over 40 hours)
- ▶ 3. Insurance (worker's compensation)
- ▶ 4. Personal Liability (Treble Damages/Atty Fees)
- ▶ 5. Payroll taxes

# EXIT STRATEGY

- ▶ CONSIDERATIONS
  - ▶ LEGAL RIGHT TO TRANSFER
  - ▶ FARM VALUATION

# RIGHT TO TRANSFER

## ▶ TAKEAWAYS

- ▶ Municipal approval needed
- ▶ Town is not required to award shellfish license to first qualified applicant;
- ▶ Purpose of M.G.L. c. 130, s. 57 is
  - ▶ not intended to create barriers to entry in aquaculture industry and
  - ▶ intended to protect the investment of licenses
- ▶ Transferring to family members is appropriate, even if family members are not experienced shellfish farmers

# RIGHT TO TRANSFER

- ▶ Recent Developments:
  - ▶ Town of Plymouth
  - ▶ Proposed state legislation, House Bill 746
  - ▶ Trend in nearby states

# FARM VALUATION

- ▶ CONSIDERATIONS FOR SELLING YOUR FARM
  - ▶ NO LAW PROHIBITTING THE SALE OF YOUR BUSINESS
  - ▶ SELLING A BUSINESS vs. SELLING A PROPERTY INTEREST
  - ▶ VALUATION MIGHT INVOLVE AN ACCOUNTANT TO ASSESS
    - ▶ PROFIT AND LOSS OF THE BUSINESS
    - ▶ ASSETS (WITH DEPRECIATION)
    - ▶ GOODWILL OF THE BUSINESS



Christopher J. Davidson, Esq.  
Berluti McLaughlin & Kutchin LLP  
44 School St Boston, MA 02108  
T: (617)557-3030  
([cdavidson@bmklegal.com](mailto:cdavidson@bmklegal.com))

# Legislative/Policy Update

- *Brad Mitchell*  
*Massachusetts Farm Bureau Federation*

# Aquaculture Centers Update

- *Josh Reitsma*

*Southeastern Massachusetts Aquaculture Center  
(SEMAC)*

- *Joe Buttner*

*Northeastern Massachusetts Aquaculture Center  
(NEMAC)*



# SEMARC Updates

2020 MAA Annual Meeting  
1/14/2020

# SEMAC Changes



- Josh Reitsma, Fisheries & Aquaculture Specialist
- Abigail Archer, Fisheries & Aquaculture Specialist
- Harriet Booth, Marine Resource Specialist
- Diane Murphy, WHOI Guest Investigator – Mostly retired
  - [dmurphy@whoi.edu](mailto:dmurphy@whoi.edu)
- Staffed by Cape Cod Cooperative Extension & Woods Hole Sea Grant

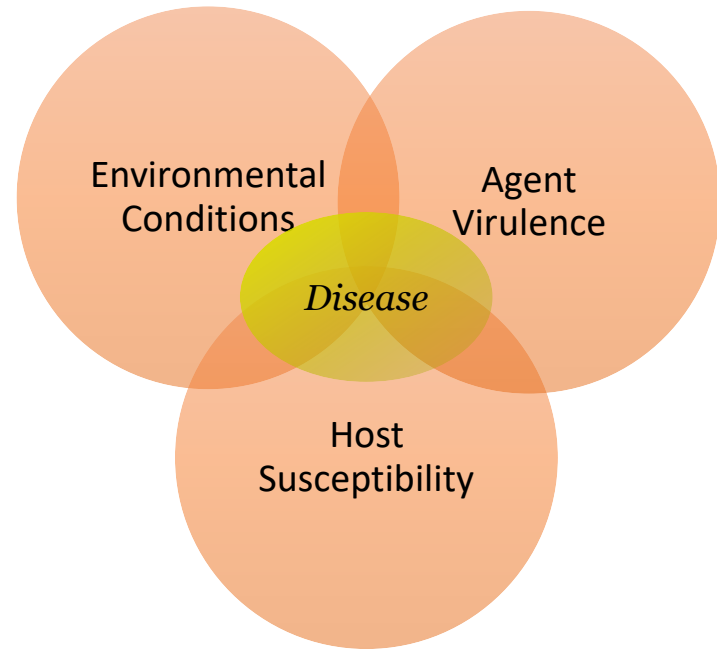
# SEMAC Funding

- Received \$29,900 in 2019 – all for projects
- After consultation with Board of Directors
  - \$17,910 for oyster disease monitoring
  - \$9,000 for water quality monitoring
  - \$2,990 admin costs
- Funding has been down in recent years
  - Haven't done mini-grant program since 2012
  - Research farm projects, looked for other funding
- There is \$300k in the Env Bond Bill for Centers
  - Not sure when or how this will be allocated



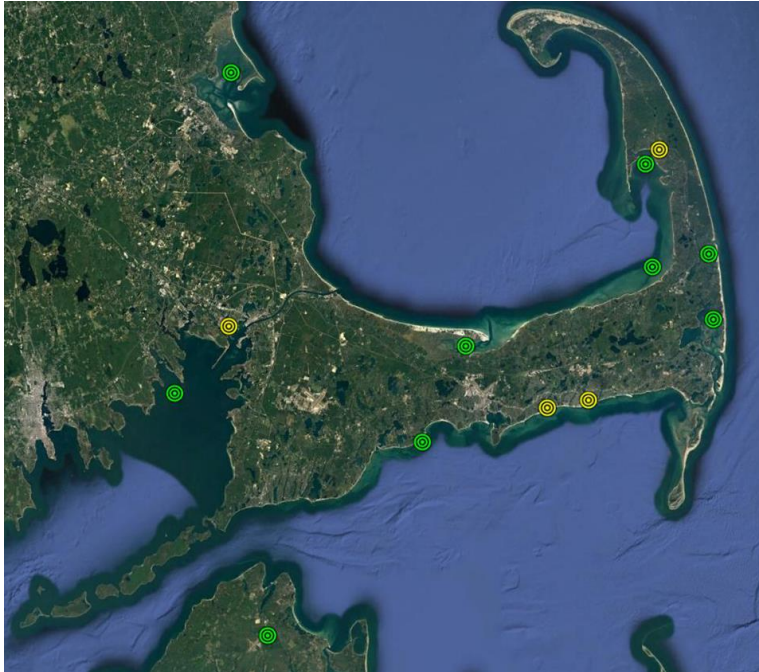
# Shellfish Disease Monitoring (DRN)

- Long term baseline data
- Detect presence of disease(s)
- Spatial occurrence
- Information for growers and resource managers
- Data to inform resource and farm management decision-making
- Note: All data shown are pooled by area or region – to protect anonymity of growers participating



# Disease Research Network (DRN)

## - Oysters



Tested oysters at 32 sites in 2019

- 28 aquaculture – 9 regions
  - Added 6 sites with USDA \$
- 4 wild sites

Investment ~\$30,000 in 2019

**Important!**

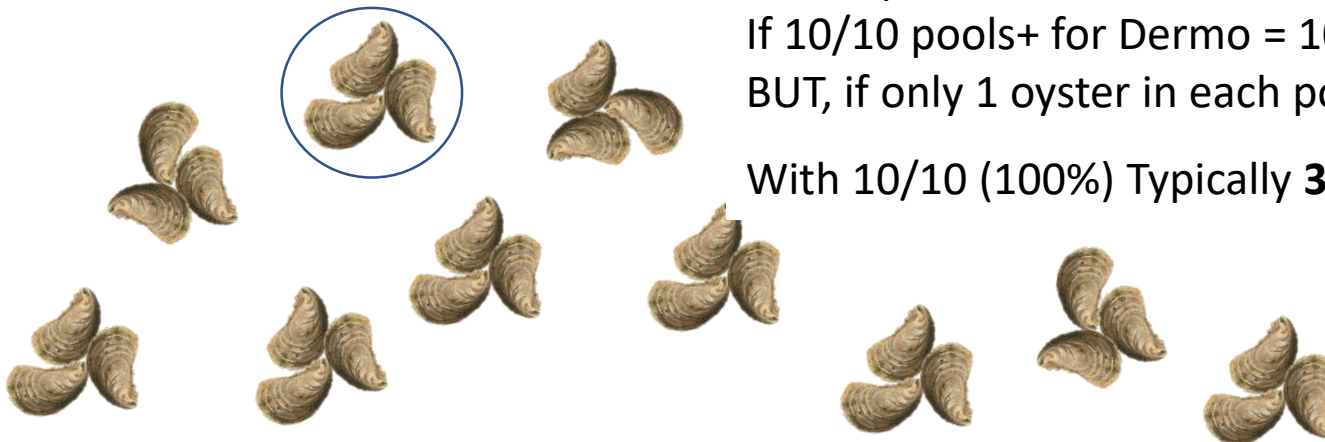
Understanding the Results:

Run in pools of 3

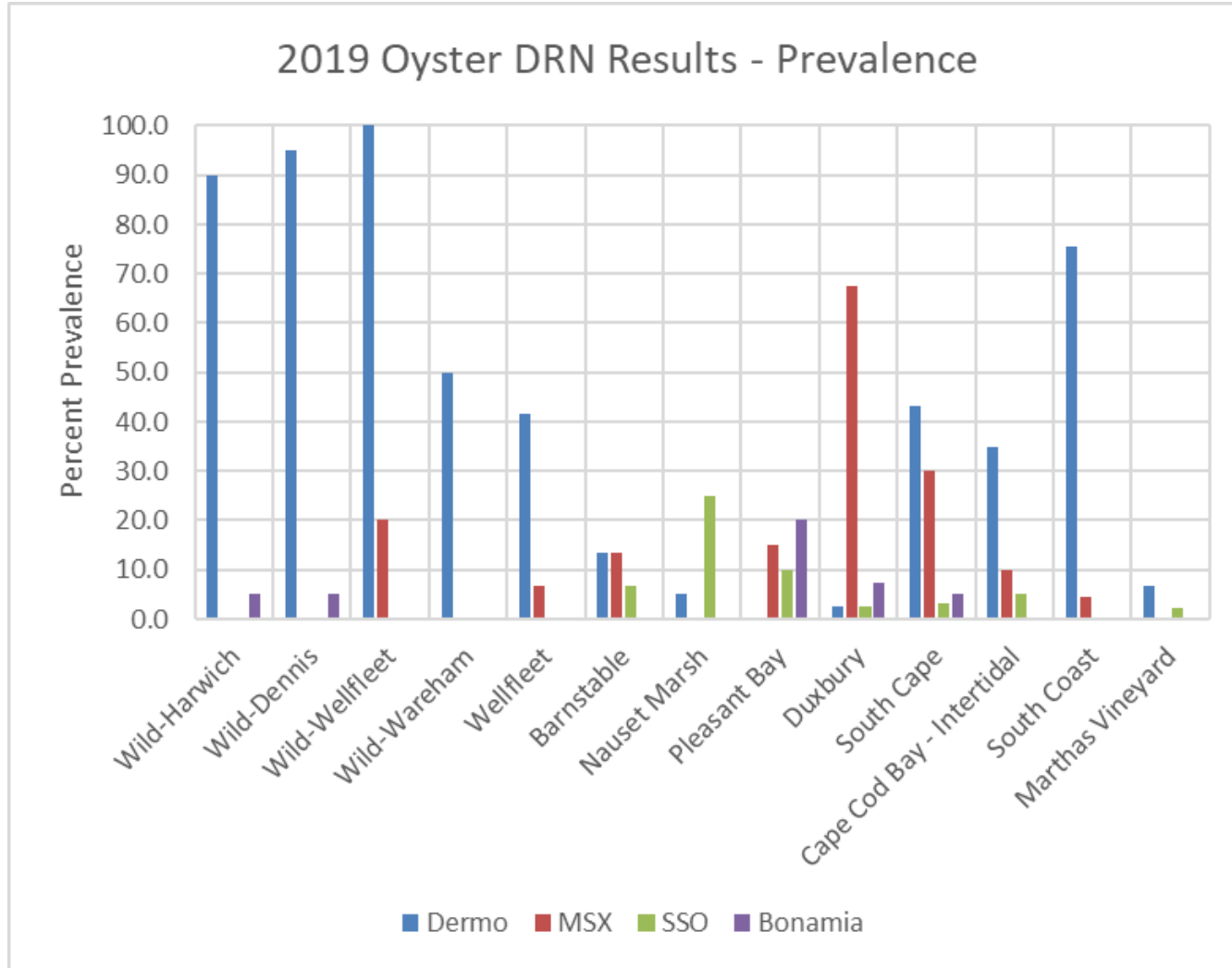
If 10/10 pools+ for Dermo = 100% of pools

BUT, if only 1 oyster in each pool+ (10/30) = 33%

With 10/10 (100%) Typically **33 – 45% of ind oysters**





# SEMAC Oyster DRN - Results

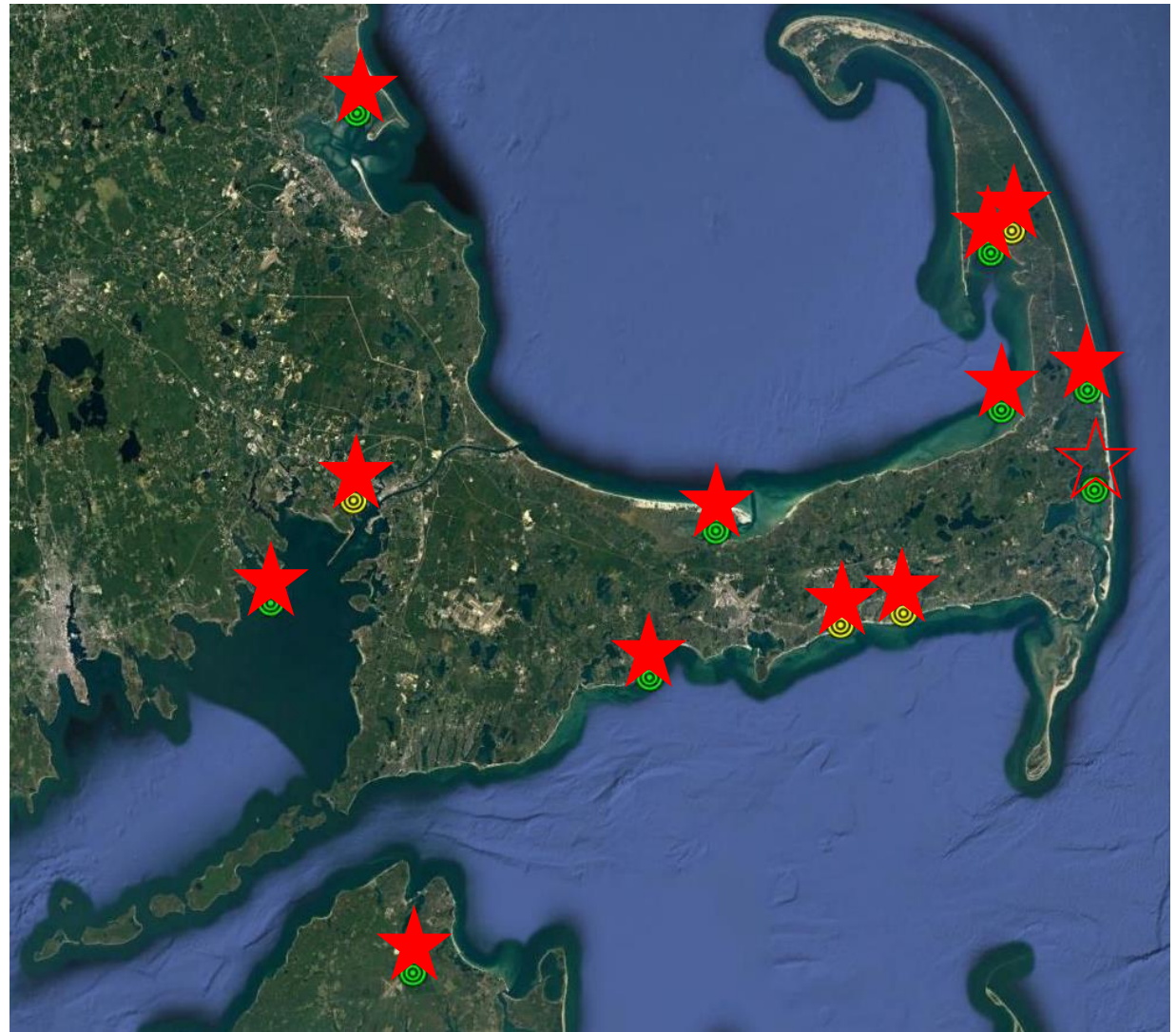


- Overall slightly down from 2018
  - Except overall intensity of Dermo was higher in 2019

# Dermo+ Sites in 2019

23/32 sites Dermo+ (72% of individual farms, 12/13 regions), (all 4 wild sites)

 =Dermo+ area  
 = no detection

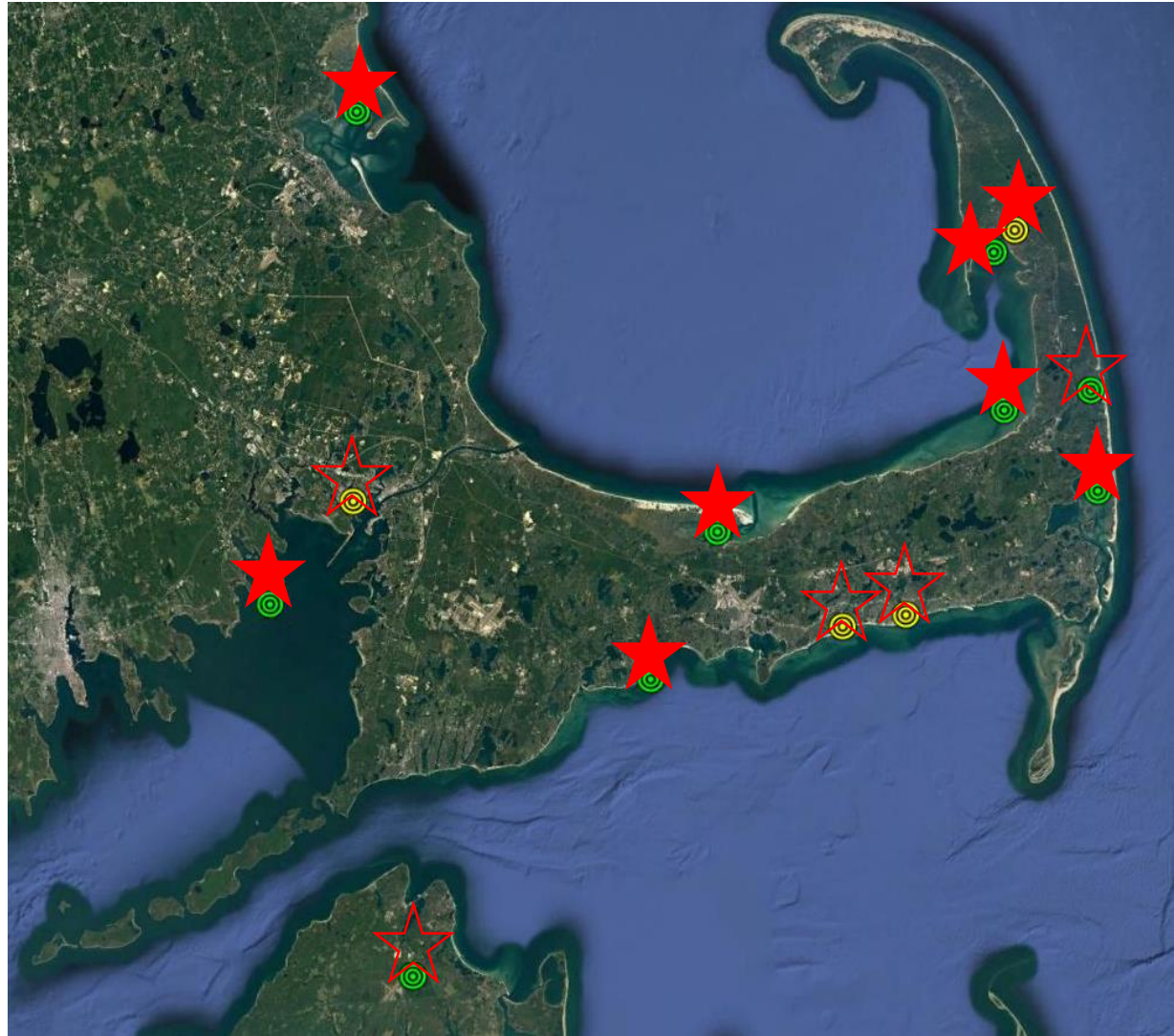




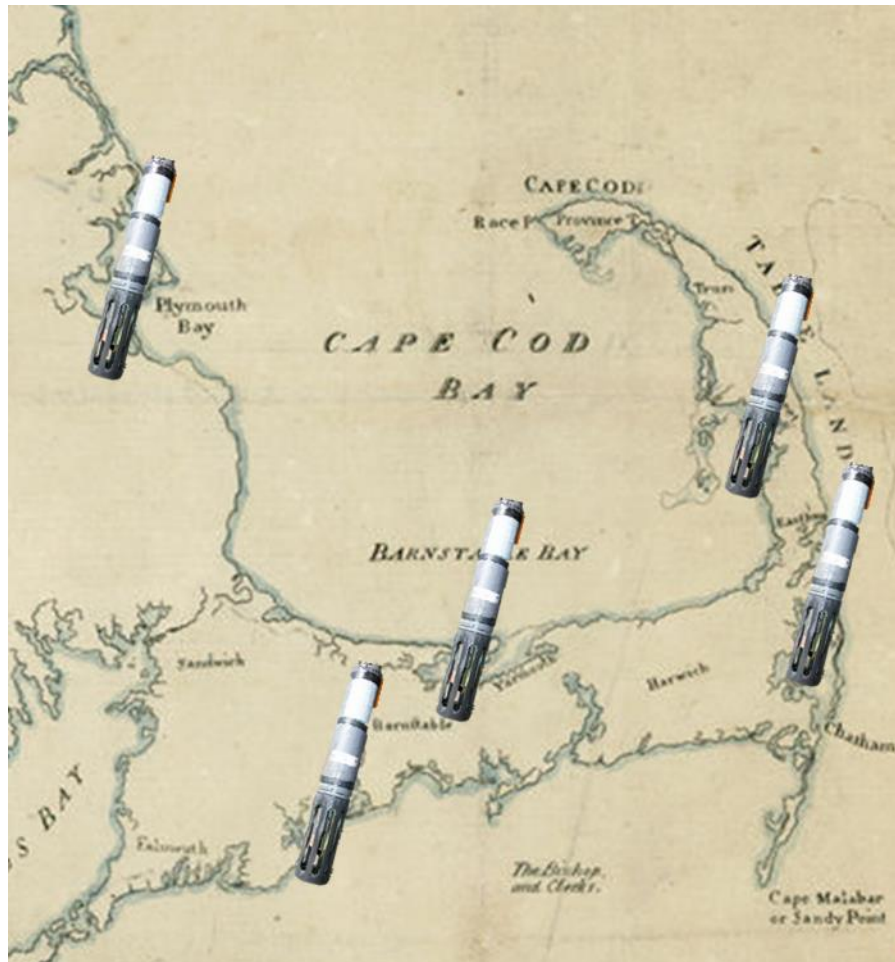
# MSX+ Sites in 2019

14/32 sites MSX+ (44% of individual farms, 8/13 areas), (1 wild site)

★ = MSX+ site  
☆ = no detection



# SEMAC – Water Quality Monitoring



- 2 available in real-time  
<https://v2.wqdatalive.com/public/103>
- Cotuit Bay - year round
- Wellfleet - water temp

# Water Quality

- Need to upgrade instruments in near future
- Attempting to make more data available in real-time on the web in coming years

← → ↺ v2.wqdatalive.com/public/103

## Cape Cod Cooperative Extension Water Quality Monitoring Program

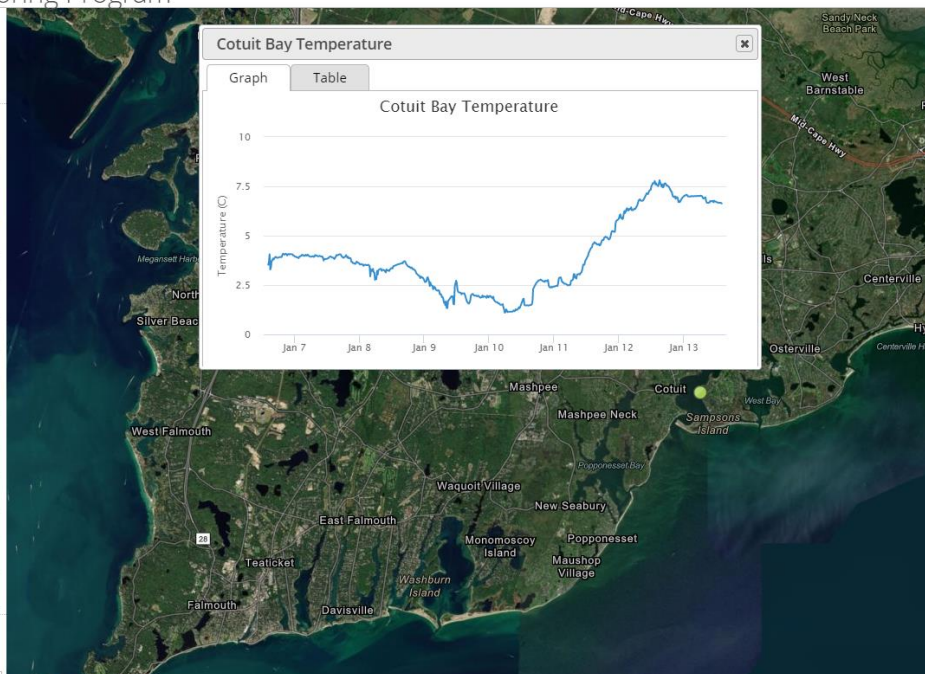
The water quality conditions are monitored using Yellow Springs Instruments Inc (YSI) sondes, which are capable of monitoring [more](#)

### Cotuit Bay ▲

Last Updated 01-13-2020 14:00

Battery (V)	13.1
Temperature (C)	6.63
Salinity (PPT)	28.99
Depth (m)	3.095
pH	7.80
Turbidity+ (NTU+)	0.90
Chlorophyll (ug/L)	5.9
ODOSat (%)	95.0
ODO (mg/L)	9.62
Battery (V)	13.1
Barometric Pressure (mBar)	1028.7
Air Temperature (C)	4.50
Wind Direction (Degree)	141
Wind Speed (mph)	5.8

### Wellfleet Harbor ▼



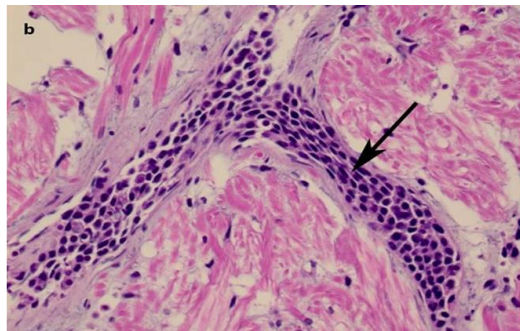


Not funded by SEMAC but of interest  
to aquaculture



# Quahog Disease Monitoring

- QPX and Hemic Neoplasia (of quahogs)
- Started routine spring monitoring in Wellfleet – 1990's
  - Both QPX and Neoplasia still found
- Expanded testing outside Wellfleet in 2019
- Neoplasia has now been found throughout Cape Cod Bay
  - Cause still unknown
  - Research ongoing



b) neoplastic cells obturate a larger vessel in the hard clam's body (photo: R. Smolowitz)



# Shellfish Farming Education

- Fundamentals of Shellfish Farming (FOSF)
- Offered spring 2019, next Spring 2021
- 36 Students from 15 towns
  - Farming is not for everybody



# Other Projects:

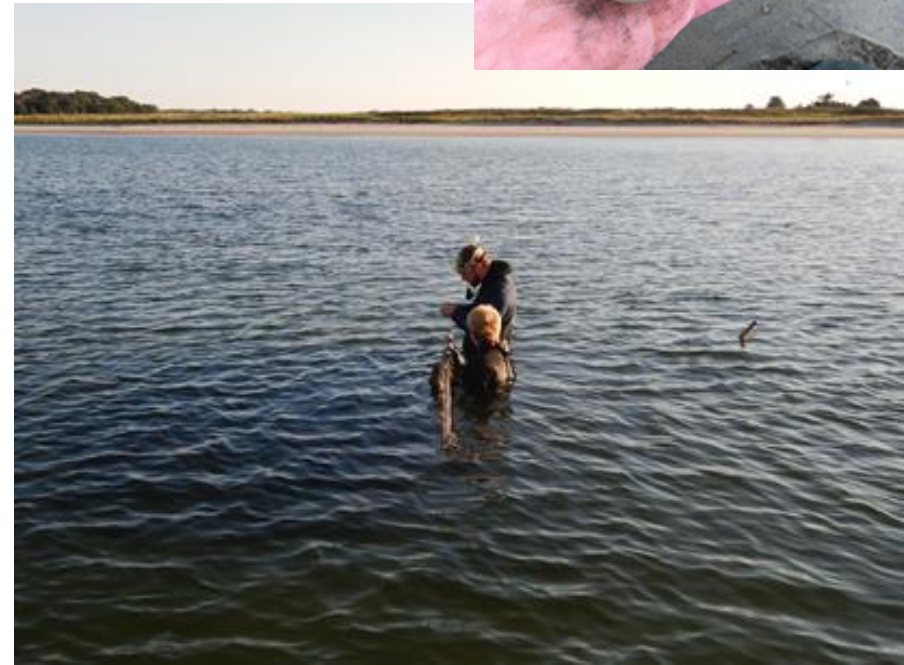
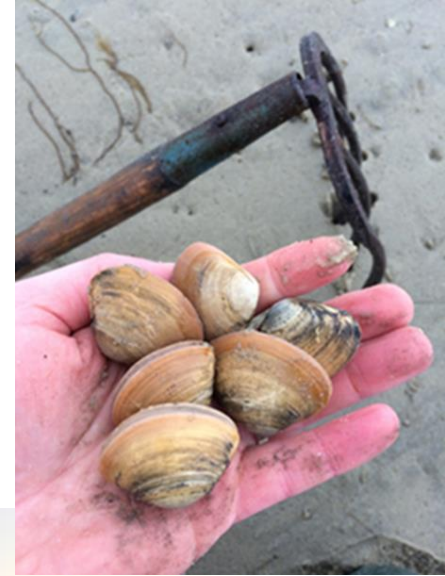


- Markets for “alternative” cultured shellfish products
- Blood clams (arks)
  - Keep current ethnic markets – not mainstream
  - Current fishery value ~\$1.75-2.25/lb (bulk, mixed size)
- Surf Clams – “New England Butter Clams”
  - Difficult for new product, but enthusiasm is there
  - \$0.28-0.34 /piece if done thru local interested chefs
- MA shucked oysters
  - Much lower value \$0.21-0.28/oyster (yield dependent)
  - There is some interest from MA processors
    - Survey to see level of grower interest



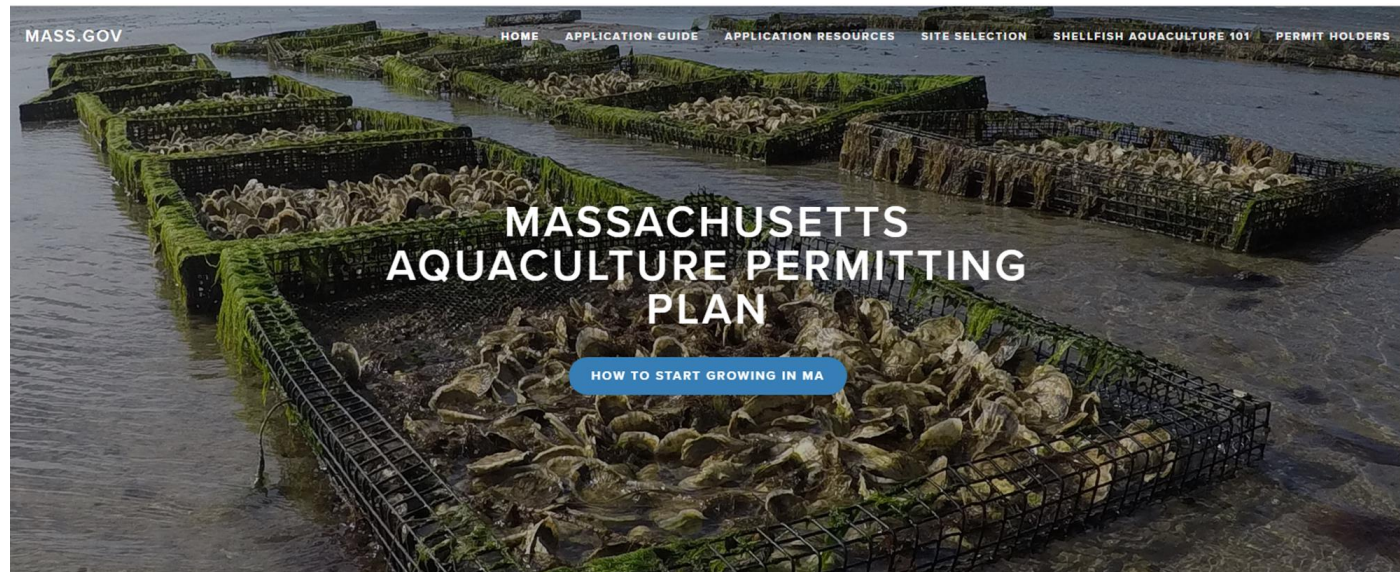
# Other Projects: Surf (Butter) Clam

- Initial studies
  - Fast growth
  - Variable survival – temp
- Future Studies:
  - Gear for subtidal clam grow out
  - Evaluate similis strain for culture performance



# MA Aquaculture Permitting Plan (MAPPP)

- MA DMF effort for streamlining and consolidating permitting information – multi-agency review
- Puts all permit related information in one place
- Not just for new applicants
- Looking for volunteers to test the site
  - Contact Kathryn Ford
  - [kathryn.ford@state.ma.us](mailto:kathryn.ford@state.ma.us)



# New Projects



- East Coast Hard Clam Selective Breeding Collaborative
  - Linking researchers to industry needs
- National Sea Grant – Seaweed Hub
  - “Identifying and Removing Barriers and Promoting Opportunities” for domestic seaweed aquaculture
- Advancing Southern New England Shellfish Aquaculture Through an Engaged Public and Next Generation Decision Support Tools
  - Better engage media and public on issues
  - Keep tools like MA ShellfAST updated and alive
    - <http://www.shellfast-ma.com/>



# Thank-You!

[jreitsma@barnstablecounty.org](mailto:jreitsma@barnstablecounty.org)

[aarcher@barnstablecounty.org](mailto:aarcher@barnstablecounty.org)

[Harriet.booth@barnstablecounty.org](mailto:Harriet.booth@barnstablecounty.org)

[dmurphy@whoi.edu](mailto:dmurphy@whoi.edu)





# **NEMAC Update**

**Massachusetts Aquaculture Association  
Annual Meeting  
New Bedford, MA  
14 January 2020**

**Joseph Buttner, Mark Fregeau, Ted Maney, Scott Weston, Alan Young  
NorthEastern Massachusetts Aquaculture Center, Cat Cove Marine  
Laboratory, Department of Biology, Salem State University, Salem, MA  
01970 USA**



# Acknowledgements

## Students and Staff of Cat Cove Marine Laboratory



Towns, State Agencies (DMF, DAR, NOAA), and many people that made and make efforts possible



# Cat Cove Marine Laboratory





**Some Consider CCML is for the Birds**



**But doing our Patriotic Best**



# Major Activities

Education (traditional, non traditional)

Softshell Clam Culture

Green Crab

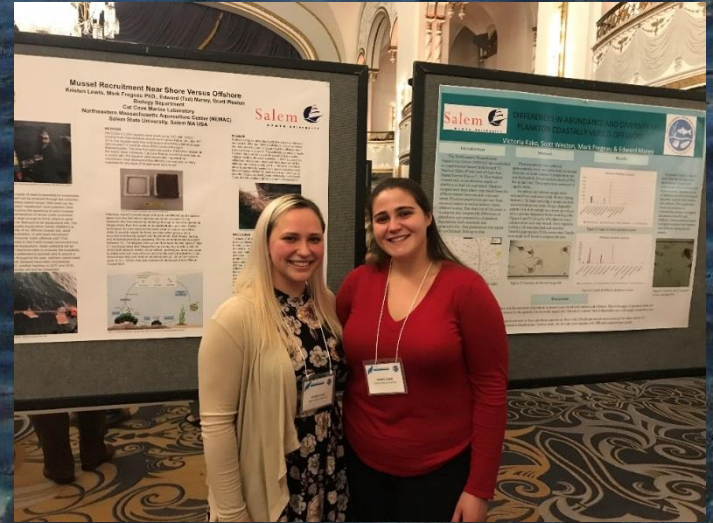
Mussel/Off Shore Aquaculture

Aquaponics (small to modest scale)

Liberia



# Education, Primary Activity



## Sampling and Sharing



## Annual Fish Biology tour of NEAQ



# Outreach

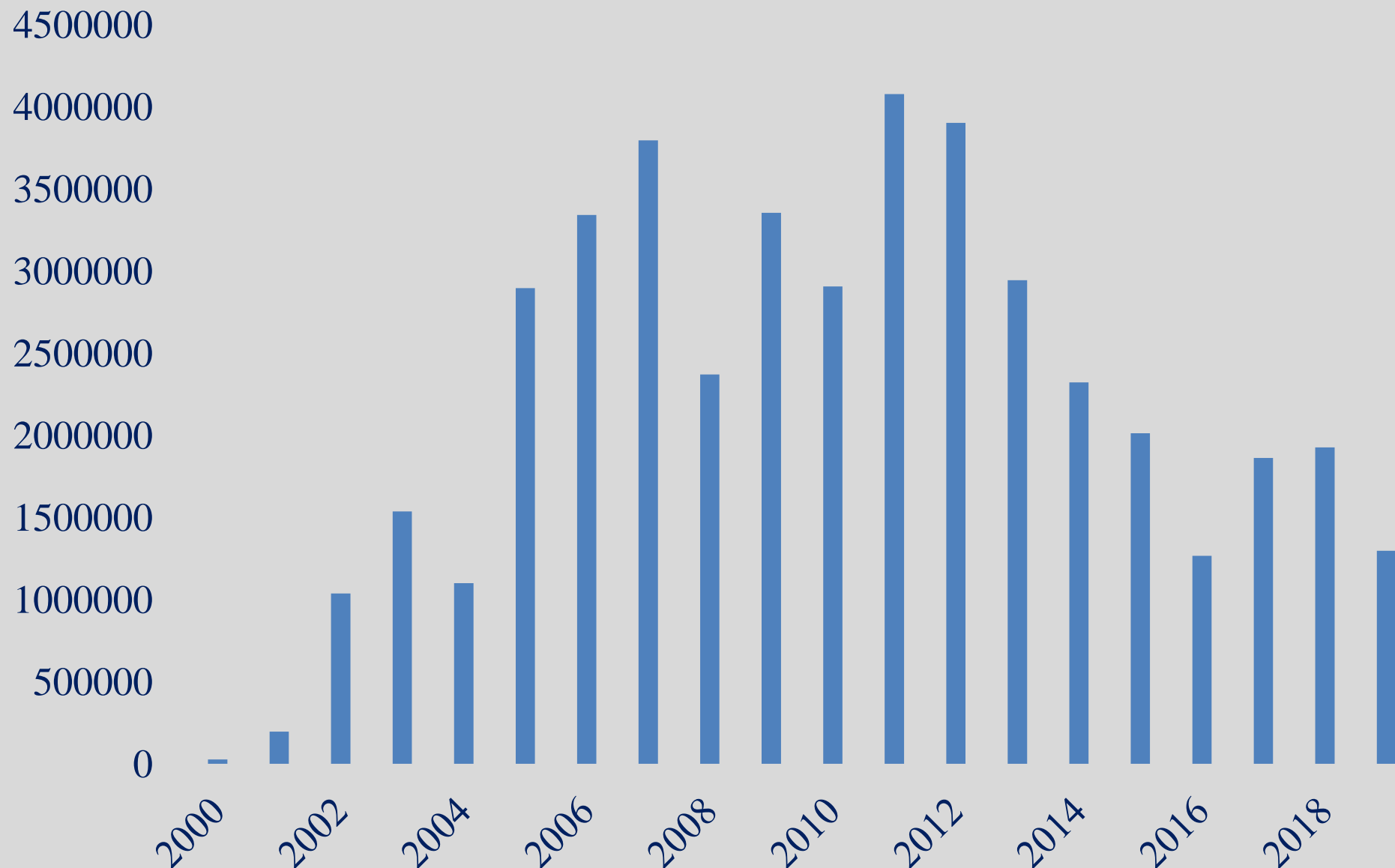
Tours of CCML (Trails and Sails, >80)

Meet with elected officials

Provide tilapia to K-12 schools including Bourne H.S., Essex Technical H.S.; Wilmington H.S.

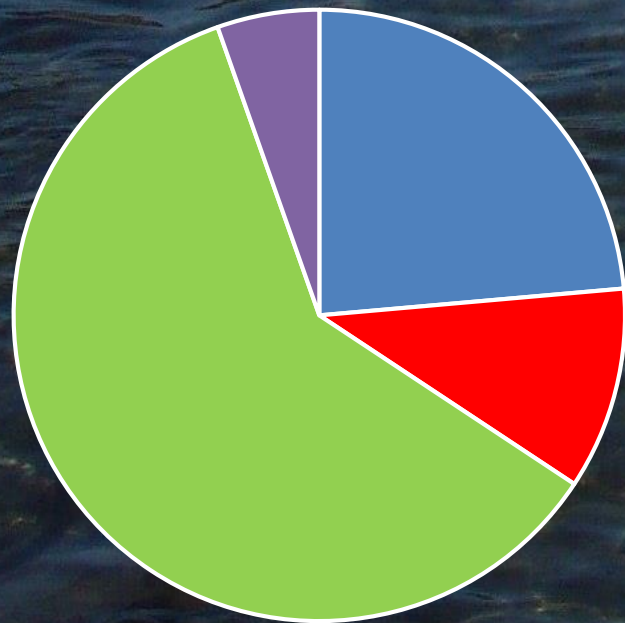


# Clam Production (2000-Present), Sum = 44.2 million



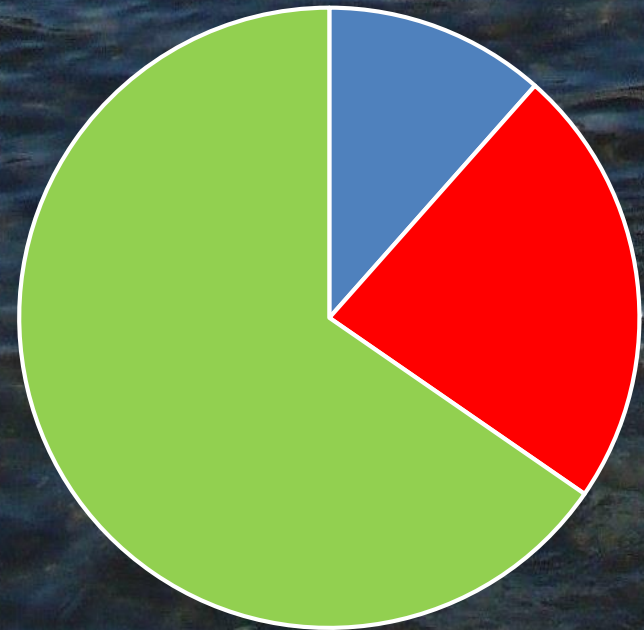


**1.8 Million in 2018**



- South of Boston
- Cape Cod
- Martha's Vineyard
- North Shore

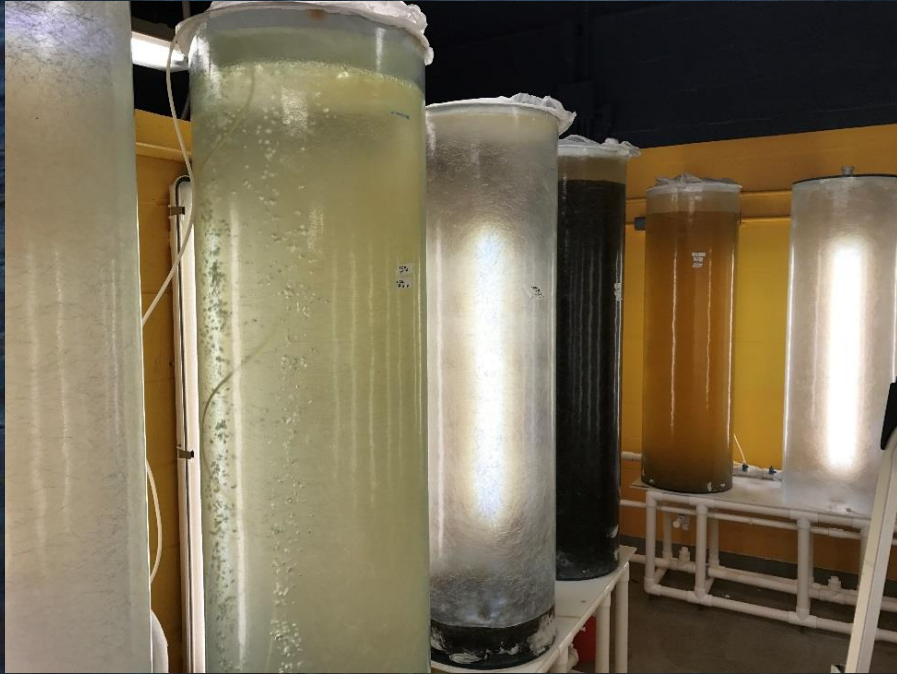
**1.4 Million in 2019**



- South of Boston
- Cape Cod
- Martha's Vineyard



# Culture for 2020 Started



Increase algal production



Broodstock moved into hatchery



# Natural Recruitment and Subtidal Culture





# Green Crab Limit Softshell Clam Culture



Young, A. M. and J.A. Elliott. 2020. Life History and Population Dynamics of Green Crabs (*Carcinus maenas*). Fishes 5, 4;doi:10.3390/fishes5010004[www.mdpi.com/journal/fishesReview](http://www.mdpi.com/journal/fishesReview)



# Mussel/Offshore Update

3 Longlines Deployed

In water for over 3 years

No interactions with protected species

Mussels grow faster and cleaner than in coastal sites

Wild seed collected on site and hatchery seed from NEMAC

Hydrophone and Video monitors

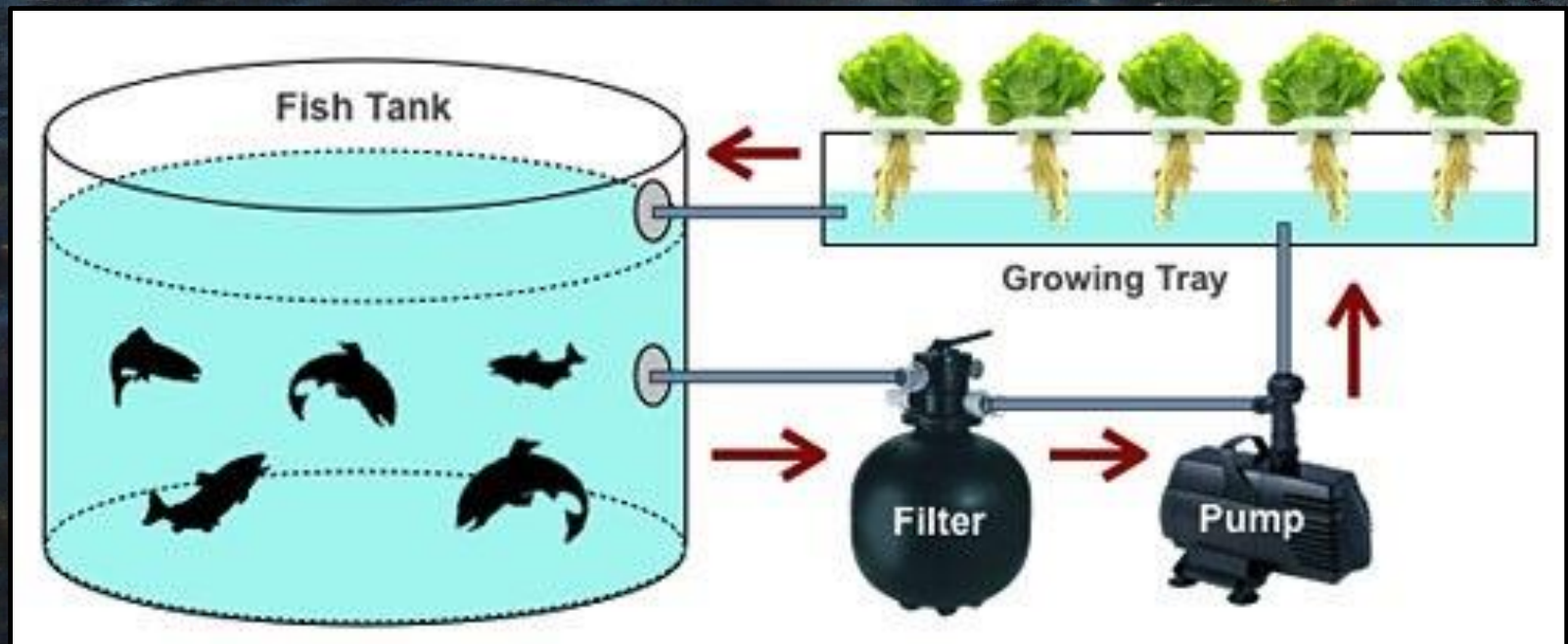
Permit Modification to USACE for 20 Longlines



Dr. Fregeau and Mr. Maney leads, with NOAA, Legal Seafood and SK support



**Aquaponics systems** are a form of Integrated Multi-trophic Aquaculture (IMTA) that reuse metabolic wastes of one product (fish) to produce a second crop (plants), adding economic value and simplifying management, maybe





# Aquaponics for the Classroom



2018-2019



2019-2020

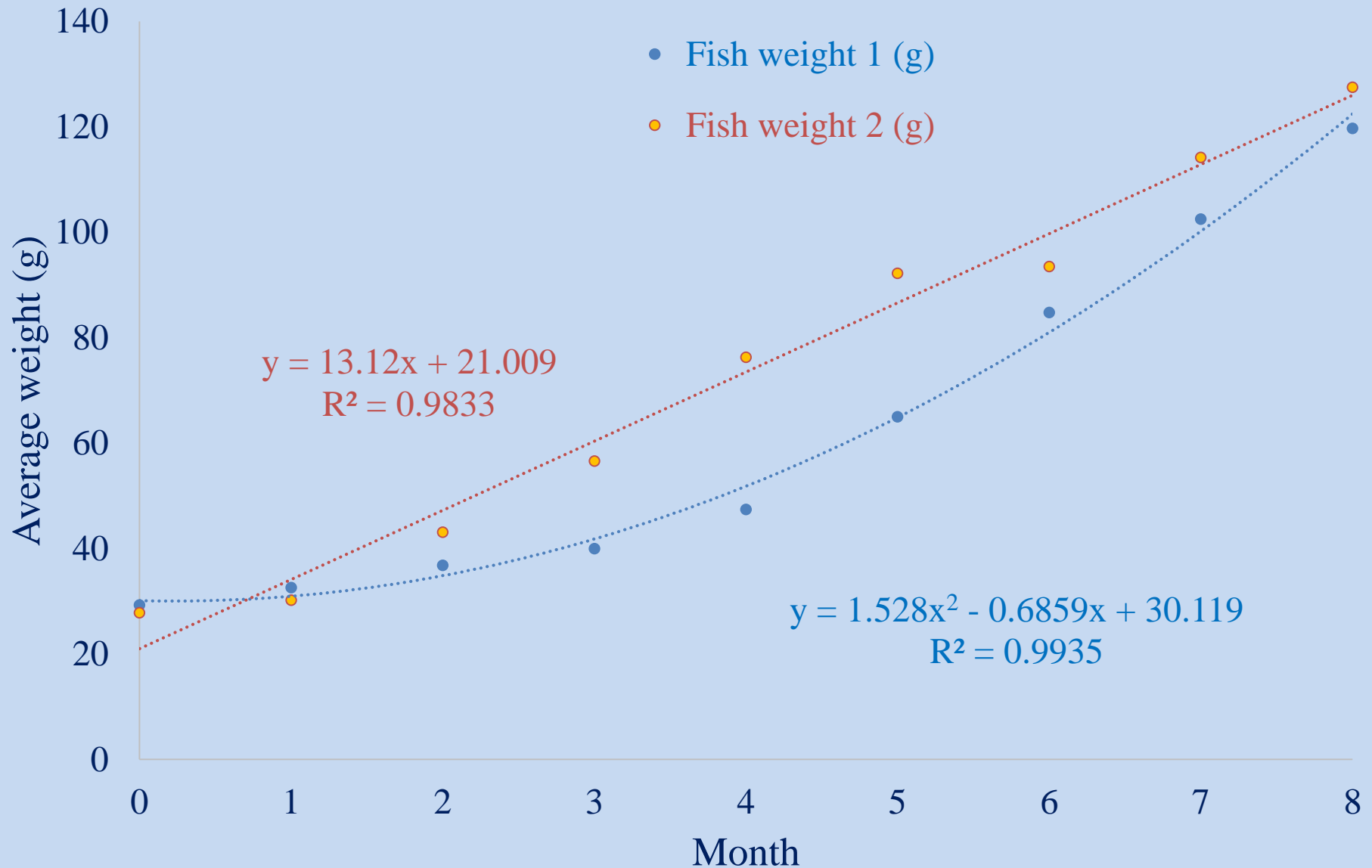




Use koi and leafy greens



# Koi Grew Well in the Systems



# Operation Summary

Duration (months)	8
Fish tank (L)	70
Plant bed (m2)	0.82
Koi production (g)	422.5/462
Plant production (g)	3401/5258
Ratio plant to fish production	8:1/11.4:1
FCR	2.67/3.59
TAN (mg/L)	0.13 (0.14) / 0.007 (0.017)
NO <sub>2</sub> <sup>-</sup> (mg/L)	0.06-0.03 / 0.025 – 0.15
NO <sub>3</sub> <sup>-</sup> (mg/L)	32.4 (28.0) / 129 (91)
Alkalinity (mg/L)	107 (23) / 104 (26)
Temperature (Celsius)	21.8 (4.3) / 19.4 (4.9)
Dissolved Oxygen (mg/L)	6.7 (0.7) / 6.2 (1.4)



# Operation: Monitoring and Management


Task	Duties	Time
Daily	Check fish and system Feed fish Add bicarbonate (as $\text{KHCO}_3$ )	3-5 minutes
Weekly	Monitor water quality Add water (2-5 cm/week) Plant harvest Add Standard f/2 Remove sediments	45 minutes 1-2 minutes 20 minutes 1 mL 2-4 minutes
Monthly	Measure fish	10 minutes
Problems	Primarily with plants	deficiencies herbivores variable growth




# Liberia Linkages Continues



Liberian Rep Roger Domah visits  
Rep Seth Moulton, October 2019




FACULTY LED STUDY TRAVEL  
OPEN TO ALL MAJORS



## LIBERIA

PEACEBUILDING FIELDWORK  
TRAVEL DURING SPRING BREAK: MARCH 13-21, 2020



**COURSES AVAILABLE**  
IDS 289, 3 CREDITS: Special Topics: Liberian Peacebuilding Fieldwork  
BIO 408, 3 CREDITS: Research in Biology


**TRAVEL COST: \$3,400 total\***  
DEPOSIT: \$600 due December 2

\*Cost includes airfare, accommodations (shared), all meals, program-related activities, administrative fee, and international travel insurance. Cost is subject to change based on number of travelers and changes to taxes/fees.

**ABOUT THE PROGRAM**  
Join members of the Salem State community for an eye-opening experience in Liberia, West Africa in March 2020. An interdisciplinary team will travel together during spring break to Ganta City, Liberia, working with the local community on collaboratively developed projects focused on sustainable and just peace. Past experiences have included:

- Leading conflict resolution workshops
- Teaching in local schools
- Documenting and planning a sustainable fish pond
- Working in the area hospital
- Collecting conflict stories for research
- Establishing baseline GIS data

**CONTACT**  
Lauren Premk, Study Abroad:  
lpremk@sa.salemstate.edu  
Prof. Greg Carroll (IDS):  
gcarroll@sa.salemstate.edu  
Prof. Alan "Rocky" Shwedel (EDC):  
ashwedel@sa.salemstate.edu  
Prof. Joe Buttner (BIO):  
jbuttner@sa.salemstate.edu  
Prof. David Mercer (BIO):  
dmerc@sa.salemstate.edu



Eighth Trip to Liberia  
13-22 March 2020



# Much accomplished in 2019, More Anticipated in 2020

Secure funding for Centers

Continue work with Mussels (growout and hatchery/nursery)

Work with SEMAC on alternate species

Continue/expand networking

Transfer aquaponics to middle/high school classrooms

Return to Liberia, develop and co-instruct training program  
for extension people

Address inevitable surprises



# Career Change

**Chris Schillaci, Scott Soares, and  
Mike Hickey Don't Have  
Monopolies**

# USDA Updates

- *Ed Davidian*  
*USDA Farm Service Agency (FSA)*
- *Paul Russell and Tom Smiarowski*  
*USDA Crop Insurance/Risk Management –UMass Ext.*
- *Tricia Delbove*  
*– USDA Rural Development (RD) Southern New England*



# Packaging and/or Gear Innovations for Shellfish Growers

- *Myron Horzesky*  
*Ketcham Supply*  
[ketchamsupply.com/product-category/aquaculture/](http://ketchamsupply.com/product-category/aquaculture/)
- *Bobby O'Hayre*  
*Packaging Products Corporation*  
[pkgprod.com](http://pkgprod.com)
- *John Reardon*  
*Hercules SLR*  
[hercules-slr-us.com](http://hercules-slr-us.com)

# Annual Massachusetts Aquaculture Association Meeting

## January 14, 2020



111 Myrtle St  
New Bedford MA 02740

Phone: 508-997-4787

Email: [info@ketchamsupply.com](mailto:info@ketchamsupply.com)

Web:  
<https://www.ketchamsupply.com>



# Overview

Ketcham Supply was established in 1975 as one of the first wire trap manufacturing companies. Since then, we have expanded into every type of trap fishing and shellfish aquaculture.

All of our wire traps, cages and trays are manufactured in our facility in New Bedford, Massachusetts.

We are also a stocking distributor for Interimas Grow-Out Bags, Bag Closure, Clam Netting, Floats, Rope, Bungee, Long Line Clips, Totes, Long Line Clips, Tools, Anchors...



# Overview

We have been building oyster gear for over 30 years. These are our first wire trays that were deployed off Penikese Island in the early 1980's. Thanks Seth!







# Manufactured Gear

## Floating Gear



## Bottom Cages & Trays







# Accessories







# Looking Forward

**What's important to you?**

**Lease Stewardship**

**Reduce Single Use Plastics**

- We are actively sourcing new materials
- Cotton Market Bags
- Biodegradable Plastic Netting

**Regulations**

**Bird Deterrent Strategies**

**What else?**





# MAA Promotion

- Free bundle (100 Pieces) of cotton market bags

Please give us feedback on the bag dimensions and quality!

Are these a suitable replacement for the traditional onion bags?

- 15% off Cavatora wire 1x1 Trays.

	Regular	MAA Price
Tray Only	\$ 32.00	\$ 27.20
Single Stack 2 feet	\$ 39.99	\$ 33.99
Double Stack 3 feet with lid assembly	\$106.47	\$ 90.50
Tripe Stack 3 feet with lid assembly	\$141.09	\$119.93



# Annual Massachusetts Aquaculture Association Meeting

## January 14, 2020



111 Myrtle St  
New Bedford MA 02740

Phone: 508-997-4787

Email: [info@ketchamsupply.com](mailto:info@ketchamsupply.com)

Web:  
<https://www.ketchamsupply.com>

# Shellfish Dealer Round Table with Audience Participation – Handling Increasing Production and “the fall glut”.

- *Seth Garfield - Cuttyhunk Shellfish Farms*
- *Alex Hay - Wellfleet Shellfish Co.*
- *Chloe Starr - Aquacultural Research Corporation*
- *Steven Wright - Chatham Shellfish Co.*
- *YOU!*

# VOTE FOR TRUSTEES

- Nominating Committee:  
*Jared Hemmila Dan Martino*
- 2020 MAA Trustee Ballot
- Nominations from the Floor
- Vote for NO MORE THAN 7
- Must be an MAA member for your ballot to count
- Following Trustee Election – Trustees will elect officers  
President, Vice President, Treasurer, Clerk

# Member Open Forum

*Scott Soares*

***What do you want from your Association?***



# Closing Remarks and Adjourn

*Seth Garfield*

***THANK YOU!***

***WISHING YOU ALL A SAFE, HEALTHY &  
PROSPEROUS 2020!***