

## SHELLFISH ADVISORY PANEL 4PM

Thursday, April 27, 2023 SMAST East 837 S. Rodney French Blvd New Bedford, MA 02744

- 1. Introductions and Remarks (4:00 4:15)
  - a. Director's Remarks
  - b. Review of April 27, 2023 Business Meeting Agenda
  - c. Review and Approval of March 2, 2023 Draft Business Meeting Minutes
- 2. Continuing Business from March 2023 Business Meeting (4:15 5:15)
  - a. Primary Purchase Variance for Barnstable
  - b. Seed Supply, Mitigation, and Support
  - c. Update on Sub-Committees
- 3. DMF Shellfish Program Updates (5:15 6:00)
  - a. Review of March 2023 ISSC Meeting
  - b. *Vp.* Control Plan Update
  - c. DMF Shellfish Regulations Update
- 4. Presentation on Commercial Shellfish Landings (6:00 6:30)
- 5. Other Business (6:30 7:00)
  - a. Panel Member Comments
  - b. Public Comments
  - c. Adjourn

#### SHELLFISH ADVISORY PANEL MARCH 2, 2023 Via Zoom

#### In attendance:

Shellfish Advisory Panel: Daniel McKiernan, Chair (DMF); Lisa Rhodes (DEP); Sean Bowen (DAR-Proxy); Jim Peters (Indian Affairs); Mike Moore (DPH); Todd Calaghan (CZM-Proxy); Josh Reitsma, Allen Rencurrel, Dale Leavitt, Renee Gagne, Ron Bergstrom, Steve Kirk, Alex Hay, Bill Doyle; Michael DeVasto; Amy Anne Croteau; and Shannon Emmett representing the House Chair on Environment and Natural Resources Absent: Jim Abbot; Bob Colby; Mike Trupiano; Rebecca Rausch.

Department of Fish and Game: Sefatia Romeo Theken, Deputy Commissioner

Division of Marine Fisheries: Bob Glenn, Story Reed, Jeff Kennedy, Chrissy Petitpas, Jared Silva, Julia Kaplan, Melanie Griffin, Matt Camisa, Gabe Lundgren, Ryan Joyce, and Anna Webb

Department of Public Health: Eric Hickey

Members of the Public: Mark Begley, Danielle Ewart, Michelle Letts, Damon Wei, Chris Miller, Ronnie Parker, Peter Orcutt, Ben Wigren, Tom Siggia, Jordan Halloran, Amanda Cutler, Jack Attridge, Brian Taylor, Donovan McElligatt, Merry Oysters, Don Merry, Mike DiMeo, Ginny, Paul Hogg, Tim Cox, Jon M, Helen Miranda Wilson, Glen Fernandes, Ryan Burch, Tyler Grady, Joseph Pierce, Danny Badger, Craig Keefe, Mark Howards, Tyler Hagenstein, Beth Gibbons, Jake Emerson, Erika Smith, Jeffrey Canha, Chris Avis, Mel Sanderson, Chloe Starr, Heinz Proft, Mashpee DNR

#### INTRODUCTIONS AND ANNOUNCEMENTS

DMF Director Daniel McKiernan chairs the Shellfish Advisory Panel (SAP) and called the meeting to order. He provided a brief history of the SAP and an overview of their mission and purpose. Chairman McKiernan asked attendees to sign into the Zoom chat box so everyone would be aware of who is in attendance. He then reminded everyone of the open meeting law and stated the meeting materials from this meeting will be posted online.

#### **REVIEW OF MARCH 2, 2023 BUSINESS MEETING AGENDA**

No changes to the agenda were requested.

## REVIEW AND APPROVAL OF MAY 20, 2022 DRAFT BUSINESS MEETING MINUTES

Chairman McKiernan sought a motion to approve the draft November 15, 2022 business meeting minutes. Dale Leavitt made a motion to approve the draft meeting minutes. Todd Callaghan seconded the motion.

Amy Croteau pointed out a typo in the bulk tagging sub-committee meeting date in the draft minutes. Jared Silva stated DMF could amend the minutes to correct this error. There were objections to this amendment. No further amendments were offered.

Chairman McKiernan requested a motion to approve the amended November 15, 2022 business meeting minutes. Todd Callaghan made a motion to approve the amended meeting minutes. Dale Leavitt seconded the motion. A roll call vote was taken and the motion passed 14-0-2 with Mike DeVasto and Amy Croteau abstaining.

#### **UPDATE ON BULK TAGGING CONSIDERATIONS**

Chairman McKiernan summarized his memorandum to the SAP regarding his decision to not move forward with a pilot program to allow shellfish aquaculturists to bulk tag market bound product. Dan then discussed the rationale behind the decision, which included:

- Shifting enforcement and compliance burden from harvesters to dealer sector, requiring participating dealers to develop Intermediate Processing Plans.
- Complicates maintaining lot integrity at point-of-sale when the dealer is receiving multiple harvester lots in succession.
- Aquaculturists have indicated wrapping pallets and insulated vats are not viable solutions to ensure lot integrity at point-of-sale.
- May be subject to more substantial actions in instances of non-compliance given quantity of shellfish involved (e.g., embargo, criminal penalties, permit sanctions).
- Risk may disincentivize participation by most conscientious dealers impacting shellfish markets and potentially worsening compliance.
- Administrative burden on state management and enforcement agencies.

Dale Leavitt expressed disappointment over DMF's decision and that DMF did not consult the SAP's bulk tagging sub-committee before making this formal decision. Dale then advocated for expand opportunities for harvester bulk tagging.

Mike DeVasto agreed with Dale's assertion that harvester bulk tagging opportunities need to be expanded and felt there was a path forward with standardization. He further argued that tagging individual containers was wasteful, time-consuming, redundant, and likely contributed to non-compliance.

Jared Silva noted DMF's decision focused on adopting a pilot program allowance for all aquacultursits. Jared also agreed with Mike's assertion that there may be a path forward with more standardized practices to ensure shellfish traceability and lot integrity and

DMF was not closing the door on smaller scale pilot programs to investigate best practices that could inform future rule changes.

Alex Hay was also disappointed with DMF's decision. As a seafood dealer, he supported an expanded harvester bulk tagging program and felt the seafood dealer sector could readily adapt to accommodate a bulk tagging model for shellfish aquaculturists. Alex also did not think that discrete enforcement issues involving a select number of entities should influence decisions regarding the broader seafood industry.

Dale Leavitt requested the bulk tagging issue be brought back to the sub-committee. Dan McKiernan did not object to this idea. However, he wanted greater involvement from the seafood dealer sector in the discussion, as this sector privately expressed concerns to DMF about expanding harvester bulk tagging.

Via the chat function, Seth Garfield asked if this decision impacted bulk tagging allowances for grower-dealers. Jared Silva responded that grower-dealers would be allowed to continue to bulk tag their own product. However, all other shellfish aquaculturists would not be able to bulk tag product in 2023.

#### **ISSC BIENNIAL MEETING PROPOSALS**

Jeff Kennedy provided the Panel with a presentation regarding Interstate Shellfish Shippers Conference (ISSC) and its upcoming biennial meeting. He first reviewed the history and purpose of the National Shellfish Snatiation Program (NSSP) and the ISSC. He then reviewed the composition of the ISSC and its process.

Jeff discussed various proposals that will be addressed at the upcoming March 2023 ISSC meeting. Some Task Force I (Growing Areas and Patrol) proposals include clarifying NSSP definitions, marine biotoxin controls, assessing wastewater treatment plants, and establishing guidance for shellfish cleansing studies. Eric Hickey from DPH discussed Task Force II (Harvest, Handling, and Distribtiion) proposals, which include reducing plant inspection frequency, adding shipping Critical Control Point (CPP), prechilling vehicles, and proper use of backflow preventers for any equipment/operations requiring a sanitary water source. Eric then discussed Task Force III (Administration) proposals, which include one to limit FDA's use of Guidance Documents to cite program deficiencies in evaluations, and another clarifying/expanding biotoxin management criteria.

Jeff Kennedy welcomed questions or comments. No comments or questions were raised by the SAP.

#### SURF CLAM MANAGEMENT UPDATE

DMF is concerned about the potential for state regulated commercial fishing activities—particularly surf clam fishing—to be constrained by municipal conservation commissions

("ConComs") under the Wetlands Protection Act. This issue came to the forefront several years ago as the result of Provincetown enforcing local ConCom regulations restricting surf clam fishing off Herring Cove. While commercial fishing interests have avoided fishing in these waters since, Michelle Letts—a surf clam permit holder—recently filed a Notice of Intent ("NOI") with the Provincetown ConCom and the Department of Environmental Protection to fish hydraulic surf clam dredge gear in this area. DMF encouraged the applicant to rescind the NOI filing given concerns about the precedent the issuance of an NOI may set for the fishery state-wide. DMF has been working closely with DEP to determine how to protect legacy commercial fisheries in a manner that allows DEP to continue to address activities that may alter wetlands resource areas.

Dan welcomed Lisa Rhodes from DEP to speak to the subject. Lisa Rhodes indicated DMF and DEP needed to develop an accurate map depicting wetland resource areas. Additionally, DEP was considering ways to potentially reduce the burden of the DEP permitting process to address DMF regulated fishing activities.

Mike DeVasto asked about the case law regarding surf clam fishing in Provincetown. Dan stated that case law stated that Provincetown did not have the authority to ban surf clam fishing, but the town has jurisdiction to permit and condition the use of the certain gear in wetland resource areas under the Wetlands Protection Act.

Dan closed his comments by stating this is a complicated issue that DMF will continue to work on and report back at the next SAP meeting at the end of April.

#### SUB-COMMITTEE ON MUNICIPAL AQUACULTURE SITE LICENSE TRANSFERS

Dan McKiernan described the need for a sub-committee on municipal aquaculture license site transfers. Dan provided a brief background regarding his interest in convening this committee. The sub-committee will not weigh in on home rule authorities; however, DMF will compile and the sub-committee will review all municipal regulations governing aquaculture license site permitting and transfer rules and engage with municipal officials and industry members on what may (or may not) be working. The work done by the sub-committee may potentially result in development of best management practices municipalities may consider when adopting or amending municipal rules.

Dan recommended Bill Doyle, Dale Leavitt, Amy Croteau, and Renee Gagne as subcommittee members and welcomed volunteers. Josh Reitsma, Mike DeVasto and Alex Hay volunteered to be on the committee as well.

Ron Bergstrom offered to be on the Panel but recognized there may be redundancy since he and Renee are both from Chatham. Renee deferred to the Chair but recommended Ron Bergstrom. Ron then raised several issues he thought should be considered when the sub-committee meets.

#### OTHER BUSINESS

#### Panel Member Comments

Renee Gagne discussed professionalizing the Shellfish Constable training and certification process through the Massachusetts Shellfish Officers Association. The group is looking into creating an educational council to further develop and standardize constable training within Massachusetts. She stated this process has begun but will take time to complete. Renee will brief the SAP as on the project's progress.

Sean Bowen brought up concern over hatchery seed supply reliability as discussed at the Massachusetts Aquaculture Association meeting. Seed supply is at the foundation of the aquaculture industry, so he wanted to initiate panel discussion on how to respond and possible solutions.

Alex Hay expressed concern over hatchery resources. Dan McKiernan asked if funding could fix some of the issues. Alex stated that money could definitely help relieve some of the strain on resources and maybe support research to overcome some of the hatchery issues.

Steve Kirk stated he is interested in this issue as well as it is a critical issue that effects industry at large. Steve Kirk asked if this was the right forum to discuss DMF staffing and resource needs.

Dale Leavitt stated while there are some commonalities, there are usually individual problems at each hatchery and they differ across hatcheries. Chrissy stated harmful algal blooms (HABs) may have a role in the stalled or failed production experienced by hatcheries and seed mortality observed on grower sites. Chrissy then described ways DMF can help including funding through the Environmental Economic Innovation grant. Chrissy stated DMF is also re-assessing policies and consulting with the Regional Shellfish Seed Biosecurity Program to allow the importation of seed and larvae from hatcheries further south than historical authorized.

Bill Doyle stated it goes beyond the hatchery issue. Hatcheries have struggled to get the seed out to growers, but even when hatcheries can provide seed there are occasions when it all of a sudden stops growing. Bill stated he lost 22.5% of seed held in his upweller, and the issue has been occurring since about 2020.

Josh Reitsma stated there is research being conducted into why the seed is failing.

Amy Croteau described a request to DPH and DMF to issue a variance to the Town of Barnstable to allow harvesters to transport their product from the landing at Blish Point to a nearby piece of town property referred to as the "grassy knoll" for sale to primary buyers. She described public safety concerns related to dealer trucks having to pick up product at the highly congested landing site and stated town officials can adequately oversee transactions at the grassy knoll.

Dan asked Jared to describe the regulatory process. Jared stated that should a DMF regulation change be warranted then it would require approximately six-to-eight months. Dan then asked Jared if DMF could provide more instant relief to Barnstable. Jared stated DMF could consider other mechanisms, but deferred the question to DPH, as this is a joint management issue.

Michael Moore stated DPH regulations currently restrict this activity and DPH was not in a position to amend its regulatory code to address this narrow issue. However, they may be allowed to issue a regulatory interpretation that would accommodate Barnstable.

Amy Croteau and Mike DeVasto questioned why DPH could not issue a variance, as it had provided a similar variance to Wellfleet several year ago. Michael Moore indicated DPH's legal opinion on the subject had evolved and determined it was not appropriate to use the variance in such instances.

Michael Moore asked Amy Croteau if this issue was flagged in writing by FDA; Amy stated it was raised verbally but it did not appear in FDA's evaluation.

Bill Doyle asked if it was possible for the different agencies to get together and devise a plan so this would be resolved for Barnstable by the summer. Dan stated that DMF will work with DPH to hopefully get this resolved for this year.

#### Public Comments

Helen Miranda Wilson wanted to see DPH give Barnstable a variance for this year. She agreed with Mike DeVasto's comments regarding expanding allowances to bulk tag. Helen expressed concern over interactions between hydraulic dredge gear and eelgrass. Helen asked if the SAP's sub-committee meetings are open to the public. Jared Silva stated this was at the discretion of the Chair and no determination had been made for the aquaculture license site transfer sub-committee. Helen then asked to be placed on the SAP sub-committee on aquaculture license site transfers, should DMF accommodate public involvement.

Jeffrey Canha asked that the bulk tagging sub-committee keep in mind the bulk tagging of product for offsite culling and moving seed between SGAs. Chrissy clarified that the bulk tagging considered in this meeting was referring specifically to market bound product and that bulk tagging allowances for offsite culling, overwintering and moving seed are not impacted by this bulk tagging assessment. Jeffery suggested a bulk-tagging limit so it is more manageable by the seller and buyer. He then discussed issues he had with the federal Army Corps of Engineers aquaculture permitting processes; he was told delays in permitting were due to an influx of offshore wind permitting applications. Dan stated he will look into the issues and get back to him. Chrissy stated that DMF will not hold up propagation permits if growers submit to DMF proof of permit application submission to federal agency.

Tyler Hagenstein and Jon M advocated for the state to take action to support the Town of Barnstable's efforts to address landing site congestion and allow for product to be sold at a secondary site.

Donovan McElligatt stated he would like to see the SAP dedicate more time to discussing wild shellfisheries and shellfish species other than oysters. He noted the Vineyard had one of the most successful bay scallop seasons this year.

Mark Begley thanked Dan for working with Amy Croteau regarding the landing site issue at Barnstable Harbor.

#### **ADJOURN**

Chairman McKiernan requested a motion to adjourn the March SAP meeting. Ron Bergstrom made a motion to adjourn the March SAP meeting. The motion was seconded by Renee Gagnee. The motion was approved by unanimous consent.

#### **MEETING DOCUMENTS**

- March 2, 2023 SAP Business Meeting Agenda
- November 15, 2022 SAP Draft Business Meeting Minutes
- DMF Decision on Bulk Tagging Pilot Program Memo
- Bulk Tagging Decision Rationale Slide
- 2023 ISSC Biennial Meeting Presentation
- WPA Map
- Aquaculture Transfer Sub-Committee Slide
- Next Meeting and Deliverables
- 2022 MA Oyster Risk Assessment
- 2022 MA Hard Clam Risk Assessment
- Aquaculture Transfer Sub-Committee Presentation

#### **UPCOMING MEETINGS**

April 27<sup>th</sup>
SMAST East
836 S Rodney French Blvd, New Bedford, MA 02744
4-7PM

#### **DMF Municipal Aquaculture Management and License Transfer Questionnaire**

|   | _   |
|---|---|
| Municipality Name:  | Date:   |
| Name of person completing this questionnaire:   | Title:  |
| Contact Information:  |   |
| Email address:  | Phone #:  |
| A. Aquaculture Site License Transfers  1. Does your municipality have written policie | es concerning aquaculture license transfers? Yes or |
| 1. Does your marnerpanty have written poner   | .5 concerning aquacaitare neemse transiers: res or  |

- Does your municipality have written policies concerning aquaculture license transfers? Yes or No.
  - If yes, cite and provide a link to specific municipal regulations.
- 2. Does your municipality define the term "aquaculture license transfer "within your municipal rules or regulations? Yes or No.
  - If yes, provide the definition and a link to specific municipal regulations:
- 3. Provide an estimate of the number of aquaculture site license transfers that have occurred in your municipality?
  - In the past year:
  - In the past five years:
- 4. Can an aquaculture license holder designate a recipient for the transfer of their site license? Yes or No.
  - If yes, describe the process.
- 5. Is there a waiting list for aquaculture site licenses in your municipality? Yes or No.
  - If yes, how many individuals were on the list as of March 31, 2023?
  - If no, describe an alternative method of awarding new aquaculture licenses to individuals, if one exists in your municipality.
- 6. Are business partners or farm hands associated with the license holder given special consideration (over someone on a waiting list) to receive the license through a transfer? Yes or No.
  - If yes, provide details.

#### B. Municipal Aquaculture Management

- 1. Does your municipality have rules and/or regulations governing the conduct of Aquaculture? Yes or No.
  - If yes, cite and provide a link to specific municipal regulations.
- 2. Does your municipality have a shellfish advisory board or shellfish committee? Yes or No.
- 3. Does your municipality have an aquaculture management plan? Yes or No.
  - If yes, provide a link to the management plan.
- 4. Are there acreage restrictions on individual licenses within your municipality? Yes or No.
  - If yes, cite and provide a link to specific municipal regulations.
- 5. Are there restrictions on whether a license holder may hold more than one site license within your municipality? Yes or No.
  - If yes, provide detail and a link to specific municipal regulations.
- 6. Is there a moratorium on issuance of new aquaculture licenses in your municipality? Yes or No.
  - If yes, provide the date the moratorium was enacted:
  - If yes, provide the rationale used to enact the moratorium:
- 7. Is there a residency or domicile requirement to qualify for a site license? Yes or No.
  - If yes, provide the criteria used to prove residency and provide a link to specific municipal regulations.
- 8. Are there minimum qualifications or other standards outside of a residency requirement for vetting an individual's eligibility to receive a site license (for example, educational or experience requirement, etc.)? Yes or No.
  - If yes, provide details and a link to specific municipal regulations.
- 9. Are aquaculture site license holders required by the municipality to possess a valid commercial fishing permit **issued by the town**? Yes or No.
- 10. Are aquaculture site license holders required by the municipality to possess a valid commercial fishing permit **issued by the state**? Yes or No.

- 11. Within your municipality, can an aquaculture site license be issued to:
  - A person? Yes or No.
  - A corporation (business entity)? Yes or No.
- 12. If an aquaculture license is issued to a corporation (business entity), are there requirements that one or more members of the corporation be residents? Yes or No.
  - If yes, provide details and a link to specific municipal regulations.
- 13. Are aquaculture site license holders personally required to work the grant in some minimum capacity? Yes or No.
  - If yes, provide details and a link to specific municipal regulations.
- 14. Is there a substantial use (minimum productivity and/or investment) requirement associated with aquaculture license sites in your municipality? Yes or No.
  - If yes, provide details and a link to specific municipal regulations.
- 15. Have licenses been revoked by your municipality for not meeting those standards? Yes or No.
  - If yes, provide details.
- 16. Has the municipality ever revoked an aquaculture site license for reason other than non-conforming substantial use practices by the licensee? Yes or No.
  - If yes, for what reason was the license revoked?
- 17. Is sub-leasing of a grant site to another person allowed? Yes or No.
  - If yes, provide details and a link to specific municipal regulations.
- 18. Does the municipality allow the licensing of multiple individuals on a single aquaculture license site? Yes or No.
  - If yes, provide details and a link to specific municipal regulations.
- 19. Beyond the town issuing aquaculture site licenses to multiple persons on a single grant site, are there other legal mechanisms used by aquaculture site license holders that enable them without being present to have someone else conduct shellfish culture activities on the grant site (e.g., use of contracts)? Yes or No.
  - If yes, provide details and a link to specific town regulations.

| 20. | Pro | vide the dollar amount c | harged to aquaculture license holders within your municipality? |
|-----|-----|--------------------------|---|
|     | Inc | lude:                    |   |
|     | •   | Annual License fee       |   |
|     | •   | license application fee  |   |

| • | license renewal fee |  |
|---|---------------------|--|
| • | Administration fee  |  |
| • | List other fees     |  |
|   |                     |  |

- 21. Are there insurance and/or bonding requirements associated with aquaculture license sites in your municipality?
  - If yes, provide details and a link to specific municipal regulations.
- 22. Does the municipality have written policies or bylaws concerning the disposition of shellfish and gear left or abandoned by a licensed grant holder or gear and product washed ashore by weather?
  - If yes, provide details and a link to specific municipal regulations.

# 2023 ISSC Meeting Hotwash

Jeff Kennedy

jeff.kennedy@mass.gov

Shellfish Program Lead

Massachusetts Division of Marine Fisheries

https://mass.gov/dmf

## National Shellfish Sanitation Program (NSSP)

## Guide for the Control of Molluscan Shellfish 2019 Revision



From the U.S. Food and Drug Administration website http://www.fda.gov/Food/GuidanceRegulation/FederalStateFoodPrograms/ucm2006754.htm

# Proposal Submission and Consideration

- For each proposal the Task Force can recommend the conference:
  - approve; no action, modify, send the proposal to committee
- Committees send recommendations on referred proposals back to Task Force (usually from previous years)
- General Assembly votes: yes/no, cannot modify
- FDA concurs or not, within ninety days
- Executive Board may act or deliberate with FDA
- Actions become effective with next revision of the NSSP unless executive board stipulates earlier date

# **New Proposal**

#### **TASK FORCE**

recommends to

**General Assembly** 

Approve; Modify; No Action; Send to Committee

GENERAL ASSEMBLY
Approve

Reject

## Interim

FDA Concurrence 90days

Executive Board may act or deliberate with FDA

Adopted into NSSP

Rejected

Modify

Send to Committee

# **Next Conference**

#### COMMITTEE

can recommend to Task Force Approve; Modify; No Action

Actions become effective with next revision of the NSSP unless executive board stipulates earlier date



ISSC

Interstate Shellfish Sanitation Conference 4801 Hermitage Rd , Suite 102- Richmond , VA 23772 Phone 804-330-6380

Website www.issc.org - Email issc@issc.org

#### 2023 TENTATIVE AGENDA

#### Saturday, March 18, 2023

| 12:00 PM           | Business Office Opens                            |
|--------------------|--|
| 12:00 PM - 4:00 PM | Registration & Selected Committee Meetings       |
| 3:00 PM - 3:45 PM  | Orientation for New Attendees (Open to Everyone) |
| 4:00 PM - 5:30 PM  | Opening General Assembly                         |
| 6:30 PM - 8:00 PM  | Chairman's Welcome Reception                     |

#### Sunday, March 19, 2023

| 8:30 AM - | 9:00 AM | Committee Chair Meeting |
|-----------|---------|-------------------------|
| 9:00 AM - | 9:00 PM | Committee Meetings      |

#### Monday, March 20, 2023

| 8:00 AM - 8:30 AM   | Executive Board Elections                            |
|---------------------|--|
| 8:30 AM - 11:00 AM  | Committee Meetings                                   |
| 11:00 AM - 12:30 PM | Executive Board Meeting                              |
| 1:00 PM - 6:00 PM   | Task Force Meetings (consideration of new proposals) |

#### Tuesday, March 21, 2023

| 8:30 AM - 6:00 PM | Task Force Meetings |
|-------------------|---------------------|
|-------------------|---------------------|

#### Wednesday, March 22, 2023

| 9:00 AM - 12:00 PM | Symposium                               |
|--------------------|---|
| 1:00 PM - 6:00 PM  | Task Force Reports Available for Review |
| 7:00 PM - 9:00 PM  | Regional Caucuses                       |

#### Thursday, March 23, 2023

| 9:00 AM - 12:00 PM | Closing General Assembly |
|--------------------|--------------------------|
| 12:30 PM - 1:30 PM | Executive Board Luncheon |
| 1:30 PM - 4:00 PM  | Executive Board Meeting  |

### Sunday - March 19, 2023

|                    | ISSC Office<br>Bonaparte | Salon 1                    | Salon II                              | Salon III                             | Salon IV                              | Camelia                               | Rose                                  | Azalea                                     | Magnolia                                 |
|--------------------|--------------------------|----------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|--|--|
| 8:00 AM - 6:00 PM  | Registration<br>Lounge   |                            | Hollow Square All<br>Day<br>30 people | Hollow Square<br>All Day<br>30 people | Hollow Square<br>All Day<br>30 people | Hollow Square<br>All Day<br>20 people | Hollow Square<br>All Day<br>20 people | LOTF<br>Conference<br>All Day<br>30 people | FDA<br>Classroom<br>All Day<br>50 people |
| 8:30 AM - 9:00 AM  |                          | Committee<br>Chair Meeting |                                       |                                       |                                       |                                       | ,                                     |  |  |
| 9:00 AM - 11:00 AM |                          | Laboratory AH  Jake        | VVIR LH Chrissy                       | GAC RS<br>Matt                        | Standards EH                          | NSSP Evaluation<br>Criteria JH        | Foreign<br>Relations DF               |  |  |
| 11:00 AM - 1:00 PM |                          | Laboratory AH              | Vp Illness<br>Response                | Wet Storage JH                        | Education<br>JG                       |                                       | Vibrio<br>Management<br>AE<br>Chrissy |  |  |
| 1:00 PM -2:00 PM   |                          | Lunch                      | Lunch                                 |                                       | Lunch                                 | Lunch                                 |                                       |  |  |
| 2:00 PM - 4:00 PM  |                          | Traceability BD            |                                       | MSC JH                                | Training KK                           |                                       | Biotoxin BL                           |  |  |
| 4:00 PM - 6:00 PM  | (                        | TIME/TEMP EH               | Federal Waters JH                     | Cleansing Study<br>RS                 | Patrol PG                             |                                       | Shellfish<br>Restoration BH           |  |  |
| 6:00 PM - 7:00 PM  |                          | Break                      | Break                                 | Break                                 | Break                                 | Break                                 | Break                                 | Break                                      | Break                                    |
| 7:00 PM - 9:00 PM  |                          |                            | PCSGA                                 | NESSA                                 |                                       | NOAA                                  | PacRim                                | LOTF                                       | FDA                                      |

## Monday - March 20, 2023

|   | ISSC Office<br>Bonaparte | Sal   | on I   | Salon II   | Salon III   | Salon IV  |   | Azalea | Magnolia |
|---|--------------------------|---|--|--|---|---|---|--------|----------|
| 8:00 AM - 6:00 PM                                 | Registration             |   | re Until Noon<br>ask Force III   | Hollow Square<br>Until Noon  | Hollow Square<br>Until Noon   | Conference  |   | LOTF   | FDA      |
| 8:00 AM – 8:15 AM<br>Executive Board<br>Elections |                          | REGION 1<br>Industry  |  | REGION 3<br>Regulatory   | REGION 5<br>Regulatory  |   |   | LOTF   | FDA      |
| 8:15 AM -8:30 AM<br>Executive Board<br>Elections  |                          | REGION 2<br>Industry  |  | REGION 4<br>Industry   | REGION 6<br>Industry  | NON-<br>PRODUCING<br>States   |   | LOTF   | FDA      |
| 8:30 AM - 9:30 AM                                 |                          |   |  | GAC Chrissy Matt   | Patrol  | Shellstock<br>Identification<br>JH  | Task Force<br>Orientation   | LOTF   | FDA      |
| 9:30 AM - 11:00 AM                                |                          |   |  | GAC  | Foreign<br>Relations  | Aquaculture JH  Chrissy   |   | LOTF   | FDA      |
| 11:00 AM - 12:30 PM                               |                          | Executive Board<br>Hollow   | oa <u>AB</u><br>d Meeting for 30<br>v Square<br>er Seating   |  |   |   |   | LOTF   | FDA      |
| 1:00 PM - 6:00 PM                                 |                          | Chrissy   | on I Matt  | Salo:  |   |   | on III  |        |          |
|   |                          | 15 w/5 wired<br>TF Rep<br>Support Pack<br>extension cor<br>Theate | ised Head Table is microphones orter Table rage(Projector, rd and screen) er Seating ophone on stand | Task Force II Rai<br>15 w/5 wired<br>TF Repor<br>Support Package(e<br>screen) The<br>125 w/microphon<br>ro | microphones<br>ter Table<br>extension cord and<br>ater Seating<br>e on stand at first | Table 15 w/5 v<br>TF Rep<br>Support Packa<br>and screen) T<br>w/microphon | I Raised Head<br>wired microphones<br>orter Table<br>ge(extension cord<br>heater Seating 75<br>e on stand at first<br>row | LOTF   | FDA      |
| 6:00 PM - 9:00 PM                                 | ISSC Office<br>Bonaparte |   | Salon I  | Salon II   | Salon III   | Camelia   | Rose  | Azalea | Magnolia |
|   | ISSC Office              |   | PCSGA  | ECSGA  | NESSA   | NOAA  | PACRIM  | LOTF   | FDA      |





| • 17-100 | Clarifies definition of marina  |
|----------|---|
| • 19-101 | Creates new lab status – conditionally conforming                                 |
| • 19-108 | Reduce min time seed grown in Prohibited from 120 -> 60days when temps above 50°F |
| • 19-123 | Marine Biotoxin Control – Public Health Explanations                              |
| • 19-124 | Marine Biotoxin Control – Guidance Document                                       |
| • 19-144 | Assessing WWTP Viral Impact on GA using MSC                                       |
| • 19-145 | Establish guidance for shellfish cleansing studies                                |
|          |   |

# Task Force I Proposals (cont')



| • 23-100  | Mooring Area re-definition >20 boats with MSD                                |
|-----------|--|
| • 23-102  | Re-defines/clarifies seed from Prohibited area + enhancement                 |
| • 23-103* | Closure duration criteria for illness outbreak: 21 days from harvest         |
| • 23-104* | Timeframe for action to close GA due to Vp illness 60->30days                |
| • 23-108  | Clarify only MSC can be used to reduce reopening the GA in less than 21 days |
| • 23-109  | Clarify growing area reopening criteria (no human sewage)                    |
| • 23-110  | Adds Restricted classification as option for w/i marina                      |
|           |  |

<sup>\*</sup> Pulled during General Assembly to be debated and voted on separately from other Task Force I recommendations



# Task Force I Proposals (cont')



| • 23-111 | Reduces min closure for relay product from 60->14 days if if only impacted by microbial contaminants |
|----------|--|
| • 23-112 | replace current language in MO 'sewage and bodily fluids' with 'sewage and vomitus'                  |
| • 23-121 | request mooring area guidance document   |
| • 23-123 | clarify how P90 is calculated for depurated endproduct   |
| • 23-124 | new Marina and Mooring Area Guidance document  |





- 19-215 Ingredient Labeling Used in Wet Storage
- 19-220 Pre-chilling Vehicles
- 19-231 Adding Shipping CCP
- 19-227 Proper Use of Backflow Preventers
- 23-201 Reducing Plant Inspection Frequency (Amended)
- 23-208 Shellstock Time to Temperature Controls (Amended)
- 23-212 Require Additional Shipping Documents

# Proposal 23-208

| Submitter         | Mitch Jurisich  |
|-------------------|---|
| Affiliation       | Louisiana Oyster Task Force   |
| Address Line 1    | 2045 Lakeshore Drive, STE 403   |
| Address Line 2    |   |
| City, State, Zip  | New Orleans, LA 70148   |
| Phone             | (504)286-8739   |
| Fax               |   |
| Email             | mitchjurisich@yahoo.com   |
| Proposal Subject  | Shellstock Time to Temperature Controls   |
| Specific NSSP     | Section II Model Ordinance Chapter VIII. Control of Shellfish Harvesting  |
| Guide Reference   | @.02 Shellstock Time to Temperature Controls.   |
| Text of Proposal/ | A. Each shellfish producing State shall establish time to temperature   |
| Requested Action  | requirements for the harvesting of all shellstock to ensure that harvesters shall comply with one of the following: |
|                   | (1) 77 (1) (1) (1) (1) (1) (1) (1) (1) (1)  |

- The State Vibrio vulnificus Control Plan as outlined in Chapter II. @.06; or
- (2) The State Vibrio parahaemolyticus Plan as outlined in Chapter II. @.07; or
- (3) All other shellstock shall comply with one of the matrix matrices below:

| Action<br>Level | Average Monthly<br>Maximum Air Temperature | Maximum Hours from Exposure to Receipt at a Dealer's Facility |
|-----------------|--|---|
| Level 1         | < 50 °F (10 °C)                            | 36 hours  |
| Level 2         | 50 °F - 60 °F ( 10 °C - 15 °C)             | 24 hours  |
| Level 3         | > 60 °F - 80 °F ( 15 °C - 27 °C)           | 18 hours  |
| Level 4         | > 80 °F (≥ 27 °C)                          | 12 hours  |

| Action<br>Level | Water Temperature                    | Maximum Hours from Exposure<br>to Temperature Control |
|-----------------|--------------------------------------|---|
| Level 1         | < 65 °F (10 °C)                      | 36 hours  |
| Level 2         | 65 °F - 74 °F ( 18 °C - 23 °C)       | 18 hours  |
| Level 3         | > 74 °F - 84 °F (> 23 °C - 28<br>°C) | 16 hours  |
| Level 4         | > 84 °F (≥ 28 °C)                    | 14 hours  |

| Public Health<br>Significance    | No adverse public health significance. Gulf states have had no significant historical bacterial based risk during cold water months Dec-Feb. This will allow states the option to have the harvest time to temperature controls based on Average Monthly Maximum   |  |  |   |  |  |
|----------------------------------|--|--|--|---|--|--|
|                                  |  |  |  | onthly Maximum Air Temperature, (as it                        |  |  |
| Cost Information                 |  | prior to 20  | 12)  |   |  |  |
| Cost information                 | None   |  |  |   |  |  |
| Action by Task<br>Force II, 2023 | Recor  | mmends a   | dopting proposal 23-208 with an            | nended language:  |  |  |
|                                  | @.02   | Shellstock   | Time to Temperature Controls               |   |  |  |
|                                  | <ul> <li>A. Each Shellfish producing State shall establish time to temperature requirements for the harvesting of all shellstock to ensure that harvesters shall comply with (1) of the following: <ol> <li>The Stat V.v Control Plan as outline in Chapter II. @.06; or</li> <li>The State V.p. Plan as Outline in Chapter II. @07; or</li> <li>All other shellstock shall comply with the matrix below:</li> </ol> </li> </ul>   |  |  |   |  |  |
|                                  |  | Action<br>Level  | Average Monthly<br>Maximum Air Temperature | Maximum Hours from Exposure to Receipt at a Dealer's Facility |  |  |
|                                  |  | Level 1  | < 50 °F (10 °C)                            | 36 hours  |  |  |
|                                  |  | Level 2  | 50 °F - 60 °F ( 10 °C - 15 °C)             | 24 hours  |  |  |
|                                  |  | Level 3  | > 60 °F - 80 °F ( 15 °C - 27 °C)           | 18 hours  |  |  |
|                                  |  | Level 4  | > 80 °F (≥ 27 °C)                          | 12 hours  |  |  |
|                                  | B. If the Authority's Vibrio Control Plan time to temperature requirements allow for more time from exposure than the @.02 A(3) temperature matrix then the time requirements of the Vibrio Control Plan may be applied in place of @.02 A(3)  |  |  |   |  |  |
|                                  | C. For the purposes of this section, temperature control is defined as the management of the temperature of shellstock by means of ice, mechanical refrigeration or other approved means necessary to lower and maintain the temperature of the shellstock to comply with Chapters XI., XIII. or XIV.  D. The Authority shall establish the water temperature required in the vibrio plans outlined in A.(1) and A.(2) above. The authority shall establish the air temperature required in A.(3) above. These temperatures shall be established for each growing area by averaging the previous five (5) years maximum monthly temperatures.  E. For the purpose of time to temperature control, time begins once the first shellstock harvested is no longer submerged.  F. The Authority shall ensure that harvesters document and provide trip records to the initial dealer demonstrating compliance with the time to temperature requirements. For |  |  |   |  |  |
|                                  |  | States that establish and limit harvest times that assure compliance with the times outlined in the matrix of Chapter VIII. @.02 A. (3) recording the time harvest begins is not required. |  |   |  |  |

# Proposal 23-208

Proposal No.

23-208

- G. Shellstock intended for Wet Storage, Depuration, PHP or "For Shucking Only by a Certified Dealer" must either be shucked, introduced into PHP, Wet Storage, or Depuration within times outlined in the matrix in Chapter VIII. @.02 A. (3) or meet the applicable time to temperature controls of Chapter VIII. @.02 A. (3). Shellstock harvested under a State Vibrio Plan intended for Wet Storage or Depuration, must be placed in Wet Storage, Depuration or refrigeration to comply with time to temperature controls outlined in the State Authority V.v or V.p. Control Plan
- H. Ocean Quahogs (Artica islandia) and surf clams (Spisula solidissima) are exempt from this temperature control plan when these products are intended for thermal processing.
- I. Authorities shall consider the need for shading in developing V.v and V.p, Control Plans. Shading shall be required when deemed appropriate by the Authority when implementing @.02 A. (1), (2), and (3).
- J. Shellstock intended for a validated pathogen reduction process hwere refrigeration would reduce efficacy of the process (and appropriately labeled with name of the receiving dealer) is exempt from the requirements in Chapter VIII. @.02 A. (1) and (2).



# Select Task Force III Proposals

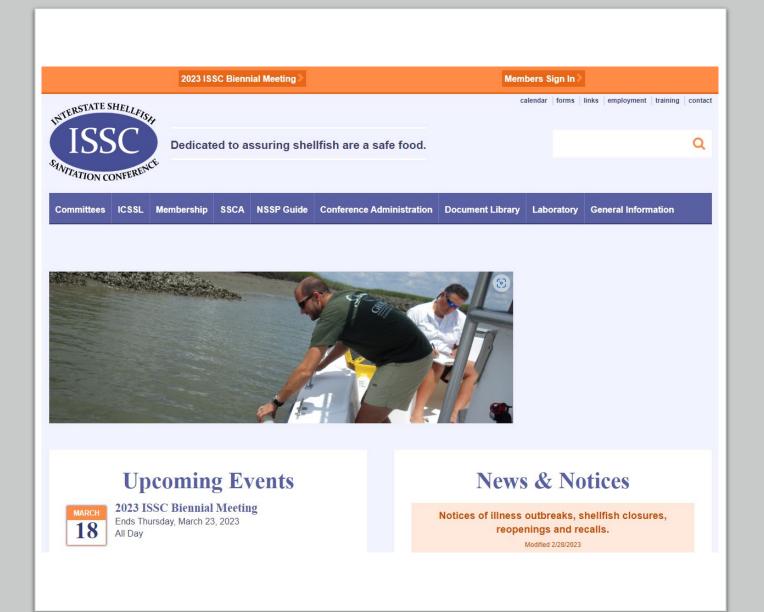


| 12 201   |           | $\wedge$ | 1              | 1          | • •      |
|----------|-----------|----------|----------------|------------|----------|
| • 13-301 | Establish | GA       | classification | evaluation | criteria |

| • 17-204 | Add in-field | compliance | criteria for | CoH e | lement evaluation |
|----------|--------------|------------|--------------|-------|-------------------|
|----------|--------------|------------|--------------|-------|-------------------|

- 23-301 Limiting use of Guidance Documents in evaluations
- 23-305 Clarifies/Expands Biotoxin Management Criteria
- 23-306 Clarifies steps in FDA/state disagreements and UI process

- ISSC Website- https://www.issc.org/
- NSSP- <a href="https://www.issc.org/nssp-guide">https://www.issc.org/nssp-guide</a>
- Interstate Shellfish Sanitation Conference 4801 Hermitage Rd Ste 102 Richmond, VA 23227
- Phone: (804) 330-6380







## Commonwealth of Massachusetts Division of Marine Fisheries



#### **Oyster Harvest Logbook**

Vibrio parahaemolyticus (Vp)

| Harvester Nam | e:                 |  |
|---------------|--------------------|--|
| Harvest Year: |                    |  |
| MA Comm. She  | ellfish Permit ID: |  |

Effective Dates: May 19 - October 19

This Logbook must be turned in to the Massachusetts Division of Marine Fisheries by the end of the calendar year.

706 South Rodney French Blvd. New Bedford, MA 02744

# Vibrio Control Season is Near

May 19-October 19

| ۹.            | assachusetts Division of Mar  |   |   |
|---------------|---|---|---|
| ì.            | Interview Information:<br>Date:   | Location:   |   |
| 2.            | Time:   | Town:   |   |
| 3.            | Officer/Staf  |   | Agency:   |
|               |   |   |   |
|               |   |   |   |
|               |   |   |   |
| 1.            |   | Check One:  | Aquaculturist Wild Harvester  |
|               | MA Commercial Shellfish Permit ID#:   |   |   |
| 3.            | denemany,   |   | Culling? Yes No   |
|               | If Aquaculturist on grant site but not har  | vesting check here:   | 222 CMR 15 OF (11/-) 15 O7 (21/-)   |
| C<br>L        | Shellfish Tagging:<br>Are All Containers Properly Tagged?   |   | 322 CMR 16.05 (1)(a), 16.07 (3)(c)  |
|               | Do the Tags Include the Following Inform  | Yes No  |   |
|               |   | Yes No  |   |
|               | a. Time of Harvest:   |   |   |
|               | b. Time of Icing:   | Yes No  |   |
|               | c. Harvest Date:  | Yes No  |   |
|               | d. Harvest Area:  | Yes No  |   |
|               | e. Harvester ID:  | Yes No  |   |
|               |   | 162 140   | ]   |
|               | V.p. Harvest Logbook:<br>Is the Logbook Present?  |   | 322 CMR 16.07 (3)(d)  |
|               | Is the Following Information Provided?  | Yes No  |   |
| ٠.            | -   | Yes No  |   |
|               | a. Time of Harvest:   | Yes No  |   |
|               | b. Time of Icing:   |   |   |
|               | c. Date:  | Yes No  |   |
|               | d. Quantity of Oysters:   | Yes No  |   |
| 3.            | If Aquaculturist, Does Logbook Indicate O   | ysters are Currently Being Re   | e-submerged? Yes No   |
|               | If Yes and Compliance Check Occurring on Gra  | int Site, are Re-submerged Lots   | s Correctly Tagged and Segregated? Yes No   |
| E             | Shellfish Handling:   |   | 322 CMR 16.07 (3)(a), (3)(b)  |
| L.            | Are Oysters Adequately Iced?  | Yes No  |   |
| 2.            | Are Oysters Adequately Shaded?  | Yes No  |   |
| F             | Shellfish Delivery:   |   | 322 CMR 16.07 (3)(e)  |
|               | Name of Wholesale Dealer:   |   | (5)(2)  |
|               | Quantity of Oysters:  |   |   |
|               | Oysters Received at (check one):  |   |   |
|               |   | Truck   | Dealer's Facility   |
|               | General Sanitary Harvest Compliance:  |   | 322 CMR 16.04 (2)   |
| 5             | the second second second second   |   |   |
|               | Is Sanitation Device/Container Secured C  | Onboard Vessel?   | Yes No NA   |
| 1.            | Is Sanitation Device/Container Secured C<br>Are Pets/Animals Onboard Harvesting Ve  |   |   |
| 1.            |   |   |   |
| 1.<br>2.      | Are Pets/Animals Onboard Harvesting Ve<br>Compliance Assessment:  |   |   |
| 1.<br>2.<br>1 | Are Pets/Animals Onboard Harvesting Ve<br>Compliance Assessment:<br>Was Enforcement Action Taken?   | Yes No N  |   |
| 1.<br>2.<br>1 | Are Pets/Animals Onboard Harvesting Ve<br>Compliance Assessment:<br>Was Enforcement Action Taken?   | Yes No N  |   |
| 1.<br>2.      | Are Pets/Animals Onboard Harvesting Ve<br>Compliance Assessment:<br>Was Enforcement Action Taken?   | Yes No N. Yes No N.   | A   |
| 1.<br>2.<br>1 | Are Pets/Animals Onboard Harvesting Ve<br>Compliance Assessment:<br>Was Enforcement Action Taken?   | Yes No N  | Please submit all forms and any questions   |
| 1.<br>2.<br>1 | Are Pets/Animals Onboard Harvesting Ve<br>Compliance Assessment:<br>Was Enforcement Action Taken?<br>If Yes, provide Citation Number or Repor | Yes No N. Yes No N. The No N. No N. Yes No No N. No N | Please submit all forms and any questions to: Christian Petitpas  |
| 1.<br>2.<br>1 | Are Pets/Animals Onboard Harvesting Ve<br>Compliance Assessment:<br>Was Enforcement Action Taken?<br>If Yes, provide Citation Number or Repor | Yes No N  | Please submit all forms and any questions to: Christian Petitpas Massachusetts Division of Marine Fisheries                               |
| 1.<br>2.<br>1 | Are Pets/Animals Onboard Harvesting Ve<br>Compliance Assessment:<br>Was Enforcement Action Taken?<br>If Yes, provide Citation Number or Repor | Yes No N. Yes No N.   | Please submit all forms and any questions to: Christian Petitpas Massachusetts Division of Marine Fisheries 706 South Rodney French Blvd. |
| 1.<br>2.<br>1 | Are Pets/Animals Onboard Harvesting Ve<br>Compliance Assessment:<br>Was Enforcement Action Taken?<br>If Yes, provide Citation Number or Repor | Yes No N Yes No N Tt Number:  | Please submit all forms and any questions to: Christian Petitpas Massachusetts Division of Marine Fisheries                               |

# VIBRIO BACTERIA WARRING A STATE OF THE STATE



Image Source: Shuttersto

"MAVEN" is the Massachusetts Virtual

Epidemiologic Network - a PHIN (Public Health
Information Network) compliant, secure web-based
surveillance and case management system for
infectious diseases that enables rapid, efficient
communication among local and state health

## What are Vibrio bacteria?

- Vibrio is a diverse genus of bacteria that exist free-living or associated with human/animal hosts
- > One of the fastest growth rates of all known bacteria
  - High growth rates in warm temperatures
- > Pathogenic strains represent a small percentage of the total *V.p.* in marine waters
- ➤ Vibriosis causes ~80,000 illnesses (~45,000 from consumption of *Vp* contaminated food), 500 hospitalizations and 100 deaths/yr in the US
- > V.p. leading cause of seafood borne illness (87% require no medical care)
  - Diarrhea, often accompanied by abdominal cramping, nausea, vomiting, fever, and chills. Symptoms occur within 24 hours of ingestion and last about 3 days.
  - Severe illness is rare and typically occurs in people with a weakened immune system.
    - Associated with consumption of raw/undercooked seafood, particularly raw oysters
    - ➤ Confirmed illnesses have increased in last 2 decades and is an ongoing public health challenge



An illness outbreak (two or more illnesses epidemiologically linked to oysters harvested on the same day from same area) triggers a *Vibrio* Control Plan for the area under NSSP standards.



2011 was the first time two illnesses had been traced back to the same Massachusetts source on same harvest day.

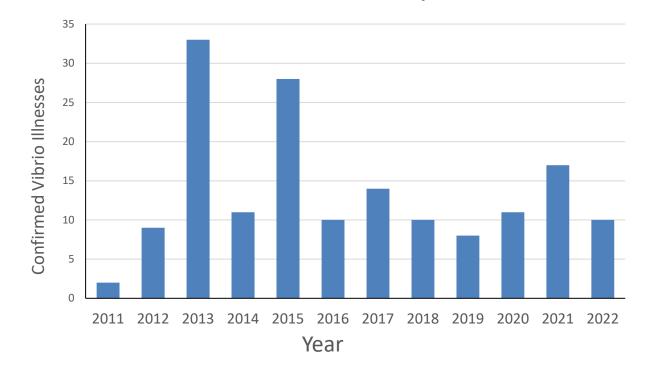
# I I

First MA *Vibrio* Control Plan implemented in 2012 for eastern Cape Cod Bay only and state-wide Plan implemented in 2013.

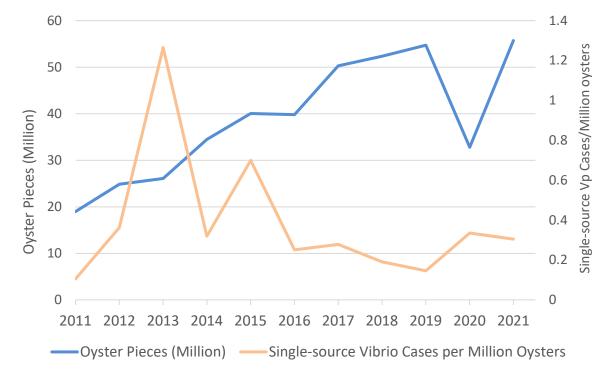


No outbreaks linked to the consumption of commercially harvested hard clams from Massachusetts harvest areas.

#### Massachusetts Sole Source V.p. Illness Cases



#### Massachusetts Oyster Landings and Vp Cases/Million Oysters Landed



Rapid Cooling (Icing)





| Oyster<br>Temp<br>(° F) | Growth<br>Rate<br>(logs/hr) | Doubling<br>Time<br>(hours) |
|-------------------------|-----------------------------|-----------------------------|
| 50                      | 0.008                       | 35.8                        |
| 70                      | 0.100                       | 3.01                        |
| 90                      | 0.292                       | 1.03                        |
| 100                     | 0.426                       | 0.71                        |



## **Vibrio Training and Outreach Meetings:**

Monday, May 1, 2023

10:00 AM - 11:30 AM

**Eastham Town Hall** 

**Earle Mountain Room** 

2500 State Hwy, Eastham, MA 02642

**Tuesday, May 2, 2023** 

10:00 AM - 11:30 AM

**Plymouth Public Library** 

Otto Fehlow Room

132 South St. Plymouth, MA 02360

Virtual Meeting Thursday May 4, 2023

5:00 PM

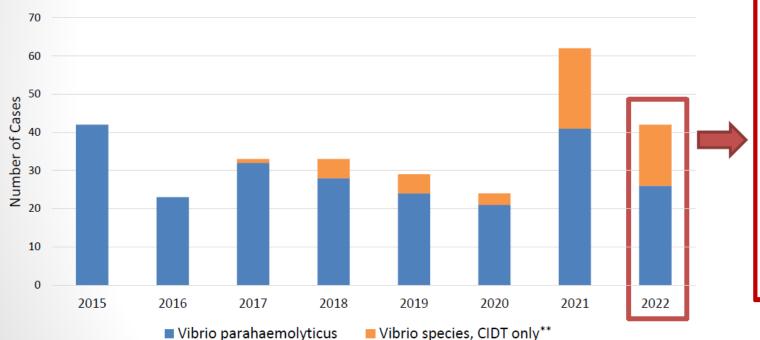


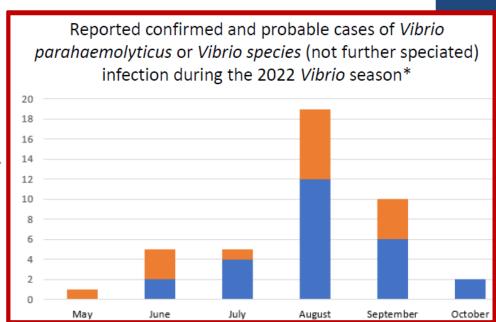


# 2022 Vibrio Season Summary



Reported confirmed and probable cases of *Vibrio parahaemolyticus* or *Vibrio species* (not further speciated) infection during *Vibrio* season\*, 2015-2022





<sup>\*</sup>Vibrio season: May 1st - October 31st.

<sup>\*\*</sup>CIDT stands for culture independent diagnostic testing Data from MAVEN as of 12/15/22 and are subject to change.



# Vibrio Season Summary

OF PURIS

41

MA residents
investigated with
Vibrio
parahaemolyticus or
Vibrio sp. (not further
speciated) from stool

80%

Reported consuming raw oysters (28 out of 35 with information available) Harvest Area Illness Attribution (n=23)

22%

43%

Single in-state

Multiple in-state

Out-of-state only

MA harvest areas associated with ≥3 cases with a single, in-state illness attribution



An additional 17 out-of-state residents reported with consumption of oysters in MA, or whose illness was traced back to oysters in MA.

Data from MAVEN as of 12/7/22 and are subject to change.

# Confirmed *Vibrio parahaemolyticus*Single Source (10; down from 18 in 2021):

| Consumption Date  | Implicated Food | Harvest Area     |
|-------------------|-----------------|------------------|
| 6/11/2022         | Raw Oysters     | CCB45-Duxbury    |
| 6/19/2022         | Raw Oysters     | CCB45-Duxbury    |
| 6/27/2022         | Raw Oysters     | BB37-Wareham     |
| 7/21/22 & 7/22/22 | Raw Oysters     | CCB11-Wellfleet  |
| 8/4/22            | Raw Oysters     | CCB45-Duxbury    |
| 8/5/22            | Raw Oysters     | CCB14-Wellfleet  |
| 8/6/22            | Raw Oysters     | CCB31-Barnstable |
| 8/6/22            | Raw Oysters     | V20-Edgartown    |
| 8/20/2022         | Raw Oysters     | V20-Edgartown    |
| 9/14/2022         | Raw Oysters     | V20-Edgartown    |

<sup>\*</sup>Confirmed Vp Self Harvest possibly V26-Edgartown

## Confirmed Vibrio sp. Single Source (6):

| <b>Consumption Date</b> | Implicated Food | Harvest Area        |
|-------------------------|-----------------|---------------------|
| 5/28/2022               | Raw Oysters     | CCB23-Dennis        |
| 6/20/2022               | Raw Oysters     | CCB45-Duxbury       |
| 8/3/2022                | Raw Quahogs     | SC20-Mashpee (Self) |
| 8/6/22                  | Raw Oysters     | SC49-Chatham        |
| 9/8/22                  | Raw Oysters     | SC49-Chatham        |
| 9/24/22                 | Raw Oysters     | CCB14-Wellfleet     |

<sup>\*</sup>Confirmed Vibrio sp. traced to single area in Canada

*V. cholera:* 5 cases (raw oysters)

V. fluvialis: 1 shellfish case (raw quahogs/cooked mussels)

## Confirmed *Vp* Multi-Source (13):

| Consumption Date       | Implicated Food | Harvest Areas                          |  |  |  |
|------------------------|-----------------|--|--|--|--|
| 7/1/2022               | Raw Oysters     | CCB45-Duxbury, SC21-Barnstable, Canada |  |  |  |
| 7/1/2022               | Raw Oysters     | CCB14-Wellfleet, CCB45-Duxbury         |  |  |  |
| 7/3/2022               | Raw Oysters     | CCB11-Wellfleet, RI                    |  |  |  |
| 7/4/2022               | Raw Oysters     | CCB31-Barnstable, Canada               |  |  |  |
| 7/4/2022               | Raw Oysters     | CCB11-Wellfleet, CCB45-Duxbury, RI     |  |  |  |
| 7/21/2022              | Raw Oysters     | CCB11-Wellfleet, SC61-Orleans          |  |  |  |
| 7/29/2022 &            |                 | CCB11 & CCB14-Wellfleet,               |  |  |  |
| 7/30/2022              | Raw Oysters     | CCB45-Duxbury, BB37-Wareham,           |  |  |  |
|                        |                 | SC21-Barnstable, ME, WA, Canada        |  |  |  |
| 7/30/2022              | Raw Oysters     | CCB23-Dennis, CCB45-Duxbury            |  |  |  |
| 8/9/2022 & Raw Quahogs |                 | V16 Edgartown/Oak Pluffs DI Canada     |  |  |  |
|                        |                 | V16-Edgartown/Oak Bluffs, RI, Canada   |  |  |  |
| 9/26/2022              | Pau Oustors     | CCB11-Wellfleet, CCB45-Duxbury,        |  |  |  |
| 8/26/2022              | Raw Oysters     | V20-Edgartown                          |  |  |  |
| 9/2/2022               | Raw Oysters     | CCB45-Duxbury, ME, WA                  |  |  |  |
| 9/9/2022               | Raw Oysters     | V10-Oak Bluffs, V20-Edgartown, Canada  |  |  |  |
| 9/24/2022 or Revision  |                 | CCD42 Via cata a CD45 Danda and A45    |  |  |  |
| 9/25/2022              | Raw Oysters     | CCB43-Kingston, CB45-Duxbury, ME       |  |  |  |

<sup>\*</sup>Three all out-of-state multi-source

## Confirmed *Vibrio* sp Multi-Source (5):

| Consumption |                 |                                 |
|-------------|-----------------|---------------------------------|
| Date        | Implicated Food | Harvest Areas                   |
| 6/25/2022   | Raw Oysters     | CCB45-Duxbury, CA, WA           |
| 7/1/2022    | Raw Oysters     | CCB14-Wellfleet, CCB45-Duxbury  |
| 8/14/2022   | Raw Oysters     | SC28-Yarmouth, SC61-Orleans     |
| 8/20/2022   | Raw Oysters     | CCB23-Dennis, CCB31-Barnstable  |
|             |                 | CCB11-Wellfleet, CCB45-Duxbury, |
| 9/4/2022    | Raw Oysters     | BB37-Wareham, Canada            |



# State Waters Landings

| Inshore Shellfish Annual Live Pounds* Landed, 2017-2022 |            |            |            |            |            |            |               |
|---|------------|------------|------------|------------|------------|------------|---------------|
| SPECIES   | 2017       | 2018       | 2019       | 2020       | 2021       | 2022       |               |
| Bay Scallop   | 949,980    | 666,416    | 561,469    | 548,705    | 379,019    | 451,153    | _             |
| Blood Ark   | 61,050     | 62,345     | 122,958    | 96,642     | 46,528     | 20,959     | ~             |
| Blue Mussel   | 10,475,228 | 5,643,323  | 879,608    | 1,486,976  | 3,363,404  | 5,276,377  | \             |
| Eastern Oyster (in pieces)                              | 50,567,982 | 56,723,345 | 55,777,785 | 35,173,907 | 54,241,183 | 51,132,057 | $\sim$        |
| Quahog  | 4,155,135  | 4,478,316  | 4,728,762  | 3,458,709  | 3,724,534  | 4,084,927  | ~             |
| Razor Clam  | 547,120    | 728,322    | 505,068    | 267,397    | 291,541    | 280,323    | $\overline{}$ |
| Softshell Clam  | 3,717,515  | 3,664,873  | 3,413,032  | 3,269,867  | 3,226,962  | 3,436,001  | $\sim$        |
| *Unless otherwise noted                                 |            |            |            |            |            |            |               |
| Data Source: SAFIS eDR, April 2023                      |            |            |            |            |            |            |               |

# State Waters Values

| Inshore Shellfish Annual Ex-Vessel Value, 2017-2022 |              |              |              |              |              |              |
|---|--------------|--------------|--------------|--------------|--------------|--------------|
| SPECIES   | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         |
| Bay Scallop   | \$1,666,194  | \$1,460,778  | \$1,469,056  | \$1,480,338  | \$1,379,947  | \$1,657,094  |
| Blood Ark   | \$80,451     | \$116,836    | \$244,211    | \$186,002    | \$100,466    | \$61,007     |
| Blue Mussel   | \$901,354    | \$740,252    | \$167,404    | \$284,572    | \$434,885    | \$600,704    |
| Eastern Oyster (in pieces)                          | \$24,039,401 | \$25,204,841 | \$26,331,800 | \$18,486,859 | \$27,090,238 | \$29,127,744 |
| Quahog  | \$4,481,278  | \$4,854,171  | \$5,490,561  | \$4,128,713  | \$5,005,621  | \$5,561,833  |
| Razor Clam  | \$2,200,900  | \$3,148,770  | \$2,489,802  | \$1,271,110  | \$1,698,643  | \$1,680,234  |
| Softshell Clam                                      | \$6,250,660  | \$6,200,635  | \$6,542,156  | \$7,201,690  | \$8,732,049  | \$8,041,675  |
| Data Source: SAFIS eDR, April 2023                  |              |              |              |              |              |              |

Inshore Shellfish Annual Average Price per Pound\*, 2017-2022

| SPECIES                    | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|----------------------------|------|------|------|------|------|------|
| BAY SCALLOP                | 1.75 | 2.19 | 2.62 | 2.70 | 3.64 | 3.67 |
| BLOOD ARK                  | 1.32 | 1.87 | 1.99 | 1.92 | 2.16 | 2.91 |
| BLUE MUSSEL                | 0.09 | 0.13 | 0.19 | 0.19 | 0.13 | 0.11 |
| EASTERN OYSTER (in PIECES) | 0.48 | 0.44 | 0.47 | 0.53 | 0.50 | 0.57 |
| NORTHERN QUAHOG            | 1.08 | 1.08 | 1.16 | 1.19 | 1.34 | 1.36 |
| RAZOR CLAM                 | 4.02 | 4.32 | 4.93 | 4.75 | 5.83 | 5.99 |
| SOFT CLAM                  | 1.68 | 1.69 | 1.92 | 2.20 | 2.71 | 2.34 |

\*Unless otherwise noted

Data Source: SAFIS eDR, April 2023