SHELLFISH ADVISORY PANEL
2-5:00PM
Wednesday, November 12, 2025
John Curtis Free Library, Hanover, MA
(listen-in only remote link below)

1. Introductions, Roll Call and Remarks (2:00 – 2:15)
    a. Director's Welcome
    b. Review and Approval of March 20, 2025 Draft Business Meeting Minutes
2. Work Group Updates & Next Steps (2:15-2:35)
    a. Aquaculture License Transfer Work Group
    b. Shellfish Hatchery Work Group
3. Shellfish Habitat Restoration Program & Planting Guidelines (2:35-2:55)
4. Wastewater Treatment Plant Model Peer Review 2:55-3:15
5. Green Crab Summitt & Depletion Program Expansion 3:15-3:30
6. Shellfish Sale Transactions: New System 3:30-3:45
7. Surf Clam Updates 3:45-4:00
8. DMF Shellfish Program Updates (4:00 – 4:30)
    a. 2025 & 2026 FDA PEER & RARM Reviews
    b. Depuration Fishery Status
    c. Vibrio & Campylobacter Control
    d. MSOA Training Class
    e. Legislation updates
    f. 2026 ISSC & NESSA Meetings
9. Other Business (4:30 – 5:00)
    a. Upcoming Meeting Dates
    b. Future Meeting Agenda Items
    c. Public Comments
    d. Adjourn

All times provided are approximate and the meeting agenda is subject to change.
The Shellfish Advisory Panel may amend the agenda at the start of the business meeting.

Future Meeting Dates

TBD

Listen in only live stream via Zoom

Nov 12, 2025 02:00 PM Eastern Time (US and Canada)
https://us02web.zoom.us/j/82748420227
Webinar ID: 827 4842 0227
Call In: +1 929 436 2866

Shellfish Advisory Panel

March 20, 2025, 3:00 pm

Zoom

Shellfish Advisory Panel: Bob Glenn (Acting Chair, Division of Marine Fisheries), Ron Bergstrom, Amy Croteau, Michael DeVasto, William Doyle, Renee Gagne, Seth Garfield, Alex Hay, Dale Leavitt, Josh Reitsma, Allen Rencurrel, John Townes, George Delaney, Jim Peters, Todd Callaghan (Office of Coastal Zone Management – Proxy), Ashley Randle (Department of Agricultural Resource), Nate Corcoran (Department of Environmental Protection – Proxy), Michael Moore (Department of Public Health), Skyler Nash (Joint Committee on Agriculture Senate – Proxy), Dylan Fernandes (Joint Committee on Agriculture Senate), Corinne Coryat (Joint Committee on Agriculture House – Proxy), Natalie Blais (JCA House). *Absent:* Jim Abbott, Stephen Kirk

Division of Marine Fisheries: Daniel McKiernan; Jared Silva; Chrissy Petitpas; Wayne Castonguay; Bradlie Morgan; Matt Camisa; Sean Terrill; Mark Rousseau; Brooke Dejadon; Anna Webb; Ryan Joyce; Gabe Lundgren; Story Reed

Members of the Public: David Slack, Dan Martino, Casaundra Healy, Suzanne Phillips, Scott Soares, Joel B., Chloe Starr, Glen Brooke, Jeffrey Canha, Anders Bjarngard, Liv Woods, Louis Strong, Mark Begley, Jordan Halloran, Pat Saunders, Sean Bowen, Jim Agostine, Melissa Campbell, Dan Goulart, Danny Badger, Eric Hickey, Beth Gibbons, Erika Smith, Nancy Civetta, Melissa Sanderson, Tom Shields, Tyler Jager, David Slack, Tom Duncan, Jordan Halloran, Bill Chace, Adam Goldstein

Introductions and Remarks

DMF Deputy Director Bob Glenn stood in for Director Dan McKiernan as Shellfish Advisory Panel (SAP) Chair and called the meeting to order. Roll call attendance was then taken.

Senator Dylan Fernandes sought clarification on the legislative appointments to the SAP since the Joint Committee on Environment, Natural Resources, and Agriculture was bifurcated into the Joint Committee on Agriculture and the Joint Committee on Environment and Natural Resources. Wayne Castonguay from DMF clarified that the SAP's enabling statute was updated to clarify that the Senate and House chairs of the Joint Committee on Agriculture would be the appointees to this public body.

DMF Director Dan McKiernan welcomed everyone to the meeting and provided some introductory comments. First, Dan introduced the SAP's newest member, George Delaney. George is the President of Ipswich Maritime Products, a shellfish dealer on the North Shore and fills the SAP seat vacated by Mike Trupiano of Ipswich Shellfish. McKiernan then introduced two new DMF employees: Sean Terrill, a Shellfish Habitat Restoration Specialist working on DMF's Habitat Program, and Bradlie Morgan, a Policy Administration and Communication Specialist for DMF's Policy and Management Program. Lastly, the Director noted two challenges facing DMF that would likely be themes throughout the SAP meeting: navigating interactions with the federal government given the changing landscape with the new administration and the continuing effort by DMF to reclassify shellfish growing areas for buffer zones around sewage treatment plant outfalls.

Review of November 2024 Meeting Minutes

Acting Chair, Bob Glenn, asked for a motion to approve the November 2024 minutes as written. Seth Garfield made a motion, and Ashley Randall seconded the motion. However, Dan McKiernan then suggested clarifying edits to page 7. The first clarified that the Risk Assessment, Risk Management (RARM) results showed good compliance except a major violation 'attributable to', not 'observed by' one harvester. The second request sought to clarify the regulations which allowed for surf clam geofencing, correcting a statement that said it would be paired with the 'new DEP regulation', when it should've read 'the new DMF statute', because DEP didn't change their regulations. Bob requested a motion to approve the amended minutes. Amy Croteau made a motion to approve the amended meeting minutes. Seth Garfield seconded the motion. A roll call vote was taken, and the motion passed 17-1-0, with Representative Natalie Blais abstaining.

Work Group Updates & Next Steps

Glenn introduced DMF's Aquaculture Project Lead, Alex Boeri, to the SAP. Boeri provided the SAP with an update on the Aquaculture License Transfer Work Group. At the November 2024 SAP meeting, there was a presentation on a DMF survey of municipalities regarding local frameworks for aquaculture licensing and license transfers. The Work Group has reviewed the results of the survey and met several times to begin developing a white paper to help inform municipalities of the various management programs and management challenges. Alex was hopeful a final draft would be ready for distribution to the SAP at their fall meeting.

Boeri noted that Work Group members had raised concerns about DMF's survey only being sent to municipal authorities, not license holders. To address this, Alex said the Work Group will prepare an additional survey for growers and other interested parties.

McKiernan explained that shellfish aquaculturists have sought the ability to transfer their municipal license site in the sale of their business and business assets. However, the extent to which this is accommodated is controlled under municipal regulation. There was a legislative initiative to create a statewide allowance several years ago, but it was met with significant resistance. Dan opined that some of this resistance was driven by a misinterpretation of the legislation's intent. This issue was highlighted by the Massachusetts Shellfish Initiative as a primary topic for the SAP to consider. To address this, DMF and the Work Group have been developing an inventory of municipal licensing programs to allow town authorities to better understand what types of programs may exist and how they may want to evolve their program.

Rep. Blais asked if the legislation was refiled in the current legislative session. McKiernan stated that it has not been refiled since 2018.

Michael DeVasto piggybacked on McKiernan's comments. He noted that it is crucial to recognize the importance of home rule given the differences between each municipality. However, the question of license site transferability is inevitable as the industry matures and permit holders age towards retirement. Given that each municipality's shellfish aquaculture industry is at a different stage in its development, it would be beneficial for municipalities with developing aquaculture programs to understand what jurisdictions with more mature programs are doing.

Bob Glenn then pivoted to the update from the Shellfish Hatchery Working Group. This Working Group was initiated in response to concerns raised by aquaculturists regarding seed availability and included technical experts who are not SAP members—Chloe Starr, the Operations Manager at the Aquacultural Research Corporation in Dennis; Hannah Pearson from Island Creek; and Dan Ward, Owner and Farmer at Ward Aquafarms and Scallop Bay Shellfish Company on Cape Cod. Glenn then introduced Chloe Starr and asked her to provide an update. The Working Group met for the first time three weeks ago and developed a mission to investigate the issues facing the shellfish hatchery sector to improve the sustainability and resiliency of seed supply in the Commonwealth. To this end, the Working Group will be analyzing DMF's seed purchase statistics, surveying growers and hatcheries to better understand regional seed supply, investigate issues related to pathology, and conduct outreach to aquaculturists on how best to minimize mass mortality, and identify research needs.

Massachusetts Shellfish Officer's Association (MSOA) Update

Bob Glenn introduced Renee Gagne, Shellfish Constable for Chatham and Vice President for MSOA. The MSOA annual meeting occurred on March 13 and was hosted at UMass Dartmouth's School for Marine Science and Technology (SMAST) East in New Bedford. Renee provided an update on the Constable Certification Course. Historically, this was an 80-hour course held at the Maritime Academy. Overtime, the Maritime Academy became less involved with this training which came to a head during the pandemic. In response, MSOA, the Massachusetts Environmental Police (MEP), and DMF worked to develop a virtual training course. While this online format addressed an immediate training issue, it was not viewed as a long-term solution. Working with Grace Simkin at Woods Hole Oceanographic Institution (WHOI) Sea Grant, the MSOA has developed a training course plan that has been embraced by Cape Cod Community College. The hope is for the community college to host a semester long hybrid in-person and virtual learning course with office hours, lab work, field trips, and networking opportunities. MSOA was tentatively scheduled to meet with DMF, the community college, and MEP to discuss how best to move this forward with the goal of offering the course during the fall semester. Additionally, MSOA was working with DMF to develop a potential amendment to G.L. c. 130, §98 to address who hosts the training course—as the statute is specific to Massachusetts Maritime Academy—as well as to provide clarity to the extent of constable authority given law enforcement training requirements under the Peace Officer Standards and Training (POST) Commission.

McKiernan noted the importance of evolving the Constable training program. He then explained that Constables were struggling with uncertainty regarding the extent of their enforcement authority under the POST Commission. Renee added that this is even more challenging because of the lack of uniformity in how shellfish constable role is positioned across municipalities. There was then discussion among Dan, Renee, Senator Fernandes, and Rep. Blais regarding how best to potentially address this issue with the legislature and within the framework of the legislative calendar.

New Shellfish Habitat Program

Bob Glenn introduced Dan Goulart, a Coastal Project Manager with the Nature Conservancy. Goulart represented a new collaboration across DMF and the Nature Conservancy to restore shellfish habitat through Natural Resources Conservation Service funding. Goulart shared slides on the project's goals and deliverables and how they function within the framework of policy plans. Bob shared excitement for DMF's involvement in this project. The Division will help ensure restoration comports with public health standards, as is critical to DMF's mission.

Sean Terrill added his enthusiasm for being a partner on this project, and DMF's Habitat Program Leader, Mark Rousseau, added that Sean and Dan Goulart will be working closely with the municipalities on restoration.

Bob invited questions from the SAP.

Mike DeVasto asked if the project will look at areas closed to the harvest of shellfish due to water quality. Dan Goulart, Mark Rousseau, and Chrissy Petitpas noted that projects would be evaluated based on a number of criteria. There is potential to site projects in contaminated waters under certain circumstances, including the ability to actively enforce harvest prohibitions. DeVasto recommended reaching out to the Town of Wellfleet regarding the Herring River estuary for a potential restoration site. Sean Terrill then noted that he has discussed enforcement bandwidth with classification area biologists across various towns to understand feasibility of restoration in different regions. Dale Leavitt commented on the potential for restoration sites to become disease reservoirs. Bob Glenn and Sean Terrill shared this concern and added disease screening will be necessary.

DMF Shellfish Program Updates

DMF Personnel Update

Bob Glenn then introduced Matt Camisa as DMF's South Coast Shellfish Program Lead. In addition to Sean Terrill being brought on to the Habitat Program, the Shellfish Program also recently promoted aquaculture specialist Gabe Lundgren.

Marina & Mooring Policy

Camisa outlined the DMF's draft matrix for classifying marinas based on various factors that may impact water quality (e.g., MSDs on vessels, overnight berths, dockage, presence of house boats). These factors will inform requirements to minimize effects on adjacent areas.

2024 & 2025 FDA PEER & RARM Reviews

Camisa then provided updates on FDA audits: the Program Element and Evaluation Review (PEER), which examines growing area classification, and the Risk Assessment, Risk Management (RARM) audit, which evaluates harvest and farming. This year's Growing Area PEER is scheduled for the first full week of August in Buzzards Bay, Mount Hope Bay, South Cape, and Nantucket. However, given delays in springtime US

Food and Drug Administration (FDA) audits coupled with ongoing adjustments to the federal government, the audit may be delayed, cancelled, or performed virtually. FDA's RARM audit is biennial and will not occur this year. DMF's performance was graded well last year, but FDA did highlight several issues including (e.g., ability to inspect residential ice machines, ice slurry and dealer trucks not reducing shellfish to 45°F at landing).

With regards to the Control of Harvest audit, the signed Memorandum of Understanding (MOU) between the MEP, Department of Public Health (DPH), and DMF is now drafted and under review. Matt noted that some conditionally approved areas are rainfall areas and require temporary closure after a threshold of rainfall, and these plans are established with relevant towns and do not require legal notice unlike other issues.

Mike DeVasto asked if local health agents would be needed to do inspections of residential ice machines or if they would be done individually. Matt responded that it could be himself, Alex, or Gabe, that would inspect the ice machines, but it's not yet decided, as this was an emerging concern not a deficiency. Mike asked about who inspects Hazard Analysis and Critical Control Points (HACCP) facilities. Matt responded that DPH does that.

Derelict fishing/aquaculture gear

Bob Glenn introduced the issue of derelict fishing and aquaculture gear as a long-standing problem facing DMF. Until December 2024, state statutes protected fishing gear regardless of its disposition. DMF worked with Senator Tarr and a derelict fishing gear task force to introduce a bill to amend Chapter 130, Section 31 and rescind Section 32, expanding DMF's ability to regulate derelict fishing gear removal. Bob explained that although the scale of derelict aquaculture gear is much smaller than that of derelict fishing gear, the nature of aquaculture, including diversity of gear and gear marking, complicates regulatory implementation. Practices led by Amy Croteau of Barnstable, which require the owner to retrieve their own gear, can serve as a model for other municipalities. Bob emphasized that gear marking requirements will likely be crucial in upcoming regulation.

Reclassifications around Wastewater Outfalls

Wayne Castonguay introduced the issue of Ipswich River's reclassification. He provided background, outlining how the Interstate Shellfish Sanitation Conference (ISSC) adopted criteria to calculate the size of mandatory dilution zones around wastewater treatment outfalls in 2015 and 2017, revealing that some mandatory prohibited zones were deficient according to the FDA audits. DMF identified 12 plants that may require

adjustment in prohibited zones, starting with the Scituate plant, and plants in New Bedford and Fairhaven. The Ipswich and Dartmouth plant were flagged for deficiency last year. SMAST completed modeling the Ipswich plant hydrography in January, revealing in a map zones of 320:1 and 1000:1 dilutions. National Shellfish Sanitation Program (NSSP) requires a minimum prohibited zone of 1000:1 dilution unless proven otherwise by substantial data, with a floor of 320:1. This new prohibited area criteria is generally larger than the size of previously prohibited zones, causing significant local impact. There is no significant change to areas of N4 and N6, as these were already classified as conditional. Bob Glenn asked for clarification on whether 1000:1 designated conditional or prohibited activity. Wayne clarified that all areas up to 1000:1 are prohibited unless proven otherwise with data, which may be revealed by the SMAST model and other data. Preliminary modeling in Dartmouth has suggested there will be minimal impact of shellfisheries.

Wayne added that after November's meeting, DMF committed to additional sampling around New Bedford and Fairhaven. Josh Reitsma and Sea Grant helped deploy tryptophan sensors, and additional testing on the impact of sewage releases via Combined Sewer Overflows (CSO) is underway in Dartmouth. Wayne clarified that modeling has only been performed with sewage plant outfalls, but CSOs, a different issue, are not being modeled and are being evaluated with other NSSP tools. These issues have frequently been conflated due to their regulations' parallel roll out caused by recent state law requiring public notification of CSOs.

He also noted that DMF is collaborating with WHOI Sea Grant to conduct a peer review of the SMAST model, which may be complete as soon as the spring.

Glenn asked to clarify what the tryptophan sensor is for. Wayne confirmed it can be used to detect CSOs, explaining that the sensor detects tryptophan as an indicator for fecal coliform bacteria caused by CSOs, allowing for continuous monitoring to pick up intermittent slugs. Camisa added that the sensor was deployed last Friday on the SMAST dock and sampling continues every day. One potential issue is that the dock and sensor location is located ½ mile from New Bedford's outfall pipe, so there's uncertainty on whether the sensor can detect CSOs at that location. However, it will allow DMF to hopefully ground truth with daily water samples and understand the sensor's efficacy in detecting CSOs and allow for more efficient closures and communication.

Wayne showed a slide of the Ipswich reclassification closure zones, where approximately 500 additional acres were prohibited, and N6.0 was reclassified as conditionally approved, though this area is not widely used for shell fishing.

Depuration Fishery Status

Wayne explained that the NSSP allows shellfish to be taken from moderately contaminated or technically Restricted areas to be depurated or relayed to an approved or conditionally approved area. DMF operated a depuration facility on Plum Island from the 1960s until November 2023, when a coastal storm destroyed the seawater system, and the plant was closed. DMF commissioned a study to evaluate the feasibility of rebuilding the plant and provided financial relief to fishers who were impacted, as described in November. The study revealed that it would not be financially feasible to restore the plant both because of the plant's cost and the fishery's decline, and that extreme vulnerability of the location. DMF collaborated with Maine, New Hampshire, and the DPH to develop a program to allow MA shellfish to use a depuration facility in nearby Elliot, ME called Spinney Creek. The cost differential is being subsidized by DMF. The Merrimack Estuary is now using the Spinney Creek depuration plant, and DMF is working with master diggers in Greater Boston Harbor to potentially utilize the facility. DMF is cautiously optimistic that this effort could save this legacy fishery.

2025 ISSC & NESSA Meetings

Wayne explained that participants in NSSP in MA attend two annual efforts to govern the program, including the Northeast Shellfish Sanitation Association (NESSA) which includes New England states, New York, and New Jersey. NESSA includes the FDA, public health specialists, and shellfish specialists, and will meet in Long Island in a few weeks; however, the FDA, a significant partner who leads training at NESSA, is unable to attend due to federal uncertainty. An ISSC convention is planned to take place in October of this year to govern the NSSP, and DMF hopes FDA will be able to attend by then. Wayne asked for comments from Eric Hickey, a member of the ISSC Executive Board from MA and the Assistant Director of the Food Protection Program at the BPH.

Eric confirmed that FDA will not attend NESSA, which is unfortunate because they provide trainings on growing areas or lab issues, and plant sanitation. A few people will present instead of the FDA. Bryant Lewis, a Growing Area supervisor at the Maine Department of Marine Resources, will present on a Maine disease outbreak in oysters this past summer. The meeting will take place April 2nd and 3rd in Riverhead, NY, and Eric is hopeful it will still achieve the goals of the meeting without the FDA.

Regarding the ISSC meeting in October, members of the executive office, including Executive Chair Michael Bott and Executive Director Keith Skiles, are still determining whether they will be able to hold the event. Polled members of the executive board have said the meeting should not take place without the FDA. The FDA plays a significant role in concurring proposals at the conference, so without the FDA issues may arise in submitting proposals. Additionally, the current federal funding resolution expires in

September, so there is risk in losing the FDA at the conference very close to the conference's scheduled date. In the event that the meeting is postponed, it would allow for the committee to continue to prepare and conduct business, as they were heavily impacted by COVID. If postponed, the meeting may be pushed as far out as October 2026, but this will likely be resolved next week during their Emergency Executive Board Meeting. Dan added that one of the purposes of the SAP is to provide feedback on potential issues ahead of the ISSC meeting, so if the meeting is postponed, that agenda item would not be necessary in upcoming meetings. Eric added that the call for proposals run from May 6th through June 20th, 2025, which will likely be impacted by this process, and will be discussed during the Emergency Executive Board Meeting next week.

Dale Leavitt proposed that the application of the CSO model ordinance for regulatory purposes was premature, and verification is necessary before it should be used for regulation. Dale has been working with the Marine Policy Center (MPC) at the Roger Williams University Law School to determine whether the model's standard can be adjusted for rainfall closures. The MPC has completed a legal review of the model ordinance in terms of its ability to be adapted for specific situations and is awaiting final review for the report, which should be released within the next few weeks by Alex Tamburino, the attorney leading the project. Dale shared some of the preliminary results. Conditional Area Management Plans (CAMP) may be an alternative way of managing closures, and Dale proposed that the SAP put together a subcommittee to understand the development of and later implement a Conditional Area Management Plan for Nasketucket Bay, noting that fecal coliform data through 1988 could be correlated with rainfall to determine whether there are predictable levels of fecal coliform exposure generated under certain rainfall conditions. A discussion followed. Dan asked whether it was the role of a subcommittee or the DMF to address the model ordinance. Dale responded it was his understanding that it's a joint effort between industry and regulatory entities and would be fair for the SAP to get involved.

Matt Camisa clarified the definition of a CAMP as applying to an area that predictably fails to meet the minimum or exceeds the threshold under specific circumstances, such as during bird migration or elevated bacteria counts. Camisa agreed that we should continue to investigate this and DMF has weighed in on the report from Alex. Camisa suggested that Dale is referring to the way Rhode Island addresses some CSO events in the Providence River; however, he cited significant differences between situations in New Bedford and Rhode Island. It's the FDA and DMF's understanding that when untreated sewage enters the marine environment, a shellfish closure must happen for 21 days with the possibility of testing after the 7th day, which is how CSOs have been addressed in New Bedford. Massachusetts dilution has been adjusted due to results from research suggesting a lower fecal concentration in local CSOs, allowing for a

smaller closure footprint. In Rhode Island, CSOs are located near treatment plants in the Providence River and are treated with chlorine, meaning they require a less strict dilution, reducing their closure footprint. The Providence River also holds a very large restricted area that helps dilute CSO activations. Camisa noted that the predictability of these events in New Bedford, which can happen during rain or dry events, is not perfect, making it difficult to have a CAMP. Dale responded that the SAP could be a forum to discuss this more deeply and requested a subcommittee.

Bob noted that before considering a CAMP, the model ordinance's legal issues should be resolved. It's DMF's understanding that CSO regulation falls under something they're obligated to implement. Bob asked if DMF should assemble their legal team to investigate this further before moving forward with a subcommittee and CAMP. Dale responded that within the next month or two, there will be enough information to determine whether a CAMP is appropriate. Bob reiterated that as a shellfish management authority, DMF must concur with the legal advice. Dale noted that this effort is not to immediately implement a CAMP, but to explore the development of a CAMP, requiring legal opinion from DMF and data analysis to better understand the extent of predictability. Dan asked Dale which components of the SAP he would like to join the subcommittee. Dale responded that this was not yet confirmed but Sarah Donilon at UMass Dartmouth is conducting analyses and would be a good technical resource.

Seth Garfield asked (1) what DMF is doing to address the CSO issue and whether they will help shellfish farmers impacted by the Ipswich River closures relocate, (2) could DMF help involve New Bedford in a newly proposed bill meant to reduce Massachusetts CSOs, and (3) when can solutions be proposed and discussed at the ISSC meeting with it being potentially postponed. Dan responded that DMF is trying to study CSO issues, and he is not opposed to taking a deeper look at Dale's request along with the DPH and DEP. Michael Moore asked to clarify if a motion has been made regarding the subcommittee. Bob responded that Dale is a panel member and can make a motion but is recommending to the SAP to create a working group. Bob asked Jared whether we need a motion to create a formal working group. Jared responded that generally we haven't used motions to create subgroups previously; rather, it's done on a volunteer basis. Dan added it could be helpful to designate exactly what the subcommittee would address. Matt attempted to distill the proposal, suggesting that Dale is proposing an alternative to the mandatory 21-day closure for each CSO release in which data is used to understand what length of closures are usually required for a given amount of rain and treat CSO events as rainfall events. Dale confirmed that this would be a possibility, and this would be a better system than used today because there is currently no predictability for growers, and increased predictability could lead to CAMPs but not necessarily. Matt asked the group if we feel that we can characterize water quality in

Nasketucket Bay with samples gathered 5 times per year when CSO events can happen at any time? Dale responded that we have data from 40 years. Matt confirmed that this is true, but we would then be required to correlate that data with the timing, location, and severity of CSO events, which were not available until 18 months ago, reiterating that Chrissy should be involved in this conversation as soon as possible. Dale agreed and noted that a working group is a good way to discuss this issue further.

Josh Reitsma added that a working group could determine what kind of data is necessary to develop a CAMP in the future. Bob summarized that there is interest from panel members to convene a subgroup to further discuss this, reiterating DMF's concerns on the timing of this discussion, but supported a future meeting. He asked whether we need to create a formal subgroup right now? Dan asked who would be interested in joining the discussion, suggesting a meeting could be held with Dale, Eric, and Michael at least. Josh Reitsma, Seth Garfield, and Sean Bowen volunteered, and Michael Moore asked to be notified after the first meeting when a more concrete structure of the body is formed. Bob clarified the issue pertains only to how the model ordinance is applied to CSO events, so Eric would be an important addition. Michael reiterated that he's reluctant to commit DPH involvement without more information.

Seth asked the group what approaches are being explored to support aquaculturists with significant closures related to sewage outflow. Dan responded that these are complicated issues and he's hesitant to do anything that will jeopardize the shellfish industry regarding the model ordinance, but DMF does not have authority to move municipal farms. Seth agreed but it's a state regulation impacting the farmers. Dan suggested he will continue the conversation with Department of Agriculture. Matt clarified that the outfall and CSO issues are separate; Dartmouth and Fairhaven closures are CSO-related. There are no CSOs in upper Buzzards Bay or the Cape. The closures that farmers are suffering from are directly caused by CSO events. DMF has quadrupled efforts to minimize impacts to the municipalities since instituting emergency closures related to CSOs, including testing 7 days after a closure and increasing lab productivity. Bigger picture ideas regarding how to avoid these issues can be a group discussion. Dale agreed in DMF's efforts to address this issue and reiterated this proposal was not meant to undermine DMF's work, rather to continue the conversation.

Other Business

Upcoming Meeting Dates

Bob asked if caucusing upcoming meeting dates could be completed outside of the meeting in the interest of time. Wayne confirmed.

Future Meeting Agenda Items

Bob asked if there are any future meeting agenda items. Dale suggested that tagging needs to be revisited. Amy noted that the green crab issue should be discussed. Wayne confirmed that his meeting with Senator Tarr regarding this issue has been rescheduled and will take place next week.

Public Comments

Scott Soares reiterated appreciation for DMF's efforts and supported efforts to explore CAMPs and other potential avenues, expressing interest in proposed bills in the Senate and House to address CSOs.

Adjourn

Bob asked for a motion to adjourn. Dale moved the motion, and multiple members seconded.

Meeting Materials:

- November 2025 Shellfish Advisory Panel Meeting Agenda
- March 2025 Shellfish Advisory Panel Meeting Draft Minutes
- WHOI Sea Grant Independent Technical Review of FVCOM Modeling Presentation
- DMF Oyster Reef Restoration Presentation
- DMF Shellfish Planting Guidelines Update
- DMF Green Crab Update
- DMF Future of Shellfish Transaction Card Presentation
- DMF Statutory Amendment Resolving WPA and Fisheries Management Presentation
- DMF Surf Clam Spatial Management Pilot Program Presentation
- DMF Audit Recommendations Presentation
- DMF Vibrio and Compliance Presentation
- DMF Depuration Fishery Updates
- DMF Legislative Updates
- DPH ISSC and NESSA Updates

Independent Technical Review of FVCOM Modeling for Wastewater Dilution in Massachusetts

Matt Charette

Jennie Rheuban

Josh Reitsma

Sea Grant
WOODS HOLE OCEANOGRAPHIC INSTITUTION

WHOI

BARNSTABLE COUNTY
CAPE COD COOPERATIVE EXTENSION

NOAA

Introduction

- WHOI Sea Grant commissioned an independent review of hydrodynamic modeling (FVCOM) used to assess wastewater dilution zones near shellfish growing areas.
- **Purpose**: Strengthen confidence in modeling used for shellfish classification decisions.
- **Review scope**: Buzzards Bay (New Bedford/Fairhaven) and North & South Rivers (Scituate).

Sea Grant
WOODS HOLE OCEANOGRAPHIC INSTITUTION

Why the Review Was Conducted

- FDA mandated that MA DMF better justify classification zones around WWTP discharges.
- DMF used FVCOM modeling (Prof. Chen, UMass-Dartmouth) to estimate wastewater dilution zones.
- Model results led to reclassification/downgrading of shellfish areas, impacting farms and harvesters.
- Industry and communities requested an independent, science-based review.






Sea Grant
WOODS HOLE OCEANOGRAPHIC INSTITUTION

Review Process

- Three independent technical experts in coastal modeling (PhD, outside MA, no conflicts).
- Reviewed: Two FVCOM reports (Buzzards Bay & Scituate) and NECOFS (the parent model) validation materials.
- MA DMF and Dr. Chen provided written responses
- Public comment period: 7 submissions from industry, NGOs, and municipalities.

Sea Grant
WOODS HOLE OCEANOGRAPHIC INSTITUTION

Key Findings

- The reviewers agreed:
  - FVCOM is a robust and appropriate modeling framework
  - Model team is highly qualified and technically sound
- But improvements were suggested:
  - Expand validation (temperature, salinity, circulation pathways)
  - Quantify uncertainty (spatial & temporal variability)
  - Consider natural reduction of contaminants (physical, chemical, biological processes)

Sea Grant
WOODS HOLE OCEANOGRAPHIC INSTITUTION

DMF and Prof. Chen Responses

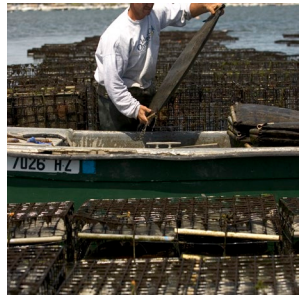
- **Dr. Chen:** Generally agreed with review findings; is fully open to incorporating more validation-related work as funding allows.

- **DMF:** Noted resource constraints; balancing public health with industry impacts.
  - ➢ Model used to inform long-term classifications, not discrete closures.
  - ➢ Conservative approach aligns with NSSP standards, assumes continuous exposure and persistent contaminants; biological factors apply only to short-term closures.
  - ➢ Future EPA dye study (New Bedford) may provide validation opportunity.

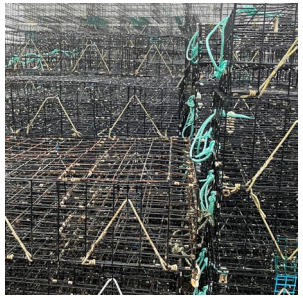
Sea Grant
WOODS HOLE OCEANOGRAPHIC INSTITUTION

Public Comment Summary

- **Economic Impact**: Reclassification has hurt shellfish harvesters and farms causing economic losses and limits future expansion.
- **Data Gaps**: Request for field validation - currents, dye studies, and real-world sampling.
- **Collaboration**: Strong support for an advisory group to foster communication among DMF, scientists, and industry.






Sea Grant
WOODS HOLE OCEANOGRAPHIC INSTITUTION

WHOI Sea Grant Recommendations

- **Expand Model Validation:** Leverage local datasets (Buzzards Bay Coalition, WHOI, NOAA, etc.).
- **Conduct Dye Studies:** Field tests to verify dilution results.
- **Assess Uncertainty:** Model additional years; quantify variability to improve confidence.
- **Improve Documentation:** Clarify inputs, assumptions, and forcing data.
- **Study Contaminant Processes:** Evaluate how natural processes affect concentrations over time.
- **Increase Transparency:** Clearly define how models inform regulatory decisions.
- **Create Advisory Board:** Include scientists, industry, and regulators to guide future modeling.

Sea Grant
WOODS HOLE OCEANOGRAPHIC INSTITUTION

Overall Takeaways

- DMF and U-Mass Dartmouth researchers are doing commendable work under tight resource and time constraints.
- The independent review confirms the modeling framework is sound and scientifically appropriate but could benefit from further validation.
- With additional state resources, DMF can implement key recommendations and build long-term confidence in modeling-based decision-making.

REPORT WEBSITE

https://seagrant.whoi.edu/review-of-wastewater-dilution-modeling/

Sea Grant
WOODS HOLE OCEANOGRAPHIC INSTITUTION

Division of Marine Fisheries Update

Sean Terrill, Habitat Restoration Specialist

Story Reed, Deputy Director

Wayne Castonguay, Regional Shellfish Program Lead

Matthew Camisa, Regional Shellfish Program Lead

Alex Boeri, Aquaculture Project Leader

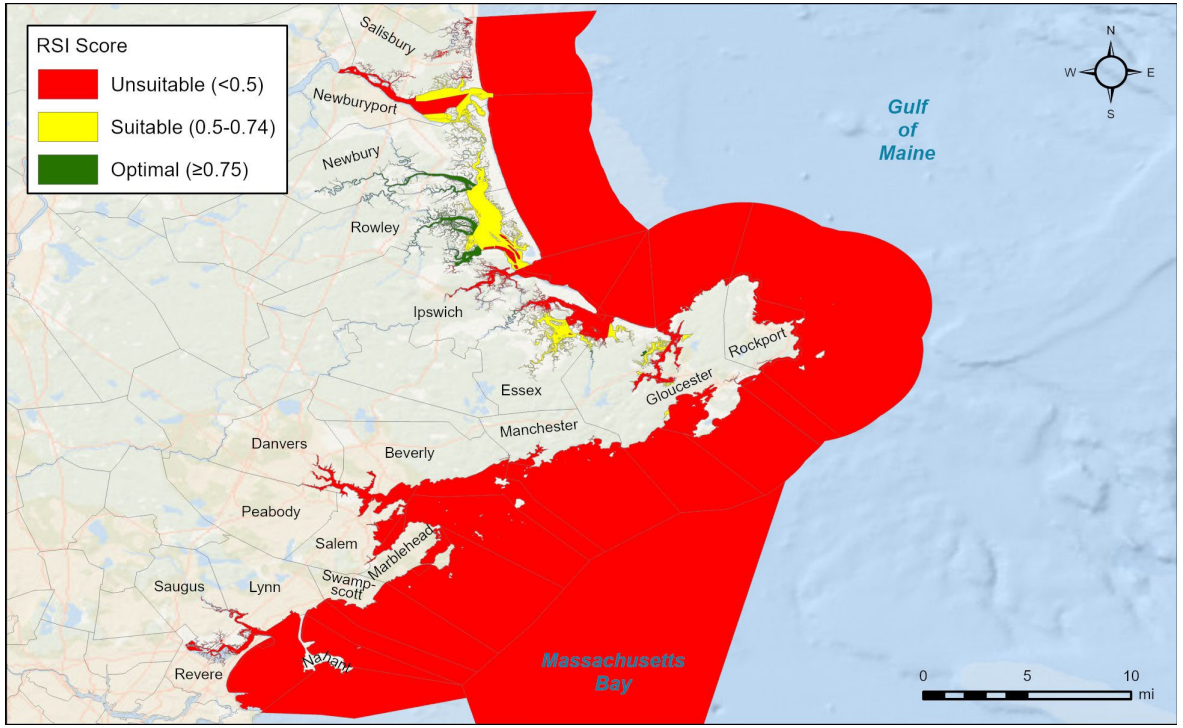
Oyster Reef Restoration

- NRCS-funded partnership with DMF, TNC, and CCCD to restore oyster reefs
- 85-99% loss of oyster reefs in New England
- Restoration for ecological services
  - Harvest opportunity
  - Habitat provisioning
  - Water filtration
  - Shoreline protection
  - Nutrient removal
- Farmer-supported through EQIP*

**EQIP= Environmental Quality Incentives Program*

Oyster Reef Restoration 2

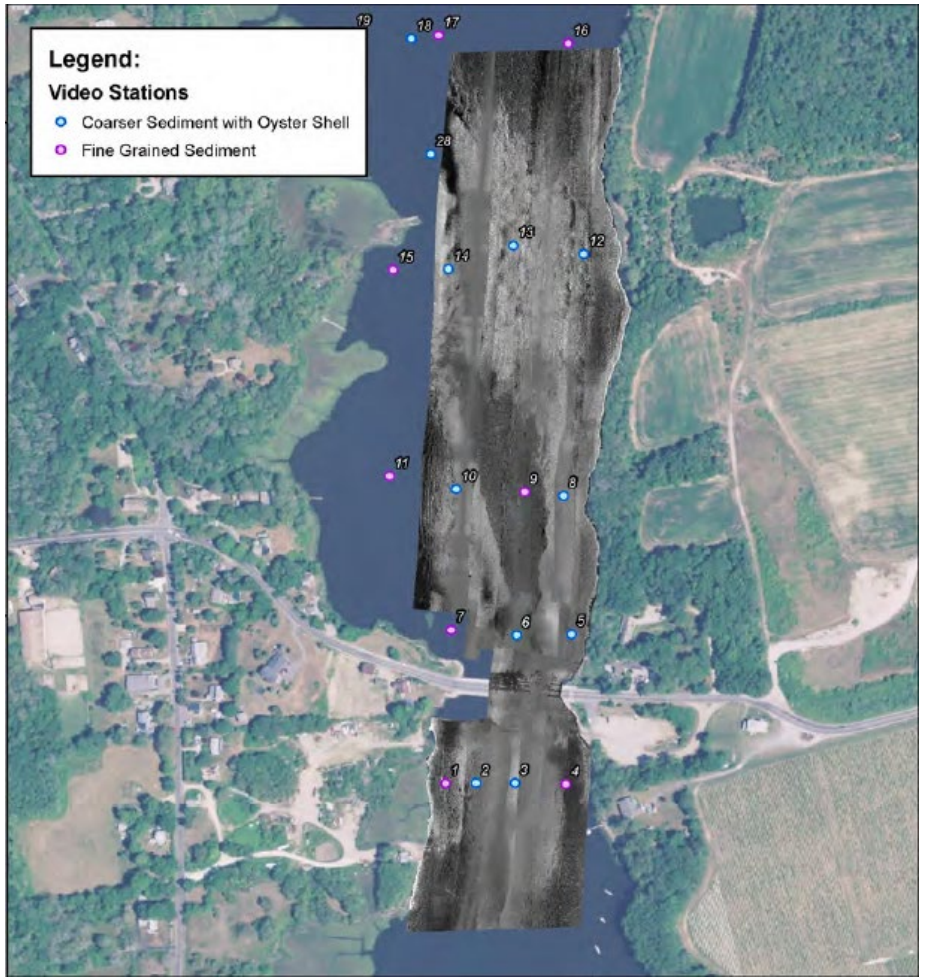
- **Oyster Restoration Suitability Index (RSI)**
- Multi-factor weighted model:
  - Habitat
    - Salinity
    - Historic Suitability
    - Water Depth
  - Logistics and Feasibility
    - Boat ramp proximity
    - Exclusionary uses
  - Community Resources
    - Shellfish management capacity
    - Aquaculture partners
- Identify most suitable areas
  - Rank 800+ SCAs



https://mass-eoeea.maps.arcgis.com/apps/dashboards/25236fbe73b84ee2a725b24a853bb0a5

Next Steps and Process

- Partner with interested municipalities
- Perform more detailed site assessments
  - sediments, water quality, and use conflicts
- Identify and designate restoration sites
- Begin design and permitting process
  - Restoration activities conditioned under municipal propagation permit
- Identify local growers interested in supporting restoration
  - Enroll in NRCS EQIP
  - Growers paid to cultivate spawners and SoS for restoration sites



Topics for the SAP

- MassDEP permits cultch as wetland fill
  - Mandatory EIRs for projects over 10 acres or within 1 mile of EJ community
- Oyster shell scarcity
  - How to build statewide recycling programs
- Restoration brood stock
  - Should goal be to use hatchery-bred disease-resistant strains or naturally selected wild strains?

Project Team and Contact Info

Sean Terrill
DMF Habitat Restoration Specialist
sean.v.terrill@mass.gov
617-762-6777

Dan Goulart
TNC Coastal Project Manager
daniel.goulart@tnc.org
774-328-6429

TNC/ Northeastern University Barriers to Restoration Survey: Please Participate!

Stephanie Tsui stephanie.tsui@tnc.org 908-917-2961

Shellfish Planting Guidelines Update

Massachusetts Division of Marine Fisheries

Shellfish Planting Guidelines

J.M. Hickey

T. Shields, J. Kennedy, K. Ford

Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
Department of Fish and Game
Massachusetts Division of Marine Fisheries

3rd Edition: March 2015
2nd Edition: September 2014
1st Edition: December 2011

Green Crab Update

- Great Marsh trapping program 11th year
- Program to expand to Cape Cod in 2026
- Green Crab Summit outcomes:
  - Update DMF trapping program rules
  - Branding problem
  - Research & Development needs
  - Expand most promising markets

Regional Green Crab Summit
AGENDA

9:00-9:30	Arrival & Networking
9:30-10:00	Welcome & Overview of Green Crabs in New England Massachusetts State Senator & Minority Leader, Bruce Tarr
10:00-10:15	Economics of Green Crabs Gabriela Brandt, Commercial Marine Fisheries Specialist at UNH, and Wayne Castonguay, Regional Shellfish Supervisor at Mass Department of Fish and Game
10:15-11:00	Session 1 - Established Market Pathways Live Bait - Brenden Doyle, Founder of Great Marsh Shellfish Co. Culinary Markets - Mary Parks, Executive Director of Greencrab.Org Compost & Fertilizer - Anne Molloy, Sales Director at Neptune's Harvest Organic Fertilizer
11:00-11:15	Break
11:15-11:55	Session 2 - Future Market Pathways for Green Crabs Animal Feed - Ellen Dierenfeld, WWF Sustainable Feed Innovations Lead Specialist Bioplastics, Cosmetics, & Pharmaceuticals - Hande Ilhan, Founder of Kykloris Alternative Bait - Dr. Katie Kahl, UMass Amherst Gloucester Marine Station
11:55-12:15	Green Crab Management in Canada Bernadette Jordan Gabby, Consul General of Canada in Boston
12:15-1:00	Lunch
1:00-1:30	Keynote Speaker Dr. Brian Turner, Washington Department of Fish and Wildlife, Aquatic Invasive Species
1:30-2:45	Breakout Discussions
2:45-3:00	Break
3:00-4:00	Panel - Addressing Challenges to Advance Next Steps Ambassador Bernadette Jordan Gabby, Senator Bruce Tarr, Dr. Brian Turner, Ms. Mary Parks, & Mr. Brenden Doyle
4:00-4:15	Closing Remarks

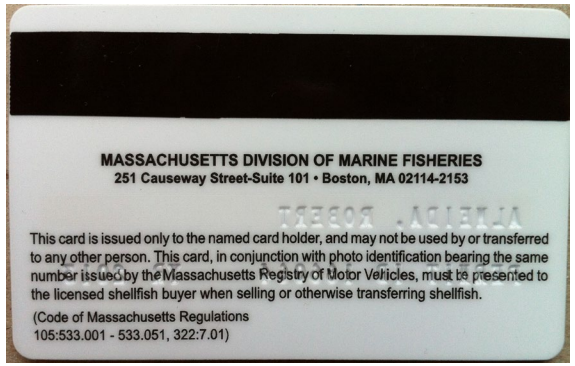
OUTFALL

Future of the Shellfish Transaction Card

Embossed Transaction Cards

Embossed shellfish transaction cards will no longer be printed beginning in 2026

- Antiquated technology
- Card printer and software have failed



2026 Solution

- DMF will condition permits to require shellfish harvesters have their paper permit or an electronic copy of it available, along with their driver's license/ID, when selling shellfish to a primary buyer

Long Term Solution

- DMF is exploring the option of purchasing a new card printer, without embossing capabilities, and establishing a connection with our permitting database
- What issues does industry foresee?
- Are there enforcement issues?

Statutory Amendment Resolving WPA and Fisheries Management

FY 2025 Budget amends G.L. c. 130, s. 1A:
The division of marine fisheries shall be within the department in the executive office of environmental affairs and shall be under the administrative supervision of a director who shall be called the director of marine fisheries. The director of the division of marine fisheries shall be appointed and may be removed by the commissioner of the department of fish and game with the approval of the marine fisheries advisory commission. The said division of marine fisheries shall administer all the laws relating to marine fisheries as appearing in chapter one hundred and thirty and any other general or special laws, except as pertain to the enforcement thereof. It shall be responsible for the biological development of marine fish and fisheries. Said division shall co-operate with all departments, boards, officials and institutions of the commonwealth or its subdivisions that may be concerned in any way with matters under its supervision. It shall co-operate with adjoining states and with the United States of America, or any agency thereof, with foreign countries, and any other agency, as may be authorized by the general court, and receive and dispense such funds from any of such agencies, states or governments as may be authorized by the general court. **Notwithstanding any general or special law to the contrary, the division of marine fisheries shall have the sole authority and jurisdiction to regulate the harvest of marine fish and the effect of such activities on marine fish species and marine fisheries resources. No person authorized to engage in fishing activities by the division pursuant to this chapter shall be required to file a notice of intent pursuant to section 40 of chapter 131 or pursuant to a local wetlands by-law or regulation and no person shall be required to obtain a permit or license pursuant to chapter 91 or a water quality certification pursuant to chapter 21 in relation to any such fishing activities.**

Surf Clam Spatial Management Pilot Program

- Tested the ability of cellular vessel tracking technology to improve the spatial monitoring of state waters surf clam vessels since November 2023.
- The vessel tracking units gather time and position reports every minute while the vessel is in motion.
- Geofences integrated into the tracking device platform establish virtual perimeters around specific geographic areas. If a vessel crosses into or exits one of these virtual areas, the vessel operator or management agency is notified via text and/or email alerts.
- Data collected on a vessel level is confidential and cannot be released. Data are transmitted for final storage, monitoring, and review at ACCSP. Only users with confidential data agreements are given access.
- The goal of the pilot program was to test the use of the technology to delineate exclusions areas and provide notification when those areas are breached by vessels.

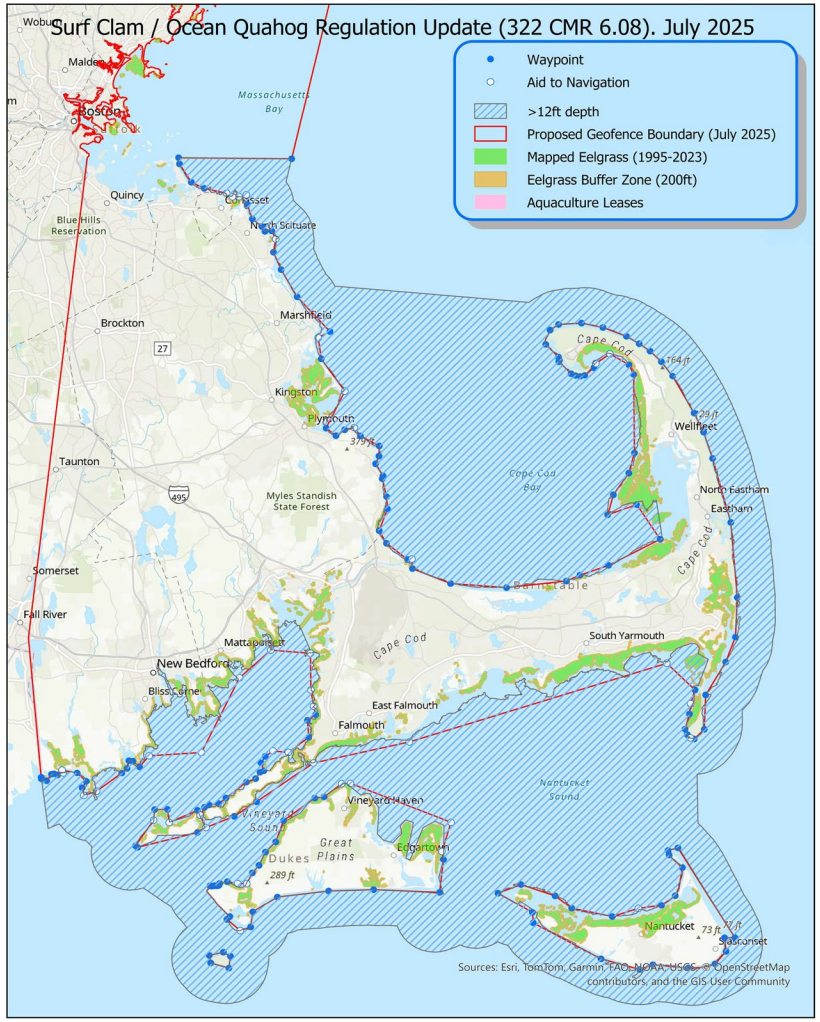
Modernizing Spatial Management Program

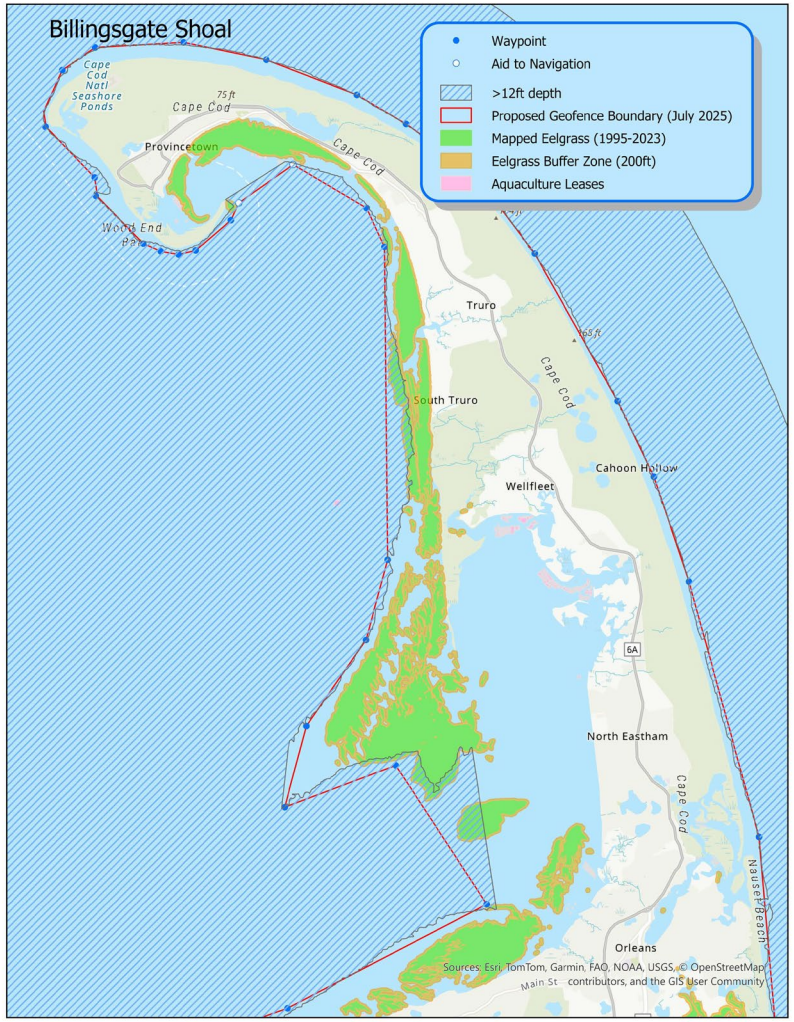
- Require participating vessels obtain, install, and maintain operable vessel tracking requirements. Same device that is used in the American lobster fishery (e.g., Viatrax Boat Demand) – VMS is not sufficient.

- Replace historic depth contour line boundary and management area closures with a series of lat/long points that will create a boundary that can be integrated with tracking device and chart plotter to ensure compliance and enforceability. The new boundary will:
  - Approximate the 12’ depth contour;
  - Provide a 200’ boundary around all eelgrass beds historically mapped by DEP;
  - Include all existing discrete management area closures (e.g., Provincetown Harbor) and exemption areas (e.g., Madaket Beach to Muskeget Island);
  - Expand spatial extent of closure to make boundary line as straight as possible in areas where there is little resource (e.g., Buzzards Bay)

- Establish a process to modify and amend closure boundary coordinates to reflect updates to DEP eel grass maps; protect, restore , or sustain benthic habitats of critical importance; and address emerging conflicts.

Map of New Management Area Boundary





Massachusetts Division of Marine Fisheries

Viatrax Boat Command Cost and Installation

Viatrax Boat Command- GPS Data Logger

- The Viatrax BOAT COMMAND is a vessel tracking device that records positional data and transmits those data via cellular network
- Allows vessel/device owner to create an account and view vessel activity in an online web application.

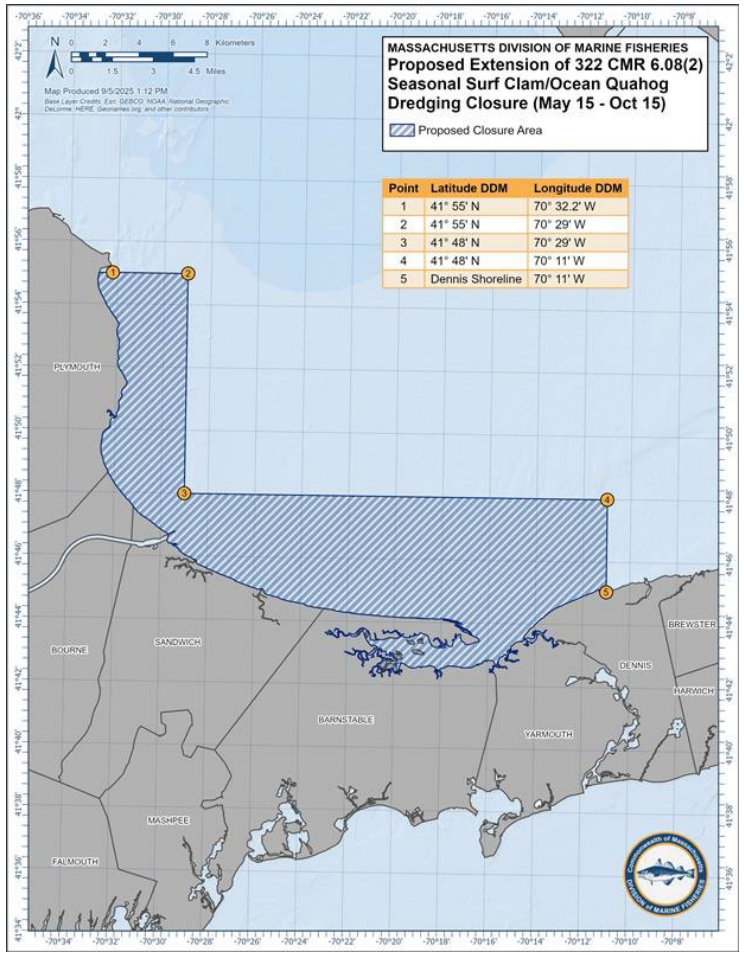
Item	Cost Information (as of 9/12/2024 Boatcommand.com)
Device + 1 year of service	$398
Device + 7 years of service	$1488

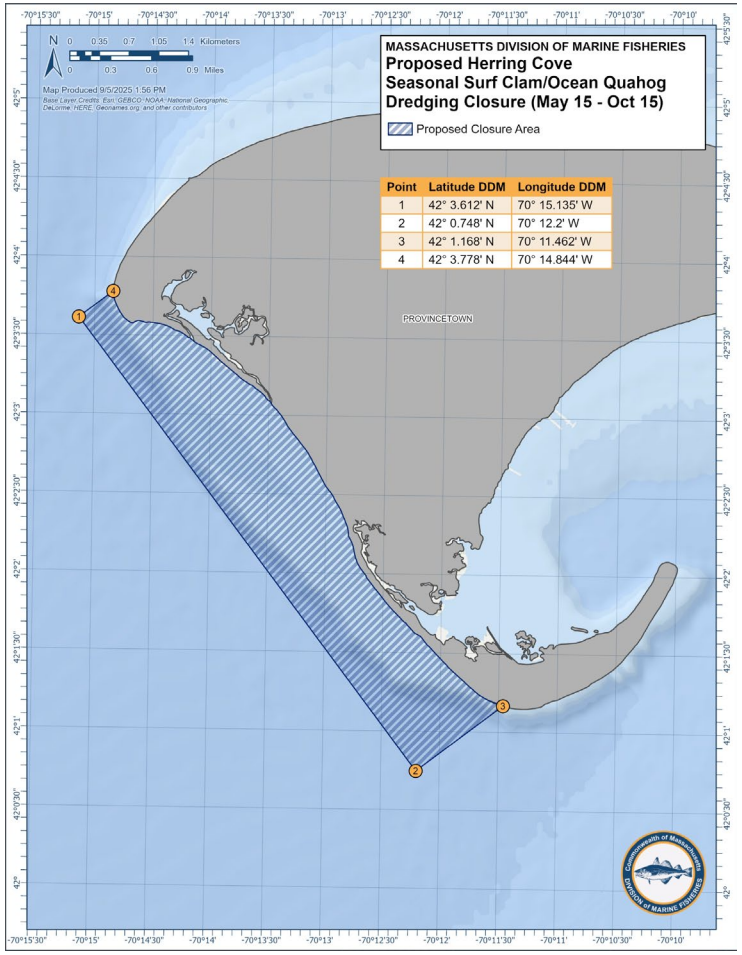
Installation

- The device must be installed near a window with a view of the sky
- Connect the red wire to the vessel battery (12v or 24v DC) or an un-switched power source on the vessel. More information: http://www.boatcommand.com
- Connect the black Wire to the negative side of the battery or the vessel ground
- The device has LED indicators that shows the status of the device
- Sign and return affidavit certifying installation of tracking device.

Addressing Historic and Emerging User Group Conflicts

- Maintain the existing May 15 – October 15 seasonal closure off Manomet.
- Adopt an adjacent May 15 – October 15 seasonal closure off Sandy Neck to protect new shell lobsters
- Propose May 15 – October 15 seasonal closure off Herring Cove to reduce gear conflicts.





Other Proposals

- Maintain closure in state waters north of Hull but establish a process to investigate commercial fishing opportunities and potentially open areas in region to both human consumption and contaminated bait harvest.

- Establish process to temporarily open and close other areas of state waters to surf clam dredge fishing as necessary to address emerging concerns.

- Lift night closure during period of February 1 – April 30.

Growing Area PEER

- 2025 PEER 8/4/2025 through 8/7/2025
  13 South Shore areas

BB34	Wings Cove
BB35	Weweantic River
BB43	Fishermen Cove
BB44	Buttermilk Bay
MHB3	Lee River
MHB4	Cole River
SC14	Eel Pond
SC15	Waquoit Bay
SC16	Little and Great Rivers
SC28	Lewis Bay
NT2	Nantucket Harbor West
NT4	Polpis Harbor
NT11	Madaket Harbor

- No New Deficiencies
- No New or Emerging Concerns

Birds on gear

- Action Plan Items
  - Cleansing studies / reopening criteria for conditional areas
  - Interagency MOA

Growing Area PEER 2

- 2026 PEER 8/3/2026 through 8/6/2026

Buzzards Bay	BB37	Little Harbor/Bourne Cove
	BB46	Phinneys Harbor
PKD Bay	CCB45	Duxbury Bay
	CCB46	Bluefish River
	CCB47	Back River
Elizabeth Islands	E2	Hadleys Harbor
	E9	Cuttyhunk Pond
	E14	Lackeys Bay
South Cape	SC19	Popponesett Bay
	SC20	Mashpee River and Shoestring Bay
	SC21	Cotuit Bay
	SC22	West Bay
	SC23	North Bay

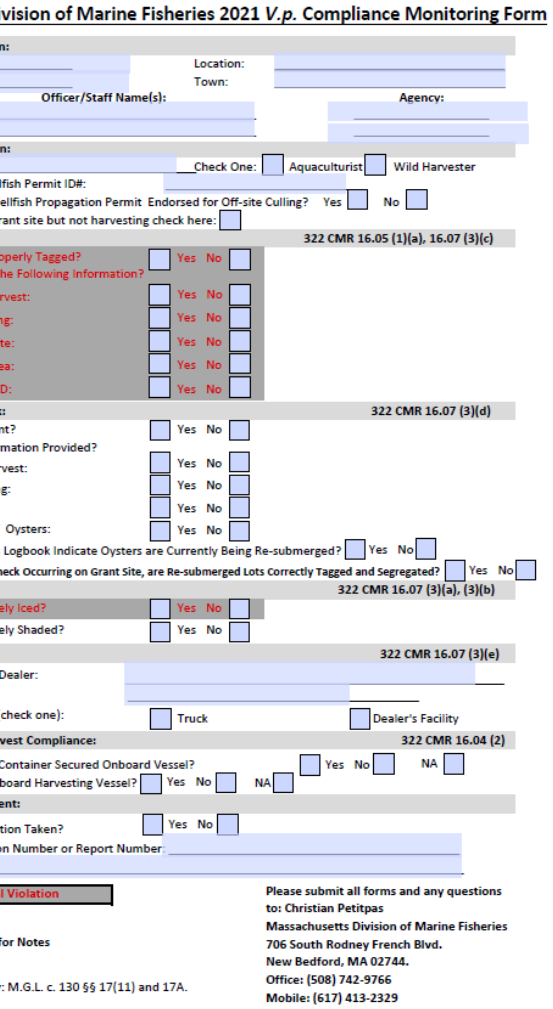
- Bird Deterrents
- Proper Signage
- Possible Boat Rides During FDA Audit

2025 Vibrio Season (preliminary)

- 27 Single source cases (so far)
- 13 multi source cases
- Duxbury/Plymouth/Kingston Vibrio closure August 18-27
- Pleasant Bay Vibrio closure August 18-September 3
- Wellfleet on the verge of closure in September

Compliance Monitoring

- Compliance Monitoring by towns is integral to the effectiveness of the Vibrio Control Plan
- So far in 2025 we have only received forms from 13 (out of 28) towns + Environmental Police
- Forms have never been completed for many aquaculturists in the state
- Aquaculture areas may be closed in the future if compliance monitoring cannot be completed



Massachusetts Division of Marine Fisheries 2021 *V.p.* Compliance Monitoring Form

A Interview Information:
1. Date: _____ Location: _____
2. Time: _____ Town: _____
3. **Officer/Staff Name(s):** **Agency:**

B Harvester Information:
1. Name: _____ Check One: ☐ Aquaculturist ☐ Wild Harvester
2. MA Commercial Shellfish Permit ID#: _____
3. If Aquaculturist, is Shellfish Propagation Permit Endorsed for Off-site Culling? Yes ☐ No ☐
4. If Aquaculturist on grant site but not harvesting check here: ☐

C Shellfish Tagging: **322 CMR 16.05 (1)(a), 16.07 (3)(c)**
1. Are All Containers Properly Tagged? ☐ Yes No ☐
2. Do the Tags Include the Following Information?
   - a. Time of Harvest: ☐ Yes No ☐
   - b. Time of Icing: ☐ Yes No ☐
   - c. Harvest Date: ☐ Yes No ☐
   - d. Harvest Area: ☐ Yes No ☐
   - e. Harvester ID: ☐ Yes No ☐

D *V.p.* Harvest Logbook: **322 CMR 16.07 (3)(d)**
1. Is the Logbook Present? ☐ Yes No ☐
2. Is the Following Information Provided?
   - a. Time of Harvest: ☐ Yes No ☐
   - b. Time of Icing: ☐ Yes No ☐
   - c. Date: ☐ Yes No ☐
   - d. Quantity of Oysters: ☐ Yes No ☐
3. If Aquaculturist, Does Logbook Indicate Oysters are Currently Being Re-submerged? ☐ Yes No ☐

If Yes and Compliance Check Occurring on Grant Site, are Re-submerged Lots Correctly Tagged and Segregated? ☐ Yes No ☐

E Shellfish Handling: **322 CMR 16.07 (3)(a), (3)(b)**
1. Are Oysters Adequately Iced? ☐ Yes No ☐
2. Are Oysters Adequately Shaded? ☐ Yes No ☐

F Shellfish Delivery: **322 CMR 16.07 (3)(e)**
1. Name of Wholesale Dealer: _____
2. Quantity of Oysters: _____
3. Oysters Received at (check one): ☐ Truck ☐ Dealer's Facility

G General Sanitary Harvest Compliance: **322 CMR 16.04 (2)**
1. Is Sanitation Device/Container Secured Onboard Vessel? ☐ Yes No ☐ NA ☐
2. Are Pets/Animals Onboard Harvesting Vessel? ☐ Yes No ☐ NA ☐

H Compliance Assessment:
1. Was Enforcement Action Taken? ☐ Yes No ☐
2. If Yes, provide Citation Number or Report Number: _____

Critical Violation

Over for Notes

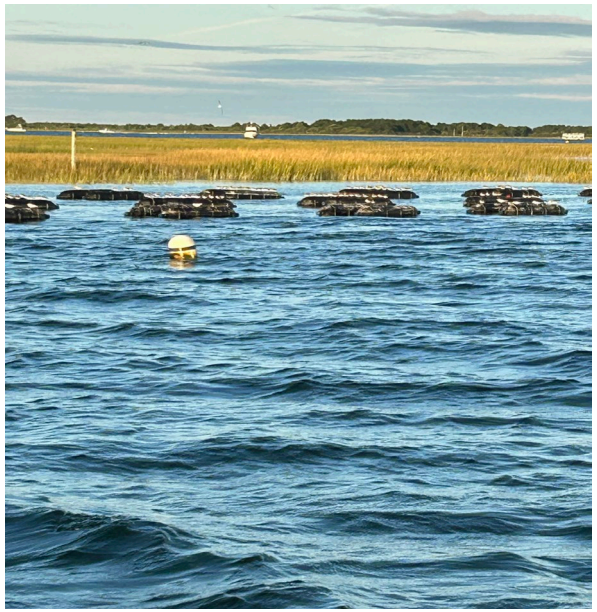
Regulatory Authority: M.G.L. c. 130 §§ 17(11) and 17A.

Please submit all forms and any questions to: Christian Petitpas
Massachusetts Division of Marine Fisheries
706 South Rodney French Blvd.
New Bedford, MA 02744.
Office: (508) 742-9766
Mobile: (617) 413-2329

Campylobacter

- 19 cases in 2025
- 5 outbreaks including one closure in Menemsha Pond and Katama Bay from August 1-8
- When oysters are epidemiologically linked to an outbreak, DMF and DPH have 24 hours to complete an investigation or implement a closure



Massachusetts Division
of Marine Fisheries

Depuration Fishery Update

- DMF Plant permanently closed February 2025 after 100-year legacy
- Working with DCAMM on decommissioning
- Support for fishers to utilize alternative facility in Eliot, ME
- Water quality improvements continue to preclude the need for depuration over time

Shellfish-Related Legislative Updates

Federal

- QUAHOGS Act of 2025: *Quantifying Uncertainty with Action to Help to Optimize Growth of Shellfish*

State

- Coastal wastewater/CSO's: 4 Bills
- Aquaculture/agriculture-general economic: 12 bills
- Aquaculture-specific: 2 Bills
- Shellfish-environmental: 1 Bill
- State agency related: 3 Bills
- Aquaculture misc: 1 Bill

ISSC News

- 2025 Fall Executive Board Mtg – October 15
  - No federal agencies participated
  - Will meet again when shutdown is over
  - Most committees not meeting without federal members
  - Grant funding cycle intact
  - Campylobacter purge study

- 2025 Biennial Meeting
  - Scheduled this October but postponed
  - Executive Board deciding when to reschedule
  - Terms for board members extended until next Biennial Meeting

ISSC News Cont.

- Keith Skiles, ISSC Executive Director, is retiring

- FDA and State Shellfish Programs
  - The Interstate Certified Shellfish Shipper's List (ICSSL) is not being updated
  - FDA Still working with states on illness investigations and recalls
  - FDA Not providing Technical Assistance
  - PEERs tentatively scheduled
  - FDA still providing scheduled training courses

NESSA 2026 – Save the dates!

- **April 8th and 9th** - Harraseeket Inn, Freeport, Maine
- Breakfast and lunch will be provided each day
- Registration is $250
- Email with registration info will be sent soon
- Requesting agenda topics and speaker suggestions
- Room block reserved
  - https://reservations.travelclick.com/116080?groupID=4822385


Commonwealth of Massachusetts
DIVISION of MARINE FISHERIES