From: McNamara, Madeleine W CIV USCG D1 (USA) <Madeleine.W.McNamara@uscg.mil>
Sent: Thursday, April 23, 2026 9:10 AM
Subject: USCG PoC Env Protection New England FW: [Non-DoD Source] RE: Public Notice No. NAE-2025-01715, Newport Mussel Farm; Technical Assistance

Good Morning Christine,

Thank you for your early interagency coordination re: Newport Mussel Farm.

Following-up on the interagency email below to identify myself as the Coast Guard's Environmental Protection Specialist throughout the New England region. I am the point of contact for interagency correspondence related broadly to NEPA.

As you know, I am part of a broader team addressing CG equities for the Newport Mussel Farm. The Coast Guard contacts identified in your 4/2/26 post meeting summary email (attached) and interagency list are accurate.

Appreciate the group's continued discussion to identify complexities.

Best,

Madeleine

Madeleine McNamara, Ph.D.
Environmental Protection
Coast Guard Northeast District (dpw)

From: Thomas Heimann - NOAA Federal <thomas.heimann@noaa.gov>
Sent: Tuesday, March 10, 2026 5:16 PM
To: cenae-rma@usace.army.mil; Jacek, Christine M CIV USARMY CENAE (USA) <Christine.M.Jacek@usace.army.mil>
Cc: Deshais, Janet <deshais.janet@epa.gov>; Colarusso, Phil <colarusso.phil@epa.gov>; Desautels, Michele CIV USCG D1 (USA) <Michele.E.DesAutels@uscg.mil>; Ellen Keane - NOAA Federal <ellen.keane@noaa.gov>; Kevin Madley - NOAA Federal <kevin.madley@noaa.gov>; cokeefe@nefmc.org; cmoore@mafmc.org
Subject: [Non-DoD Source] RE: Public Notice No. NAE-2025-01715, Newport Mussel Farm; Technical Assistance

Hello,

We have reviewed the USACE Public Notice No. NAE-2025-01715 regarding the Newport Mussel Farm permit application. Please find the attached Technical Assistance letter for your consideration as you review the permit application and evaluate the project. Please reach out if you have any questions.

Thanks

Thomas

Thomas Heimann
Marine Habitat Resource Specialist
NOAA Fisheries
Greater Atlantic Regional Fisheries Office
55 Great Republic Drive
Gloucester, MA 01930
(978) 238-9721

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
Gloucester, MA 01930

March 10, 2026

Christine Jacek, Project Manager
U.S. Army Corps of Engineers
New England District
Regulatory Division
696 Virginia Road
Concord, MA 01742-2751

RE: Public Notice No. NAE-2025-01715, Newport Mussel Farm; Technical Assistance

We have reviewed Public Notice No. NAE-2025-01715 published on February 10, 2026, describing an application by Newport Mussel Farm for the construction and operation of a commercial longline blue mussel (*Mytilus edulis)* mariculture facility. The mariculture facility is proposed in federal waters, ranging in depths from 35 to 42 meters, roughly 20 nautical miles southeast of Newport, RI, 12 nautical miles south of Westport, MA, and nine nautical miles west-southwest of Martha's Vineyard, MA. The proposed project encompasses a total area of 3,806 acres and includes the installation of 240 horizontal longlines and associated components such as helical anchors, grow lines, mooring lines, marker buoys, and surface floats.

We understand, as the lead federal agency, the US Army Corps of Engineers (USACE) intends to request consultation with us pursuant to the Essential Fish Habitat (EFH) provisions of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and Section 7 of the Endangered Species Act (ESA). Given the size, location, and potential impacts to resources resulting from the proposed project, we request an interagency pre-application meeting be convened to discuss priority concerns. In an effort to provide you with early technical assistance on this project, we provide comments and information below related to resources under our jurisdiction to help inform your evaluation of the proposed project and assist in environmental review and permitting.

Project Description

Based on information in the Public Notice, the project proposes 240 longlines to be deployed in three units, each consisting of 80 parallel horizontal longlines spaced 100 meters apart. The three units would be arranged in 10 columns and eight rows, with 200 meter wide gear-free corridors separating the three units. The entire project area would be marked by twelve signal buoys with radar reflectors and automatic identification system (AIS) beacons. Vertical lines with marker buoys will be deployed and anchored with helical anchors, approximately 100 meters from the end of each horizontal longline. Each horizontal longline will use a mooring line approximately

150.25 meters in length, affixed at each end of the longline, and moored to the seafloor with helical anchors. Additionally, each mooring line will have an 80-liter subsurface float affixed roughly 45 meters from each helical anchor. Additional, permanent, flotation will be provided to each horizontal longline through a pair of 220-liter surface floats attached at the terminus of where the mooring line meets the backbone. Line and float configuration is designed to maintain a consistent backbone depth of approximately 9 meters. Over the course of each mussel grow-out cycle, additional surface and subsurface floats will be added to each backbone to compensate for the increase in mussel biomass. To maintain the depth specifications (9 meters) and biomass (12 kilograms per meter) each horizontal longline was designed for, up to 43 additional 220-liter surface floats and 15 additional 220-liter subsurface floats would be added to compensate for the additional biomass. Surface, subsurface, and mooring line floats would all be tethered with 24 millimeter thick polypropylene-polyethylene rope (Duradan PPE) in respective lengths of 9-meters, 4-meters, and 2-meters. Depending on phase of operations (spat-collection or grow-out) the horizontal longlines will support either hanging weighted vertical spat collection ropes or continuous loop vertical mussel cultivation lines spaced every 1.8 meters. Spat catching ropes would consist of polypropylene ropes with a 14 millimeter wide weighted inner core and outer filamentous layer of 55-65 millimeter fibers.

The project description in the Public Notice either did not fully describe or did not include information specific, but not limited to, the following items: Vertical lines, cultivation lines, components used to connect lines, helical anchors, activities associated with facility installation and maintenance (i.e. description of vessels to be used, expected vessel traffic to and from the facility during installation and operation), gear monitoring requirements and plans, lifetime of the facility and facility components, or facility decommissioning activities. Additionally, any known or anticipated activities associated with incident responses to the facility from damage (e.g. from weather or vessel interaction) should be included in the description of the proposed action.

When gathering information needed to initiate consultation, all components related to the proposed action must be fully described, including equipment, methods for installation, and operation of the facility. This includes the physical infrastructure to be permanently or temporarily installed as well as the activities associated with installation and operation and maintenance of the facility. Descriptions of components and activities need to include the specific location, frequency of activity, seasonality, and/or duration of activity in order to analyze the potential adverse impacts from project installation and operation on NOAA Trust Resources.

Essential Fish Habitat

The MSA requires federal agencies to consult with us on any action or proposed action authorized, funded, or undertaken by such agency that may adversely affect EFH identified

under the MSA. This process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments and generally outlines each agency's obligations in the consultation process. EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. An adverse impact to EFH can be considered as any impact which reduces the quality and/or quantity of EFH. Adverse impacts to EFH may be the result of either direct or indirect effects from the proposed action and may arise from individual, cumulative, or synergistic consequences of the proposed action. The intent of the EFH consultation is to evaluate the potential adverse effects of the proposed action and identify options to avoid, minimize, or mitigate such effects. Impact analysis in your EFH assessment should focus on the elements of the proposed action that may result in adverse impacts to EFH and how those impacts affect species.

The proposed project will require a project-specific consultation as it does not meet the mariculture activity thresholds of GARFO and USACE Programmatic Consultation and Project-Specific Consultations Requirements due to facility siting in non-state federal waters. Additionally, due to the size and complexity of the proposed project and overlap with Habitat Areas of Particular Concern (HAPCs), we believe an expanded consultation is warranted under 50 CFR 600.920 (h)(3) to ensure analysis needed to assess the effects of the action on EFH is reflected in the assessment.

The Programmatic Consultation and Project-Specific Consultation document identified above provides a description of the minimum information required for consultations on all projects, including projects with a project-specific consultation, and provides an outline of information typically required for an expanded EFH assessment. The types of information most pertinent when reviewing the potential effects to EFH include a complete description of the proposed action, descriptions of the existing site conditions (including EFH/HAPC features present or absent within the project area), delineation of habitat types within the project area, and project plans which illustrate the location of project related infrastructure and activity to delineated habitat.

The Public Notice states that direct impacts to the seabed are expected to be approximately 480 square feet and originate from the installation of helical anchors. Additionally, the Public Notice states that divers will be used to microsite anchor installation to avoid impacts to sensitive habitat. As discussed above, EFH is not limited to benthic habitats and impacts are not limited to direct physical disturbance. The EFH assessment should include discussion and analysis on all possible adverse effects to EFH from the proposed action. Finally, the presence and extent of overlap of EFH and HAPCs with the project area is determined by the characteristics of the site (salinity, depth, sediment, complexity, etc.) as it relates to a particular species or life stage of a species. As a result, the presence or absence of specific habitat characteristics, as defined for each species and species life stage with EFH or HAPC overlapping the project area, must be

described in the assessment to determine the potential for adverse affect and need for conservation recommendations.

The proposed project is in an area designated by the New England Fishery Management Council (NEFMC), Mid Atlantic Fishery Management Council (MAFMC), and NMFS as EFH for one or multiple life stages of the following federally managed species. These species are, Atlantic cod (*Gadus morhua*), Atlantic herring (*Clupea harengu*), Atlantic mackerel (*Scomber scombrus*), Atlantic sea scallop (*Placopecten magellanicus*), Black sea bass (*Centropristis striata*), Bluefish (*Pomatomus saltatrix)*, Butterfish (*Peprilus triacanthus*), Little skate (*Leucoraja erinacea*), Longfin inshore squid (*Doryteuthis (Amerigo) pealeii*), Monkfish (*Lophius americanus*), Ocean pout (*Zoarces americanus*), Quahog (*Arctica islandica*), Pollock (*Pollachius virens*), Red hake (*Urophycis chuss*), Scup (*Stenotomus chrysops*), Silver hake (*Merluccius bilinearis*), Spiny dogfish (*Squalus acanthias*), Summer flounder (*Paralichthys dentatus*), Windowpane flounder (*Scophthalmus aquosus*), Winter flounder (*Pseudopleuronectes americanus*), Winter skate (*Leucoraja ocellata*), and Yellowtail flounder (*Limanda ferruginea*). In addition, the project area overlaps with EFH for the following highly migratory species managed by NOAA: Albacore tuna (*Thunnus alalunga*), Basking shark (*Cetorhinus maximus*), Bluefin tuna (*Thunnus thynnus*), Thresher shark (*Alopias vulpinus*), Sand tiger shark (*Carcharias taurus*), Sandbar shark (*Carcharhinus plumbeus*), Skipjack tuna (*Katsuwonus pelamis*), Smoothhound shark complex, White shark (*Carcharodon carcharias*), and Yellowfin tuna (*Thunnus albacares*).

Certain species and life stages may receive higher levels of exposure to impact producing factors or be more vulnerable to adverse effects of those factors associated with installation and operation of the project due to inherent biological or ecological life history characteristics. In particular, species with benthic eggs sensitive to sedimentation, habitat limited species, and species which aggregate to spawn in areas overlapping the project are expected to be more vulnerable to adverse impacts. Specifically, Atlantic cod and longfin squid are anticipated to be more vulnerable to adverse impacts as a result of at least one of the following: Limited habitat availability, sensitive demersal eggs, and/or spawning aggregations. Below, we highlight species with EFH which overlap with the proposed project and should receive particular focus in the EFH assessment.

<u>Atlantic Cod</u>

Atlantic cod are an important ecological, economic, and cultural resource with a significance to the Greater Atlantic region dating back centuries. Presently, Atlantic cod are managed as two stocks: The Gulf of Maine and the Georges Bank stock. The most recent stock assessment concluded that a four stock structure is considered the best scientific information available and assessed cod as four stocks: The Eastern Gulf of Maine, Western Gulf of Maine, Georges Bank, and Southern New England/Mid-Atlantic. This project overlaps exclusively with the Southern

New England/Mid-Atlantic stock. The Southern New England/Mid-Atlantic stock was determined to be overfished with overfishing still occurring with an estimated spawning stock biomass of 3% of the targeted management threshold and experiencing an estimated fishing mortality rate at 806% of the annual target[1]. Spawning behaviors necessary for successful reproduction, in combination with the current stock status, make Atlantic cod particularly vulnerable to impacts from offshore development.

Atlantic cod form discrete aggregations during their spawning season, which varies based on location, as males acoustically communicate by producing sounds or "grunt" to establish spawning territory and attract mates. This process, necessary for successful reproduction, is vulnerable to disruption from disturbances which overlap in time and space with spawning activity. Data collected for nearby wind energy areas indicate that spawning activities of Atlantic cod have been observed in close proximity to the proposed project location between November and April. Areas with the greatest overlap with spawning activity were found to include a mix of complex rocky habitats, gravels, and soft bottom habitats. Atlantic cod exhibit high site-fidelity to spawning areas and complex behavior during spawning, forming leks and haystacks during active spawning that can extend for weeks to months. Cod settlement begins approximately 3-4 months post-spawn. Early life stages of Atlantic cod require complex habitats, particularly pebble, cobble and boulder habitats. The project area overlaps with a designated Habitat Area of Particular Concern (HAPC) for spawning cod (see below for more details).

The EFH assessment should focus on potential adverse effects to cod and cod spawning as a result of project installation and operation. Minimizing seafloor disturbances within areas known to support cod spawning aggregations and limiting construction related activity, particularly activities which generate significant levels of sound, between November and April would minimize potential impacts to cod spawning. Additionally, avoiding and minimizing impacts to any complex habitats would minimize adverse impacts to sensitive early life history stages of Atlantic cod that depend on such habitats.

Longfin Inshore Squid

Longfin inshore squid spawn throughout the New York Bight and migrate to shallow waters starting in April and continue through June or July when they return to deeper shelf waters; early life stages are found in coastal waters and throughout the project area. Egg masses are demersal and are typically attached to low-relief structure (e.g. rocks, small boulders) on sandy or muddy substrate in water depths less than 50 meters. Longfin squid demonstrate elaborate spawning behavior that could be disturbed by construction activities, and produce demersal egg mops that are susceptible to mortality from direct or indirect (e.g. sedimentation/burial) effects. Peak egg mops in this area occur between June and September depending on environmental conditions from year to year. Specific to the EFH assessment, analysis of potential adverse effects should

[1][NEFSC] Northeast Fisheries Science Center, 2024c. Southern New England Atlantic cod 2024 Management Track Assessment Report. US Dept Commer Northeast Fish Sci Cent [Retrieved from apps-st.fisheries.noaa.gov/stocksmart]

focus on the risk for egg mop mortality from construction and operation of the project in habitats which overlap with the project area.

Rocky Habitats

Intertidal and subtidal gravel (i.e. mixed sand, pebble, cobble, and/or boulder) habitats, often associated with additional complexity from invertebrate communities and macroalgal cover, serve as important habitat for a variety of species. Rocky habitats may be used by managed species for one or all of their respective life stages and species may exhibit a preference for a specific complexity level of rocky habitat (e.g. gravel mixes). Respective of the proposed project, there are multiple species reliant on rocky habitats for one or multiple life stages and have designated EFH for complex rocky habitat within the project area: Atlantic cod, Atlantic pollock, black sea bass, little skate, ocean pout, red hake, scup, winter flounder, and winter skate.

Impacts to rocky habitats should be avoided wherever feasible. This is particularly true for rocky habitats known to support spawning aggregations or early life stages of vulnerable species. To minimize impacts to these habitats we typically recommend measures such as the micrositing of structures (e.g. anchors) within allowable configuration tolerances, and/or relocation or removal when micrositing is unable to avoid or minimize permanent impacts to complex, rocky habitats. Other measures that may avoid and/or minimize impacts to these habitats include: 1) restricting anchoring in these habitats; and/or 2) time of year restrictions in those habitats if proposed activities are expected to impact species using those habitats during a specific window in time. To avoid and minimize impacts to complex habitats, the EFH assessment must identify and characterize habitats within the project area.

The Public Notice states the seafloor in the project area is composed of soft mud or fine sands and lacks complex habitat and seafloor features. The location of the proposed project is in close proximity to extensive areas of glacial moraine which has deposited rocky habitat, in varying levels of complexity, across the region. The EFH assessment should fully describe any data collected or referenced that is used to describe the existing habitat features of the project area. Identification and characterization of habitats can involve a combination of desktop-based and field studies to collect and ground truth habitat data. The EFH assessment should use appropriate methods to describe existing habitat for the size of the project area as this ensures a high level of confidence in mapped habitat delineation, characterization products, and identification of EFH and HAPC features. We recommend early discussion with our habitat staff to review current data, identify additional information needs for the EFH assessment, and if needed, provide input on ways to collect that information.

Habitat Areas of Particular Concern

HAPCs are a subset of EFH, designated by regional fishery management councils, that exhibit one or more of the following: Ecological importance to managed species, particular susceptibility to human-induced degradation, vulnerability to developmental stressors, and/or rarity. The HAPC status can be applied to a specific habitat type or to a discrete area if habitat features present are determined to meet at least one of the above criteria. This project overlaps with areas designated as HAPC.

The Southern New England HAPC, which overlaps the project area, has been designated by the NEFMC for complex and cod spawning habitat within an area covering the southern New England wind energy lease areas plus an additional 10-kilometer buffer. This HAPC is intended for application during EFH consultation when data indicate that cod spawning and/or complex habitats occur within or near the footprint of a project located within the HAPC. The extent of overlap of HAPC features within the project area (i.e. complex habitat and/or identified cod spawning habitat), in combination with the activities proposed, determine the potential for adverse impacts to this HAPC as well as the specifics of any necessary conservation recommendations. The EFH assessment must evaluate the presence of HAPC features and, if warranted, discuss potential adverse impacts to those features from project development and proposed measures to avoid and minimize impacts to HAPC. Activities which could result in the loss or modification of complex habitat or may disrupt the spawning activity of cod must be described in the EFH assessment, including a full description of all proposed actions associated with installation, operations and maintenance that may occur in the project area between November and April.

Affected Fisheries

In response to the Public Notice, we are providing the following technical assistance about historic fishery operations which overlap with the proposed project area. This technical assistance is provided to inform your efforts reviewing the proposed project under the National Environmental Policy Act.

As proposed, fisheries that operate within and around the proposed project area would be impacted through disruptions to transit to/from fishing grounds and from displacement of fishing effort within the project area. Fishing vessels from various ports transit through the proposed project area throughout the year, especially those from New Bedford, MA and Point Judith and Newport, RI. Although vessels may continue to transit through the area, the anticipated addition of floats during the course of the growing season could complicate navigation and result in vessels avoiding transiting through the area as a precaution, especially given its proximity to the structures associated with the adjacent Revolution Wind project. Historic fishing operations within the project area would likely be excluded due to the amount of gear that would be

installed, which would prevent the setting of any fixed or mobile fishing gear within the area. Since 2008, fishing logbook data indicates that the Atlantic herring, skate, silver hake, lobster, summer flounder, and squid fisheries would be most affected based on historic fishery landings and revenue from trips that overlapped with the project area. In some years, up to 220,000 lb of fish valued at up to $26,000 were harvested from trips that overlapped with the project area. Such fishing activities would likely be displaced to other locations within surrounding waters.

Endangered Species Act Section 7

Under section 7 of the Endangered Species Act (ESA), federal agencies must consult with NOAA Fisheries when any action the agency carries out, funds, or authorizes may affect either a species listed as threatened or endangered under the ESA, or any critical habitat designated for it. As the lead federal action agency, USACE is responsible for determining whether the proposed action may affect ESA-listed resources. If USACE determines that the proposed action may affect ESA-listed resources under our jurisdiction, a request for consultation, along with the corresponding determination of effects, and supporting analysis, should be submitted to the attention of the section 7 coordinator at nmfs.gar.esa.section7@noaa.gov. Prior to submitting a finalized consultation request and supporting analysis (e.g. biological assessment (BA)), we encourage the designated USACE project manager to coordinate with our section 7 staff for assistance in reviewing and structuring the assessment.

As the action agency, you must provide a comprehensive description of all areas to be affected by the Federal action (action area as defined in 50 CFR §402.02). Furthermore, the request for consultation must include a comprehensive description of the proposed action such as its purpose, duration, components and how they will be carried out, and information on the nature of the effects that the proposed action will have on ESA-listed species. This information is critical in adequately and completely analyzing the effects of the action so that you may meet your ESA Section 7 obligations. The statutory requirements for BAs and requests for consultation are described at 50 CFR §402.02. Please refer to our ample online guidance resources and tools, as well as the specific guidance on aquaculture consultations, for assistance with supplying the required information for the description of the proposed action and the corresponding analysis of effects. We recommend that special attention is given to the information gaps highlighted above as you draft your BA.

The following ESA-listed resources under our jurisdiction overlap in time and space with the proposed project, as we currently understand it, and must be included in your analysis and request for consultation:

Atlantic Large Whales

Federally endangered North Atlantic right whales and fin whales occur year-round off the waters of Rhode Island and Massachusetts in the Atlantic Ocean. Right whales are most likely to occur offshore between November and April, but could be present year-round. Adult and juvenile right whales feed on copepods and could be foraging in the project area if suitable forage is present; right whales are also likely to be migrating along the Atlantic coast. Fin whale sightings off the eastern United States are centered along the 100 meter isobath, but fin whales are well spread out over both shallow and deep water, including submarine canyons along the shelf break (Kenney and Winn 1987; Hain et al. 1992). The presence of adult and juvenile fin whales overlap with the proposed action and could be present year-round, feeding on small schooling fish, squid, and crustaceans, including krill.

Sea Turtles

Four species of ESA-listed threatened or endangered sea turtles under our jurisdiction are seasonally present in the project's area: the threatened Northwest Atlantic Ocean distinct population segment (DPS) of loggerhead, North Atlantic DPS of green, and the endangered Kemp's ridley and leatherback sea turtles. Sea turtles typically occur along the Rhode Island and Massachusetts waters from May to mid-November, with the highest concentration of sea turtles present from June through October.

Atlantic Sturgeon

Atlantic sturgeon presence overlaps with the proposed project. The New York Bight, Chesapeake Bay, Carolina, and South Atlantic Distinct Population Segments (DPSs) of Atlantic sturgeon are endangered; the Gulf of Maine DPS is threatened. Transient adult and subadult Atlantic sturgeon originating from any of these DPSs could occur in the proposed project area to opportunistically migrate and forage. Due to the habitat and salinity in the area, spawning or early life stages are not expected to occur. Adult and sub-adult Atlantic sturgeon are expected to occur in the project area.

Shortnose Sturgeon

Shortnose sturgeon are present in the waters of the proposed project. Shortnose sturgeon are listed as endangered throughout their range. Transient adult individuals could occur in the proposed project area to opportunistically migrate and forage. Due to the habitat and salinity in the area, spawning and early life stages are not expected to occur.

Guidance for ESA section 7 consultation:

As project details develop, we recommend that you consider the following in regard to ESA-listed whales, sea turtles and sturgeon species:

- Entanglement risk associated with the proposed in-water gear and lines. Please refer to the aquaculture consultation resources shared above for guidance on the development of your BA. Consider the implementation of measures to mitigate entanglement risk such as:
    - Minimizing the number of vertical lines
    - Maintaining tension on all lines under all tidal conditions and as feasible with the proposed gear design
    - Avoiding high quality or known foraging habitat and/or aggregation areas to reduce overlap of species and gear
    - Implementing weak links designed with the appropriate breaking strengths, according to the listed species present
    - Gear marking
- Increased risk of vessel strikes. Consider the vessels associated with the deployment, maintenance and monitoring of the proposed aquaculture gear; and how, when added to the existing baseline of vessel traffic in the area, those vessels will result in an increased risk of a vessel strike on ESA-listed species.
- Proposed gear monitoring and maintenance protocols. Detailed descriptions of the methods and frequency for the general gear maintenance; as well as the proposed procedures in case of gear damages, losses, and adverse weather conditions. Additionally, a decommissioning plan and corresponding operations schedule must be provided.

Marine Mammal Protection Act (MMPA)

The MMPA established a national policy to prevent marine mammal species and population stocks from declining beyond the point where they ceased to be significant functioning elements of the ecosystems of which they are part. Given the overlap of ESA-listed marine mammal species with the proposed action area, we recommend that USACE review the guidance about coordination under the MMPA for ESA-listed marine mammals. Please refer to the Office of Protected Resources' website for appropriate contacts, requirements and instructions for incidental take authorizations.

Conclusion

Thank you for the opportunity to comment on the Public Notice and the consideration of our request for an interagency pre-application meeting. We look forward to continued work on the upcoming consultations and are available to answer any questions regarding information needs for the assessments. If you have any questions or need additional information in relation to the EFH consultation, please contact Thomas Heimann at (978) 238-9721 or by e-mail (thomas.heimann@noaa.gov). For the section 7 consultation, please contact Roosevelt Mesa at (978) 281-9186 or by email (roosevelt.mesa@noaa.gov).

Sincerely,

Christopher Boelke

for Louis A. Chiarella
Assistant Regional Administrator
for Habitat Conservation

cc:

Janet Deshais, EPA
Phil Colarusso, EPA
Michele Desautels, USCG
Ellen Keane, NMFS
Kevin Madley, NMFS
Cate O'Keefe, NEFMC
Chris Moore, MAFMC

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Joseph Cimino, Chair | Skip Feller, Vice Chair
Christopher M. Moore, Ph.D., Executive Director

MEMORANDUM

Date: April 27, 2026

To: Cate O'Keefe, Executive Director New England Fishery Management Council

From: Chris Moore, Executive Director

Subject: Revision of Spiny Dogfish Essential Fish Habitat (EFH)

The Mid-Atlantic Fishery Management Council voted (unanimously) on April 7, 2026, to submit its Omnibus Essential Fish Habitat (EFH) Amendment to NOAA Fisheries. This amendment was submitted on April 16, 2026, and includes revised EFH maps and text descriptions for 14 managed species including spiny dogfish.

Updated EFH maps and text combine information from species distribution models with an analysis of estuarine and coastal species habitat zones, as well as relevant literature. These species distribution models and inshore workflows were developed through the Northeast Regional Habitat Assessment and further refined during the EFH 5-Year Technical Review. This work was completed as a joint effort between our organizations, with the same methods used for both the New England Council's 2026 EFH Framework and Mid-Atlantic Council's Omnibus EFH Amendment. The proposed spiny dogfish EFH designations are provided below in Table 1, and Figures 1 and 2.

Thank you for supporting the ongoing collaboration between the New England and Mid-Atlantic Councils on EFH identification and habitat management topics. Please reach out to Jessica Coakley, jcoakley@mafmc.org, if you have questions.

Table 1. Spiny dogfish EFH designations in text.

Life Stage	Proposed (Action)
Juveniles	EFH for all spiny dogfish juveniles (combined male and female, including sub-adults; size < 64 cm stretched total length) is all inshore and offshore marine habitat in the principal EFH area (defined as the top 75% quantile of occupied habitat predicted from model outputs) joined to inshore species zones. Juveniles are generally found in bottom salinities that range from 29 to 36 ppt, although they generally avoid brackish waters and spend more time in full salinity marine waters (>32 ppt). Mating occurs in the winter months with newborns (neonates or "pups") delivered on the offshore wintering grounds from November to January; however, newborns are also sometimes observed in the Gulf of Maine or southern New England in early summer. Juvenile spiny dogfish in the Northwest Atlantic inhabit the marine water column (shallow/inner continental shelf, shelf bottom, and slope bottom). They utilize both pelagic (open water) and epibenthic habitats (just above seafloor bottom sediments). They inhabit a broad range of full salinity estuarine and marine habitats, including firm hard bottom habitat, loose coarse bottom habitat, loose fine bottom habitat, marine mud, structured sand, and glacial till. They exhibit strong seasonal movements and migrate both north and south as well as inshore and offshore seasonally in response to changes in water temperature. They are generally found where bottom temperatures range from 4 to 18°C. Very few remain in the Mid-Atlantic area in the summer and fall after water temperatures rise above 15°C. While spiny dogfish in the Northwest Atlantic US ranges from Labrador to Florida, they are most frequently found from Nova Scotia to Cape Hatteras and have been caught near shore to as deep as 600 meters, although they are more frequently found at depths between 15 and 205 meters.
Adults	EFH for all spiny dogfish adults (combined male and female; size > 64 cm stretched total length) is all inshore and offshore marine habitat in the principal EFH area (defined as the top 75% quantile of occupied habitat predicted from model outputs) joined to inshore species zones. Adults are generally found in bottom salinities that range from 27 to 36 ppt (polyhaline and marine waters), although they generally avoid brackish waters and spend more time in full salinity marine waters (32-36 ppt). Adult spiny dogfish in the Northwest Atlantic utilize both pelagic (open water) and epibenthic habitats (just above seafloor bottom sediments). They inhabit a broad range of full salinity estuarine and marine water column (shallow/inner continental shelf and shelf bottom) habitats, including firm hard bottom habitat, loose coarse bottom habitat, loose fine bottom habitat, structured sand, and glacial till. Satellite tag returns also indicate some usage of habitat beyond the shelf break. Like juveniles, adults exhibit strong seasonal movements and migrate both north and south as well as inshore and offshore seasonally in response to changes in water temperature. They are generally found where bottom temperatures range from 4 to 17°C. Very few remain in the Mid-Atlantic area in the summer and fall after water temperatures rise above 15°C. Mating occurs in the winter months. While spiny dogfish in the Northwest Atlantic US ranges from Labrador to Florida, they are most abundant from Nova Scotia to Cape Hatteras and have been caught near shore to as deep as 500 meters, although they are more frequently found at depths between 15 and 190 meters.

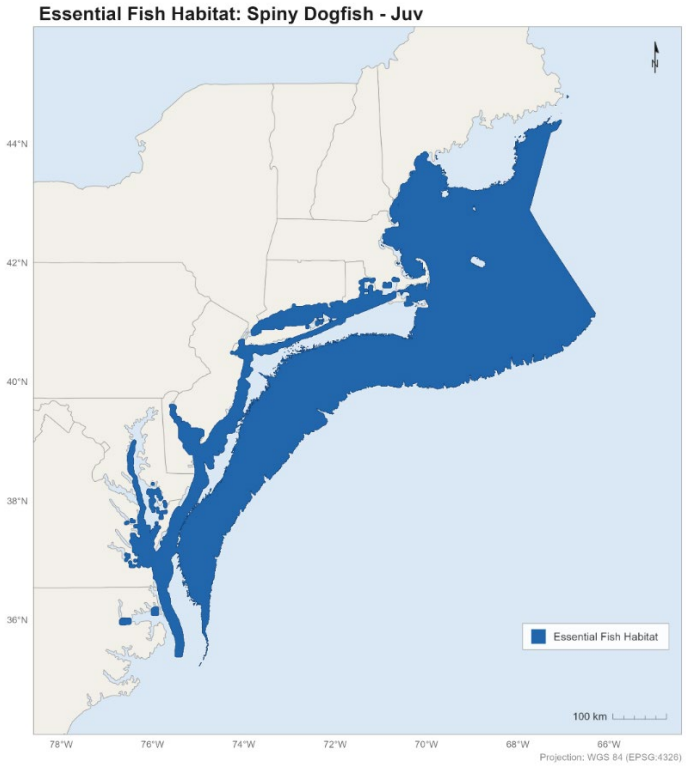

Figure 1. Spiny dogfish proposed juvenile EFH map.

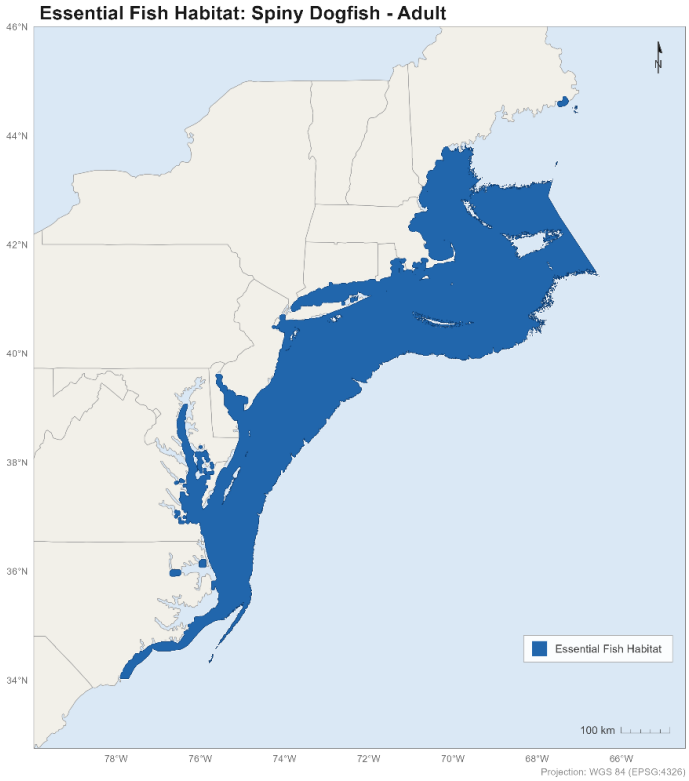

Figure 2. Spiny dogfish proposed adult EFH map.

Monte Rome & Intershell International Corp.

9 Backburn Drive

Gloucester, MA01930

5/20/2026

Chairman Dan Salerno

Executive Director Cate O'Keefe

NEFMC

50 Water Street

Newburyport, MA 01950

Re: Written Comments for the Habitat Advisory Panel Webinar 05/29/2026

Dear Chairman Salerno & Director O'Keefe,

As vessel owner, vessel operator, seafood processor, and as a participant in the recent survey work (EFP 23073) done on Davis Bank East, I comment that the research work must go on until such time as those of us who are working on this area for the sake of fisheries research, finish the work tasked them by the NEFMC and the Research Priorities for the GSCHMA.

By performing multibeam/side scan survey work with our vessel, F/V Tom Slaughter, pursuant to EFP 23073, we have been able to map detailed bathymetry, hardness and densities of the areas from which we have been harvesting clams to pay for the survey work.

While there are many takeaways to date from the work, one specific detail that the Habitat Committee should know is the minimal area worked for the results. In 286 compensation trips in the area, the harvesting vessels have used only 8.44 sq. km to harvest approximately 1,793,792 lbs of surf clam meat for food.

In this instance where most of the trips were conducted in the area known as Rose & Crown, the footprint of use is .003289 of the total 2566 sq km of the HMA. This activity was performed all in a sandy bottom area. During the events, we did not damage any fishing gear which is a testament to where we are able to find surf clams in the highest densities. During the work conducted, we did not encounter even 1 cod fish in our gear.

There has been much more information discovered since the April 2019 closure that has to do with Essential Surf Clam Habitat and the lack of damage to any surf clam habitat for which surf clam dredging could be held responsible. In fact, a leading NOAA habitat scientist, John Everett, has indicated that by MSA standards, fisheries should be allowed to harvest the target species if habitat damage from harvest operations produces only minimal and temporary damage. Everett indicates that from his 30+ years of scientific study with NOAA, that the outcome from surf

clam harvest is flawed in that surf clam dredging not only does minimal and temporary damage to the habitat where it is prosecuted, but in addition to temporary and minimal damage, hydraulic dredging improves the habitat and cleanses the bottom of build-up of detritus, other settled habitat materials, and brings up broken shells which create shell hash that complements the productive make-up of the HMA.

On page 8 of the July 22, 2019, Clam Dredge Framework Adjustment, it is made clear that codfish **s**pawn on the East and West of the HMA – not in the middle. This is consistent with many other reports and papers.

Please note the following:

1) Codfish do not spawn on the top of the Shoals (HMA) where surf clams are harvested.
2) Hydraulic dredging produces only Minimal and Temporary habitat damage and cleanses the bottom of the habitat it works. (Ammendment13 -SCOQ Mgt Plan)
3) Swept area consumed from dredging is almost negligible.

Our Team is ready and able to pursue all objectives of research necessary to demonstrate other surf clam exempt areas which should be opened as soon as possible in order to support the now fledgling New England Surf Clam Industry.

We have been doing the work in collaboration with our partner Coonamessett Farm Foundation and have contributed approximately $750,000.00 to this effort. We are certain that our continued work will answer the many questions that Fisheries Managers will need in order to reverse their position that Surf Clam harvesting has any negative impact on habitat, cod spawning, or negative impact on the small, perceived codfish habitat occurrence on the Shoals.

The eventual exemption for surf clam harvest must be considered and I respectfully request the full support of the Council in recommending that the EFP/Compensation Fishing be allowed to continue until all questions that closed the HMA are answered in full so that a scientific based decision will be made concerning surf clam harvest in the HMA.

Very truly yours,

Monte Rome,

Intershell International Corp. GM/Owner

The Tom Slaughter Surf Clam Fleet

MEMORANDUM

TO: Fellow Members, NEFMC Habitat Advisory Panel

FROM: Drew Minkiewicz

DATE: May 2026

RE: Three Year Review of the Georges Bank and Stellwagen Dedicated Habitat Research Areas

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Summary

This memo is intended to provoke discussion ahead of the May 29 meeting, and I welcome your thoughts, and any corrections. The DHRA review is an important decision on our agenda, and I think we will serve the Council better by working through the analysis together in advance.

My view is that the AP should recommend the Council advise the Regional Administrator to sunset the Georges Bank DHRA and should send the Stellwagen DHRA back to GARFO for completion of the dependence analysis the regulatory framework requires before any retention recommendation moves forward.

The PDT has recommended retention of both, and I have real respect for the work the PDT put into this review. With that said, the PDT memo acknowledges facts that, applied consistently to the regulatory standard, do not support retention of either. The Georges Bank case is straightforward. The Stellwagen case requires GARFO to do work it has not yet done.

The Regulatory Standard

Under 50 CFR 648.371(e) and the framework established in Omnibus Habitat Amendment 2, a DHRA may be maintained on the showing of any one of three things, all in the disjunctive:

- Documented active and ongoing research in the form of data records, cruise reports, or inventory of samples with analytical objectives focused on DHRA topics; or
- Approved research proposals focused on DHRA topics; or
- Funding requests for pending research focused on DHRA topics.

OHA2 defines DHRA topics as gear impacts on seabed habitat, habitat recovery dynamics, natural disturbance dynamics in the absence of fishing, and productivity of managed species across habitat types. The GARFO review framework, drawn from OHA2 Volume 3 at pages 116 to 117, applies the regulatory standard through a set of operational subquestions, including this one, which is dispositive for our purposes: are the fishing restrictions associated with the DHRA designation an explicit part of the design of the project?

That subquestion is not extra regulatory. It is part of the framework GARFO is required to apply, and it asks whether the research depends on the DHRA designation specifically. The procedural default favors retention because removal requires affirmative rulemaking by the Regional Administrator. The substantive standard places the burden of demonstrating qualifying research on those advocating retention. Our job, as the advisory panel, is to give the Council and the Regional Administrator a defensible record under the substantive standard, not to defer to procedural inertia.

Georges Bank DHRA: The Case for Sunset Is Already in the Record

The 2026 GARFO review states: NMFS did not identify any past, current, or planned research activities in which the designation of the Georges Bank DHRA has played a critical role. The 2022 GARFO review reached the same conclusion in identical language. Two consecutive triennial reviews, eight years apart from designation, with the same finding: no qualifying research.

GARFO documented 23 Scientific Research Permit applications from NEFSC for surveys overlapping the Georges Bank DHRA between October 2022 and March 2026. GARFO's own evaluation describes these as routine resource assessments that would occur in these areas regardless of their status as DHRAs. None of the three regulatory criteria, active research focused on DHRA topics, approved proposals focused on DHRA topics, or funding requests for pending research focused on DHRA topics, is satisfied on the record.

The PDT's recommendation to retain does not rest on the regulatory standard. It rests on opportunity cost arguments: the worry that letting the designation lapse will foreclose future closed area comparative research opportunities, and that recreating analogous closed conditions would take years. These are reasonable policy considerations, but they sit outside what 50 CFR 648.371(e) authorizes the Council to weigh in a sunset review. The regulation asks three specific questions about ongoing research, approved proposals, and pending funding requests. It does not invite a balancing test against speculative future research value. Treating opportunity cost as an independent basis for retention effectively rewrites the regulatory standard the Council itself adopted in OHA2.

The comparative research the PDT cites in support of its concern, including Murawski 2005, Davies 2015, Sherwood and Grabowski 2016, Vitaliano 2013, and Pereira 2012, predates the DHRA designation. Researchers conducted that work under prior groundfish closures that have existed in the area since December 1994. The DHRA itself has produced none of the research the PDT cites in its defense.

Two additional points reinforce sunset:

- **Resource conditions do not support a conservation rationale either.** Recent scallop resource surveys in the Georges Bank DHRA show essentially zero biomass with no recent recruitment. The closure is not protecting a productive resource. It is not generating spillover. Whatever conservation function the area may have served historically, the current scallop data do not support a continuing conservation rationale tied to this designation.

- **Sunsetting does not produce wholesale opening, but the PDT memo overstates the durability of the PSP overlap.** The PDT memo states that lifting the Georges Bank DHRA would still leave clam dredging prohibited under the overlapping Georges Bank PSP Closure. That is correct as a snapshot of the current regulatory regime. Outside a brief EFP that allowed fishing in part of the old Closed Area II, the area currently available to surfclam and ocean quahog harvest in the reopened portion of the Georges Bank PSP Closed Area does not extend into the DHRA itself, so sunsetting the DHRA in isolation would not immediately give clam dredges access to it. What the PDT memo does not address is that the PSP regulatory regime is expected to change in the next couple of years. NOAA Fisheries has indicated that the current Georges Bank PSP closure will be removed and replaced by a nationwide biotoxin monitoring regime administered by EPA and NOAA Seafood Inspection, with proposed and final rules expected. When that removal occurs, hydraulic dredge access to Georges Bank, including areas that today happen to fall within the DHRA, will be addressed in the separate Council action the agency itself anticipates. The DHRA is not the appropriate vehicle for managing hydraulic dredge access on Georges Bank, and using it as a placeholder for that policy question, in expectation of PSP changes, stretches the designation beyond what 50 CFR 648.371(e) authorizes. Sunsetting the DHRA on the regulatory record, and addressing dredge access in the dedicated Council action the agency expects to come, is the proper sequence of events.

The 2022 review found the regulatory criteria were not met and the Council retained the designation anyway. The 2026 review reaches the same finding. If the AP and Committee recommend retention again, we will have established a pattern in which sunset provisions never produce sunsets, and the Council's credibility in designing future closure with review measures will suffer for it. The integrity of the sunset mechanism, as a regulatory design choice the Council itself adopted in OHA2, depends on using it when the evidence supports doing so.

My recommendation: the AP should recommend that the Council advise the Regional Administrator to sunset the Georges Bank DHRA.

Stellwagen DHRA: The Dependence Analysis Has Not Been Done

Stellwagen is harder than Georges Bank, and the analytical question that matters under the regulatory framework deserves direct treatment rather than the gloss the PDT memo gives it.

The PDT memo points to specific research projects in support of retention: the SBNMS, Boston University, and University of Connecticut BRUV video analysis of natural disturbance patterns; the NEFSC passive acoustic monitoring soundscape study; and the Gloucester Marine Genomics Institute eDNA biodiversity work, with additional projects planned. GARFO concludes that the SBNMS video analysis explicitly relies on the Stellwagen DHRA designation and requires the exclusion of bottom tending gear from the DHRA.

That conclusion is doing the work in the retention recommendation. The record before us does not test that conclusion against the question the GARFO operational framework requires the agency to ask: do the fishing restrictions associated with the DHRA designation, as distinct from other overlapping restrictions, function as an explicit part of the design of the project?

The PDT memo itself contains the fact that exposes the contradiction. It states, on the question of what would change if the Stellwagen DHRA were sunset: Lifting the Stellwagen DHRA restrictions would not result in a change in fishing gear access to the area as there are overlapping restrictions associated with the year round Western Gulf of Maine Habitat Management Area, the Western Gulf of Maine Groundfish Closure Area, and the seasonal Cod Protection Closure Areas.

That sentence is dispositive on the dependence question, and the PDT did not appear to recognize it as such. If lifting the DHRA produces no change in gear access, then the overlapping closures, not the DHRA, produce the exclusion of bottom tending gear that the SBNMS research depends on. The DHRA is not the operative regulatory authority generating the research conditions. It runs concurrent with the operative authorities. SBNMS additionally holds independent permit authority over activities in the Sanctuary, and the Sanctuary Superintendent permits the video analysis under that authority in the first place.

The question is not whether the research relies on closure. It plainly does. The question is whether the research relies on the DHRA, as distinct from the WGOM HMA, the WGOM Groundfish Closure, the seasonal Cod Protection Closures, and the Sanctuary permit authority. The available record does not address that question. GARFO excludes NEFSC surveys from the dependence analysis on the explicit ground that they would occur regardless of DHRA status. GARFO then credits SBNMS research toward retention without applying the same test, even though the same overlapping closures produce identical gear exclusion.

The application of the dependence subquestion in the GARFO report is therefore inconsistent. The same logical test produces opposite conclusions for two sets of research projects in the same area, and the difference is not explained on the record.

Recommended AP Position on Stellwagen

A clean sunset recommendation for Stellwagen is harder to defend than for Georges Bank. Active research is occurring, and that research does benefit from the area being closed to bottom tending gear. The analytical weakness is not in whether closure helps the research. It is in whether the DHRA designation, specifically, is the operative source of that closure.

The cleanest AP position is therefore not a flat sunset recommendation. It is a recommendation that the Council does not act on Stellwagen retention until GARFO completes the dependence analysis the OHA2 review framework requires. Specifically, for each research project credited toward DHRA retention, GARFO should analyze whether the project would be impaired if the DHRA were sunset and the WGOM

HMA, the WGOM Groundfish Closure, the Cod Protection Closures, and the Sanctuary permit authority all remained in place. If that analysis demonstrates dependence on the DHRA specifically, retention is justified. If it does not, sunset is the appropriate recommendation.

This framing has three advantages. It accepts the regulatory framework on its own terms and asks only that the framework be applied consistently. It is unanswerable on the current record, because GARFO has not done the analysis. And it produces a defensible Council record whatever the ultimate outcome: if GARFO demonstrates dependence, retention rests on solid ground; if GARFO cannot demonstrate dependence, sunset rests on solid ground. Either way, the OHA2 sunset mechanism functions as the Council designed it to function.

If colleagues are not prepared to support remand for further analysis, an alternative position is to recommend sunset on the redundancy grounds the PDT memo itself supplies: lifting the designation produces no change in gear access, other closures not under review produce the controlled conditions for research, and the DHRA therefore functions as a redundant regulatory layer that adds nothing the underlying closures do not already provide. This is not an anti research position, because the research conditions persist regardless of what we recommend on the DHRA.

Conclusion

The AP has an opportunity at this meeting to give the Council and the Regional Administrator a defensible record under the substantive regulatory standard, rather than defaulting to retention on grounds the standard does not authorize.

For Georges Bank, the record across two consecutive triennial reviews supports a sunset recommendation. The regulatory criteria are not met, scallop biomass data does not support a conservation rationale, and using the sunset mechanism as designed protects the credibility of closure with review designs the Council may want to use in the future. The pending change to the PSP regulatory regime, with hydraulic dredge access on Georges Bank expected to be addressed in a separate Council action, reinforces rather than undermines that recommendation.

For Stellwagen, the AP should at minimum require GARFO to complete the dependence analysis the review framework requires before any retention recommendation moves forward. If colleagues are not prepared to support remand, sunset on regulatory redundancy grounds is defensible on the PDT memo's own acknowledged facts.

I would welcome the chance to discuss this with any of you ahead of the meeting.

Respectfully,
Drew Minkiewicz
Member, NEFMC Habitat Advisory Panel

GehanLaw
The Law Office of Shaun M. Gehan

May 28, 2026

Via Electronic Mail
Habitat Advisory Panel, Plan Development Team, & Committee Members
c/o New England Fishery Management Council
50 Water Street, Mill 2
Newburyport, MA 01950

RE: Upcoming Habitat Meetings and Great South Channel HMA Review

Dear Members of the Habitat AP, PDT, & Committee:

This letter is submitted on behalf of the Saving Surf Clams Coalition ("SSCC"), an unincorporated trade association comprised of business involved in the Atlantic surf clam fishery. As the Council initiates a review of habitat policies and procedures, as well as the clam dredge exemption within the Great South Channel ("GSC") Habitat Management Area ("HMA"), the SSCC would like to review the legal framework governing the New England Fishery Management Council's duties with respect to minimizing adverse impacts on essential fish habitat ("EFH"). We also provide both some background on the GSC HMA surf clam fishery and sources of scientific data – some collected subsequent to the Omnibus Habitat Amendment 2 ("OHA2") and the Surf Clam Framework and other ignored during the development of those actions – that bear on the review of the HMA.

In summary, the closure of the GSC HMA never had a strong legal[1] or scientific basis, but research conducted confirms that continued exclusion of this fishery is unwarranted. Surf clams are not only not overfished; they are, in fact, an under-utilized resource. This is largely due to inaccessibility to significant amounts biomass due to EFH restrictions like the GSC HMA, a region that has accounted for up to twenty percent of total surf clam landings prior to the closure.

Elevation of the concept of "habitat management" over that of productive fisheries is antithetical to the law's purposes of "promot[ing] domestic commercial and recreational fishing under sound conservation and management principles" and "encourag[ing] the development by the United States fishing industry of fisheries which are currently underutilized or not utilized by United States fishermen." 16 U.S.C. § 1801(b)(3),(6). As such, the designation of this area as an

[1] In fact, neither the Magnuson-Stevens Act ("MSA") itself nor the regulations promulgated by the National Marine Fisheries Service ("NMFS") to implement habitat provisions define or mention of "habitat management areas."

HMA and imposition of restrictions on that basis is wholly unmoored from the law. This action imposes significant costs on fishermen and the Nation while providing no identifiable benefits and significantly burdens small businesses that have traditionally relied on fishing in this area.

Legal Background Relating to EFH Protection

The Magnuson-Stevens Fishery Conservation and Management Act of 1976 ("MSA" or "Act"), as amended over the years, sets forth the framework for managing this nation's fisheries resources. In adopting the MSA, Congress found that

> [t]he fish off the coasts of the United States, the highly migratory species of the high seas, the species which dwell on or in the Continental Shelf appertaining to the United States, and the anadromous species which spawn in United States rivers or estuaries, constitute valuable and renewable natural resources. These fishery resources contribute to the food supply, economy, and health of the Nation and provide recreational opportunities.

16 U.S.C. § 1801(a)(1). To realize these benefits over the long term, the MSA establishes conservation and management system as "necessary to prevent overfishing, to rebuild overfished stocks, to insure conservation, to facilitate long-term protection of essential fish habitats" in order "to realize the full potential of the Nation's fishery resources." *Id.*§ (6). The statute thus "balances the twin goals of conserving our nation's aquatic resources and allowing U.S. fisheries to thrive." *Oceana, Inc. v. Pritzker*, 26 F. Supp. 3d 33, 36 (D.D.C. 2014).

Toward these ends, Congress established a process for promulgating fishery management plans ("FMP"), the development of which are guided by ten National Standards for fisheries conservation and management. *See* 16 U.S.C. §§ 1853, 1851(a). Chief among them is National Standard 1, which requires implementation of conservation and management measures that "prevent overfishing while achieving, on a continuing basis, the optimum yield from each fishery for the United States fishing industry."[2]

While courts have found that the conservation mandate of the MSA is paramount,[3] it is so only to the extent that socioeconomic concerns cannot be used as an excuse to avoid action when the best scientific information indicates that a stock of fish is overfished or subject to overfishing. *See, e.g., id.* When a managed stock is "healthy" in the sense that, at a minimum, its biomass is above, and fishing mortality rates are below, their thresholds, the goal of management is to help ensure the fishery can harvest the full amount of catch which has been determined to be sustainable, both annually and over the long term. "Once optimal yield is set, the Secretary is charged with 'achieving' the optimum yield."[4]

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[2] 16 U.S.C. § 1851(a)(1); *see also Oceana, Inc. v. Pritzker*, 26 F. Supp. 3d 33, 37 (D.D.C. 2014).

[3] *See, e.g., Nat'l Res. Def. Coun. v. Daley*, 209 F.2d 747, 753 (D.C. Cir. 2000).

[4] *Western Seas Fishing Co. v. Locke*, 722 F. Supp. 2d 126, 133 (D. Mass. 2010).

As one measure to sustain fish populations for their economic and social benefits, FMP's must "describe and identify" EFH for the fishery. 16 U.S.C. § 1853(a)(7). Councils must also consider measures that "minimize to the extent practicable adverse effects on such habitat caused by fishing" in each FMP. *Id.* There are two elements to this prescription: (1) that fishery impacts must be "adverse" and (2) that measures to minimize such impacts must be "practicable."

NMFS' regulations explain these terms. For an impact from fishing activity to be adverse, it must reduce the "quality and/or quantity of EFH." 50 C.F.R. § 600.810(a). If an adverse effect is found, it must be minimized *only* if the impact "is more than minimal and not temporary in nature." *Id.* § 600.815(a)(2)(ii). Measures to minimize adverse EFH effects must also be "practicable." The practicability determination is made by (1) "determining the nature and extent of the adverse effect on EFH" and (2) evaluating "the long and short-term costs and benefits of potential management measures to EFH, associated fisheries, and the nation, consistent with national standard 7." *Id.* § 600.815(a)(2)(iii).

Courts have read the "practicability" language as a limitation, rather than a requirement to protect EFH no matter the cost. "The upshot of [the MSA's] structure is that Congress did not intend any of these specified goals — *i.e.*, the ones limited to actions that are 'practicable' — to take priority over the others."[5] Indeed, "the 'practicable' language permits, or perhaps even requires, the Council to weigh social and economic harms to fishers against any conservation value." *Id.* at 90. The practicability limitation in the EFH and other MSA provisions is "the means by which [Congress] 'delegated to the agency the discretion to weigh the relevant factors' embodied in the MSA's competing objectives."[6]

It is clear from this background that the decision as to what measures to minimize adverse impacts on EFH in any given area may be practicable is to be made based on the best scientific information on the particular importance of the habitat, a determination as to whether fishing impacts are adverse within the meaning of the law, and the impact of the measures on fishery participants and attainment of OY. The MSA does not require the closure of some percentage EFH. In fact, closure of areas to fishing activity can lawfully only be justified when the habitat is of critical importance to one or more species, and the impacts on fisheries is minimal.

During the debate on the Surf Clam Framework, the concept of "mitigation," or the need to close another area if clamming continued to be allowed in the GSC HMA, was taken as an article of faith. In part, that discussion was driven by decisions made in OHA2, which was then in litigation by environmental non-governmental organizations. Specifically, that the Amendment was justified on the grounds that some volume of EFH would be protected from fishing. As dubious a legal proposition as that was then, the concept of mitigation – which still holds sway in some quarters – has no role to play in the subsequent review of the practicability

[5] *Conservation Law Foundation v. Ross*, 374 F. Supp. 3d 77, 91 (D.D.C. 2019).

[6] *Id.* at 91-92 (quoting *Oceana, Inc. v. Pritzker*, 24 F. Supp. 3d 49, 67 (D.D.C. 2014)).

of a given closure. If such a closure cannot be justified because science shows fishing impacts are not adverse in the legal sense or because its impacts are not practicable, the prohibition should be lifted. If one advocates for a new closure, it must be legally justified on its own term.

The Nantucket Shoals Surf Clam Fishery

The Southern New England ("SNE") Atlantic surf clam fishery has historically represented only a small portion of the overall species landings, but since 2010 landings from the SNE have become increasingly important to the fishery overall. Since 2011, the SNE surf clam fishery has comprised about twenty percent of the total coastwide landings. (Clam Dredge FW, at 69.) The areas of the GSC HMA that are now closed accounted for than a third of nominal revenue generated by the Massachusetts surfclam industry. (Surf Clam FW at 150, 66 (Fig. 6).) Surf clams inhabit sandy bottom but can be found in association with cobbles, rocks, and boulders.[7]

Medium sized clam vessels (60' to 80') comprise the majority of the New England fleet's catch. (Clam Dredge FW at 63, 188). Such clam vessels are concentrated in a small number of communities—New Bedford, Fairhaven, and Hyannis—which have "the high rates of dependence … on Great South Channel HMA" because they are unable to fish safely on Georges Bank. (Clam Dredge FW at 64.) "While a minority **(20%) of coast-wide surfclam revenues are generated in the Great South Channel HMA**, these revenues are **concentrated among a relatively small number of permits, owners, and communities**." (*Id.* (emphasis added).) At least until recently, in fact, surf clams were the second highest valued species landed in New Bedford after scallops. The amounts of lost revenue to these dependent surf clam fishing communities are significant. Prior to the New England Council's near total closures, the fishing grounds impacted by the HMA designation accounted for as much as $7,800,000 in annual revenues. (*See* Table 35 from the Surf Clam Framework below).

The surf clam fishing grounds within the HMA are also important because harmful algal blooms which can contaminate surf clams and cause Paralytic Shellfish Poisoning intermittently occur on Georges Bank.[8] Vessels fishing offshore must therefore adhere to costly testing protocols. (*Id.*) By contrast, fishing grounds southeast of Nantucket do not experience such algal blooms. (*Id.*) Thus, both proximity, which reduces trip costs, and costs avoided by not having to implement shellfish testing protocols make the GSC HMA a more efficient and profitable area to fish. Surf clams in this area are also unique because they grow to a larger size than elsewhere in the fishery. (Powell et al. 2021.)

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[7] *See, e.g.*, E.N. Powell, *et al.*, The conundrum of biont-free substrates on a high-energy continental shelf: Burial and scour on Nantucket Shoals, Great South Channel ("Powell et al. 2021"), Estuarine, Coastal and Shelf Science 249 (2021) 107089 (citations omitted) ("Cobbles, rocks, and boulders are routinely encountered on the neighboring Georges Bank in regions occupied by surfclams. Surfclams, however, are sand denizens and, presumably, do not require or benefit from the presence of such sedimentary components in their habitat.").

[8] N.F. Jennings, et al., Great South Channel Habitat Management Area Survey, Final Report for Exempted Fishing Permit #19066 ("Jennings et al. 2022"), at 7 (June 15, 2022), *available at* https://s3.us-east-1.amazonaws.com/nefmc.org/6.-CFF-PR-EFP19066-Feb2022.pdf.

Table 35 – Revenue (to nearest $100K) and fishing effort (hours) within the Alternative 2 areas (note that these are year-round estimates for Old South and Rose and Crown South) for January 2011-December 2017.

Metric	Area	2011	2012	2013	2014	2015	2016	2017	Average
Revenue (logbook)	Fishing Rip	$ -	$ 100,000	$ 700,000	$ 600,000	$ 300,000	$ 300,000	$ 300,000	$ 300,000
	Davis Bank East	$ -	$ 300,000	$ 700,000	$ 400,000	$ 600,000	$ 500,000	$ 300,000	$ 400,000
	McBlair	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ 100,000	$ -	$ -	$ 100,000
	Old South	$ 500,000	$ 300,000	$ 300,000	$ 1,200,000	$ 1,000,000	$ 1,300,000	$ 400,000	$ 700,000
	Rose and Crown N	$ 500,000	$ 1,300,000	$ 1,300,000	$ 1,000,000	$ 1,200,000	$ 600,000	$ 500,000	$ 900,000
	Rose and Crown S	$ 300,000	$ 1,200,000	$ 600,000	$ 1,100,000	$ 800,000	$ 900,000	$ 400,000	$ 800,000
	Total Alt 2	**$ 1,500,000**	**$ 3,400,000**	**$ 3,700,000**	**$ 4,300,000**	**$ 4,000,000**	**$ 3,600,000**	**$ 1,900,000**	**$ 3,200,000**
	Total HMA	**$ 2,800,000**	**$ 6,100,000**	**$ 7,800,000**	**$ 7,800,000**	**$ 7,100,000**	**$ 7,300,000**	**$ 4,700,000**	**$ 6,200,000**
	% of HMA revenue	**52%**	**56%**	**48%**	**55%**	**56%**	**50%**	**41%**	**52%**
Fishing Effort (hrs, VMS)	Fishing Rip	17	208	1,843	2,070	1,254	222	97	816
	Davis Bank East	45	248	1,956	532	1,375	2,974	2,077	1,315
	McBlair	795	10	106	178	564	300	34	284
	Old South	855	469	1,111	2,788	2,204	5,220	2,171	2,117
	Rose and Crown N	911	3,182	2,877	3,036	3,962	5,821	1,715	3,072
	Rose and Crown S	111	2,151	1,250	1,684	1,356	3,214	1,645	1,630
	Total	**2,734**	**6,268**	**9,143**	**10,288**	**10,714**	**17,752**	**7,738**	**9,234**
	Total in HMA	**3,887**	**7,562**	**11,262**	**12,364**	**13,100**	**21,567**	**9,645**	**11,341**
	% of HMA hours	**70%**	**83%**	**81%**	**83%**	**82%**	**82%**	**80%**	**81%**

Source: Revenue from surfclam logbook analysis, fishing effort from VMS.

The Nantucket Shoals surf clam fishery harvest area differs from all other productive East Coast harvest areas due to the clam's large physical size and the high yield of meat per unit of clam. The size and health of the resident surf clams in the GSC HMA have been crucial to the interests of New England processors for the ease of removing the meat in a hand shuck surf clam operation and the supportive yields to the smaller processing operations. (Jennings et al. 2022.)

The closure of the GSC HMA to the fishery has had negative spillover effects. As Massachusetts Director of the Division of Marine Fisheries Daniel McKiernan noted in his letter to the Council on this issue: "It is extremely concerning that restrictive surf clam access in federal waters appears to be resulting in an unintended shift of effort into Massachusetts state waters. Preliminary findings reveal a likely displacement of effort from the federal restricted area to state waters manifested in a trend of Massachusetts surf clam landings coming increasingly from state waters."[9] Director McKiernan went on to note that this forced effort shift was having an adverse impact on important inshore habitat. *Id.*

Closure of Most of the GSC HMA Adversely Impacts Achievement of Optimum Yield

In the late 1990s and early 2000s, the Atlantic surf clam fishery routinely met or approached its annual total allowable catch ("TAC").[10] The fishery has not caught its total allowable catch ("TAC") since 2003 and over the past four years, less than fifty percent of allowable landings were harvested. (2024 Surfclam Doc. at 5.) In 2023, the lowest amount of surf clams were harvested— only 10,653 mt or 41% of the TAC—since at least 1999. *Id.* Landings from Georges Bank and Southern New England have declined precipitously since 2019 even though the fishery is generally moving northward. (*Id.* at 6 (Figure 4), 1.)

[9] Letter of Daniel McKiernan to Cate O'Keefe & Dan Salerno (Nov. 6, 2025).

[10] *See* 2024 Surfclam Doc., Table 1.

The COVID pandemic may have affected landings in 2020 and 2021.[11] Even in those years, when restaurant demand was low, demand still exceeded supply. (*Id.* at 2-3.) Currently, demand continues to exceed surf clam supply, limiting the potential for expanding export markets. Also depressing overall landings was the closure of the GSC HMA in April 2019 to surf clam fishing following the expiration of the one-year exemption under the New England Council's Omnibus Essential Fish Habitat Amendment 2.[12] From 2013-2017, this area accounted for 16-28% of total surf clam fishery revenue. (Clam Dredge FW at 123-24 (Table 32).) In June 2020, access to some of those historic fishing grounds, specifically the areas referred to as McBlair, Fishing Rip, and Old South, were restored. However, access to fishing grounds that produced 87% of the surf clam revenue from the GSC HMA remain closed.[13]

Under the New England Council's Clam Dredge Framework, the alternative that would have restored access to the largest number of fishing areas, Alternative 2, still reduced total revenue by 60%. (*Id.*) Had the two additional areas, the Rose and Crown and Davis Bank East, been open, only 17.7% of the total area within the GSC HMA would be open to fishing. The footprint of the fishery, however, is much smaller due to the need to avoid large boulders (greater than 5') that can damage clam dredges and the industry's focus on grounds known to be most productive. (Jennings et al. 2022.)

Finally, the Habitat PDT estimated the total area swept within the five exemption areas considered in the Clam Dredge Framework Action ranged from 4 to 20 percent annually. (Clam Dredge FW at 101.) During the industry-funded research project conducted by Jennings et al., only a total of 3.12 square kilometers of bottom within the 24 sq. km study area, or 13 percent, was swept during a total of 3,236 tows (104 trips). (Jennings et al. 2022.) On average, only 0.03 sq. km of bottom was impacted per trip during the two-year study period. By contrast, the Habitat PDT estimated that 160.52 sq. km of bottom was impacted by 985 trips by surf clam vessels in 2014.[14] That equates 0.16 sq. km per trip estimated by the PDT, over five times greater than the carefully measured trips studied during the Jennings et al. research project. The assumptions used to estimate swept area in the Clam Dredge Framework are likely to be very conservative.

Overall, the total impact of the surf clam fishery in terms of swept area is small. On average, the total amount of annual bottom impacted by clam dredges ranged from 371 to 860 sq. km from 2000-2010. (OHA2, Vol. 4, at 46.) This is less than 0.3% of the area swept during that

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[11] MAFMC, Atlantic Surfclam and Ocean Quahog Fishery Performance Report ("2022 Performance Rpt."), at 2 (April 2022).

[12] NEFMC, Omnibus Essential Fish Habitat Amendment 2 ("OHA2") (Dec. 8, 2016), *available at* https://www.nefmc.org/library/omnibus-habitat-amendment-2.

[13] *Id*. at 125 (Table 33) (showing a reduction from $6.3 to $0.8 million under the selected alternative). Some of those revenues have been recouped through research fishing, but such amounts have been low and a number of research proposals that could have generated landings and revenue, not to mention valuable data, have been denied.

[14] *See* Clam Dredge FW at 123 ("During 2011-2017, the entire HMA was fished on 423-985 trips per year."); *id.* at 102 (Table 24). It is here assumed that the year with the highest swept area estimates was the year with the highest number of trips.

period by otter trawls, and between 2% and 3.24% of that by scallop dredges.[15] Even this may be an overstatement. In 1998, it was estimated that the total area swept by the entire surf clam fishery was less than 100 square miles annually, or about 260 sq. km.[16]

These figures almost certainly overstate the amount of EFH impacted by the surf clam fishery. "Surfclams are found primarily in sandy sediment and are predominantly oceanic, where they are most common in turbulent waters just beyond the breaker zone." (*Id.*, at 41 (citing Ropes 1980).) The fishery tends to return to the same areas over time, (Clam Dredge FW, at 94), and recovery rates of surf clams within the GSC HMA are high. (*See* Jennings et al. 2022 (noting that catch-per-unit-of-effort remained stable over the research period).)

Summary of Recent Research in the GSC HMA

Prior to and following the 2019 closure of the GSC HMA to clam dredges (and the subsequent 2020 reopening to some areas by the Clam Dredge Framework), there have been several industry-funded research projects to address questions about the fishery's impact on EFH. Relevant findings of these projects are discussed below.

Powell et al., conducted a survey of an area off Nantucket in 2017, including a large portion that was then under consideration to become the GSC HMA.[17] In particular, the researchers examined the assumption that substrate complexity increases species richness and trophic linkages in "high energy subtidal regimes where burial, exhumation, and sediment scour" processes may limit epibiont coverage. "Sand waves, typically 1–5 m in height and hundreds of meters in length, occur between major shoal systems and move with bottom currents and storm activity." (Powell et al. 2021) (citing Emery and Uchupi 1965, Twitchell 1983)).) In such high energy environments, the "assumed importance of substrate complexity in determining present-day community structure and in application to ecosystem management" may not hold.

The survey revealed that "[l]onger-lived attached biota are extremely rare. By inference from a range of studies, these substrates must be buried and exhumed frequently and exposed to scour by moving sand, all of which would be anticipated from the known tidal currents in the region and the presence of large mobile sand waves; otherwise occupation by attached epibionts would be much more common and a wider range of taxa would be expected." Particularly striking was the finding that mussels rarely attached to hard substrate. "Their tendency to have limited resistance to scour and prolonged burial is consistent with their infrequent collection on these substrates in this survey."

The authors concluded that the "rarity of long-lived attached epibionts suggests the ephemerality of exposed surfaces reminiscent of some intertidal sand-scoured rocky shores and

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[15] *Id.* From 2000 to 2010, generic otter trawls' swept area ranged from 125,694 to 297,954 sq. km, while limited access scallop dredges impacted 19,523 to 26,525 sq. km annually. *Id.*

[16] MAFMC, Amendment 13 to the Surf Clam and Ocean Quahog FMP, Vol. 1, at 173 (June 2003).

[17] E.N. Powell et al. 2021. Some data from this research project was available to the NEFMC during development of the Clam Dredge Framework. This paper, however, was written and published subsequent to the Framework.

that cobbles, rocks, and boulders contribute little to the community composition in the surveyed region, which is composed almost exclusively of infaunal clams, less commonly, mat-forming mussels, and exclusive of the mussel mats, infrequent gastropods and other mobile fauna." Where epibionts where found, they tended to be "opportunistic fast-growing epibionts," suggesting "hydrodynamic and edaphic processes minimize the importance of substrate complexity in community structure" within the study area.

Jennings et al., conducted a cooperative research study within a 24 sq. km area in a historically important surf clam fishing area known as the "Rose and Crown" within the GSC HMA. A total of 3,236 tows were videotaped over a period ranging from June 2020 to February 2022. The study's purpose was "to document substrate, habitat features…, fishes and invertebrates within the Rose and Crown area"; "[c]reate spatiotemporal distributions of biotic and abiotic habitat features"; "[e]stablish relationships between high clam CPUE and habitat complexity[;] and "[d]etermine spatiotemporal presence of Atlantic cod in this area." Over the project, questions about changing substrate composition and shifts in sandy habitat arose.

Among the researchers' observations was significant interannual change in substrate within the study area. The mean proportion of pebble/cobble substrate composition was highest in the winter, intermediate in the summer, and lowest in the fall. "[I]n summer of 2020, 71% of observations saw less than 50% coverage of pebble/cobble while summer of 2021 consisted of 4% of observations." There was also evidence of a dynamic substrate on a much shorter time scale. "Bottom types in the area changed not only between seasons, but also over shorter time spans of weeks or even days following disturbance events like storms." "[D]redge paths from different time intervals were undetectable beyond a 24-hour period following disturbance." As with the Powell et al., researchers, Jennings et al., also observed the "presence of barnacle scars on some rocks and barnacles in the annotated video demonstrat[ing] that rocks can be subjected to sediment scour and burial."

In this regard, the report concluded: "The parameters in play and the limiting factors to productivity and hard bottom are less understood in areas like the HMA than in areas of low energy regimes. It is our speculation that productivity is a function of disturbance in this area, following disturbance theory norms. Heavily disturbed areas are hypothesized to have lower levels of diversity. This raises the question of whether fishing impacts are significant relative to natural disturbance. Due to the nature of our sampling, distinguishing between the two factors is difficult."

Finally, Jennings and other researchers with the Coonamessett Farm Foundation ("CFF") initiated a collaborative research project with the surf clam industry to use multibeam sonar to map habitat within the GSC HMA. The purpose was to "to elucidate the spatial and temporal dynamics" of bottom habitat features within the HMA.[18] The team mapped a 10 sq. km area

[18] Jennings and CFF, Supplementary materials for the EFP request entitled: Great South Channel Habitat Management Area Study Phase II: A Video and Acoustic mapping Survey of Davis Bank East (2023), *appended hereto as* Exhibit 3.

within the Rose and Crown area, first on November 15, 2022 and again on April 14, 2023. Both backscatter and bathymetry were collected and mapped and compared between the two surveys.

The researchers found that the backscatter changes demonstrate positive and negative changes in seafloor hardness occurring as softer sediments shift to cover or expose areas of harder bottom. Specifically, "[t]he bathymetry and sediment composition of the R&C survey area changed during the 150-days between acoustic surveys…. Depth increased by up to 1.2 m to the north of the survey and decreased by up to 1.2 m within the central portion of the survey area." The CFF researchers found 10-meter movement of individual sand waves in the southern portion of the study area and positive and negative changes in seafloor hardness. This further supports prior findings that the area is highly dynamic and unlikely to be adversely impacted by surf clam dredges working in sandy or sand/cobble areas.

A similar research project by Jennings, et al., is currently underway in the Davis Bank East portion of the HMA. An interim report notes that the Davis Bank East study area is predominately characterized by coarse sandy sediments with granule, gravel, and pebble patches that had a little low-relief epibenthic growth. Epibenthic organisms identified were limited to barnacles, bryozoans, and hydroids. Boulders, dense mussel beds, and other features observed in the Rose and Crown research area were absent in Davis Bank East.[19]

In sum, the weight of the evidence shows a dynamic area with changing distributions of hard and sand bottom. While many areas may be stable, as suggested by Harris et al., there is widespread evidence of sand scour and processes of burial and exhumation limiting the growth of long-lived epifauna and epibionts throughout much of the area (at least the Rose and Crown) where productive surf clam grounds are found. Similar research is being undertaken in the Davis Bank East area and initial results suggest similar processes.

Scientific Information Ignored in OHA2 and Surf Clam Framework

1. Potentially Positive Impacts of Clam Dredges on EFH[20]

Dredging is often associated with habitat disturbance, but controlled low to moderate dredging can, in some contexts, enhance benthic productivity. A growing body of research indicates that mild seafloor disturbances may boost the recruitment, growth, or diversity of benthic organisms such as clams, oysters, and other infauna. This benefit aligns with ecological principles (*e.g.*, the intermediate disturbance hypothesis) whereby periodic disruption prevents stagnation and encourages new growth.

Mechanisms for Increased Benthic Productivity

[19] A copy of the interim report is appended hereto as Exhibit 4.

[20] This section is based on research by John Everett and Eric Newton of The Everett-Vehrs Conservation and Research Foundation, www.evcarf.org

- Clearing Silt and Algae: Light dredging can remove accumulated silt, detritus, and algal mats from the seabed, exposing cleaner substrate or even depositing fresh shell material. By mitigating sedimentation and fouling, such disturbance creates a more hospitable surface for larvae to settle.[21]

- Provision of New Settlement Surfaces (Cultch): The act of dredging often breaks apart shells and invertebrates, redistributing shell fragments and gravel across the seabed. These materials serve as valuable "cultch" – hard surfaces on which larvae can attach. Studies have noted that dredge furrows tend to trap broken shells, effectively creating settlement hotspots for oyster and clam spat. Spreading shell hash over a clam bed (whether by intentional cultivation or as a byproduct of dredging) increases clam larval settlement, as the shell material stabilizes sediments and offers ample attachment points. Hard clam and quahog abundance is known to rise in areas rich in shell hash, due in part to these enhanced settlement surfaces. (Mercaldo-Allen and Goldberg, 2011).

- Reducing Overcrowding and Predation: Mild seafloor disturbance can thin out overly dense populations of benthos (or their competitors/predators) in ways that favor recruitment. In the case of surf clams, removing a portion of large adults can reduce competition for food and space and may lower predation pressure on juveniles (since some predators target large clams). A Maryland study in the 1970s found that plots where adult softshell clams were removed by an escalator dredge subsequently had higher recruitment of young clams than undredged plots. One explanation is that the dredging eliminated adult clams which either preyed on larvae or attracted predators, thereby improving survival of the next generation. Additionally, the shell fragments left behind by dredging can "confuse" predators and protect small bivalves (by providing refuge and camouflage), further boosting juvenile recruitment (Mercaldo-Allen and Goldberg, 2011).

- Sediment Mixing and Water Circulation: By physically turning over bottom sediments, dredging can alter sediment texture and chemistry in ways beneficial to certain benthic species. In many shallow, dynamic habitats, benthic infauna are adapted to disturbance and actually thrive when sediments are periodically resuspended. Moderate disruption can mix oxygen into anoxic sediment layers and increase pore-water exchange, improving habitat quality for burrowing organisms. Field experiments have shown that "cultivating" the seabed (*e.g.*, by harrowing or dredging the top layer) increases sediment pore size and permeability, leading to better water circulation through the seabed. This creates a more oxygenated, sandier substrate that many benthic invertebrates prefer. (Mercaldo-Allen and Goldberg, 2011).

[21] Mercaldo-Allen, Renee and Goldberg, Ronald (2011). Review of the ecological effects of dredging in the cultivation and harvest of molluscan shellfish. https://repository.library.noaa.gov/view/noaa/3971 (and citations therein).

- Nutrient Release and Trophic Stimulation: Another mechanism by which disturbance can boost productivity is through the release of organic nutrients from the sea floor. Dredging stirs up sediment plumes that carry organic matter into the water column. These plumes can transiently increase the availability of nutrients and food particles for filter feeders and deposit feeders. A 2014 review noted that dredging disturbances have been reported to enhance the diversity and abundance of benthic fauna near dredged channels, possibly by releasing buried organic nutrients that enrich the local food supply.[22] Suspension-feeding bivalves like clams and oysters quickly ingest resuspended matter; studies observed that oysters fattened rapidly when feeding on the fine particulates kicked up by nearby dredging operations. Those bivalves then excrete biodeposits back to the sediment, which further fertilizes the benthic environment and promotes microbial and detrital food webs. A moderate disturbance can set off a chain of nutrient recycling that ultimately supports greater benthic biomass (at least until the system re-equilibrates).

- Intermediate Disturbance Effects: The intermediate disturbance hypothesis suggests that ecosystems experience maximum diversity at intermediate levels of disturbance. Low-to-moderate dredging, if not too frequent, can create a patchwork of seafloor zones in various stages of recovery, thereby increasing overall benthic diversity. Immediately after a disturbance, fast-colonizing opportunistic species invade, and later, longer-lived species establish, resulting in a more heterogeneous community. A seafloor study in Long Island Sound found that one to two years after a clam bed was dredged, the site hosted significantly more species than either an undisturbed control site or a freshly dredged plot.[23] In that study, the undredged seabed (left fallow ~10 years) had fewer total species – likely dominated by a stable assemblage – whereas the moderately disturbed sites had a mix of both pioneer and equilibrium species, yielding higher diversity.

Controlled disturbances like low-to-moderate dredging can act as a form of benthic habitat management. The evidence – from improved shellfish recruitment and growth to higher post-dredging diversity – shows that under the right circumstances, dredging is not purely detrimental to benthic ecosystems. Key factors include the intensity, frequency, and technique of dredging, as well as the natural resilience of the habitat. When carefully implemented (*e.g.*, infrequent, shallow dredging that avoids sensitive areas), it can reduce siltation, increase habitat heterogeneity, and release nutrients, collectively supporting benthic productivity rather than suppressing it (Mercado-Allen and Goldberg, 2011).

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[22] Todd et al. (2014), *ICES J. Mar. Sci.* – review of dredging impacts (noting nutrient release can enhance benthic prey) https://academic.oup.com/icesjms/article/72/2/328/676320; *see also* Sciberras, M., Hinz, H., Bennell, J. D., Jenkins, S. R., Hawkins, S. J., & Kaiser, M. J. (2013). Benthic community response to a scallop dredging closure within a dynamic seabed habitat. *Marine Ecology Progress Series*, 480, 83-98 (finding no difference in scallop and epifaunal diversity in dredged and undredged areas).

[23] Mercaldo-Allen, Renee et al. (2016). Benthic Ecology of Northern Quahog Beds with Different Hydraulic Dredging Histories in Long Island Sound. https://doi.org/10.2112/jcoastres-d-15-00055.1

Moreover, even if not beneficial, research suggests that even trawling has no impact on species' richness in shallow areas with coarse bottom.[24] At shallow depths, even areas subject to intensive clam dredging show quick recovery rates.[25]

2. Studies Showing That the GSC HMA is Likely No Longer Important Cod EFH

Perhaps the primary reason the GSC HMA was closed to surf clam fishing was its alleged adverse impact EFH for cod,[26] even though only small portions along the eastern and western edges of the HMA (including only a portion of one fishing area, Old South) are considered to be cod spawning areas. (*Id.* at 8.) That said, even at the time the Surf Clam Framework was adopted, several studies found that warming ocean temperatures in the New England region made it unlikely that the Nantucket Shoals remained important grounds for cod spawning or for cod at any life stage.

For example, the Northeast Climate Impacts Assessment Synthesis Team prepared a summary report of the International Union for Conservation of Nature's 2007 Northeast Climate Impacts Assessment. Entitled "Confronting Climate Change in the U.S. Northeast," that report noted that the cod "off the northeastern coast occupy the southern extent of the species range in the northwestern Atlantic" and that continued increases in water temperatures will adversely impact "the distribution and abundance of cod" in the region."[27] That report also found that maximum tolerance for cod is 54^{o} Fahrenheit and that "water temperatures above 47^{o}F will lead to a decline in [cod's] growth, survival, and recruitment." *Id.* at 37-38.

The most recent average temperature data by month we have been able to find for Nantucket Shoals (Station 44008) covers the period from 1962 to 2008. During this much cooler period, the lowest temperatures (for February and March) were only 5^{o} Celsius (41^{o}F), while the 54^{o}F maximum identified by the Synthesis Team is exceeded in every month from June to November. *See* Figure 1 below.

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[24] Van Denderen, P. D., Hintzen, N. T., Rijnsdorp, A. D., Ruardij, P., & van Kooten, T. (2014). Habitat-specific effects of fishing disturbance on benthic species richness in marine soft sediments. *Ecosystems*, *17*(7), 1216-1226.

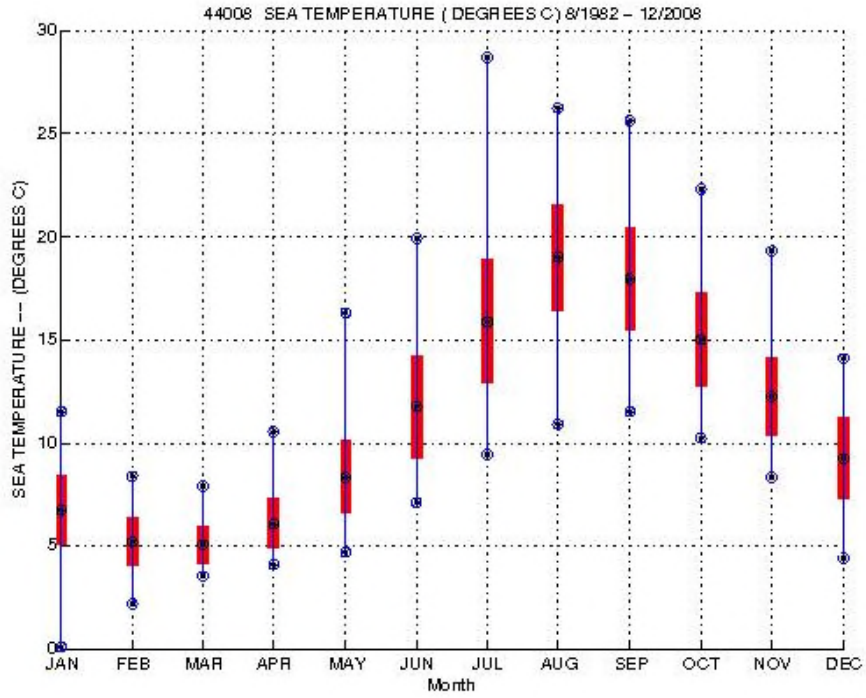
[25] Constantino, R., Gaspar, M. B., Tata-Regala, J., Carvalho, S., Cúrdia, J., Drago, T., & Monteiro, C. C. (2009). Clam dredging effects and subsequent recovery of benthic communities at different depth ranges. *Marine environmental research*, *67*(2), 89-99.

[26] *See* Clam Dredge FW at 36 ("Field studies conducted in shallow water show that survival rates of juvenile cod were higher in more structured habitats (e.g., in vegetation or rocky reefs and on cobble bottoms) where they find refuge from predators."). Notably, however, the PDT found sand waves provide a similar protective function, while failing to explain why a dredge track would not serve a similar function. (*Id.*)

[27] Frumhoff, P.C., McCarthy, J.J., Melillo, J.M., Moser, S.C., Wuebbles, D. J. (2007). *Confronting Climate Change in the U.S. Northeast, Science, Impacts, and Solutions*, at 37, *available at* https://www.esf.edu/glrc/library/documents/ConfrontingClimateChangeintheUSNortheast_2007.pdf.

IUCN (2007). Confronting Climate Change in the U.S. Northeast.

Station 44008 - Climatic Summary Plots for sea temperature



Source: NOAA National Bouy Data Center, *available at* https://www.ndbc.noaa.gov/view_climplot.php?station=44008&meas=st.

More recent research suggests that cod spawning no longer occurs within the HMA.[28]

# # # #

The SSCC looks forward to working with the Council on this review, including the legal, socioeconomic, and scientific information provided herein. Please let us know if we can answer any questions.

Sincerely,

Shaun M. Gehan

Shaun M. Gehan, *Counsel for the Saving Surf Clams Coalition*

[28] G. Bellin, Effect of Ocean Warming Trends on Cod Spawning, Analyzing the GSC HMA and looking at large scale temperature related trends (Nov. 13, 2022).

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Daniel Salerno, *Chair* | Cate O'Keefe, PhD, *Executive Director*

June 1, 2026

Mr. Michael Pentony
Regional Administrator
NOAA Fishery Service
Greater Atlantic Regional Fisheries Office
55 Great Republic Drive
Gloucester, MA 01930

Re: Great South Channel Habitat Management Area Surfclam Compensation Fishing EFP

Dear Mike:

Please accept these comments on behalf of the New England Fishery Management Council regarding the potential adjustment of an Exempted Fishing Permit (EFP) issued to Coonamessett Farm Foundation (CFF). In this instance, considering the objectives of the project are relevant to ongoing and future Council decisions and research objectives identified for the Great South Channel Habitat Management Area, and that the project is nearing completion, we think that the benefits of continuing the research outweigh the negative habitat impacts that will result from the additional 64 compensation fishing trips. Therefore, we support authorizing an additional 64 compensation trips to be taken in either the Rose and Crown or the Davis Bank East areas, as defined by the coordinates in the May 22, 2026, FR notice. We would also support any requested time extension should the trips not be taken by September 30th, provided that the final report from the project is available over the summer as previously planned.

GARFO's May 22 proposal would allow CFF and their partner fishing vessels to complete 64 additional compensation trips within portions of two areas, Davis Bank East and Rose and Crown (91 FR 30288). The May 22 FR notice indicates that additional, minor modifications to the EFP could be requested and authorized without further public notice. As for prior fishing authorizations under this EFP, each trip would occur over one to two days and is expected to require around 30 tows to harvest up to 14 cages of surfclams. The proposed extension would bring the total trips authorized under this EFP to 350. Prior authorizations and extensions are summarized below:

- Via the initial EFP issued on May 24, 2024, GARFO authorized 260 compensation fishing trips to be taken in the Davis Bank East area only.
- During August 2025, GARFO modified the EFP to allow compensation fishing trips to be completed in the Rose and Crown area as well, with an extension for completion of March 31, 2026. No additional trips were authorized beyond the original 260 trips. The extension was granted to allow for additional harvest opportunities.
- On April 24, 2026, GARFO authorized 26 additional trips (i.e., 286 trips total) to be taken in either of the Davis Bank East or Rose and Crown areas, with an extension for completion of July 15, 2026. The extension was granted to allow for additional harvest opportunities to pay for the final acoustic survey work.

The Council has an interest in this project since the compensation fishing and research areas are located within the Great South Channel Habitat Management Area (HMA), which was established when the Council's Omnibus Habitat Amendment 2 (OHA2) was implemented in April 2018. The research areas were established via the Clam Dredge Framework which was implemented in June 2020. The research conducted under this EFP helps address some of the research objectives identified following final Council action on the Clam Dredge Framework. The Council commented on an earlier adjustment to this EFP-based project in July 2025 and commented on the original EFP in April 2024. In our 2025 letter, we supported expanding the potential compensation fishing area and extending the timeframe for completing the 260 trips authorized originally under the EFP.

In general, the Council recommends a cautious approach to authorizing fishing within areas where such activities would normally be restricted to minimize the impacts of fishing on habitats (see these October 2022 comments). However, we have previously recognized that compensation fishing is an important source of funding for research projects, including within the Great South Channel Habitat Management Area (see October 2022 comments). Without such funding, important research on habitat types and susceptibility to fishing may not be possible in this area. Compensation fishing also generates revenue for participating fishing businesses.

During 2026, the Council is evaluating the Great South Channel Habitat Management Area surfclam dredge exemption program, focusing on the three designated exemption areas, McBlair, Old South, and Fishing Rip. We have spoken to staff at CFF and understand that the final report from this EFP will be completed in July, regardless of any compensation fishing trip additions and time extensions, since the final optical habitat survey was conducted in May. The Council would benefit from receiving the project report in a timely manner to support our exemption program review, and to support any future decisions about whether to reconsider the exemption program structure within the Great South Channel Habitat Management Area. The Council may also benefit from understanding any anecdotal information regarding compensation fishing performance in the Davis Bank East or Rose and Crown areas as it pertains to resource availability, even if these trips are completed following submission of the final report.

Please contact me if you have any questions.

Sincerely,

Cate O'Keefe
Executive Director