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December 5, 2017

John K. Bullard, Regional Administrator
National Marine Fisheries Service
55 Great Republic Drive
Gloucester, MA 01930

Re: Comments on the Proposed Rule for OA2

Dear Administrator Bullard:

We represent the Fisheries Survival Fund ("FSF"). FSF's participants include over 250 full-time active Atlantic scallop limited access permit holders. FSF respectfully submits these comments regarding the National Marine Fisheries Service's ("NMFS") proposed rule for the New England Fishery Management Council's ("Council") Omnibus Essential Fish Habitat ("EFH") Amendment 2 ("OHA2").[1] As you know, the Council completed its final vote on OHA2 over two years ago, in June of 2015, and submitted its Environmental Impact Statement ("EIS") for your review on September 6, 2016. We urge you to finalize the proposed rule and fully implement the amendment as recommended by the Council as quickly as possible, with the exception of the "lobster closure" in the Northern Edge Habitat Management Area ("HMA").

OHA2 is the result of substantial effort on the part of the Council, its committees, its staff, and Plan Development Team ("PDT") members from NMFS and other institutions across multiple Fishery Management Plans ("FMP"). It offers significant improvements over existing habitat protections, is based on the best scientific information available, and meets legal requirements concerning practicability. FSF and its participants were actively engaged in the Council's alternative development process for OHA2, which was fair and transparent. Moreover, the collective benefits of improved management areas were designed to, and in fact do, comply with the amendment goals and applicable law for the reasons described herein.

[1] 82 Fed. Reg. 51492 (Nov. 6, 2017).

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I. EXECUTIVE SUMMARY

We, along with the scallop industry more generally, have worked for the past two decades with the Council, NMFS, and the industry's scientific and academic partners to develop and implement the scallop rotational area management program, which has been a huge biological and economic success. Rotational management serves to promote scallop optimum yield and reduce scallop discards while minimizing swept area. Fishery closures in historic areas of scallop abundance, as considered in certain OHA2 alternatives, directly threaten the future success of scallop area management. Providing access to the most productive areas decreases scallop dredge bottom time and promotes bycatch reduction, cost efficiency, and safety, and fosters economic stability in our fishing communities.

The Magnuson Stevens Fishery Conservation and Management Act ("MSA") allows actions for habitat management only within a "practicability" standard, and requires FMPs only to avoid, minimize, or compensate for adverse impacts to habitat from fishing. The Council properly weighed these mandates in choosing preferred alternatives from the many options contained in OHA2. That is, it balances a comprehensive and strategic approach to protecting the improvement of fish habitat in New England with economic benefits to fisheries communities and the achievement of optimum yield.

Fishery management decisions must be based on the best scientific information available. The Council, in cooperation with its technical teams, federal, state, and academic scientists, and others, spent years developing the Swept Area Seabed Impact ("SASI") model, which was twice peer-reviewed and unequivocally showed that increasing catch per unit effort ("CPUE") is the best way to reduce harm to habitat. The Council also considered all other information available at the time of OHA2 development, including a cluster analysis it developed based on the SASI model outputs called Local Indicators of Spatial Association ("LISA"), its own juvenile groundfish

hotspot analysis, video survey and other benthic substrate data, catch and observer records, extensive biological and economic analyses, and more.

Despite these major successes and the massive improvements incorporated in OHA2, we are concerned that NMFS, in the proposed rule, fails to recognize the significant steps forward OHA2 provides for Georges Bank and the Great South Channel. In particular, it solicits information on "whether the Council's preferred alternatives minimize to the extent practicable the adverse effects of fishing; how the recommended measures meet the Council's stated goals and objectives of the Amendment; and whether the designation of an Habitat Area of Particular Concern ("HAPC") has been duly considered" regarding Georges Bank.[2] These concerns are readily addressable based on the OHA2 record as a whole. The record of this rulemaking shows that:

- Despite the Council's thorough efforts to update the scientific record and the abundance of scientific information upon which its preferred alternatives were selected, NMFS and the EIS continue to inappropriately rely on biased, qualitative statements to negatively characterize the Council's preferred alternative for Georges Bank (and, to a lesser extent, for Southern New England). They falsely rely on the premise that *any* decrease in total area where fishing is prohibited results in negative impacts to habitat protection—regardless of the quality of habitat located in those areas—and that closed areas, once closed, should not re-open regardless of what science dictates. In contrast, as the OHA2 documents demonstrate, and as the Council appropriately concluded, the empirical information in the record resoundingly supports the carefully-considered choices the Council made. Whether some at NMFS/GARFO agree with those choices is not the relevant metric for approval or disapproval under the MSA.

- In fact, not only does the SASI model *not* support the contention that "bigger is better" for habitat closures, but scientific research does not even support the theory that implementation of broad-based closures in highly productive fishing grounds, in temperate areas analogous to New England, leads to increased productivity at all. Nor do studies from existing closures in New England provide evidence that those closures have increased groundfish productivity. Rather, widespread concerns exist throughout the scientific and fishery management communities about the risks of unintended consequences of fishery closures. Evidence suggests that closures can lead to increased pressure on bycatch stocks. Furthermore, studies have shown that analyses associated

[2] 82 Fed. Reg. at 51498.

with closures tend to greatly overestimate their anticipated biological benefits and underestimate their economic impacts.

More specific responses to NMFS' concerns regarding Georges Bank are provided in Section IV(2) of this letter.

Turning away from the qualitative opinions with which NMFS has salted the record, the Council's preferred alternatives, now incorporated in the proposed rule, do represent a practicable and much-improved approach to habitat management throughout New England. The proposed rule protects habitat in the following critical ways:

1. It includes a set of management measures developed in OHA2 that are based on a consideration of regions as a whole, such as Georges Bank (whereas the existing habitat areas were purposely limited to the then-existing groundfish closed areas), that update the scientific record, and that employ the kinds of peer-reviewed information that were absent from the essentially qualitative analyses used to develop and support the habitat closures contained in OHA1;[3] and

2. Overall, the proposed rule provides far better protections for the depleted Georges Bank cod stock, which inhabits waters in both Georges Bank and the Great South Channel in Southern New England.

    a. On Georges Bank, the proposed action closes approximately 1,120 nm^2 of ocean bottom, in areas of high vulnerability. The areas cover, in total, over 600 nm^2 of cobble, boulder, and granule pebble habitat—an area exceeding all three no action habitat closures combined. A large area that is currently open bottom with demonstrably high habitat vulnerability on Georges Shoals would be completely closed to fishing. In addition, most of the existing Northern Edge habitat closure (currently included in Closed Area II) would remain closed, including more than half the HAPC. Finally, the Reduced Impact HMA encompasses the huge majority of the remaining HAPC area, and would be open to only rotational (intermittent) scallop fishing in accordance with principles of adaptive management; and

[3] One of the primary objectives of OHA2 was to "[d]evelop analytical tools for designation of EFH, minimization of adverse impacts, and monitoring the effectiveness of measures designed to protect habitat." EIS Volume I at 83. This was in response to the stated need "to reevaluate and integrate habitat management measures across the fisheries managed by the Council, and to update these measures given new scientific information about habitat distributions and fishing impacts." *Id.* at 24.

b. In the Great South Channel, new HMAs that are narrowly targeted to include the most highly vulnerable substrate, according to the SASI model, will cover over 1400 nm^2, as well as a very large portion of EFH and juvenile cod HAPC in the area. The current Nantucket Lightship closure in that sub-region includes significantly less areas of vulnerable substrate and fewer juvenile groundfish hotspots.

In only one respect does the Preferred Alternative relax status quo habitat protections, by allowing for a scallop access area to be created in the far northern portion of the current Northern Edge habitat closure. Groundfishing, however, would be prohibited. As explained above, the alternative includes more than sufficient mitigation measures to offset this action, including the extension of the Reduced Impact HMA to the west, and it satisfies practicability requirements. Moreover, scallop rotational management will only be permitted in this Northern Edge sliver if, and to the extent to which, the best available scientific information supports such access. The proposed rule includes a mixture of ordinary HMAs and the innovative Reduced Impact HMA, which are both proper tools for achieving the goals of OHA2 and statutory requirements. Targeted access can provide the necessary protections while promoting the achievement of optimum yield. We understand that opening for limited fishing an area that was closed for over twenty years is difficult, but the correct decisions are often difficult decisions.

II. THE PROPOSED RULE IS CONSISTENT WITH APPLICABLE LAW

NMFS must approve any FMP amendment submitted by a council unless that amendment is inconsistent with the law.[4] OHA2 is consistent with all relevant laws; therefore, it must be implemented as submitted, with the exception of the "lobster closure," even if some on NMFS' staff may not have selected the same alternatives the Council did.

The MSA,[5] and its associated EFH regulations,[6] have often been characterized in generalizations during OHA2's development. While new or existing habitat measures must

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[4] 16 U.S.C. § 1854(a)(3); NMFS, *Operational Guidelines for the Magnuson-Stevens Fishery Conservation and Management Act Fishery Management Process*, National Marine Fisheries Service Instructions 01-101-03 (Sept. 30, 2015) at 1, *available at* http://www.nmfs.noaa.gov/sfa/management/councils/operational_guidelines/ogs.pdf.

[5] 16 U.S.C. §§ 1801 *et seq.*

[6] 50 C.F.R. §§ 600.805-815.

"prevent, mitigate, or minimize any adverse effects from fishing, to the extent practicable...,"[7] the law does *not*:

1. Establish any specific threshold for habitat protection;

2. Prohibit HMAs from shifting based on new scientific information;

3. Require that pre-existing habitat closures can only be replaced by closures of the same size or larger; nor

4. Permit NMFS to ignore the peer-reviewed scientific information and approaches in the record in favor of unsupported, qualitative generalizations.

1. NMFS Must Implement Council Recommendations So Long As They Comply with the Law

Congress tasked NMFS in the MSA with the important job of evaluating whether Council decisions are consistent with applicable law.[8] If so, NMFS must implement those decisions. That law, however, provides wide latitude for record-based decision making. The MSA does not allow NMFS to disapprove a Council recommendation, just because NMFS might have preferred another alternative.

Under the Administrative Procedure Act, an agency action will be set aside only if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law."[9] An agency acts arbitrarily and capriciously if it:

> [H]as relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view of the product of agency expertise.[10]

A reasonable record basis exists within the OHA2 EIS to support the Council's choice, which is not arbitrary and capricious. The empirical analyses within the OHA2 EIS address the

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[7] 50 C.F.R. § 600.815(a)(2)(ii).

[8] 16 U.S.C. § 1854(a)(3).

[9] 5 U.S.C. § 706(2)(A); *Citizens to Preserve Overton Park, Inc. v. Volpe*, 401 U. S. 402, 414 (1971).

[10] *Motor Vehicle Ass'n v. State Farm Mut. Auto. Ins.*, 463 U.S. 29, 43 (1983).

relevant issues head-on and substantiate the Council's choices in a rational, science-based way. This is what the law requires.

2. The Rule Must Meet the Legal Standard of "Practicability"

Habitat protection was added as a consideration in the MSA in 1996, via § 303(a)(7), which states that any FMP must "describe and identify essential fish habitat for the fishery ... minimize *to the extent practicable* adverse effects on such habitat caused by fishing, and identify other actions to encourage the conservation and enhancement of such habitat."[11] This practicability requirement forms the very core of the deliberative process. The First Circuit clarified that "practicability," as included in the MSA, requires "weighing and balancing."[12]

The Council's habitat omnibus amendment process was developed as a direct result of this statutory provision. That is, but for the MSA's instruction to take action regarding habitat, none of the options on the table would be considered based on the scientific record alone. The amendment document recognizes this in its purpose and need section, stating that the need of the action is "to meet requirements of the Magnuson Stevens Fishery Conservation and Management Act."[13]

Section 303(a)(7) must be considered as a whole. It does not provide unlimited discretion to enact closures in the name of precaution and experimentation. The "practicability" standard included in the MSA is integral to the EFH provisions' mandate and must not be overlooked. The Council has broad discretion to "weigh and balance" the many, sometimes conflicting, aspects of habitat management.

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[11] 16 U.S.C. § 1853(a)(7) (emphasis added).

[12] *Conservation Law Foundation v. Evans*, 360 F.3d 21, 28 (1st Cir. 2004) ("Moreover, the plaintiffs essentially call for an interpretation of the statute that equates "practicability" with "possibility," requiring NMFS to implement virtually any measure that addresses EFH and bycatch concerns so long as it is feasible. Although the distinction between the two may sometimes be fine, there is indeed a distinction. The closer one gets to the plaintiffs' interpretation, the less weighing and balancing is permitted. We think by using the term 'practicable' Congress intended rather to allow for the application of agency expertise and discretion in determining how best to manage fishery resources.")

[13] New England Fishery Management Council, *Final Omnibus Essential Fish Habitat Amendment 2, Volume I* (Sept. 6, 2016) [hereinafter EIS] at 80.

3. The Rule Must Incorporate the Best Scientific Information Available

The MSA also requires that the location and design of habitat closures, like any fishery management measures, be based on the best scientific information available.[14] The Council developed the peer-reviewed SASI analysis and the LISA cluster analysis to identify high-vulnerability habitat areas for protection, as described in more detail below. The output of these models constitutes the best available information, and those metrics conclusively show that the measures in the proposed rule will increase habitat protection. The proposed action's closures encompass vulnerable habitat on Georges Bank and the Great South Channel, based on the peer-reviewed SASI analysis, while reducing the amount of effort that will be displaced onto such vulnerable habitat. Because these alternatives do not displace large amounts of fishing effort, they avoid adverse effects that would have occurred with the selection of other alternatives the Council considered. The alternatives that are not based on the SASI model's vulnerability indices would have resulted in increases in swept area and bottom contact time in places that the best available science has identified as the most demanding of special attention.

4. OHA2 Meets Regulatory Requirements

After the addition of MSA § 303(a)(7), NMFS promulgated implementing regulations to provide a framework for EFH management. Those Secretarial EFH guidelines state that "FMPs must identify actions to encourage the conservation and enhancement of EFH, including recommended options to avoid, minimize, or compensate for the adverse effects... especially in areas of particular concern."[15] The guidelines further define "adverse" as a combination of effects on habitat that are both "more than minimal" and "not temporary."[16] However, determinations about what exactly is meant by minimal and temporary, and about what management measures are practicable, are left to the Council's discretion.[17]

The OHA2, which updates the last habitat action that occurred in 2003, is able to meet this mandate in several ways: 1) through specific management measures to be contained in OHA2; 2) by updating the scientific record, in which precision is a benefit in and of itself; 3) via the benefits to EFH from fisheries management measures over the past decade (i.e., improved baseline conditions), which must be considered under a cumulative effects analysis;[18] and 4) via anticipated

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[14] 16 U.S.C. § 1851(a)(2).

[15] 50 C.F.R. § 600.815(a)(6).

[16] 50 C.F.R. § 600.815(a)(2)(ii).

[17] *CLF*, 360 F.3d at 28.

[18] 50 C.F.R. § 600.815(a)(3)-(5).

trailing management measures, including fishery-specific considerations for scallop access areas, spawning, and bycatch.

Finally, the EFH regulations simply do not provide the kind of specificity and clarity that would form a basis for their inflexible application; instead, they recognize the need for practical implementation of the law's EFH requirement. As another example beyond the adverse effects mitigation language described above, these regulations specifically state that Council must use "Level 4" data to describe and identify EFH.[19] But in the next breath, the regulations state what a Council should do if it only has Level 1 data.[20] And, consistent with the flexible nature of the regulations, the regulations go on to state that Level 1 data should be used as follows: "distribution data should be evaluated (e.g., using a frequency of occurrence or other appropriate analysis) to identify EFH as those habitat areas most commonly used by the species."[21]

Accordingly, and as a whole, these regulations do not prescribe any specific course of action. The Council has the authority to implement these regulations in a sensible way, taking into account OHA2's newly-developed habitat vulnerability analytical tools and economic information relating to the impacts of the alternatives under consideration. The proposed rule for Georges Bank and the Great South Channel will improve habitat protection and minimize and avoid adverse effects. Moreover, it is rooted in a reasonable record basis, and is entirely consistent with the law and implementing regulations, as well as OHA2's goals and objectives.

5. The Proposed Rule Meets the Goals and Objectives of OHA2

The MSA required NMFS to create National Standards Guidelines, but specifically prescribes that those guidelines shall not have the force and effect of law.[22] The National Standard guidelines require a Council to establish objectives for each FMP it develops that generally balance "biological constraints with human needs, reconcile present and future costs and benefits, and integrate the diversity of public and private interests."[23] First, a Council would not violate the MSA if it chose not to set any goals and objectives for an FMP or amendment because the authority on which the requirement is based does not have the force and effect of law. However, once it does

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[19] Level 4 data is defined as that which directly relates the production rates of a species or life stage to habitat type, quantity, quality, and location. Notably, such data was not used in the designation of the HAPCs in OHA2. 50 C.F.R. § 600.815(a)(1)(iii)(B).

[20] *Id.*

[21] 50 C.F.R. § 600.815(a)(1)(iv)(A).

[22] 16 U.S.C. § 1851(b).

[23] 50 C.F.R. § 600.305(b)(1).

set goals, a Council is in fact *directed* to balance an FMP's biological needs with those of human interests. The guidelines go on to state that any FMP objectives set by a Council should be:

> [C]learly stated, practicably attainable, framed in terms of definable events and measurable benefits, and based upon a *comprehensive rather than a fragmentary approach* to the problems addressed... The objectives of each FMP provide the context within which the Secretary will judge the consistency of an FMP's conservation and management measures with the national standards.[24]

The National Environmental Policy Act ("NEPA") has its own requirements regarding a clearly stated purpose and need of an action.[25] Although the purpose and need must be clearly defined in order to define the appropriate range of alternatives, NEPA requires no particular substantive outcome and requires only that the action agency take a "hard look" at environmental impacts and at alternatives.[26]

While we will not repeat all of OHA2's ten stated goals here,[27] many of them focus on updating the scientific record including, *inter alia*, numbers 1 ("[r]edefine, refine or update the identification and description of all EFH for those species of finfish and mollusks managed by the Council, including the consideration of HAPCs"), and 6 ("[i]ntegrate and optimize measures to minimize the adverse impacts to EFH across all Council managed fishery management plans"). Others specifically call for a balance between biological and socieconomic considerations, such as numbers 5 ("[d]efine metrics for achieving the requirements to minimize adverse impacts to the extent practicable"), and 10 ("[m]aximize societal net benefits from the groundfish stocks while addressing current management needs"). Only two of the ten—numbers 4 and 9—are more geared to specific management approaches: "[i]dentify and implement mechanisms to protect, conserve, and enhance the EFH of those species managed by the Council to the extent practicable" and "[e]nhance groundfish fishery productivity."[28]

The amendment also includes 14 objectives, which are derivative of the goals. Of those, the proposed rule specifically focuses on the third-to-last, "[i]mproved protection of critical groundfish habitats" and questions whether just one of the Council-selected suite of closed areas

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[24] 50 C.F.R. § 600.305(b)(3) (emphasis added).

[25] 40 C.F.R. § 1502.13.

[26] *See Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989).

[27] The full list of goals and objectives in contained in the EIS Volume I at 83-84.

[28] As explained above, while improved habitat productivity is a goal, OHA2 presents no data showing any correlation between habitat closures and increased productivity.

for a sub-region of the Georges Bank stock area will fall so short of reaching that objective that the entire 15-year amendment should be disapproved.[29]

The Council properly balanced its goals and objectives for OHA2 in designing its array of closures. Furthermore, while the Council selected alternatives based on sub-regions, it adopted a "comprehensive rather than fragmentary" approach to management by greatly improving habitat protections across entire stock areas, such as the Georges Bank cod stock area. It took a hard look at the impacts of its actions, and provided a compelling scientific record to justify its course of action.

III. THE PROPOSED RULE IS BASED ON THE BEST SCIENTIFIC INFORMATION AVAILABLE

As described in Section II, Council actions must be based on the best scientific information available. In developing OHA2, the Council considered a huge range of scientific studies and created its own peer-reviewed models in order to determine the best way forward. In short, the scientific record does not support broad-scale or permanent closures. Instead, it consists of: model results showing that *the best way to reduce harm to habitat is to decrease area swept by removing closures*; a lack of data showing any correlation between habitat closures and increased productivity; substantial uncertainty that the proposed closures are able to produce their hoped-for benefits; and the possibility of unpredictable shifts in catch composition and rate. The mere consideration of any other action that could cause huge amounts of *additional* economic harm to the communities that rely on scallop and groundfish resources on Georges Bank alone—compared only to the status quo and excluding the harm already being incurred from the current closures—is not tenable.

1. The Final Rule Must Not Substitute Qualitative Assumptions for Peer-Reviewed Science

There has been a troubling pattern throughout OHA2's development, whereby analyses, and particularly presentations of cumulative or summary impacts, have been based on qualitative descriptions while minimizing the scientific record, including SASI/LISA model outputs. For example, the proposed rule states that "[t]he Council concluded that the proposed alternative [for the Northern Edge] would be less beneficial to the groundfish resources in the sub-region than the existing closures, but would be moderately positive relative to no habitat protection measures."[30] This statement ignores the enormous amount of analysis in the EIS—which shows that the

[29] 82 Fed. Reg. at 51497.

[30] 82 Fed. Reg. at 51497.

proposed action is both practicable and directly linked to the scientific record. Accordingly, this proposed rule statement is false and misleading.

We presume that the statement in the proposed rule is based on the EIS's "Summary of Impacts" tables presented in its Executive Summary section, inasmuch as there does not appear to be other evidence to substantiate the claim. That table shows Alternative 10 for Georges Bank (the basis for the proposed rule) as having moderate positive impacts to both habitat and the large mesh groundfish resource. The status quo alternative shows the same rating for habitat impacts, but with highly positive impacts for groundfish, However, the alternative that would remove all closures scores "moderately negative" for habitat impacts and "highly negative" for groundfish impacts. This begs the question: what are the alternatives being compared to (there is no alternative on Georges Bank rated with neutral impacts)?

The fact is that some NMFS and Council staff have made some statements and drafted some analyses during OHA2's development that make it clear they would have preferred a different management approach than the one the Council adopted. This has resulted in certain components of the record, which are entirely qualitative, that do not match the science upon which the amendment was based. However, the comparison of impacts under NEPA cannot be completed based on some desired, but non-existent reality. The law requires presentation of a clear "no action" alternative, and for any proposed actions to be fairly and transparently measured against that alternative.[31] "[C]ourts not infrequently find NEPA violations when an agency miscalculates the 'no build' [i.e., no action] baseline or when the baseline assumes the existence of a proposed project."[32] Again, NMFS is required to implement the Council's selected management measures, unless those measures violate the law—not because it would have preferred a different outcome.

2. The Proposed Rule Updates Closures That Were Not Based on Habitat Protection

Through the process of developing this amendment, the Council and its committees made enormous scientific advances using both new and existing analytical tools. The Council's Closed Area Technical Team ("CATT") determined, after years of comprehensive review, that its SASI model and hotspot analysis are the best and most robust tools for consideration of alternatives that "collectively, [] comply with the requirement of the MSA to minimize the adverse effects of fishing on essential fish habitats."[33] The Council also relied on far more detailed substrate profiling

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[31] 40 C.F.R. § 1502.14.

[32] *N. Carolina Wildlife Fed. v. N. Carolina Dep't of Transp.*, 677 F.3d 596, 603 (4th Cir. 2012).

[33] EIS Volume I at 40.

information that was not available when the existing closures were implemented in OHA 1, such as scallop video survey work by the University of Massachusetts' School for Marine Science and Technology ("SMAST"). Using those tools, the CATT, Council, and Habitat Committee developed and refined the document's range of alternatives, and the proposed rule would implement the Council's preferred and reasoned choices.

Updating the scientific record, and refining EFH boundaries and habitat management measures based on those updates, is part and parcel of improving habitat protection and is itself an improvement over existing management. The EIS recognizes this principle:

> Furthermore, the existing management areas currently produce multiple benefits, which may not link directly to the original purpose of the designations. In contrast to some past spatial management efforts, the action alternatives are not designed to reduce fishing mortality per se, but to protect fish habitats, particularly for juvenile groundfish, to minimize fishing impacts on spawning, and to facilitate research focused on links between habitat characteristics and use by managed species.[34]

Therefore, spatial management for habitat conservation purposes will be improved by the selection of any science-based alternative.

3. There Is No Correlation between the Existing Closures in New England and Long-Term Increased Productivity

No scientific research that has been conducted on the effects of the existing closures in New England has shown any long-term positive impacts, nor has it found any evidence of a link between the closures and increased groundfish, scallop, or ecosystem productivity.

As noted earlier, NMFS' EFH guidance identifies four levels of information relating to EFH, the fourth being habitat that leads to increased productivity of a species. That guidance states that "Councils should strive to obtain data sufficient to describe habitat at the highest level of detail (i.e., Level 4)."[35] During the development of OHA2, the CATT stated on the record that there is no level four information that shows a particular habitat leads to increased productivity of haddock; nor is there such data for any New England groundfish species.[36] Despite this utter lack of

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[34] EIS Volume III at 9.

[35] 50 C.F.R. § 600.815(a)(1)(iii)(B).

[36] "Drew Minkiewicz (Fisheries Survival Fund) noted that while the juvenile habitat areas are being proposed on the premise that the habitat is important for increased productivity of juveniles, we have no "level 4" data on habitat-specific production rates. Staff agreed that this was true, noting that New England is not unique in this regard." New

information, the EIS claims "the primary goal addressed with these [spatial management] areas was to improve groundfish productivity."[37] This assumption of increased productivity from protecting habitat for groundfish is simply not supported by the available scientific information, and should not be relied upon in analyzing the proposed rule.

In stark contrast to the lack of level four data showing that these closures increased groundfish productivity, studies do exist demonstrating that groundfish closures *do not* increase scallop or ecosystem community productivity. A 2006 study by NMFS scientists compared scallop stock dynamics in areas with and without fishing closures.[38] They found that long-term mean scallop recruitment was the same inside groundfish closures and in open areas, showing that habitat disturbances do not affect productivity of scallop populations. In contrast, rotational area closures have contributed to scallop biomass rebuilding, and the resulting increases in biomass have been found to remain even after such areas were temporarily opened.[39] Scallop population size only increased in open areas after gear time in water was greatly reduced. These types of impacts to the scallop resource and scallop fishery are not included in the EIS analyses.

In addition to the Hart and Rago study, studies performed by SMAST have shown no difference in community productivity between areas that are open and closed to scallop fishing. Epibenthic community surveys in Closed Areas I and II showed that changes in number of fish and macroinvertebrate categories, and the density of individuals within each category, were similar in areas impacted by the limited short-term scallop fishery and in the control areas that were closed to all fishing.[40] This evidence is sufficient to conclude that there is no scientific basis for the exclusion of scallop dredges in areas that are designated for groundfish protection.

4. The SASI Model Demands Minimization of Area Swept

The main analytical tool employed in the development of OHA2 was the SASI model developed by the Habitat PDT. SASI analyses indicate that adverse effects ("Z") values are the greatest factor in predicting harm to habitat. Any action that increases area swept either through

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England Fishery Management Council, *Joint Habitat and Groundfish Oversight Committee Meeting Summary* 5 (May 17, 2013) (emphasis added).

[37] EIS Volume III at 19.

[38] Deborah R. Hart & Paul J. Rago, *Long-Term Dynamics of U.S. Atlantic Sea Scallop (Placopecten magellanicus) Populations*, 26 North American Journal of Fisheries Management 490–501 (2006).

[39] *Id.* at 495.

[40] Kevin D.E. Stokesbury & Bradley P. Harris, *Impact of Limited Short-Term Sea Scallop Fishery on Epibenthic Community of Georges Bank Closed Areas*, 307 Marine Ecology Progress Series 85–100 (2006).

lowering CPUE or enlarging the footprint of trawl or dredge gear increases Z, and therefore does the most harm compared to all other actions. The Scallop PDT reiterated during the development of OHA2 (at the December 2013 Council meeting) that the lowest swept area will be achieved through having no closures.[41] Even more recently (as explained in Section III(6)(B) below) Council staff and PDT analysis showed that the implementation of OHA2 will have the most positive impacts for the fishery in FY 2018 in terms of achieving the lowest swept area, of all alternatives considered for Framework 29 to the Scallop FMP.

The Habitat PDT determined the SASI model provided the best available scientific information, and the Council affirmed that advice. It is unclear, then, why the proposed rule mentions SASI only in its preamble, while stating concerns with the Council's spatial management alternatives that are purely qualitative in nature. NMFS must perform an unbiased review of OHA2 based on the contents of its scientific record.

5. The Analysis Fails to Consider Consequences Associated with Effort Displacement

FSF notes that the supporting analyses for the EIS and proposed rule completely omit any consideration of possible unintended consequences that can, and do, result from effort displacement in areas with mixed fisheries. Such consequences could readily nullify any possible benefits of closures or even incur greater harm to fishery resources. Failure to consider fishermen's behavioral changes associated with closures can undermine the achievement of fishery management goals. The same is true for fishermen's adaptation to the refinement of habitat closures that do a better job than current measures at targeting habitat protection wisely.[42]

It is well-documented that assumptions about the spatial distribution of fishing effort before and after the implementation of a closure, which do not take economic factors into effect, generally overstate the beneficial effects of closures and severely bias the predicted outcome.[43] Such

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[41] NEFMC Scallop PDT, *Draft preliminary results: Additional impacts analysis related to sea scallop resource and fishery in the form of a memo from the Scallop PDT to the Habitat PDT* 3 (December 2013) ("The total landings for [the no closure alternative] is higher than current levels because substantial catches are expected in both MA access areas and newly opened EFH areas. This run has the lowest bottom area swept because more effort is in MA access areas and newly opened EFH areas that have higher LPUEs"). *Id.* at 7 ("In a nutshell, runs that have no EFH closures have lower ST and LT bottom area swept because the fishery has access to all areas, so catch would be concentrated in areas with highest catch rates").

[42] *See* n. 41, *infra*.

[43] *See, e.g.* Martin Smith & James Wilen, *Economic Impacts of Marine Reserves: The Importance of Spatial Behavior,* 46 Journal of Environmental Economics and Management 183–206 (2003).

complexities in fishermen's behavior are compounded in multispecies fisheries or where trade-offs between spatially proximate single-species fisheries must be analyzed. This is in part because, where species exhibit distinct patterns of spatial abundance, closures designed to protect one species can inadvertently increase harvesting pressure on others, with potential cascading effects for bycatch species.[44] One example of this is in Alaska's East Bering Sea, where closures implemented to reduce the rock sole and Pacific cod fisheries' interactions with red king crab, marine mammals, and seabirds inadvertently led to substantially increased bycatch of Pacific halibut.[45] Once again, a reduction in the scallop fishery's habitat impacts is simply best accomplished by reducing gear time on the seafloor using rotational management.

6. All Fisheries and Areas Must Be Considered Holistically in Analyzing Habitat Measures

The proposed rule includes a wide range of new management measures that the Council created in OHA2 to collectively meet its list of goals and objectives. Those measures not only include suites of year-round closures to protect vulnerable habitat, but also seasonal closures to protect spawning groundfish. The Council correctly and legally intended these measures to be implemented as a package, and thoroughly considered the impacts and needs of all its managed fisheries in relation to the proposed action.

A. The Appropriate Spatial Scale for Analyzing Benefits Is Stock Area

The OHA2 measures for each of the five sub-regions were never intended to be considered in isolation, and we have submitted extensive letters throughout its development process detailing the ways in which the amendment will holistically improve habitat conservation. The proposed rule acknowledges this fact:

> Because the [CATT's SASI and hotspot analysis] processes resulted in so many potential areas and combinations of areas, the Habitat Committee determined that sub-dividing the analyses and decision-making process would better represent the fishing stocks and areas involved . . . In each sub-region, the Council considered eliminating all spatial habitat management in order to fully describe the range of

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[44] Joshua Abbott & Alan Haynie, *What Are We Protecting? Fisher Behavior and the Unintended Consequences of Spatial Closures as a Fishery Management Tool*, 22(3) Ecological Applications 762–777 (2012).

[45] *Id.*

> impacts and to *provide the ability to mix and match across subregions* to find a practicable solution. [46]

Therefore, NMFS must not eliminate any flexibility in the proposed rule by examining each sub-region and each proposed habitat area as though it stood alone. For example, the area covered by vulnerable cobble and gravel substrate in the Great South Channel HMA alone is larger than the entire juvenile cod HAPC on the Northern Edge. Both are designed to protect the same thing—Georges Bank cod, and juveniles of that stock in particular.

B. The Analysis Must Consider All Fisheries

The proposed alternatives are also designed to apply to the entire range of fisheries managed by the Council, yet NMFS' commentary in the proposed rule with regard to environmental (as opposed to economic) impacts applies solely to groundfish, as do NMFS' stated concerns in the proposed rule.[47] NMFS' consideration of the proposed rule must also focus on how the scallop fishery and scallop resource will be affected if all the major scallop beds are not placed into rotation.

Just last week, on November 30th, Council staff presented to the Scallop Committee analysis associated with Framework 29 to the Scallop FMP, which is the action that would implement scallop rotational management under the OHA2 measures. It unequivocally concluded that the alternatives where OHA2 is fully implemented as the Council recommended not only "result in higher [economic] benefits compared to no openings through OHA2 ... generally a result of redirecting effort out of [the existing] CAII [access area] in 2018 to areas with larger scallops and/or higher densities," but that there would be the "[l]owest overall swept area estimates for Alternatives that open both NLS-W and CAI" *and* that "[moving access area] effort to the NLS-West and(or) CAI will likely have positive impacts on [Protected Resources] compared to Status Quo."[48]

The Council was well aware of the nature of these impacts, as a similar analysis of the OHA2 alternatives' impacts to the scallop fishery was provided in a memorandum from the Scallop PDT for the Council's December 2013 meeting. The memorandum, in addition to explaining that habitat harm is minimized by the absence of closures, showed that some of the alternatives the Council was considering, particularly on the Northern Edge and the eastern part of

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[46] 82 Fed. Reg. at 51495 (emphasis added).

[47] *Id.* at 51497.

[48] Jonathon Peros, *Scallop Framework 29*, Presentation to NEFMC Scallop Committee (Nov. 30, 2017), at 23-25, *available at* http://s3.amazonaws.com/nefmc.org/Doc.1-staff-presentation.v.3.pdf.

the Great South Channel, proposed closures in highly productive scallop areas. Roughly 30 million pounds of scallops—7.5% of the potential long-term yield (and 18% of the short-term yield) for the entire scallop fishery—is in the current closed areas, 5% of which is in the Northern Edge alone.[49] The proposed Great South Channel East area contains another 16% of the long-term yield for the fishery.[50]

The EIS unequivocally concludes that:

- "Long-term scallop landings would be higher if long-term closures did NOT overlap productive scallop grounds,"[51]

- "In general, the [spatial management] alternatives are expected to have neutral impacts on the scallop resource."[52] and

- "[T]here is no definitive evidence that suggests area closures are having a substantial effect on recruitment at the scale of the [scallop] resource."[53]

It is imperative, in light of these broad statements, that the major impacts of many of the alternatives being considered are thoroughly evaluated for practicability. The OHA2 measures simply present much-improved management for the scallop resource and fishery. The effect of any habitat closures on scallop management, recruitment, yield per recruit, as well as economic and social impacts, must be carefully weighed against all other considerations.

IV. THE PROPOSED RULE GREATLY IMPROVES HABITAT PROTECTION FOR GEORGES BANK GROUNDFISH STOCKS

As stated above, OHA2's habitat improvements must be considered on a stock-wide basis. While the Council divided its alternatives into two sub-regions for Georges Bank cod stocks, it did so for ease of analysis and not because each part stands alone. The alternatives as described in the proposed rule represent enormous advances toward all of the Council's goals and objectives,

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[49] EIS Volume V at 260.

[50] *Id.*

[51] *Id.* at 278.

[52] *Id.* at 232.

[53] *Id.*

including updating the scientific record, protecting juvenile and spawning groundfish, and protecting vulnerable habitats.

1. Southern New England

The proposed rule creates a large Great South Channel HMA, with two additional HMAs on Cox Ledge, that provide enormous conservation benefits to Georges Bank groundfish stocks in comparison to the existing Southern New England closures. These HMAs will cover over 240 nm^2 of vulnerable (gravel and cobble) substrate,[54] as well as a large portion of EFH and juvenile cod HAPC in the area. Specifically, an area comprising nearly 1400 nm^2, much of which is to be designated juvenile cod HAPC, will be closed to groundfishing and scalloping. Clam dredging will be allowed for one year in 1200 nm^2 of that area, but will be prohibited thereafter if the Council cannot develop management measures that allow for an appropriate balance of clam fishing and habitat protection.[55]

The Habitat PDT and the CATT proposed the Council-selected area based upon a collaborative effort between industry and scientists to maximize biological and economic gain in habitat management. By allowing for access to these fishing grounds without compromising the goals of habitat protection, these alternatives are therefore the practicable solutions to protect hard bottom to the level considered in the range of alternatives.

As we have noted in previous letters, the Council's preferred alternative is based on LISA cluster analysis outputs, that is, of groups of areas that are more vulnerable to the adverse effects of fishing with bottom trawls and scallop dredges. It has a nearly identical maximum vulnerability score to other alternatives the Council considered, and much higher than the status quo closures.[56] It also scored "high" as to overlap with Atlantic juvenile cod EFH in the hotspot analysis,[57] and provides substantial overlap with the juvenile cod HAPC.

2. Georges Bank

The proposed rule would remove Closed Areas I and II on Georges Bank (which as discussed *supra* were not designed for habitat protection) and instead create three Habitat Management Areas: the Georges Shoal and Northern Edge Mobile Bottom-Tending Gear

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[54] EIS Volume IV at 159.

[55] EIS Volume IV at 159.

[56] EIS Volume IV at 148

[57] *Id.* at 149.

("MBTG") HMAs that would be closed to all bottom-tending gear, and the Northern Edge Reduced Impact MBTG HMA that would allow limited scallop fishing based on the successful rotational management model.[58] These measures are based on OHA2's Alternative 10 for Georges Bank, which was developed before the final Council vote to contain key elements of Alternatives 7 and 9. FSF supported each of these alternatives for Georges Bank throughout the process, and submitted detailed letters and oral statements in their support. In short, as described in the OHA2 EIS, Alternative 10 provides an improvement over existing habitat protection,[59] is based on the best scientific information available, and meets legal requirements concerning practicability.

The proposed rule would close approximately 1,120 nm^2 of ocean bottom, in areas that the peer-reviewed SASI model identified as "overlap[ping] the higher vulnerability portions of Georges Bank."[60] The areas cover, in total, 232 nm^2 of cobble and boulder habitat (of which 46 nm^2 could be fished rotationally) and 369 nm^2 of granule pebble habitat (of which 142 nm^2 could be fished rotationally).[61] The areas with these substrates exceed all three no action habitat closures combined.[62] In addition, the Eastern Area of the proposed rule's Georges Bank measures maintains the southern half-plus of the existing Northern Edge habitat closure, including more than half of the HAPC, while the Reduced Impact Habitat Management Area HMA encompasses the huge majority of the remaining HAPC area, and significantly reduces fishing in a new area to the west of current Closed Area II that is currently open bottom.[63] The benefits of the proposed rule are

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[58] 82 Fed. Reg. at 51496.

[59] EIS Volume I at 70 (coding Alternative 9 as "green plus plus"—that is, it having positive impacts to both habitat and the groundfish resource compared to No Action). Although the EIS lacks a summary score for Alternative 10, it is similar to Alternative 9 with a "larger mobile bottom-tending gear closure portion to provide additional habitat protection" and thus would have at least as positive impacts. EIS Volume III, at 66; NEFMC, *The Swept Area Seabed Impact (SASI) Model: A Tool for Analyzing the Effects of Fishing on Essential Fish Habitat* (Jan. 21, 2011), at 234 ("allowing fishing in almost any portion of the area closures on Georges Bank is estimated to substantially decrease total adverse effects from fishing").

[60] EIS Volume IV at 137.

[61] The HMAs also cover other areas with sand bottom, which recent research has shown is extremely important for habitat features and ecosystem services, and biologically significant for coastal fisheries. *See* Jacob Kritzer et al., *The Importance of Benthic Habitats for Coastal Fisheries*, 66 BioScience 274-284 (2016). As such, it adds benthic diversity to habitat protections on Georges Bank. While the proposed rule discussion seems to take issue with such diversity, the proposed rule is out of step with more recent habitat analyses.

[62] *Id.*

[63] This area was designed to protect even more of the most vulnerable gravel substrate highlighted by the SASI model.

even more pronounced when taken in concert with those provided by the Southern New England portion of the proposed rule, as both are part of the Georges Bank cod stock area.

C. The New Proposed Closures Will Protect Areas with High Habitat Value

The proposed rule posits that the Council's rationale for creating the Northern Edge Reduced Impact HMA is that "the potential economic benefits of allowing rotational scallop fishing on the northern edge outweigh the potential benefits to juvenile cod and cod stock recovery that would accrue from leaving the area closed."[64] While it is well within the Council's purview to choose the correct balance between fisheries economics and conservation, in fact, the notion that the Council has somehow sacrificed the recovery of Georges Bank cod in favor of scallop profits constitutes a gross mischaracterization of the Council's decision.

The Council's rationale for Alternative 10 is centered around improving and increasing habitat protection. The EIS specifies: "[t]he Council clarified the intent of the reduced impact area . . . managing the area as a scallop access area would reduce impacts on habitat overall in that area."[65] It goes on to enumerate the great efforts the Council made to design closures on Georges Bank that protect habitat to the maximum extent practicable, including modifying Alternative 7 by shifting the western area to the east from the original Georges Shoal area to encompass additional clusters of high vulnerability seabed habitats, and expanding the eastern area in size to protect a greater amount of substrate.[66]

Indeed, the proposed rule would enact a wide-ranging habitat closure on Georges Shoals, an area with a high level of topographic relief and diverse sediment types ranging from sandy highly moveable bottom to areas of boulder and cobble. This area is well-known to fishermen to include diverse and spatially differentiated habitat types. Independent and objective analysis under the peer-reviewed SASI model shows that this 560 nm^2 Georges Shoals area—which is currently open bottom—is highly vulnerable to adverse impacts—even more vulnerable than the Northern Edge HAPC.[67] Moreover, the Georges Shoal HMA is more than one and a half times as large as the current Closed Area II closure—so the total gravel-cobble area that would be closed to fishing is much *higher* than under the current closures. So when the proposed rule claims that "the habitat

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[64] 82 Fed. Reg. at 51496.

[65] EIS Volume III at 66.

[66] *Id.* at 63.

[67] EIS Volume IV at 120-21 (showing higher maximum vulnerability scores in Georges Shoal 2 for both otter trawl and scallop dredge, and a greater number of structured grids overlapping the area for both gear types).

value of the Georges Shoal HMA is low,"[68] it is neither correct nor correctly representing the empirical analyses within the OHA2 EIS. The SASI model was peer-reviewed not once, but twice, and reached the opposite conclusion from the proposed rule's qualitative claims. Such an alternative, which covers more actual square nautical miles of a *more* vulnerable substrate, certainly presents a reasonable method of achieving the desired protection in a practicable manner, and the Council acted within its authority to select it.

D. The Proposed Rule Protects Juvenile Cod and Other Important Groundfish Life Stages As Well As Other Considered Alternatives

In the proposed rule, NMFS states a concern that the Georges Bank measures would not "appear to improve ... refuge for critical groundfish life history stages in this sub-region."[69] To address this issue when NMFS previously expressed it, the PDT and CATT developed their hotspot analyses. The hotspots were identified as an addition to the SASI model that were intended to demonstrate which groundfish species had particular affinities to substrate types associated with the species' spawning and juvenile life stages.[70] Thus, they are most useful in the habitat context as indicators of potential spawning activity.

None of the Georges Bank habitat management area alternatives contain hotspots for cod, juvenile or otherwise, including the Northern Edge. [71] In fact, the huge majority of areas contain hotspots only for haddock, red hake, and winter flounder—none of which are overfished. Excluding those three stocks from the analysis would make each alternative perform nearly identically.

The proposed Georges Shoals HMA does, moreover, add to the overall habitat protection formula important depth and substrate characteristics for juvenile fish not contained in existing measures. Cultivator Shoal is known to be shallower than many of the other locations the Council considered for habitat areas, although the EIS does not appear to provide average depths of proposed HMA alternatives. Young-of-the-year cod have been shown to live in very shallow areas (<90' in spring and 31'-180' in autumn), and year one fish generally live in relatively shallow

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[68] 82 Fed. Reg. at 51497.

[69] 82 Fed. Reg. at 51497.

[70] EIS Volume I at 328.

[71] EIS Volume V at 82 ("There were no hotspots for redfish, cod, halibut, ocean pout, pollock, white hake, or witch flounder in any of the Georges Bank HMAs").

waters (61'-180').[72] It is therefore likely that this area is a major nursery area for juvenile cod because it meets the habitat and depth criteria that have been shown to attract cod in inshore areas. The HMA also contains areas of shell hash, which provides important habitat for juvenile yellowtail flounder.

Moreover, it is not necessary to implement year-round closures to protect groundfish in their spawning life stages. Targeted access can provide the necessary protections while promoting the achievement of optimum yield. OHA2, and the proposed rule, would implement additional closures specifically tailored to protect spawning cod on Georges Bank. Also, and notably, the scallop fishery has successfully tailored time-area closures in parts of Closed Area II for several years in order to address groundfish bycatch considerations. The development of management measures for rotational scallop fishing in the Reduced Impact HMA area should and will occur with due consideration to protecting spawning aggregations of vulnerable stocks.

E. The Proposed Rule Adequately Protects EFH

NMFS goes on to posit in its proposed rule that the "habitat value of the Georges Shoal HMA is low, judging from its high proportion of unstable sandy substrate and low EFH value."[73] NMFS may not arbitrarily assign a "low" habitat value contrary to the results of the SASI/LISA analyses and information contained in the EIS. Moreover, the Georges Shoals HMA, by itself, has "moderate" coverage for juvenile cod EFH and "high" coverage for adult cod EFH based on the EIS analysis—which is the primary stock the amendment is intended to conserve.[74] Indeed, the Georges Shoals contains EFH for 48 groundfish species or life stages. While that number may be lower than some of the other areas the Council considered,[75] it contains "moderate" to "full" EFH for several of the most commercially and biologically important groundfish species, many of which are subject to rebuilding plans, such as wolffish, juvenile red and white hake, adult yellowtail flounder, little skate, winter skate, scallops, and herring eggs, and *full* EFH coverage for all life stages of severely depleted windowpane and winter flounders.[76]

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[72] Arnold Howe et al., *Spatial Distribution of Ages 0 and 1 Atlantic Cod (Gadus morhua) off the Eastern Massachusetts Coast, 1978-1999, in Support of 'Habitat Area of Special Concern'*, Massachusetts Division of Marine Fisheries Technical Report TR-12 (June 2002).

[73] 82 Fed. Reg. at 51497.

[74] EIS Volume IV at 122.

[75] For purposes of comparison, the maximum EFH score of any alternative considered by the Council was 82.

[76] *Id.* at 122-23.

Nor were the individual areas within Alternative 10 intended to be analyzed individually. In fact, the cumulative effects, and thus the true impact, of the action are based on all of the areas that may be adopted in an action. The Northern Edge HMA areas overlap EFH for additional species and have higher EFH scores—79 for the area that will be entirely closed to MBTG, and 69 for the Reduced Impact area.[77] Together, Alternative 10 has a total EFH overlap score well within the range of the other alternatives under consideration. The "overlap" analysis must also be considered in light of the fact that the overall area of closures in the proposed rule is much larger than many others the Council considered; not only is there a significant amount of overlap, but there is more EFH protected as a whole than in some other alternatives.

Finally, the Council completed the EFH designations included in OHA2 in 2007. While the overlap with those EFH areas are one factor for analyzing habitat value, deference must be given to the more recent, specific information produced by the SASI/LISA models and other analyses. The SASI model identified the most vulnerable substrate, and the goal of the amendment is to protect that substrate and the most vulnerable life stages against adverse impacts. The proposed rule does so across huge portions of the Georges Bank groundfish stock areas.

F. The HAPC Is Appropriately Treated By the Council Recommendation

The proposed rule states that the Northern Edge area has "fully recovered from any adverse effects of fishing" after being closed for twenty years, and that it is therefore "more at risk from the impacts of scallop dredges and bottom trawls than other areas."[78] It is also notes concern that some fishing would be allowed inside the HAPC.[79]

In fact, the proposed rule would create the Northern Edge HMA, in which MBTG would be fully restricted, in the southern portion of the current Northern Edge habitat closed area—including nearly half of the existing HAPC. Then, the Council designed Alternative 10 to close even 50 nm^2 more bottom in the HAPC than the previous alternative under consideration (Alternative 9) would have. As an additional measure to protect the most vulnerable habitat around what is currently Closed Area II, the proposed rule significantly reduces fishing in a new area to the west as part of the Reduced Impact HMA. This area is currently open bottom and heavily fished by the groundfish and scallop fleets. This area was added to other alternatives based on SASI modeling, during the OHA 2 development process, to augment habitat protections along the

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[77] *Id.*

[78] 82 Fed. Reg. at 51497.

[79] *Id.*

Northern Edge. Scallop access area fishing will be allowed, as will groundfish vessels operating under the Haddock Special Access Program ("SAP").

The EIS analyses, and other scientific information which have come to light since the OHA2 HAPC determination in 2007,[80] shows there are more advantages to protecting the vulnerable area on Georges Shoals than there are in simply closing the HAPC to all fishing, and that doing the former is more practicable. The OHA2 EIS explained the habitat benefits of scallop access area fishing (via reduced dredge bottom time), as compared to open area fishing, using the peer-reviewed Z scores. As the record repeatedly recognizes, the best impacts for habitat are achieved by protecting vulnerable substrate and maintaining or lowering the Z score on vulnerable habitat. This is best done by increasing catch per unit effort ("CPUE") which, in turn, reduces seabed contact time for bottom-tending gears.[81] Targeted actions to increase CPUE, therefore, have the greatest positive impact on habitat—and the creation of a scallop access area in the sliver of the HAPC that is open, while extending that access area west to open bottom is exactly that kind of targeted action.[82]

The fact that some fishing will occur in the HAPC is entirely permissible. The Council's decision to maintain the HAPC designation for juvenile cod in OHA2 was never intended to disallow fishing in the area, and such a restriction is not required by law or regulation.[83] Alternatives must be selected based on an analysis and weighing of the metrics for habitat conservation. Otherwise, once an area was closed to fishing, it would never be eligible for reopening—which clearly is not and has never been the Council's intent. Moreover, the HAPC in the Great South Channel for the same life stage of the same stock—juvenile Atlantic cod—will remain closed.

Further, the goals of the amendment include to "redefine, refine or update the identification and description of all EFH ... including the consideration of HAPCs" and to "[i]ntegrate and optimize measures to minimize the adverse impacts to EFH."[84] These goals are necessarily

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[80] *See, e.g.*, Brad Harris et al., *Effects of Mobile Fishing Gear on Geological and Biological Structure: A Georges Bank Closed Versus Open Area Comparison, Final Report* (2011) Atlantic Sea Scallop Research Set-Aside Program Grant: NOAA/NMFS NA11NMF4540026 (2014).

[81] *See, e.g.*, Michelle Bachman, Habitat PDT Chair, *Developing Adverse Effects Minimization Options and Alternatives for Omnibus EFH Amendment 2*, Presentation at the NEFMC Habitat Committee (Sept. 27, 2012), at 10.

[82] In contrast, actions that reduce CPUE not only increase bottom contact time, but create major concerns related to effort displacement and changes in bycatch rates and composition.

[83] EIS Volume II at 379.

[84] EIS Volume I at 83.

integrated with the objective of improving habitat protection. In order to improve protection, habitat closures must be located based on the best scientific information available. To restrict fishing in an area based on outdated science, and the longevity of a pre-existing closure, contradicts that goal and creates an arbitrary condition. Therefore, updating the scientific record, and refining EFH boundaries and habitat management measures based on those updates, is part and parcel of improving habitat protection.

The OHA2's commitment to redefining and refining EFH and related management measures could not have required existing closed areas to remain as-is, if others areas were scientifically shown to provide the most suitable and most practicable protection. Furthermore, the proposed rule does protect a large portion of the HAPC, consistent with the consideration and analysis of the effects of fishing in the area.

G. Rotational Scallop Fishing Will Not Have Unlimited Adverse Habitat Impacts

The proposed rule states that OHA2 "provides no habitat factors for considering the degree of scallop fishing that may be allowed in [the Northern Edge]" and that although the area would be fished rotationally, "the extent and duration of the openings is otherwise unlimited."[85] Both statements are facially incorrect.

In the HMAs that will allow rotational scallop fishing, the precise level of habitat impact can and will be calibrated as part of the process to develop the scallop access areas. Such access area development has historically included considerations relating to scallop yield and sustainability, bycatch, habitat impacts, protected species interactions, economic considerations, and other relevant matters. Both NMFS and the courts have considered this approach to be permissible and effective.[86]

Moreover, the EIS explicitly states that "[t]he schedule, seasons, and number of [scallop access area] trips allocated would be designed to balance multiple objectives, which could include optimizing yield, minimizing bycatch of stocks such as yellowtail flounder and windowpane

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[85] 82 Fed. Reg. at 51497.

[86] *See Conservation Law Found. v. Mineta*, 131 F.Supp.2d 19, 27 (D.D.C. 2001) (in upholding Framework 13 to the Scallop FMP, which authorized seasonal fishery access in portions of the closed areas on Georges Bank, the court held that "[d]efendants have numerous—and oftentimes competing—statutory objectives to contend with in managing the New England waters; preservation of essential fish habitat is only one of many. Defendants are charged with, among other things, fairly and equitably allocating fishing privileges among the states, rebuilding overfished species, minimizing adverse economic impacts on communities, and promoting the safety of human life at sea.").

flounder, and minimizing adverse impacts to EFH."[87] It is simply not possible to plan the timing of the access areas up front; the process is, by its very nature, adaptive.[88] It is that adaptability that reduces CPUE the most. This is not only consistent with the way scallop access areas have always been managed under Amendment 10 to the Scallop FMP and well over a dozen preceding and succeeding framework adjustments, but with the requirements of the law.

H. Any New Habitat Impacts in the Reduced Impact HMA are Offset by Reduced Bottom Contact Time

The proposed rule, despite NMFS' assertion that "the other two [Georges Shoals and Northern Edge HMAs] may not sufficiently compensate for the adverse impacts from opening the Northern Edge Reduced Impact HMA,"[89] is more conservative than the status quo. It closes an area larger than the HAPC—and protects nearly all of that HAPC, too. It does, however, permit creation of an access area in only the northern part of the habitat closure along the Northern Edge. The small area to be made an access area—which the Habitat Committee trimmed back by an additional 50 nm^2 from the area included in Alternative 9—contains among the most historically productive scallop grounds in the world.

The Reduced Impact HMA would remain closed to groundfishing, and scallop fishing on a Day at Sea ("DAS") would also not be permitted. Bottom trawls represent the majority of potential impacts to both habitat and spawning groundfish. As the EIS concludes, and as we have explained repeatedly, scallop access area fishing is the least habitat-intensive way to conduct scallop fishing. The proposed rule will also require surf clam and ocean quahog dredging to be limited within a year in the Georges Shoals HMA, and will prohibit the use of clam gear in both Northern Edge HMAs, to further mitigate habitat impacts. This will provide additional habitat protection relative to the status quo.

I. The Georges Bank Measures in the Proposed Rule Satisfy Practicability Requirements

The Council was required to weigh both the economic and environmental costs of displaced effort that a draconian change like that described in the EIS's Alternative 8 would have entailed, in light of any potential habitat benefits and the fact that the SASI model advised against such broad-scale closures. The economic impacts of such an alternative would be enormous, as analyzed

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[87] EIS Volume III at 65.

[88] *See* New England Fishery Management Council, Amendment 10 to the *Atlantic Scallop Fishery Management Plan* (Dec. 2003) (implementing the rotational fishing model and referring to its "adaptive" nature 216 times).

[89] 82 Fed. Reg. at 51497.

in the EIS. Further, if a significant portion of historic fishery grounds were to be closed, displaced effort would lead to increased bottom contact time and inevitable changes in bycatch rates and composition—both of which have extensive and unpredictable ecological impacts. Thus, the creation of a closure such as that in Alternative 8 would have represented the stark opposite of practicability. Indeed, any of the alternatives in the EIS would displace groundfish effort and at least some scallop effort, but that displacement must be calibrated reasonably. The impacts analysis of the Framework 29 scallop management options, described above, show that the proposed rule is just such a reasonable approach.

In conjunction with balancing economic and environmental considerations, the MSA requires the Council and NMFS to address the adverse effects of fishing. The proposed rule not only increases habitat protection vis-a-vis the status quo, but also provides substantial mitigation for the creation of an access area in the northern portion of the Northern Edge. Both the western extension of the Reduced Impact HMA and the huge protected area on Georges Shoals are new closures on what is currently open bottom. The benefits of these areas have been thoroughly described elsewhere in this letter, and those benefits must be considered in light of their substantial mitigation effects.

V. THE "LOBSTER CLOSURE" PROPOSED IN THE NORTHERN EDGE HMA VIOLATES LAW AND COUNCIL POLICY

The proposed rule contains a seasonal scallop vessel restriction in what would be the former Closed Area II, now the Northern Edge Reduced Impact HMA, to mitigate gear conflicts between the scallop and lobster industry. The Council discussed this measure in conjunction with Alternative 10 in June 2015. The EIS states, at that time, the groundfish and lobster fisheries operating in the area signed an agreement that trawl fishing would not occur in Closed Area II north of 41°30'N lat. from June 15-October 31, should the area open under OHA2. It further states "[t]his agreement is not codified and could be changed by the signatories."[90] This provision of the proposed rule violates the law in several regards.

First, by shoe-horning a regulatory closure into an action unrelated to gear conflicts, the Council violated its own management rules. The Council adopted an omnibus amendment for resolving gear conflict in 1996, which outlines a sensible approach to reducing conflict.[91] That approach requires, among other things, that fishermen initiate any action relating to resolving gear conflicts, and that the Council discusses alternatives over the course of at least two Council

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[90] EIS Volume III at 66.

[91] New England Fishery Management Council, *Environmental Assessment for Resolving Gear Conflict in the Gulf of Maine, Georges Bank, and Southern New England* (July 29, 1996).

meetings. It further requires the Council to hold public meetings with fishermen specific to the issue, and to refer the matter to an ad hoc or standing industry advisory committee. It also outlines specific analyses that must be undertaken in order for the Council to take action to address gear conflicts. It took none of these steps regarding this closure.

Second, OHA2 lacks any credible justification for the closure. There is no documentation to support that a gear conflict could occur, nor that there has been any such conflict to date in areas adjacent to what would be the Northern Edge HMA that have large amounts of fixed gear and are currently open to scallop fishing.

Third, the Council did not conduct the legally-mandated analysis on this portion of Alternative 10. OHA2 contains no analysis of biological or economic impacts of the closure, except for a short discussion of potential impacts to the lobster stock.[92] The MSA requires fisheries management decisions to be "founded on science and law, not pure diplomacy."[93] A full description of the impacts of the closure would require analysis of the loss of scallop yield, biological impacts to the scallop resource, any impacts from the trap fishery on berried lobsters during the scallop closure period, and others. Absent these analyses, this approach is at best a political compromise, and at worst entirely arbitrary.

Finally, the EIS does not contain (and the Council did not consider) a reasonable range of alternatives under NEPA for this action.[94] Even if it felt the closure was necessary, it should have analyzed different potential closure dates and/or areas. The chosen date was entirely random and no other options were considered.

VI. HABITAT PROTECTION OCCURS THROUGH THE MANAGEMENT PROCESS EVEN BEYOND OHA2

In addition to updating the scientific record and choosing new habitat areas based thereon, the Council and NMFS have already and will continue to improve habitat protection through the management process. The EFH regulations require that habitat measures "avoid, minimize, or compensate for" the "cumulative effects" of fishing activities.[95] The full context of the region's fishery management measures thus must be considered in evaluating habitat alternatives.

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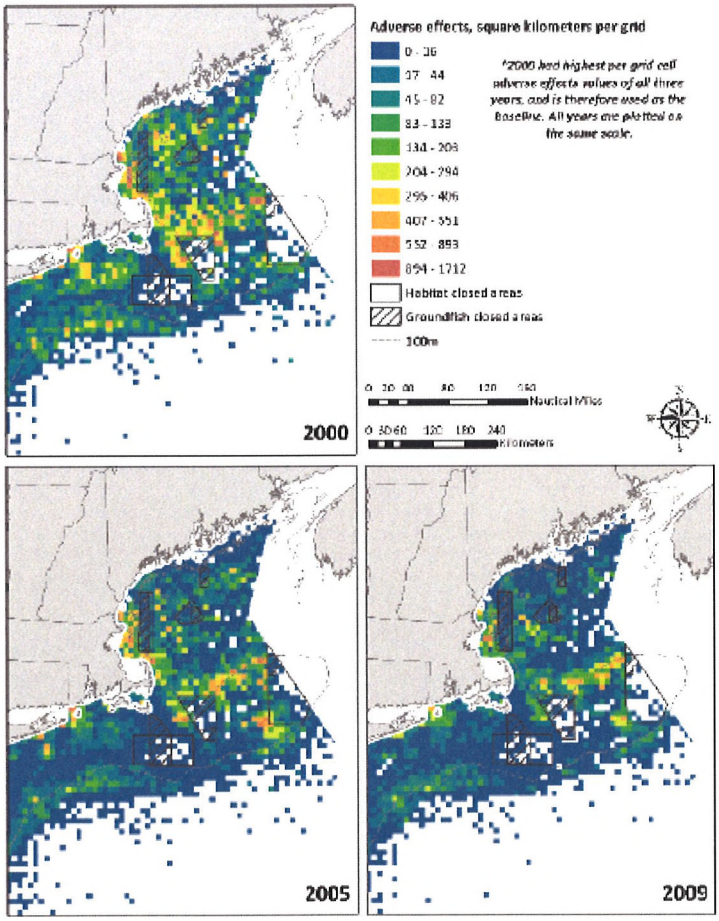
[92] *See* EIS Volume V, § 17.

[93] *Midwater Trawlers Co-op. v. Dept, of Commerce*, 282 F. 3d 710, 721 (9th Cir. 2002).

[94] *See* 40 C.F.R. § 1502.14(a).

[95] 50 C.F.R. 600.815(a)(3)-(6).

Large-scale effort reductions across New England fisheries have already improved habitat protection by decreasing area swept. The following map from the EIS shows substantial reductions in realized adverse effects from otter trawl gear between 2000 and 2009:[96]



Indeed, realized adverse effects across all gear types have declined even more significantly since 1996:[97]

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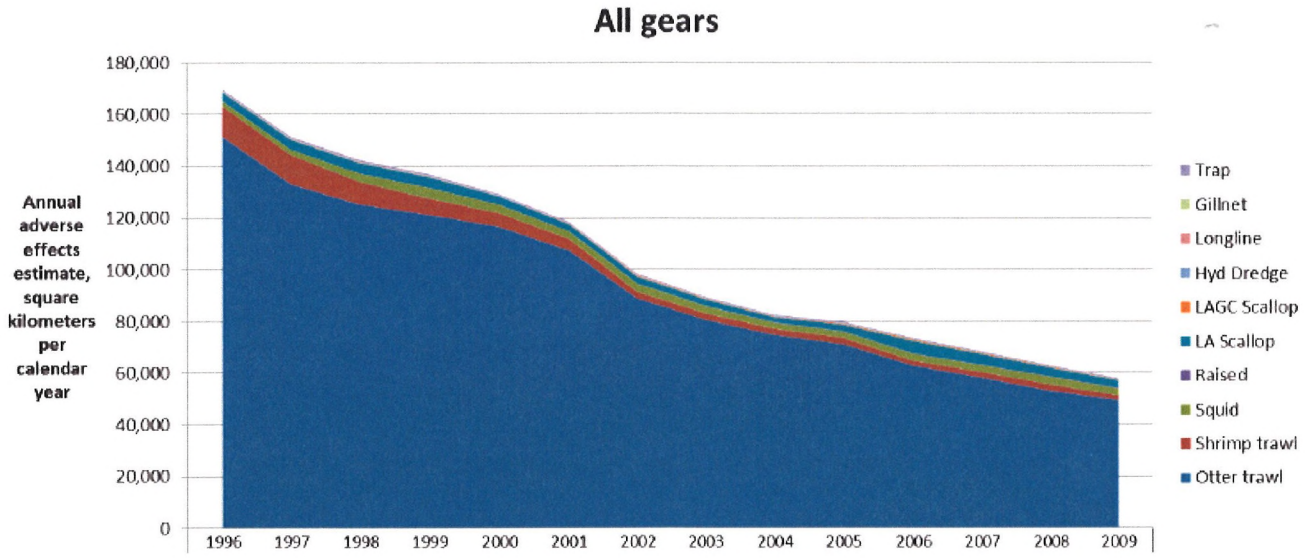
[96] EIS Volume I at 160. Note that the otter trawl fishery has experienced even larger effort declines, and thus reductions in area swept, since 2009 due to resource conditions and management measures.

[97] *Id.* at 170.



There is, therefore, no doubt that the management process has already improved habitat protection on Georges Bank and that OHA2 will further improve such protection based on the totality of the record. OHA2 must factor these improvements into the calculus for the habitat options the Council recommended.

VII. THE PROPOSED RULE INCLUDES IMPORTANT PROVISIONS FOR MONITORING, RESEARCH, AND ADJUSTMENTS

To repeat, the Council, NMFS, and their various joint technical teams gathered and analyzed large volumes of data in considering modifications to the current closed areas during the development of this amendment. The process would have been improved had more robust fishery-dependent data been available to inform the decision making process. This lack of information hampered the development of OHA2 and led to considerable public controversy.

It is absolutely critical that we continue to collect data in any areas that are closed to fishing on any scale, so that we may correct for this problem in future management decisions. Therefore, FSF supports the provisions for a strategic review process and to monitor closed areas to ensure their effectiveness. We hope that both the management agencies and independent cooperative partners will continue to gather data in and around the closed areas in order to develop more knowledge about the desirability and effects of the closures.

To that end, FSF supports the designation of a Dedicated Habitat Research Area ("DHRA") within the existing Closed Area I in Georges Bank. The scallop industry proposed this area to be

dedicated to research because of the importance of ongoing scallop studies there. The fleet has collected video survey data in the area that will serve as baseline information for future studies. These studies will provide valuable information about scallop productivity, distribution, abundance, and growth. The designation of the DHRA is expected to streamline the permitting process for these research activities and to reduce administrative hurdles. Areas that are designated as DHRAs must have sunset provisions that will open an area if there is no habitat research conducted there within three years. There is no benefit to excluding commercial fishing from a DHRA if there is no interest in or capacity for actively pursuing research there.

Additionally, FSF supports adding changes in HMA designations or restrictions to the list of items that may be modified through framework action. This management flexibility is necessary given the aforementioned lack of scientific record and resulting uncertainty related to the anticipated results of these habitat decisions.

VIII. CONCLUSION

Again, we urge NMFS to implement the proposed rule, with the exception of the Northern Edge HMA "lobster closure," as quickly as possible. As described above, the measures represent a practicable and science-based approach to improving the protection of EFH and juvenile, spawning, and of-age groundfish across the Georges Bank stock area and New England as a whole. It is important to consider the full record for OHA2, which unequivocally supports the proposed action. All the measures contained in the proposed rule (save those related to gear conflicts) will meet the Council's goals and objectives as well as all legal requirements for OHA2. They will protect areas identified as having extremely high habitat value, areas necessary for groundfish spawning and juvenile life stages, and areas designated as EFH for a large number of stocks—but most importantly, they will do so in a manner that minimizes swept area and maximizes economic benefits to the extent practicable. Finally, they will improve the ability to research and monitor these closures and update them in the future as our scientific knowledge increases. Implementing the proposed rule would therefore be the correct decision, even if it is a difficult one to take.

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We want to sincerely thank GARFO, the Council, and their staff, committee, and PDT members, for the huge amount of work and thought you all have spent on this amendment. Please do not hesitate to contact us with questions or concerns.

Sincerely,

David E. Frulla
Andrew E. Minkiewicz
Anne Hawkins

Counsel for Fisheries Survival Fund