CORRESPONDENCE

BLUE WATER FISHERMEN'S ASSOCIATION

March 2, 2021

The Honorable Scott De la Vega
Acting Secretary of the Interior
Department of the Interior
1849 C. Street, N.W.
Washington, DC 20230

Dear Mr. Secretary:

We write with respect to President Biden's January 21, 2021, Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis. Section 3 of that order calls for your review, in consultation with other federal offices and Tribal entities, of the Northeast Canyons & Seamounts Marine National Monument, and the conditions related to our fishery's continued access to it.

The Blue Water Fishermen's Association (BWFA) membership is comprised of the U.S. Atlantic pelagic longline fishery for highly migratory species of fish such as tunas and swordfish, as well as fish dealers and other shoreside enterprises associated with this fishery. In all respects, this fishery is the most sustainable of its kind in the world. Further, the management, monitoring and enforcement of this fishery by federal and international authorities represents the global model for this gear type. We are very proud of that achievement and remain committed to it.

Our fishery operated sustainably in the area of this Monument for many years prior to being excluded when the Monument was established. It has resumed its sustainable operations within the Monument boundaries since its access was restored last year. We believe that closing this area to our fishery again would be counterproductive to U.S. conservation and economic objectives.

BWFA asserts a thorough and correct science-based analysis of all relevant data would confirm that this fishery has no adverse impact on the Monument, and that the future exclusion of this fishery from the Monument would instead serve to undermine the ongoing successful conservation of both target and bycatch species, including protected species, both inside and outside of the Monument boundaries.

We also expect that the future exclusion of this fishery from the Monument would exacerbate the already unlevel playing field on which our industry's small businesses must compete with

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seafood imports from nations whose fisheries are subsidized and/or that operate at environmental and labor standards far below those that our fishery embraces and practices. Vessels in our fleet can derive 50 percent or more of their annual income from fishing within the Monument area. Further shrinkage of the U.S. fleet, a loss of jobs at-sea and shoreside, and an increase in sub-standard imports can be expected to result if the closure is reinstituted – a major downside with no apparent conservation upside.

On June 23, 2017, BWFA submitted detailed comments in response to a Request for Comments published in the Federal Register at 82 FR 22016 on May 11, 2017. This request for comments was issued by the former Secretary of the Interior in response to Executive Order 13792 calling for a review of 27 National Monuments including the Northeast Canyons and Seamounts Marine National Monument. This Monument was established by President Obama on September 15, 2016, by Proclamation 9496 pursuant to the Antiquities Act of 1906.

Attached are updated relevant excerpts from BWFA's detailed comments presented according to the outline of the specific issues raised in the 2017 Request for Comments. We feel these detailed comments are highly relevant to the review of this Monument called for by President Biden, and so we respectfully request your most serious consideration thereof.

In summary, BWFA asserts that –

1) This fishery has no adverse impact on the Monument.

- this fishery operates in only the near-surface waters where its gear is set at a maximum depth of perhaps 50-60 meters. As described by NOAA, the Canyons section of the Monument extends from depths of 200 meters to thousands of meters, while the top of the Seamounts range in depth from 1000-2000 meters in depth. Consequently, this fishery has zero impact on the deep-sea benthic ecosystem, including deep-sea corals, found in these canyons and seamounts.

- this fishery targets highly migratory species of finfish such as tunas and swordfish that, unlike the demersal species found in this region, travel rapidly and widely throughout this region and, in fact, throughout the Atlantic Ocean. These species migrate many thousands of miles on an annual basis and are caught in the fisheries of dozens of other nations. These fish do not reside within the Monument boundaries but spend time there only temporarily as a reflection of highly dynamic oceanographic conditions. Given this unique life-history, the Monument simply does not contribute to the conservation of these species.

- instead, the U.S. conservation of these species is achieved through an intensive multilateral and domestic management, monitoring and enforcement regime that is the global model for this gear type. Unlike other U.S. fisheries, this fishery is managed and closely monitored directly by the Secretary of Commerce through the NOAA Highly Migratory Species Division. The operation of this sustainable fishery inside the Monument boundaries would in no way undermine this management, monitoring and enforcement regime to which the U.S. and our fishery is deeply committed.

- this fishery also interacts with bycatch species, including protected species of marine turtles and mammals, and certain pelagic sharks. Once again, this fishery is the subject of a very active and intensive domestic and international management, monitoring and enforcement regime developed over many years that successfully minimizes such bycatch and bycatch injuries and mortalities pursuant to the Endangered Species Act, the Marine Mammal Protection Act, the Magnuson-Stevens Fishery Conservation and Management Act, and other applicable U.S. statutes.

  This includes such requirements as the use of large circle hooks, monofilament leaders, innovative, life-saving gear configurations, cooperative bycatch hotspot avoidance measures, and the deployment of Vessel Monitoring Systems (VMS) and video cameras to monitor 100% of the fleet.

  Once again, this fishery represents the global model for effectively minimizing bycatch and bycatch mortality to the maximum extent practicable both outside and inside of the Monument.

2) A prohibition on the operation of this fishery inside the Monument boundaries would instead yield a net conservation loss for both target and bycatch species, including protected species.

- in order to account for highly dynamic ocean currents and winds that might cause fishing gear to drift into the Monument, an area of the ocean even much larger than the Monument itself would, effectively, become off-limits to this fishery. The fishery would be forced to operate in a much more confined area outside of the Monument that it might normally avoid at times of the year when marine mammals, turtles or other bycatch species are in greater abundance. The net effect over time is to undermine the effectiveness of bycatch 'hotspot' avoidance tactics, increase bycatch interactions and, consequently, undermine bycatch and protected species conservation. The more area this fishery has access to, the greater its ability to minimize bycatch and bycatch mortality.

- the Monument is indeed, at times, a highly productive area for such target catch as swordfish, for which the U.S. is subject to an international quota. The loss of production inside the Monument would undermine the ability of this fleet to fully harvest this quota which, in turn, increases the probability that this unused U.S. quota would be reallocated to other fishing nations that do not even approach the efficacy of the U.S. fishery conservation regime. This would yield a net conservation loss for both target and bycatch species, including protected species. For this reason, among others, the U.S. has pursued a policy of trying to maximize the utilization of such international quotas by the U.S. fleet, not reduce it.

3) A prohibition on the operation of this fishery inside the Monument boundaries would yield a net economic loss for our small businesses and increase seafood imports.

- the reduction in U.S. pelagic longline catches of swordfish, tunas and other species, and the reallocation of U.S. quotas to other nations, would increase U.S. imports of those species from nations whose fisheries operate under dismal environmental and labor standards including China and, unfortunately, from IUU fisheries. An ongoing priority of U.S. trade policy is to address our nation's seafood trade deficit, in one part, by providing

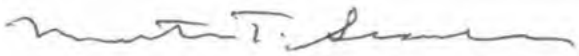
U.S. industries with a fair and level playing field on which to compete in the U.S. marketplace and, in other part, by reducing excessive regulatory burdens on U.S. small businesses. Denying our fishery access to the Monument is completely at odds with this policy. It creates yet another anticompetitive burden on our industry and provides our foreign competitors with yet another competitive advantage.

4) A prohibition on the operation of this fishery inside the Monument boundaries would be counterproductive to efforts to effectively address the effects of climate change on our fishery.

- The distributions of the highly migratory species of fish that our fishery targets, as well as the pelagic bycatch and protected species our fishery interacts with, are highly dynamic and directly reflective of oceanographic dynamics being influenced by climate change. A static closure of this Monument to our fishery is not only completely unresponsive to these dynamics, it would actually present a barrier to an effective response. Static closures represent the antithesis of the adaptive conservation and management strategies needed to effectively conserve and manage highly migratory marine species including protected species of marine mammals and sea turtles in response to the effects of climate change on the distributions of these marine species and on the entire pelagic ecosystem.

BWFA appreciates your consideration, and the consideration of your consulting agencies, of our inputs as part of your review of this Monument and the continued access of our fishery to it. We would be pleased to respond to any questions you may have, and to have the opportunity to discuss this issue directly with you or your staff.

Sincerely,



Martin T. Scanlon
President

cc: Honorable Gina Raimondo, Secretary, U.S. Department of Commerce
Sara Gonzalez-Rothi, Senior Director for Water, Council on Environmental Quality

Attachment

Updated BWFA Detailed Comments

The following relevant excerpts from BWFA's comments are presented according to the outline of the specific issues raised in the 2017 Request for Comments that are in large part with reference to specific provisions of the Antiquities Act.:

In making the requisite determinations, the Secretary is directed to consider:

(i) The requirements and original objectives of the Act, including the Act's requirement that reservations of land not exceed "the smallest area compatible with the proper care and management of the objects to be protected";

We also cite here the following relevant excerpt from President Obama's Proclamation establishing the Northeast Canyons and Seamounts Marine National Monument (*hereinafter*, MNM):

> *"The Federal lands and interests in lands reserved consist of approximately 4,913 square miles, which is the smallest area compatible with the proper care and management of the objects to be protected."*

Smallest area compatible

A fundamental premise of BWFA's positions and recommendations regarding this MNM designation has been that the pelagic longline fishery should not be the subject of a fishing prohibition under this or any MNM designation in the first place. Throughout this document, we elaborate on the many reasons for this fundamental conclusion.

When taken in that context, the size of the area of this MNM relative to the Antiquities Act criteria (smallest possible) is immaterial. There is no area of any size that would be justified for prohibiting this fishery from operating in a MNM under the Antiquities Act.

That said, the bathymetric map of this 4,913 square mile MNM clearly shows that the boundaries encompass far more area than the area that the actual canyons and seamounts comprise, especially in the seamount area. Thus, if the true underlying purpose of this MNM was to protect those deep-sea structures and associated benthic ecosystems from some other human activity that actually does have an impact on them, then the area of this MNM certainly far exceeds the "smallest area compatible" criterion.

Proper care and management:

Improper interpretation of the statute -- As discussed in the next section of our comments, living fish and other sea creatures that temporarily occupy and migrate through the surface waters within this MNM were considered to be "objects of historic or scientific interest'. As such, these species must be the subject of "proper care and management" and "protected" by the MNM designation according to the Antiquities Act. This is a misinterpretation of the Act that was used to prohibit pelagic longline fishing within this MNM's boundaries.

Immaterial to proper care and management – Contrary to some unscientific assertions made prior to its designation, this MNM does not provide any meaningful or special "protection" for highly migratory species of tunas, swordfish and other pelagic species including marine mammals and sea turtles that are the target catch or bycatch in the pelagic longline fishery. These species do not respect any man-made boundaries. They range very widely, in most cases on the order of many thousands of miles and, often, quite rapidly throughout vast areas of the Atlantic Ocean including only seasonally and temporarily within the boundaries of this MNM. Like many sea creatures, the primary motivators behind the distribution of these species are opportunities to feed and reproduce. And their distributions are changing significantly as a direct as a consequence of the effects of climate change on their habitat and forage.

In reality, the MNM area represents only a portion of a large, highly productive pelagic habitat that extends along nearly the entire US and Canadian Atlantic continental shelf and shelf edge. The information used to justify the fishing prohibitions completely failed to account for this scientific reality. Instead, a non-representative 'snap-shot' of a relatively tiny area of this vast productive pelagic habitat was taken in order to present a misleading image of the complete and correct distributions and behavior of marine mammals, sea turtles and other pelagic species.

With specific respect to tunas and swordfish, the MNM area often provides a particularly productive area for our fishery in the summer months especially when, in some years, warm-core Gulf Stream eddies push up along the shelf edge. For this reason, prior to the MNM designation and fishing prohibition, the seamount area in particular was emerging as important fishing grounds for our fleet to target certain tuna species. Some vessels in our feet have earned 50 percent or more of their annual income from fishing in the Monument area.

However, these species occupy this area only seasonally, migrating vast distances over the course of a year. Given this behavior, there is nothing the MNM boundaries or fishing prohibition could or would ever do to provide for the 'proper care and management' of these highly migratory species. And conversely, one only needs to review the successful experience of the nearby Stellwagen Bank National Marine Sanctuary to confirm that fisheries for highly migratory species can and do operate sustainably within the Sanctuary boundaries.

Further, at any given time and in any given place there can also be concentrations or "hot-spots" of marine mammals and even sea turtles throughout this vast productive pelagic habitat. It is certainly true that sometimes those hot-spots occur within the MNM boundaries – but as a correct scientific and statistical analysis would have shown President Obama - over time, these species are no more likely to occur inside the Monument boundaries than virtually any other place within this vast pelagic habitat area. They follow the food, and their food is distributed in large part according to the highly dynamic currents, temperatures and other oceanographic conditions that prevail any given month of any given year. In this respect, the MNM's existence is immaterial to the proper care, management or protection of these pelagic migratory species.

In summary, drawing static lines in the ocean is simply not an effective or appropriate tool for the conservation and management of the pelagic, highly migratory species of fish, marine mammals or sea turtles that are found in this area.

Proper care and management is already provided-- In fact, the "proper care and management" of these species has already been achieved through an extraordinarily comprehensive domestic and international conservation and management regime pursuant to numerous Federal statutes and international agreements that transcends anything in the world.

More specifically, extensive regulatory policies and procedures are in place pursuant to numerous statutes including the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), the Endangered Species Act, the Marine Mammal Protection Act, and the Atlantic Tunas Convention Act, as well as the binding obligations issued through the International Commission for the Conservation of Atlantic Tunas (ICCAT).

Relative to this comprehensive conservation and management regime, the MNM simply does not enhance or advance such "proper care and management" for these species in any measurable or meaningful way. And, although we will not go into full detail here, a careful study of these statutes and their programmatic implementation would reveal that the MNM designation and prohibition on the pelagic longline and other fisheries are fundamentally inconsistent with those mandates and programs.

For one example of this stark inconsistency, National Standard 1 of the Magnuson-Stevens Act (16 U.S.C. 1851(a)(1)) mandates that U.S. conservation and management measures must achieve "*on a continuing basis, the optimum yield from each fishery for the United States fishing industry*".

As another example, section 304(g) of the Magnuson-Stevens Act sets forth the specific conservation and management standards for U.S. Atlantic highly migratory species fisheries including our fishery. Such conservation and management measures must –

- "*minimize, to the extent practicable, any disadvantage to United States fishermen relative to their foreign competitors*";

- "*provide fishing vessels of the United States with a reasonable opportunity to harvest*" its ICCAT quotas; and

- "*take into consideration traditional fishing patterns of fishing vessels of the United States and the operating requirements of the fisheries".*

Counterproductive to conservation—Further to that point, the fishing prohibition on pelagic longline fishing is likely to be counterproductive to conservation for at least the following two reasons.

First, the prohibition on pelagic longline fishing can have the effect of displacing existing fishing effort into areas where at any given time marine mammal are more concentrated than in the MNM area. The logistical consequence of this displacement is that the fleet's ability to avoid marine mammal interactions is reduced.

To elaborate, the US pelagic longline fleet has participated extensively in the Take Reduction Team established for this fishery under the Marine Mammal Protection Act. The resulting Take Reduction Plan sets forth a comprehensive research and management strategy for minimizing this fishery's interactions with marine mammals.

This Plan includes strategies for avoidance including, among other things, a critical protocol for vessel-to-vessel communications regarding the location of marine mammals at any given time, and the requirement for vessels to relocate to areas away from those marine mammals. This intricate system of marine mammal avoidance would likely be disrupted and undermined by the

displacement of pelagic longline fishermen from their traditional fishing grounds inside the MNM area and into areas where there may be higher concentrations of marine mammals. Thus, the perverse consequence of the MNM's prohibition on pelagic longline fishing is more likely to be an increase in fishery interactions with marine mammals and a decrease marine mammal conservation.

Further, due to the nature of strong, unpredictable ocean currents in the vicinity of the MNM, pelagic longline gear can inadvertently drift into the MNM area. This would be a violation of law and expose fishermen to Federal prosecution. Thus, pelagic longline fishermen must set their gear at a distance – sometimes a substantial distance - from the MNM boundaries as a buffer in order to avoid such a violation.

This has the practical effect of substantially increasing the area of the fishing prohibition far beyond the MNM boundaries, and this has the counterproductive effect of even further displacing fishermen into areas they would prefer to stay out of in order to avoid marine mammal interactions consistent with the Take Reduction Plan. Further complicating this logistical nightmare is the close proximity of the MNM to the Canadian border which, of course, presents yet another legal boundary for our fleet's operations.

More gear conflicts and less safety at sea **–** The displacement effect of the fishing prohibition forces our fishermen to make unfortunate choices. Either they choose to fish in a more compressed area and risk gear conflicts with each other and the gear of other fisheries such as fixed pot gear – or they must choose to fish in areas that are a much greater distance from shore than their vessel size would justify. This, of course, presents a serious safety hazard to our captains and crew. Similarly, any prohibition on the transiting of pelagic longline vessels through the Monument would also pose a safety hazard by forcing vessels to travel greater distances farther offshore.

Net conservation loss to foreign fisheries -- The second counterproductive effect of the pelagic longline fishing prohibition on conservation relates to the international fishery management regime. As noted above, highly migratory fish stocks are intensively managed multilaterally by the International Commission for the Conservation of Atlantic Tunas, and domestically by the National Oceanic and Atmospheric Administration (NOAA) Highly Migratory Species Division pursuant to multiple statutory authorities. Both the ICCAT and domestic management regimes are science-based, and ICCAT now has implemented what is perhaps the most effective compliance program of any Regional Fishery Management Organization (RFMO) for tuna in the world. The annual amount of catch (quota) of certain fish stocks such as swordfish the U.S. fleet is allowed to catch is ultimately dictated through binding measures adopted by ICCAT.

We note that the canyon and seamount areas included within this MNM are not identified by either the domestic or ICCAT management regimes as in need of special or additional conservation and management measures such as a closure of our fishery for the purposes of highly migratory fish species or protected species conservation.

However, at certain times of the year (such as July and August) and depending on the dynamics of the Gulf Stream and other oceanographic forces, this area can be among the most productive fishing grounds for our fleet. This area is of substantial economic importance to our fishery and the communities that depend on it as explained in greater detail under consideration (iv) below.

Thus, the obvious consequence of the fishing prohibition is that the US pelagic longline fleet suffers a reduction in its overall fishing effort and catch (and revenue). This is in part because U.S. pelagic longline vessels are very small compared to the vessels of major pelagic longline fishing nations such as China, Taiwan and Japan, and so their range and fishing grounds are comparatively limited geographically. The closure of this important fishing area has displaced and concentrated the U.S. small vessel fleet into smaller areas presenting a logistical limit to the amount of gear the fleet can safely set to avoid conflicts with each other and other fisheries. Such a reduction in effort translates to a reduction in the U.S. catch of the quotas allocated to the U.S. through ICCAT.

Among all U.S and foreign fisheries Atlantic-wide, the U.S. pelagic longline fishery is the most highly accountable for its catch, bycatch and various operational requirements. This is achieved in part through an intensive system of 100% Vessel Monitoring System (VMS) coverage, a statistically significant level of human observer coverage established by NOAA, and 100% coverage by video surveillance cameras (electronic monitoring). The fishery is fully compliant with the domestic and ICCAT regulatory regimes. It has participated extensively in the research, development, implementation and global advancement of the most effective sea turtle bycatch reduction regime for pelagic longline fisheries in the world.

Similarly, the U.S. pelagic longline fishery has assumed the leadership role for highly migratory species conservation at ICCAT where, for one example, it played a major part in establishing the successful rebuilding plan for the north Atlantic swordfish stock. Domestically, each and every U.S. pelagic longline vessel is held precisely accountable to its bycatch quota share of bluefin tuna. No other pelagic longline fishery or fishing nation in the world has achieved or advanced a comparable standard of conservation for highly migratory fish stocks or protected species bycatch. Not even close.

Consequently, any reduction in the ability of the U.S. pelagic longline fleet to fully harvest its ICCAT quotas that is caused by the Monument fishing prohibition would ultimately result in those quotas being reallocated by ICCAT to other fishing nations that do not manage or control their fisheries to conserve target or bycatch species in a manner that is even remotely comparable to the U.S.

Thus, the consequence of reallocating U.S. ICCAT quotas to other nations would be a net reduction in the conservation of swordfish, tuna, billfish and pelagic shark stocks, and a similar net decrease in the protection of sea turtles and marine mammals. In this respect, such a closure would likely have the perverse and counterproductive effect of actually triggering overfishing of highly migratory fish stocks by foreign fisheries and increasing their bycatch of sea turtles and marine mammals the U.S. has invested so heavily in protecting.

In summary, the fishing prohibition in the MNM does not advance the so-called 'proper care and management' of highly migratory fish species, marine mammals or sea turtles – and is instead likely to have the counterproductive effect of undermining existing regimes that are highly effective in conserving and protecting these species.

Inconsistent with U.S. trade policies -- Finally, we note that another major consequence of reducing US pelagic longline catches of swordfish, tunas and other species, and of any reallocation of US quotas to other nations, would be to increase US imports of those species. An

ongoing U.S. priority is to address our nation's seafood trade deficit– and to achieve this, in part, through providing US industries with a fair and level playing field on which to compete in the US marketplace, and in part by reducing excessive regulatory burdens on U.S. small businesses. This MNM designation is completely at odds with this policy. It creates yet another anticompetitive burden on our industry and provides our foreign competitors with yet another competitive advantage.

(ii) whether designated lands are appropriately classified under the Act as "historic landmarks, historic and prehistoric structures, [or] other objects of historic or scientific interest";

We also cite here the relevant excerpt from President Obama's Proclamation establishing the Northeast Canyons and Seamounts MNM.

> *"WHEREAS, the waters and submerged lands in and around the deep-sea canyons Oceanographer, Lydonia, and Gilbert, and the seamounts Bear, Physalia, Retriever, and Mytilus, contain objects of scientific and historic interest that are situated upon lands owned or controlled by the Federal Government;" (emphasis added)*

This fishery has zero impact-- The MNM prohibits all pelagic longline fishing within its boundaries. Whether or not the submerged lands including the canyons and seamounts underlying this MNM constitute historic landmarks, or historic and prehistoric structures as envisioned by President Obama in his interpretation of the Antiquities Act (we think not), and whether or not the Antiquities Act can be legitimately extended to apply to these submerged lands (we think not), our fishery has absolutely zero interactions with or impacts on the seafloor, canyons or seamounts – or their associated benthic ecosystems. Our fishery is a surface fishery. Our gear is fished to a maximum depth of approximately 200 feet – in most cases literally thousands of feet above the seafloor in the MNM area.

No special historic or scientific interest -- As noted above, the Proclamation establishing this MNM misinterpreted the concept of "objects of historic or scientific interest" set forth in the Antiquities Act as applying to the highly migratory species of fish including tunas, swordfish and other such species, as well as sea turtles and marine mammals, that seasonally occupy the near surface waters of this area. All of these pelagic species range freely and widely throughout vast expanses of the Atlantic Ocean and obviously, they have no direct nexus whatsoever with the submerged lands or geologic structures on the seafloor underlying the MNM.

Further it is difficult to conceive of how a living marine organism such as a tuna, swordfish, sea turtle or marine mammal can be construed as being of "historic interest" in this context. That is at best a rather creative interpretation of the Antiquities Act's plain meaning. These species simply do not constitute "objects of …historic interest".

On the other hand, the *fisheries* for these species are often appropriately considered of historic interest as depicted in many maritime museums along the Atlantic coast. Commercial fisheries were a principal driver of the pre-colonial and colonial economies on which this nation was founded. This legacy is an important reason for sustaining our nation's fisheries. But, living fish and other marine creatures cannot be seriously treated as objects of historic interest.

With respect to the notion of treating these species of fish, sea turtles and marine mammals being treated as "objects of…*scientific* interest", it is true, as a general matter, that marine scientists

study the oceans and the organisms that live in it. And so, like virtually all marine species of plants and animals, these pelagic species are of some scientific interest to somebody for some reason. However, that does not mean that this scientific interest is unique or somehow of greater magnitude than the scientific interest in virtually all other sea life.

Further, such general scientific interest is not somehow enhanced or advanced by virtue of the MNM designation or the prohibition on pelagic longline fishing within the MNM. These highly migratory fish species are largely the subject of scientific study for the purpose of supporting the expansive and highly successful US and international fishery conservation and management regime that ensures the sustainability of our fishery. Similarly, in the case of protected species such as sea turtles and marine mammals, this research, conservation and management regime and underlying statutes ensure that the futures of these species are not jeopardized.

If anything, the MNM area is actually more likely to diminish, not enhance scientific research overall. US pelagic longline vessels provide an essential platform for NOAA and non-Federal scientists to collect data that support critical management including stock assessments. In this way, our fleet has served as a consistent and reliable partner to NOAA and non-Federal marine scientists for decades. The closure of this part of the ocean to our fishery would have the effect of creating a 'black hole' in this data. Likewise, any reduction in pelagic longline fishing effort would, in turn, reduce research opportunities and the collection of important data.

To summarize; the scientific research needed to support fishery conservation and management objectives is not advanced or enhanced by the MNM or the fishing prohibition on our fleet. On the contrary, it is likely to undermine the existing scientific research regime. The species that are the subject of such scientific study do not attain some peculiar or special scientific interest when they happen to be found inside (or outside) of the boundaries of the MNM. Thus, we reiterate; the application of the Antiquities Act in this respect appears to be a unfounded interpretation of its plain meaning and original intent.

(iii) the effects of a designation on the available uses of designated Federal lands, including consideration of the multiple-use policy of section 102(a)(7) of the Federal Land Policy and Management Act (43 U.S.C. 1701(a)(7)), as well as the effects on the available uses of Federal lands beyond the monument boundaries;

We note that Section 1701(a)(7) of Title 43 of the U.S. Code states:

> *"(a) The Congress declares that it is the policy of the United States that—*
> *"(7) goals and objectives be established by law as guidelines for public land use planning, and that management be on the basis of multiple use and sustained yield unless otherwise specified by law;"*

Taking this provision on face value, it is clear that the effect of the MNM designation is to explicitly prohibit the use by the US pelagic longline fishery of the sustainable yield of highly migratory species of tunas, swordfish and other valuable fish stocks that are found within the boundaries of the MNM. This, notwithstanding the facts that –

- this fishery is sustainably managed;

- it has zero impact on the deep-sea benthic habitats which were the original focus of the MNM proposal and, as explained above; and

- these fish do not rationally meet the test for being considered "objects of scientific or historical interest" cited by President Obama as the basis for prohibiting this intensively managed fishery from operating within the MNM pursuant to the Antiquities Act.

Further, although recreational fisheries target the very same highly migratory fish stocks that our fishery does, this MNM designation does not prohibit recreational fishermen from fishing within its boundaries for these or any species. This would appear to be inconsistent with the multiple use objective of the Federal Land Policy and Management Act cited above. It also certainly calls into question the conservation basis used to justify the commercial pelagic longline fishery closure.

Still further, as noted above, due to the nature of strong, unpredictable ocean currents in the vicinity of the MNM, pelagic longline gear can inadvertently drift into the MNM area. This would be a violation of law and subject fishermen to prosecution. In order to avoid such a violation, pelagic longline fishermen must set their gear at a distance – sometimes a substantial distance - from the MNM boundaries. This operational 'buffer' effect is exacerbated by the close proximity of the MNM to the Canadian border. Thus, the practical effect of the MNM designation is to prohibit this fishery from operating in an area that is far greater in size than the 4,913 square miles that fall within its boundaries.

The combined effect of the fishing prohibition inside the MNM area and this 'buffer' effect is to significantly reduce the ability of the fleet to achieve the sustainable (optimum) yields of the fish stocks this fishery targets. These sustainable yields are otherwise authorized under binding ICCAT agreements and the statutory mandates of the Magnuson-Stevens Act.
In summary, the fishing prohibition for the pelagic longline fishery set forth in this MNM designation is fundamentally inconsistent with Federal land use policies and other relevant statutory provisions.

U.S. Regional Fishery Management Councils
www.fisherycouncils.org

Caribbean
Miguel Rolon
Executive Director
Marcos Hanke
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Gulf of Mexico
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South Atlantic
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Western Pacific
Kitty Simonds
Executive Director
Taotasi Archie Soliai
Chair

February 26, 2021

The Honorable Scott De la Vega
Acting Secretary of the Interior
Department of the Interior
1849 C. Street, N.W.
Washington, DC 20230

Dear Mr. Secretary:

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) is the foundation that guides the management, conservation, and use of United States fishery resources. The MSA charges the nation's eight Regional Fishery Management Councils with the responsibility of achieving its goals and objectives. The Council Coordination Committee consists of the senior leaders of all eight Councils. We reviewed Section 3 of the Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis. This section asks you to recommend whether a commercial fishing prohibition within the Northeast Canyons and Seamounts National Marine Monument (Marine Monument) should be restored. We recommend that any fishing restrictions that apply in the Marine Monument continue to be developed, analyzed, and implemented through the public, transparent, and science-based management process required by the MSA. Fishing restrictions in marine national monuments should not be implemented through the Antiquities Act of 1906.

The MSA gives the United States the strongest statutory framework in the world for the management of sustainable fisheries and associated ecosystems. In addition to preventing overfishing and rebuilding overfished stocks, the Councils protect essential fish habitat, minimize bycatch, and comply with protections for species listed under the Endangered Species Act and other Federal laws within the U.S. Exclusive Economic Zone. The Council process is public, transparent, science-based, and adheres to the requirements of the National Environmental Policy Act. As a result, we not only meet conservation objectives but also ensure the sustainability of seafood caught for U.S. consumers, promote the economies of coastal communities, and maintain the social and cultural fabric of our nation's recreational, commercial, and subsistence fishing communities.

To achieve these conservation and management objectives, the Councils use a wide range of management tools, including spatial management (e.g., marine protected areas, gear restricted areas). Through the Councils, more than 1,000 individual spatial habitat and fisheries conservation measures have been implemented, protecting more than 72 percent of the nation's ocean waters from the adverse effects of unsustainable fishing practices.

Designations that use the Antiquities Act of 1906 to adopt fishing restrictions within marine national monuments may disrupt our ability to manage fisheries throughout their range and in an ecosystem-based manner. We are concerned that the Antiquities Act of 1906 does not explicitly require a robust public process or science-based environmental analyses. When a commercial fishing prohibition was adopted for the Marine Monument in 2016, MSA

requirements to achieve optimum yield from the nation's fishery resources were not considered. Nor were other requirements of that statute, such as its emphasis on science-based decision-making, a rigorous public process, and ten national standards for fisheries management. The prohibition can also redirect effort into other areas, which can increase gear conflicts and have unintended consequences on protected species. These issues are routinely examined, evaluated, and discussed with the public through the Council process before decisions are made.

Deep-sea coral protections developed by both the New England and Mid-Atlantic Councils provide excellent examples of how conservation objectives can be achieved through a transparent, and science-based Council process. The New England Council's action will provide sweeping protections for corals off the New England coast and prevents the expansion of fishing effort into areas where corals are likely to be present. The new protection zone encompasses 87 percent of the Marine Monument. The prohibition on bottom-tending fishing gear in the protected areas will provide strong habitat and coral protections in the area while balancing the social and economic impacts to the industry. Similarly, in 2015 the Mid-Atlantic Council approved a large deep-sea coral protection area in the Mid-Atlantic where deep-sea corals are now protected from the impacts of bottom-tending fishing gear. Both of these Councils used similar processes to examine the science, collect input from stakeholders, and develop alternatives in order to protect deep-sea corals. Between the Mid-Atlantic and New England, the deep-sea coral protection areas encompass a total combined area about the size of the state of Florida.

For all of these reasons, as we have noted in our earlier letters to President Obama, the Secretary of the Interior, and the Secretary of Commerce, we believe fisheries management decisions should be made using the robust process established by the MSA. It has been successfully used for over forty years to conserve fishery resources through sustainable, science-based management. We urge you to leave fisheries management in this marine monument to the system established by the MSA.

Sincerely,

Marc Gorelnik Chair
Pacific Fishery Management Council

Mike Luisi, Chair
Mid-Atlantic Fishery Management Council

Archie Taotasi Soliai, Chair
Western Pacific Fishery Management Council

Marcos Hanke, Chair
Caribbean Fishery Management Council

Dr. John Quinn, Chairman
New England Fishery Management Council

Melvin Bell, Chair
South Atlantic Fishery Management Council

Simon Kinneen, Chair
North Pacific Fishery Management Council

Dr. Thomas Frazer, Chair
Gulf of Mexico Fishery Management Council

cc: The Honorable Wynn Coggins, Acting Secretary of Commerce
Mr. Paul Doremus, Assistant Administer for Fisheries (Acting) NOAA/NMFS

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 01930-2276

February 25, 2021

Stephan Ryba, Chief
Regulatory Branch
U.S. Army Corps of Engineers
New York District
Jacob K. Javits Federal Building
26 Federal Plaza
New York, New York, 10278-0090

RE: Public Notice Number: NAN-2020-01079-EME, South Fork Wind, LLC.

Dear Mr. Ryba:

Reference is made to Public Notice (NAN-2020-01079-EME) published on January 6, 2021, which describes an application by South Fork Wind, LLC, to construct an offshore wind farm (SFWF) consisting of up to 15 wind turbine generators and inter-array cables in the Atlantic Ocean on the Outer Continental Shelf (OCS) within BOEM Renewable Energy Lease Area OCS-A 0517, located approximately 19 miles southeast of Block Island, Rhode Island and 35 miles east of Montauk Point, Suffolk County, New York. The project also includes the installation 61.4 miles of export cable from the offshore substation (OSS) to the Town of East Hampton, Suffolk County, New York and the construction of an operations and maintenance (O&M) facility at either Lake Montauk, Town of East Hampton, Suffolk County, New York, or at Quonset Point, North Kingstown, Washington County, Rhode Island. An O&M facility located at Quonset Point would not require any in-water work for the SFWF project. The proposed facility in Lake Montauk would require annual maintenance dredging with beach placement and the installation of new structures.

The Bureau of Ocean Energy Management is the lead federal agency for offshore wind development activities and, as such, is responsible for consulting with us under the Magnuson Stevens Fishery Conservation and Management Act (MSA), the Fish and Wildlife Coordination Act (FWCA), and the Endangered Species Act (ESA). BOEM initiated consultation with us under Section 7 of the ESA on February 8, 2021 and that consultation is ongoing. The essential fish habitat (EFH) consultation under the MSA has not yet been initiated. As a result, it is premature for us to offer any project specific EFH conservation recommendations at this time. However, we recognize that both of our agencies are cooperating agencies with BOEM on the development of the National Environmental Policy Act (NEPA) documents in accordance with the Title 41 of the Fixing America's Surface Transportation (FAST) Act, known as FAST-41,

and that a number of activities including your public interest evaluation, the development of the NEPA documents, and the MSA, FWCA, and ESA consultations must all occur concurrently.

We have been working directly with BOEM, the lead federal agency, related to information needs for our EFH consultation. On December 14, 2020, we provided BOEM with an additional information request in response to a draft EFH Assessment received on October 13, 2020. Currently, we are working with BOEM to ensure the project area is appropriately characterized to reflect the complexity of habitats that occur within the lease area. We expect our consultation with BOEM to be initiated early this spring with the submission of a complete EFH assessment and will provide our recommendations to BOEM within 60 days of receiving the complete assessment. We recommend that any appropriate EFH and FWCA recommendations we make to BOEM as part of the MSA and FWCA consultations be incorporated as special conditions to any Department of the Army permit issued for the proposed activity. As a partner cooperating agency, in response to your Public Notice, we offer the following technical assistance related to our mandates under MSA and FWCA as you undertake your evaluation and public interest review of the activities proposed within your regulatory authority.

General Comments

The waters off of East Hampton and Lake Montauk, NY provide important habitat for many aquatic species including both state and federally managed species and their forage, including the state managed species striped bass (*Morone saxatilis*), tautog (*Tautoga onitis*), blue crab (*Callinectes sapidus*), horseshoe crab (*Limulus polyphemus*), and Eastern oyster (*Crassostrea virginica*). Federally managed species for which EFH has been designated in the project area include, but are not limited to, Atlantic cod (*Gadus morhua*), summer flounder (*Paralichthys dentatus*), winter flounder (*Pseudopluronectes americanus*), longfin inshore squid (*Doryteuthis pealeii*), red hake (*Urophycis chuss*), black sea bass (*Centropristis striata)*, bluefish (*Pomatomus saltatrix*), several species of skates, and a number of highly migratory species. The waters within and surrounding the project area also support strong commercial and recreational fisheries for numerous species, including bluefish, winter and summer flounder, striped bass, blue crab, weakfish (*Cynoscion regalis*), and others.

Given the size of the proposed project, substantial impacts to NOAA-trust resources may occur and an expanded EFH consultation will be required. Of particular concern are potential impacts to spawning and early life history stage habitats and to complex and sensitive habitats. To avoid and minimize adverse impacts to these habitats we typically recommend: 1) in-water work time of year restrictions during spawning and early life history development periods; and 2) the project be sited outside of areas of sensitive and complex habitats. For this project, there is the potential for impacts to spawning and early life history stage habitats of multiple managed species and NOAA trust resources including, Atlantic cod, longfin inshore squid, winter flounder, and horseshoe crabs. There is also the potential for impacts to complex and sensitive habitats including, complex natural rocky habitats and submerged aquatic vegetation (SAV) habitats within the nearshore project areas.

The proposed lease area falls with a portion of Cox Ledge. The complex and unique features of Cox Ledge, and the importance of this area for marine resources and fisheries, is well documented. To protect areas of documented cobble and boulder habitats from benthic disturbance (i.e. fishing gear) the New England Fishery Management Council recently proposed a Habitat Management Area (HMA) that overlaps with a portion of the proposed project area. Cox Ledge is also a known spawning ground for Atlantic cod and serves as the center of a distinct spawning stock for this species. This stock is very important to the area's commercial and recreational fisheries, and is heavily regulated due to the declining abundance and vulnerability resulting from reduced recruitment in recent years.

Aquatic Resources

As mentioned above, the project area provides habitat for a wide variety of commercially and recreationally important fish species and ecologically important habitats. The ones listed below are just a small sample we wish to highlight for your awareness during your review of the application for this project. Some, such as winter flounder, horseshoe crabs, and SAV are species and habitats we often discuss in our comments and recommendations for activities within NY waters. We have commented to you less often on others such as Atlantic cod and rocky habitats because they are not typically affected by the routine regulatory actions upon which our agencies consult.

Atlantic cod

Atlantic cod form discrete aggregations during their spawning season, which varies based on location. Spawning of Atlantic cod is known to occur within the Cox Ledge area between late fall/early winter (November-January) and late winter/early spring (February-April). BOEM is currently funding a study examining the distribution and habitat use of soniferous fish, focusing on cod spawning aggregations on Cox Ledge that includes the project area. Studies conducted on Georges Bank found cod settlement begins approximately 3-4 months post-spawn. Early life stages of Atlantic cod require complex habitats, particularly pebble, cobble and boulder habitats. Minimizing impacts to complex habitats and limiting construction related noise, particularly pile driving activities, between November and April would minimize potential impacts to cod spawning and sensitive life stages on Cox Ledge.

Winter Flounder

Winter flounder is one of the federally managed species we often comment on in our coordination with you on coastal development projects within the New York District. Our concern for this species is based upon a number of factors, but their somewhat unique life history is the main concern, particularly that of the eggs and larvae in the estuaries. Winter flounder have demersal eggs that sink and remain on the bottom until they hatch. After hatching, the larvae are initially planktonic, but following metamorphosis they assume an epibenthic existence. Young-of-the-year flounder tend to burrow in the sand rather than swim away from threats, so they can be entrained in dredge plants. Increased turbidity and the subsequent deposition of the suspended sediments can also smother the winter flounder eggs and can adversely affect their EFH. Avoiding in-water construction activities such as dredging and pile driving when early life stages

are present, generally from January 1 to May 31 is often the preferred method of avoiding and minimizing adverse effects to EFH for these life stages.

We also note that the proposed development of the O&M facility in Lake Montauk would require annual maintenance dredging, an increase from the existing dredge cycle of every four to five years. Although the proposed dredge depth, -12.4 ft. MLW, would still be consistent with the winter flounder EFH designation the proposed dredging may still result in adverse impacts to winter flounder prey. The proposed disturbance pattern change would substantially limit the ability of the benthic communities to recover between dredge events and may result in a reduction of available prey for post-spawn feeding of winter flounder. As the Quonset Point location would not require in-water work, further evaluation should be done to consider if this is a viable option to avoid these impacts to winter flounder prey species.

Horseshoe Crabs

Dredge disposal/placement may result in the loss of horseshoe crabs, their eggs and larvae, and their habitat, resulting in a reduction in prey species for several federally managed species and adverse effect to their EFH. Therefore, it is important to determine if the project site, especially the beaches and nearshore areas are regionally/locally important to horseshoe crabs, either as staging, nursery, resting, foraging or other aggregating-type habitat. Avoiding dredging and placement in Lake Montauk between April 15 to July 15 minimizes potential impacts to horseshoe crab spawning.

Rocky Habitats

Intertidal and subtidal gravel (i.e. mixed sand, pebble, cobble, and/or boulder) habitats with added habitat complexity from invertebrate communities and macroalgal cover serve as important shelter and forage habitat for a variety of species including Atlantic cod, black sea bass, red hake, striped bass, cunner (*Tautogolabrus adspersus*), tautog, and scup (*Stenotomus chrysops*). The structural complexity of rocky habitats is important for fish in that they provide shelter and refuge from predators. Rocky habitats also provide a substrate for macroalgal and epibenthic growth which serves as additional refuge for juvenile fish. The complexity of rocky habitats with, and without, macroalgal and epifaunal cover have been well demonstrated as important habitats for juvenile and adult life history stages of Atlantic pollock (*Gadus chalcogrammus*), red hake, lobster (*Homarus americanus*), cunner and tautog.

Due to their important role for multiple marine organisms, impacts to rocky habitats should be avoided wherever feasible. This is particularly true for rocky habitats supporting macroalgae and/or epifauna. To avoid and minimize impacts to complex habitats, we typically recommend measures such as the micrositing of structures, and/or structure relocation/removal if micrositing would not avoid or minimize permanent impacts to complex, rocky habitats. Other measures that may avoid and/or minimize impacts to these habitats are: 1) restricting anchoring in these habitats; and 2) minimizing scour and cable protection and/or choosing materials that match the existing habitat characteristics in areas where full avoidance is not feasible.

We do note that the Public Notice indicates only 0.07 miles of the cable is expected to require protection for a permanent impact area of 7.9 acres. While the Draft Environmental Impact Statement for the project does include a similar number in one estimation, the Benthic Habitat, EFH, Invertebrate, and Finfish section states that up to 179.3 acres of cable protection may be necessary. We are working with BOEM to clarify what is the expected permanent impact area for cable protection.

Submerged Aquatic Vegetation (SAV)

Submerged aquatic vegetation is designated as a Habitat Area of Particular Concern (HAPC) for Atlantic cod and summer flounder. HAPCs are subsets of EFH that have been designated because of their important ecological function, sensitivity to human induced degradation, development related stressors, and/or the rarity of habitat type. Increases in suspended sediments and the subsequent reductions in water transparency caused by construction activities, such as dredging, limit light attenuation and may result in losses of this important resource. We typically recommend the avoidance of dredging, staging equipment, and mooring within SAV beds, the avoidance of activities that generate suspended sediments in and near SAV beds the vegetation is actively growing and flowering between April 15 to October 31 to avoid affecting the plant's ability to photosynthesize and its growth and survival, and BMPs to ensure turbidity is minimized in the water.

Endangered Species Act

Consultation pursuant to section 7 of the Endangered Species Act was initiated for the South Fork project on February 8, 2021. BOEM is acting as the lead Federal agency for consultation and prepared and submitted a Biological Assessment (BA) to us. BOEM has determined in their BA for the South Fork Wind Farm and Export Cable that the proposed project may affect, and is likely to adversely affect, a number of listed species under our jurisdiction. Our consultation will consider the effects of all proposed federal actions on ESA listed species and critical habitat in the action area, including consideration of the permit proposed for issuance by the US Army Corps of Engineers (ACOE). The FAST-41 Milestone date for completion of the consultation is July 8, 202. We anticipate issuing a biological opinion that will determine whether the proposed actions are likely to jeopardize the continued existence of any listed species or destroy or adversely modify any designated critical habitat. This Opinion may include an Incidental Take Statement that may include Reasonable and Prudent Measures (RPMs) and implementing Terms and Conditions. It is our expectation that any of these RPMs or terms and conditions that apply to the ACOE will be incorporated as conditions of any permit you issue for this project. We may also include Conservation Measures that should be considered by you as appropriate to further minimize effects of the proposed action.

Conclusion

Thank you for the opportunity to comment on the Public Notice for this project. We look forward to continued coordination as a partner cooperating agency on this project as it moves forward in the NEPA process. We will update you on the status of the MSA, FWCA, and ESA consultations as information becomes available and if any additional information or issues of

concern arise. If you have any questions or need additional information, please contact Alison Verkade at (978)-281-9266 or by e-mail (alison.verkade@noaa.gov). Should you have any questions about the ongoing Section 7 consultation process for the South Fork project, please contact Nick Sisson at (978) 281-9179 or by email (nick.sisson@noaa.gov).

Sincerely,

GREENE.KAREN.M.1365830785 Digitally signed by GREENE.KAREN.M.1365830785 Date: 2021.02.26 12:09:57 -05'00'

Karen M. Greene
Mid-Atlantic Field Offices Supervisor
Habitat Conservation and Ecosystem Services

cc:

Nick Sisson, GARFO PRD
Peter Burns, GARFO HESD
Lisa Grudzinski, USACE
Tim Timmerman, USEPA
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Thomas Nies, NEFMC
Christopher Moore, MAFMC
Lisa Havel, ASMFC

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 01930-2276

February 24, 2020

Randall G. Hintz
Chief, Operations Support Branch
U.S. Army Corp of Engineers
New York District
Jacob K. Javits Federal Building
26 Federal Plaza
New York, NY, 10278-0090

RE: Essential Fish Habitat Assessment, Maintenance Dredging of Jamaica Bay (Rockaway Inlet), New York, Federal Navigation Project

Dear Mr. Hintz:

We have reviewed the revised essential fish habitat (EFH) assessment and additional supplemental information provided in response to our November 23, 2020, letter on the proposed maintenance dredging of the Jamaica Bay – Rockaway Inlet, New York Federal Navigation Project and the placement of the dredged material within the U.S. Army Corps of Engineers' (ACOE) Borrow Area West of the Rockaway Ocean Sand Borrow Area (ROSBA-west) located in the Atlantic Ocean offshore of Queens County, New York. ACOE plans to remove approximately 500,000 cubic yards (cy) of sand from a shoal within the Rockaway Inlet using a small hopper or mechanical dredge with scows and place the material within the southern half of the approximately 440-acre ROSBA-west. This material is anticipated to be used sometime in the future as a source of sand for the Atlantic Coast of New York, East Rockaway Inlet to Rockaway Inlet and Jamaica Bay Coastal Storm Risk Management Project.

In our previous letter, we raised concerns regarding the placement of dredged material at the ROSBA-west, the subsequent removal of the material, and the effects of these actions on EFH. Through coordination with your staff, our concerns have been addressed. From the information provided by your staff, the dredging of the shoal within Rockaway Inlet and placement of material at the ROSBA-west is anticipated to occur every 4-6 years. Reuse of material from the ROSBA-west for the Rockaway Coastal Storm Risk Management Project is anticipated to occur approximately every 4-years as needed during the 50-year life of the project and is projected to begin as early as 2022. The initial fill is expected to add 1.6 million cy of sand to the beach from the borrow area with 1 million cy to be added during each subsequent renourishment cycle. EFH consultations have already been completed in the past for the beach nourishment activities using the ROSBA-west as a sand source.

Magnuson Stevens Fishery Conservation and Management Act

The MSA and the FWCA require federal agencies to consult with one another on projects such as this that may adversely affect EFH and other aquatic resources. In turn, we must provide recommendations to conserve EFH. These recommendations may include measures to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH resulting from actions or proposed actions authorized, funded, or undertaken by that agency. 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 this consultation procedure.

As discussed in our previous letter, the project area has been designated as EFH under the MSA for a number of federally managed species including Atlantic butterfish (*Peprilus triacanthus*), Atlantic sea herring (*Clupea harengus*), bluefish (*Pomatomus saltatrix*), black sea bass (*Centropristis striata*), red hake (*Urophycis chuss*), silver hake (*Merluccius bilinearis*; Rockaway Inlet only), scup (*Stenotomus chrysops*), summer flounder (*Paralichthys dentatus*), winter flounder (*Pseudopleuronectes americanus*), windowpane flounder (*Scophthalmus aquosus*), yellowtail flounder (*Limanda ferruginea*), monkfish (*Lophius americanus*), little skate (*Leucoraja erinacea*), winter skate (*Leucoraja ocellata*), longfin inshore squid (*Loligo pealeii*), and others. The project area is also EFH for several highly migratory species including the Atlantic stock of smoothhound shark complex (Mustelus), dusky shark (*Carcharhinus obscurus*), common thresher shark (*Alopias vulpinus*), sandbar shark (*Carcharhinus plumbeus*; ROSBA-west only), sand tiger shark (*Carcharias taurus*; ROSBA-west only) and others.

Dredging the shoal and placement of material at the ROSBA-west will adversely affect EFH within the shoaled area of the federal navigation channel and in the borrow area. These adverse effects are the result of disturbance of the sediments, increases in turbidity and the changes in water quality at both the dredging location and the placement site, as well as the dredging location when the sand is removed from the borrow area during the next beach renourishment cycle. As indicated in the EFH assessment, water quality impacts are expected to be temporary and minor. The effects on the benthic community will also be temporary, but the recovery may not fully occur while the channel is actively maintained or while the borrow area remains in use.

Although adverse effects to EFH and NOAA trust resources will result from this project, they appear to have been avoided and minimized to the maximum extent practicable through the use of best management practices (BMPs) during dredging and sand placement. Such designs include the avoidance of dredging between January 1 and May 31 of any year to minimize adverse impact to winter flounder early life stages and waiting to turn the sand extraction pumps on until the drag head is at or near the sea bottom and turning off the pump prior to being lifted from the sea bottom to avoid entrainment of resources that occupy areas in the lower, middle, and upper level of the water column. Additionally, your staff have agreed to take the specific location of future borrow area dredging into consideration as appropriate and as the information is available to refine the specific dredged sand placement location within ROSBA-west.

As discussed in our previous letter and during conversations with your staff, we recommend the ACOE continue to seek opportunities for the direct placement of sand on beaches served by the ROSBA-west when maintenance dredging this and other inlets rather than placement in ROSBA-

west with later removal for beach renourishment.

Essential Fish Habitat Conservation Recommendations

Pursuant to Section 305(b)(4)(A) of the MSA we request that you adopt the following EFH conservation recommendations to minimize or offset adverse impacts on EFH:

- Continue to adhere to the seasonal work windows developed for the maintenance dredging of the Jamaica Bay/Rockaway Inlet to avoid and minimize impacts to winter flounder. (No dredging between January 1 and May 31 of any year.)
- Consider options for the direct placement of sand on beaches served by the ROSBA-west.
- Document the exact placement location within the ROSBA-west, which can be incorporated into a management plan for the future use of the borrow area for sand placement from dredging of the shoal within the federal navigation channel.
- Provide us with a report of the dredging and placement activities prior to each new dredging event to ensure that the cumulative effects of dredging and sand placement are no more than minimal and the basis for our EFH determination remains unchanged. This notification should include the following information.

  Within Jamaica Bay/Rockaway Inlet:
  - Anticipated schedule for dredging and placement at ROSBA-west
  - Cubic yardage and depths to be attained
  - Areal extent of the shoal to be dredged

  At the ROSBA-west:
  - Areal extent of previous material placement
  - Areal extent of current area for material placement
  - Areal extent of previous dredging for beach placement
  - Amount of material removed
  - Date(s) material was removed
  - Where the material was placed

Please note that Section 305(b)(4)(B) of the MSA requires you to provide us with a detailed written response to these EFH conservation recommendations, including a description of measures adopted for avoiding, mitigating, or offsetting the impact of the project on EFH. In the case of a response that is inconsistent with our recommendations, Section 305(b)(4)(B) of the MSA also indicates that you must explain your reasons for not following the recommendations. Included in such reasoning would be the scientific justification for any disagreements with us over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects pursuant to 50 CFR 600.920(k). This response must be provided within 30 days after receiving our EFH conservation recommendations and at least 10 days prior to final approval of this action.

Please also note that a distinct and further EFH consultation must be reinitiated pursuant to 50 CRF 600.920 (j) if new information becomes available, or if the project is revised in such a manner that affects the basis for above determination.

Conclusion

We look forward to your response to our EFH recommendations and continued coordination of maintenance dredging activities within the federal navigation channel as well as the use of ROSBA-west. As always, please do not hesitate to contact Jessie Murray (Jessie.Murray@noaa.gov, 732-872-3116) in our Sandy Hook field office if you have any questions or need assistance.

Sincerely,

Louis A. Chiarella
Assistant Regional Administrator
for Habitat Conservation

cc:

GARFO PRD – E. Carson-Supino
GARFO APDS - J. Pelligrino, V. Vecchio
NY ACOE – G. Alexander, C. Provoncha, G. Perlas
FWS – S. Sinkevich
NYDEC – S. Zahn
EPA Region II – M. Finocchiaro
NEFMC – T. Nies
MAFMC – C. Moore
ASMFC – L. Havel

New England Fishery Management Council

MID-ATLANTIC FISHERY MANAGEMENT COUNCIL

February 22, 2021

Program Manager, Bureau of Ocean Energy Management
Office of Renewable Energy Programs
45600 Woodland Road (VAM-OREP)
Sterling, Virginia 20166

Dear Sir/Madam,

Please accept these comments from the New England Fishery Management Council (New England Council) and Mid-Atlantic Fishery Management Council (Mid-Atlantic Council) on the Draft Environmental Impact Statement (DEIS) for Deepwater Wind South Fork LLC's (DWSF) wind farm and export cable proposed offshore of Rhode Island.

The New England Council has primary management jurisdiction over 28 marine fishery species in federal waters and is composed of members from Connecticut to Maine. The Mid-Atlantic Council manages more than 65 marine species[1] in federal waters and is composed of members from the coastal states of New York to North Carolina (including Pennsylvania). In addition to managing these fisheries, both Councils have enacted measures to identify and conserve essential fish habitats (EFH), protect deep sea corals, and manage forage fisheries sustainably. The Councils support policies for U.S. wind energy development and operations that will sustain the health of marine ecosystems and fisheries resources. While the Councils recognize the importance of domestic energy development to U.S. economic security, we note that the marine fisheries throughout New England and the Mid-Atlantic, including within the project area, and in surrounding areas, are profoundly important to the social and economic well-being of communities in the Northeast U.S. and provide numerous benefits to the nation, including domestic food security.

General comments

Given that multiple wind farms are simultaneously undergoing environmental review, lessons learned while working with cooperating agencies to prepare EIS documents should be adopted for subsequent projects. These include methods for processing and analyzing data (our particular interests relate to fisheries and seafloor habitats), as well as consistent organization of documents so that information is easier to find. We understand that standardization will be challenging when environmental review processes overlap and there are different authors involved in each project. However, consistency in approaches will benefit stakeholders who seek to engage in the review process for these extremely complex projects.

It is essential to clearly identify the impacts of each alternative on each resource, and to compare impacts across alternatives. The table describing what constitutes negligible, minor, moderate, or major

[1] Fifteen species are managed with specific Fishery Management Plans, and over 50 forage species are managed as "ecosystem components" within the Mid-Atlantic Council's FMPs.

impacts across the different resources provides useful criteria for evaluating which level of impacts might be assigned under various circumstances (Table 3.1.1-1). However, based on the data presented, the impact levels estimated in Chapter 3 do not always seem to match these definitions. In addition, the overall impacts conclusions listed in Table 2.3.1-1 (Comparison of Impacts by Alternative) are the same for the proposed action and the transit and habitat alternatives. Even if the three alternatives do have the same magnitude of impacts (negligible, minor, moderate, or major), their relative impacts should be ranked for each resource. For example, as compared to the proposed action, will the habitat alternative result in less adverse impact to complex habitat, even if the impact magnitude of both alternatives is minor? Will the vessel transit alternative improve vessel navigation through the lease area? Clear comparisons among alternatives will improve the utility of the FEIS as a decision support tool, and importantly, such comparisons are required by 40 CFR 1502.14[2] which states that the document "…should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public." This is a significant shortcoming of the DEIS and makes it difficult to compare the alternatives.

We recognize that it is an editorial decision to specify magnitude but not direction for adverse impacts (vs. magnitude and direction for beneficial impacts); however, it would be helpful to reiterate this caveat at intervals throughout the text. In addition, BOEM should be careful when summarizing the effects of an alternative on a resource when a range of positive and negative outcomes are expected over different time frames due to a range of impact producing factors. This should be noted as a caveat wherever impacts are summarized. Direct and cumulative impacts are described in a single narrative by alternative and resource in Chapter 3. This is a reasonable way to structure the analysis, but it is sometimes difficult to follow where the DEIS is describing a direct project effect vs. a cumulative effect. Relative to long term impacts, the document should acknowledge that although future decommissioning will attempt to reverse all impacts and return the area to pre-construction conditions, this may not be possible.

We know BOEM is working under Secretarial Order regarding maximum document length. Our observation while reviewing these documents is that the page limits relegate important content to appendices. BOEM should carefully consider whether additional information can be included in the body of the FEIS. For example, where impacts are deemed to be negligible or minor for a resource, estimates of direct and cumulative effects are provided in Appendix H. We recommend at least summarizing negligible and minor impacts in Table 2.3.1-1. We also suggest that this table would make more sense as part of Chapter 3, which focuses on impacts, rather than at the end of Chapter 2, which focuses on the range of alternatives. In addition, the written descriptions of the geographic analysis areas for each resource (Table E-1 in Appendix E) are fundamental to understanding the assessment and we believe are necessary to include in the body of the document. To the extent that information must be placed in an appendix, we recommend that the document include hyperlinks to figures, tables, and section headings throughout the document. Most of the maps are provided in the appendices to streamline the body of the document, but small reference maps of wind energy areas and lease areas would be useful at intervals throughout the text. Since the EIS frequently references the

[2] Here we are referring to the previous NEPA regulations, but this requirement is included in the 2020 NEPA regulations as well, under the same section number.

Construction and Operations Plan (COP), we appreciate that BOEM has provided very specific references to the relevant volumes and sections, as the COP itself is a complex document.

Management alternatives

We appreciate BOEM's analysis of the transit lane alternative, as recommended by fishery stakeholders, and the habitat alternative. Since some turbine locations are considered for removal in the transit lane and habitat alternatives, it would be helpful to understand whether these alternatives do in fact meet the purpose and need for the project. The purpose and need includes the following: "In addition, DWSF's goal is to fulfill its contractual commitments to Long Island Power Authority (LIPA) pursuant to a power purchase agreement executed in 2017." This statement suggests that the power purchase agreement, and by extension the amount of power expected by LIPA, is an important consideration for evaluating the range of alternatives. However, the total project generation capacity is not mentioned in the DEIS. From the New York State Energy Research & Development Authority's website[3], the expectation is that the project would be 130 MW. With 15 possible locations, and up to 12 MW turbines, it would be possible to install only 11 turbines and still generate 130 MW. A reduction in the number of turbines would reduce impacts on both habitat and fisheries. Due to the large amount of complex habitat in the project area, it will be important to minimize the amount of impacted habitat while achieving the project's designed power output. The document should provide some discussion of why the greater number of turbines is planned.

The fisheries habitat impact minimization alternative does not specify how many or which turbines might be microsited or removed. While we understand that analysis of habitat data is ongoing, we think the potential differences between this alternative and the proposed action could have been more fully specified in the DEIS, and we look forward to additional clarity in the FEIS. Please include a more specific definition of complex habitat, for example percent of gravels, existence of attached epifauna, occurrence of boulders or bedrock in addition to cobble and pebble, etc. In addition, the alternative should indicate how different sites might be ranked in terms of which locations might be dropped from the array to best minimize impacts. For example, would the preference be to maintain spatial continuity of complex habitat? To avoid areas with the highest percent cover of gravels or attached fauna? Considering two locations, one known to have complex habitat, and one with potentially complex habitat, would avoidance of known habitat be the preferred approach, or would both be avoided? We recommend that the FEIS indicate how habitat conditions were assessed at each site based on what data, as well as which locations are most appropriate for micrositing or turbine removal and why.

Mitigation measures are described in Appendix G. Table G-1 summarizes measures that have been agreed to by DWSF and Table G-2 lists potential additional measures. While not alternatives per se, these measures are fundamental to how the project will be constructed and will influence the impacts the project will have on various resources. The FEIS should clarify if any of the mitigation measures listed in Table G-2 are assumed as part of the alternatives, including for the purpose of impacts analysis. This clarification is important because some of these measures could have significant potential for reducing project impacts, potentially more so than what is suggested in the document. As

[3] https://www.nyserda.ny.gov/All-Programs/Programs/Offshore-Wind/Focus-Areas/NY-Offshore-Wind-Projects

stated on page 3-38: "If BOEM requires the above measures, impacts to benthic habitat, EFH, invertebrates, and finfish could be further reduced, although impacts would still be negligible to moderate." For example, Section 3.5.1.4 notes that monitoring of the export cable would reduce the expected adverse impacts on commercial fishing, however, this is only included as a potential additional mitigation measure in Table G-2. The issue of which mitigation measures might be required becomes further complicated when considering the cumulative scenario. It seems that the same mitigation measures will likely be required for other projects, but this would ideally be clarified as it has bearing on the cumulative effects analysis: "Assuming other offshore wind projects employ the same minimizing measures included in the Project, impacts would be further reduced and would be moderate" (Appendix H, page H-68).

Overall, Table G-1 and Table G-2 are very general and do not detail what each mitigation plan entails and the expected effects on resource impacts. This has implications for which subset of the commercial fishing sector, for example, will likely be most impacted and in need of financial compensation, even if the overall fishing fleet experiences negligible to minor impacts. Also, the financial compensation policy for the fishing industry for any lost or damaged gear is referenced in the DEIS as being included in the communications plan; however, we cannot find the communications plan through the DEIS or COP references. Please include a link to the communications plan in the FEIS.

In order to reduce potential impacts, we recommend that BOEM require the following mitigation measures shown in Table G-2: (1) *anchoring plan* to limit disturbance to bottom habitat (especially on Cox Ledge) during construction of platforms, (2) *post installation cable monitoring plan* to proactively mitigate for any cable exposure and risk to mobile gear from shifting bottom sediments (e.g., Block Island Wind Farm situation), (3) *pile-driving sound source verification plan* and *monitoring plan* to better understand how energy is propagated through the water and seafloor to help assure the required 10 dB reduction in sound is achieved to minimize harm to fish, (4) *geophysical survey vessel collision avoidance* of whales, turtles, and other protected species requiring protected species observers to help avoid any species interaction and to collect biological samples in the wind farm area, and (5) *scientific survey mitigation* through funding to help consider ways to address the likely missing NOAA (National Oceanic and Atmospheric Administration) survey data in the wind energy area, which has potentially major implications for stock assessments and catch limit advice.

Impacts to physical habitat and EFH

We recognize that additional habitat data analysis and mapping will be completed prior to development of the FEIS, and therefore it is not possible to fully evaluate the impacts of any of the alternatives, including the fisheries habitat impact minimization alternative, on physical habitat and EFH. However, this uncertainty makes the DEIS difficult to review, in the sense that the physical habitat impacts analysis is very incomplete. This information limitation also makes it impossible to compare the habitat alternative to the proposed action and transit alternatives. While the DEIS places all three alternatives in the same category (negligible to minor), we expect the magnitude of the impacts will vary across alternatives because the number of turbines will change. For example, page 3-38 states: "Although the number of wind turbine generators and their associated inter-array cables varies slightly, BOEM expects that benthic resource, EFH, invertebrate, and finfish impacts would range from negligible to minor for all action alternatives." This point could be followed by a statement such as, "These impacts would vary in degree across alternatives, depending on the final number and siting of

turbines. For example, the minor negative impacts of the habitat alternative on habitat would be lesser in magnitude than the minor negative impacts of the proposed action." We assume that the transit alternative, which removes turbine locations that appear to be within complex habitat, would also have positive habitat impacts relative to the proposed action.

We agree that avoiding placement of piles, scour, or cables within complex habitat will reduce impacts to physical habitats and EFH. We also agree that seafloor disturbance during installation may be short term in sandy or muddy-sand areas. However, the FEIS should be clear about when permanent conversion of habitat may occur, and what the expected effects might be, and should estimate how much conversion is expected depending on how many and which turbine locations are used. In terms of impacts determinations, if there are permanent changes in habitat types, this outcome is not consistent with the definitions of negligible or minor provided in Table 3.1.1-1, which imply a temporary change. It would be useful to state how much conversion, as an absolute amount or as a percent of the project area, is allowable under a minor determination, vs. a moderate or major impact determination.

Overall, a more quantitative impacts analysis would elucidate the benefits of the habitat or transit alternatives relative to the proposed action. This analysis could include information such as how much complex habitat presently occurs within the project site, the expected area of overlap with piles, foundations, and cable routes, overall and by turbine location, how much complex habitat will be created where there is currently sand, and how much natural hard bottom would be converted to artificial hard bottom. Relative to artificial hard bottom, options for scour protection materials are listed but not described in any detail in the COP. The New England Council's submarine cables policy recommends using materials that mimic natural, nearby habitats where possible. It would be helpful to identify the characteristics of any cable protection materials, should burial depths of 4-6 feet not be achieved, because these materials have the potential to mimic natural complex habitats, and thus contribute to the net amount of complex habitat that would exist in the area once the project is constructed.

As a foundation for any further analysis, it would be helpful to explain more specifically how complex habitat is defined, beyond occurrence of glacial moraine and coarse sediment as compared to areas of sand and muddy sand (see section 3.2.4.1.1, page 3-5). BOEM's presentation during the February 11 public information session suggested that greater than 5% gravel coverage is a threshold that was used to identify complex habitat, but we could not find this definition in the DEIS. We recommend the definition in NOAA Fisheries' habitat mapping recommendations.[4] This definition should in turn be clearly mapped to the data used to classify habitats, and classification challenges should be identified, at least briefly, in the chapter about impacts analysis. For example, pebble and cobble habitats are important to many finfish and invertebrate species, as stated in the DEIS. However, if acoustic mapping methods are unable to detect features at the scale of a few centimeters, how are pebble or cobble areas identified within the lease area? Ultimately the habitat delineations must be consistently and clearly mapped to the available data. We are particularly concerned about accurate habitat

[4] These are posted on the NEFMC-MAMFC joint wind webpage at https://static1.squarespace.com/static/511cdc7fe4b00307a2628ac6/t/5ed7a3d163b9cb64d977a88f/1591190482376/NMFS+HabMapRecs+to+BOEM_May272020.pdf

delineations in the southern part of the project area that overlaps Cox Ledge.

Improved map products would better support the impacts analysis. Figure 3.4.2-1 is helpful for understanding the rough distribution of habitats in the project area, but it is difficult to assess individual turbine locations at this scale. Ideally the FEIS would include a map of this size for each turbine location and the adjacent cable corridor. Also, the caption should clarify that the black markings indicate surficial boulder, and the text should describe why boulder can be identified throughout the project area, but complex/non-complex habitat is only identified in specific corridors overlapping the turbine and cable locations. Occurrence of boulders would suggest that the area should be identified as complex habitat. Based solely on Figure 3.4.2-1, it appears that all locations except 2, 3, 4, 7, and 11 overlap with complex habitat and might therefore be considered for removal under the habitat alternative. Finally, in the COP (page 3-38, and Appendix F Figure 3) there are maps of areas that may require boulder relocation. How were these areas identified?

Finally, related to habitat description and delineation, we are confused by the terminology 'mobile gravel' as used in the appendices. It seems this term is intended to indicate areas where gravels (e.g., pebbles and cobbles) occur within a mobile sand matrix; however, we think it would be more appropriate to characterize the sand as mobile. More important than the terminology, the analysis should indicate whether the dynamic nature of these seafloor habitats is material to the estimation of impacts. Is the implication that sediment movement will facilitate rapid return of the habitat to pre-construction conditions?

Impacts to invertebrates and finfish

The document should include greater detail on how the impacts of the proposed action and the other two alternatives vary across different species of commercial and recreational importance, especially the species that overlap the most with the wind farm area and analysis area (e.g., Section 3.4.2.1.2 includes some species without nexus to the wind farm or surrounding area). This level of detail is important for determining the likely impacts to a species that is rebuilding (e.g., Atlantic cod) and evaluating the effectiveness of mitigation and monitoring measures going forward for this wind farm and other future projects. Species-specific impacts are important to include because even if the impacts are negligible to minor at the population level, the adverse impacts could be more substantial at higher spatial resolution resulting in localized depletion, disruption in cod spawning, alteration to squid recruitment, etc., all of which indirectly impact fishermen in this region. For species with complex population structure, like Atlantic cod, it is important to maintain local spawning components throughout the species' range. Both the planned and potential mitigation measures in Appendix G should also specify how these measures are likely to reduce impacts to commercial and recreational species to the species-level.

The Atlantic Cod Stock Structure Working Group concluded there are more than two stocks of Atlantic cod, including a likely separate Southern New England stock, which overlaps with Cox Ledge EFH area (Peer Review of the Atlantic Cod Stock Structure Working Group Report 2020[5]). This area

[5] Kritzer, J. 2020. Peer Review of the Atlantic Cod Stock Structure Working Group Report. Presented to the NEFMC Scientific and Statistical Committee. June 4, 2020. Available at https://s3.amazonaws.com/nefmc.org/Presentation-ACSSWG-Review-Panel-Report.pdf

could be greatly beneficial for stock rebuilding given this and other surrounding complex habitat areas are important for cod spawning and survival of juvenile cod. The DEIS does not consider how the proposed action will impact the Southern New England cod stock or cod rebuilding more broadly.

Impacts to herring, mackerel, and squid, and other ecologically important forage species (e.g., sandlance) should be included in the FEIS. Construction of the wind farm will likely at least temporarily negatively impact these forage species (displacement due to underwater noise), which could result in predators of these species (e.g., cod, pollock) moving elsewhere (again, at least temporarily). This outcome in turn could negatively impact the commercial, for-hire recreational, and private recreational fishermen who fish in those areas. This impact could be partially offset by the "reef effect" as it does for the impact on marine mammals as stated on page 3-59; however, this point should be clearly stated. Time of year restrictions related to pile driving should be considered as a mitigation measure, since some species, including longfin squid, could be disproportionately affected if most pile driving occurs in summer during their spawning season.

Multiple aspects of wind farm construction and operations involve noise production. Noise can negatively affect biological processes for many species of fishes and invertebrates. Table 2.3.1-1 lists negligible to minor impacts for invertebrates and finfish; however, Table 3.4.2-3 lists injury from underwater construction noise to finfish larger than two grams out to a radius of 39,265 ft from each monopile during installation. This is a diameter of 12.9 nm, suggesting a larger impact than what is listed in Table 2.3.1-1. On page 3-53 the DEIS indicates that due to 'difficult substrate conditions' pile driving at some turbine locations could take longer than the expected installation time of two hours. Given the amount of hard bottom at the South Fork site, some additional exploration of this issue in the FEIS would be helpful. In addition, the two-hour estimate mentioned in the proposed action section differs from the 4-6 hours mentioned on page 3-46 (No Action/Future Activities section). In general, the cumulative impacts of pile driving for multiple projects at the same time should be given more emphasis, since construction of these projects could overlap both temporally and spatially.

Impacts to commercial fishing

The estimates of commercial fishing revenue exposed to offshore wind energy development by fishery are helpful to include, however, without corresponding landings information by species and stock area, the impacts on a particular fishery may be incomplete. Focusing on ex-vessel value can mask other important considerations such as the use of a low-value species as bait for a high-value species or the number of impacted fishery participants. For example, skates are typically a low revenue, high volume fishery with one fishery segment supplying bait to the lobster fishery; however, this level of fishery dependence and impacts on other fisheries are not readily apparent in the revenue tables. There is significant overlap of the lease area with the skate fishery and skate is one of a few fisheries most impacted by the proposed action (Figure C-12).

Appendix F provides a good overview of the commercial fisheries data used in the analysis, including associated caveats. Additional clarification should be added that although vessel monitoring system (VMS) data cover most landings in many fisheries, certain types of activity, potentially for many vessels, are not captured in VMS data. The document should also make it clearer that the number of vessels not covered by the VMS data is not quantified.

Like our findings on EFH impact determinations, the analysis of impacts to commercial fishing do not match the definitions of potential adverse and beneficial impact levels listed in Table 3.1.1-1. It would be useful specify criteria for negligible, minor, moderate, or major impacts to commercial fishing in terms of loss of revenue, landings, and number of vessels, by species or FMP.
We are curious why fisheries information related to the larger RI-MA Wind Energy Area precedes the description of fishing activity in the South Fork Wind Farm Area (Section 3.5.1). Is the intention to better incorporate impacts on transiting and operational effects on fishing in the broader area and/or to inform the cumulative effects analysis? Without additional clarification, the inclusion of data from the broader regional area takes the focus away from the South Fork Wind Farm area of interest.

Finally, regarding Memorandum M-37059 released by the Department of the Interior Office of the Solicitor on December 14, 2020[6], clarification on how BOEM will evaluate the project with respect to "interference with reasonable uses of the exclusive economic zone, the high seas, and the territorial seas" would be helpful.

Impacts to recreational fishing

The DEIS considers for-hire recreational fishing impacts separately from private recreational fishing impacts. The grouping of private recreational fishing with the recreation and tourism resource, rather than with commercial and for-hire fisheries, is not intuitive to us and makes it challenging for readers to understand the full picture of potential impacts on all fishery sectors. If fishery species are affected by the project, this will affect both for-hire and private recreational fishing. Linkages between biological and fishery conditions would be more straightforward to explain if both types of recreational fishing were grouped into a single resource, while still considering their differences, as was done for the grouping of commercial and for-hire recreational fishing. Regardless of how the document is structured, private angling accounted for over 50% of recreational trips made in 2016 and is economically important in the SFWF project area (Fisheries Economies of the United States 2016[7]). By grouping private recreational fishing with the tourism sector and considering it through Appendix H, rather in the main body of the document, we are concerned that the impacts to private recreational anglers are essentially discounted.

We recognize that data on private angling are very limited. In addition, we are concerned that data on the party/charter recreational fishing fleet are outdated; the 2006-2014 data are likely not representative of current fishing.

The occurrence of complex, hard bottom habitats underlies the project area's importance to recreational fishing. Appendix H mentions the relocation of approximately 255 acres of boulders that are encountered along the inter-array and export cable routes (page H-75). This process is described in the COP as involving a "dragging technique that would have similar impacts as trenching" (page 3-19). Relocation of boulders for cable laying will cause disruptions in recreational fishing activity (private and for-hire), as it could take several trips to find their new locations. While the relocated boulders may continue to attract recreational fishery species, relocation is not a negligible impact. Detailed

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[6] https://www.mafmc.org/s/DOI-legal-memo-re-fisheries-interference.pdf

[7] National Marine Fisheries Service. 2018. Fisheries Economics of the United States, 2016. U.S. Dept. of Commerce, NOAA Tech. Memo. NMFS-F/SPO-187, 243 p.

reporting on where boulders are moved to, as described in Appendix G, Table G-2, should be required as a mitigation strategy.

Turbine foundations and their associated fouling communities will create artificial reefs throughout the project area, which are expected to attract certain fishery species (e.g., black sea bass). The benefits of this artificial reef effect will vary by target species. The negligible to minor beneficial impact from the increased production is species dependent as it is likely that only certain species will colonize on or aggregate near the reef, and these may or may not be the species of greatest value to anglers. For example, any benefit to anglers targeting highly migratory species (i.e., tunas and sharks) could be offset by the inability to anchor or to drift throughout the area. If operators shift their effort outside the wind farm, during construction or long-term operations, this will potentially put them in areas of higher vessel traffic and gear conflict. Also, depending on operating conditions at sea, recreational fishermen cannot always reap the benefits of any increased catchability of target species due to safety concerns of fishing in swells around the turbines. These safety considerations will be different than the existing artificial reefs in the region which, except for the Block Island Wind Farm turbine foundations, are all submerged structures.

Navigation and vessel traffic, other uses

We continue to hear concerns from commercial fishing partners about navigation safety, including the potential for impacts to use of radar. The continued ability of the Coast Guard to effectively conduct search and rescue, or SAR operations, described in the Other Uses analysis, is also of concern. The ability of fishing vessels to operate within the South Fork Wind Farm and adjacent wind farms will influence the magnitude of negative effects of the projects on commercial fisheries. The impact information related to navigation and vessel traffic is narrowly included in one summary table (Table 2.3.1-1) and kept primarily in Appendix H; it would be helpful to pull some of this information forward, especially the cumulative effects, to the impacts section (3.5.6). This is important because even though it is technically feasible to transit through the South Fork Wind Farm, safety concerns and navigational complexity appear understated in other parts of the draft text. For example, successful transit is dependent upon many factors including environmental conditions, radar cluttering and shadowing and gear conflict with other resource users. Safety concerns pertinent to commercial and for-hire fisheries likely apply to private recreational anglers as well. We hope BOEM will recommend any mitigation measures included in Table G-2 that make transit and fishing in the wind farm safer, beyond those already required under Federal Aviation Administration, United States Coast Guard, and BOEM guidelines.

The Councils have significant concerns about the cumulative impacts of wind farms on fishery independent surveys. We agree with the conclusion that the alternatives would have "major effects on scientific research…potentially leading to impacts on fishery participants and communities." We are encouraged by BOEM's commitment to working with NOAA on long term solutions to this challenge.

Monitoring and adaptive management

A robust monitoring program is important to understanding project effects and adaptively managing wind farm construction in the region going forward. It would be helpful to understand how DWSF and other regional developers will be held accountable to monitoring plans, as well as the mechanism for

modifying these plans over time. Given that large scale offshore wind development is new for our region, and that the spatial scale of reasonably foreseeable projects is unprecedented world-wide, there are certain to be effects that we cannot fully anticipate at present. We appreciate developer commitments to the work of the Responsible Offshore Science Alliance and the coordination around monitoring that will result, but these are voluntary agreements as opposed to permit conditions.

There are many opportunities for learning and adaptive management going forward. For example, the DEIS discusses that there may be positive effects associated with the creation of artificial hard bottom habitats. A range of materials could be used for scour protection and for cable armoring where burial is not possible. These materials will likely have different ecological benefits, depending on the species. Materials can be selected for their expected benefits, and/or the effects of different types of materials might be compared. Time of year restrictions on construction and maintenance, e.g., to protect fish spawning activity, also provide an opportunity for data gathering and adaptive approaches. These windows may shift over time as the region continues to experience the effects of climate change. Such shifts could have implications for best practices related to operations and maintenance of the South Fork Wind Farm project, as well as other projects in the region.

The relationship between this project and others is important. BOEM should articulate how it will ensure that regional development occurs in a coordinated manner across projects. For example, could a single planning and environmental evaluation process be conducted when multiple projects wish to use similar routes for their export cables? If the effects of installation or operation are found to be unacceptable despite best efforts to mitigate them, will this information be used to alter future projects?

Minor errors noted in the DEIS

The following errors in the document are not substantive to the overall conclusions drawn but should be corrected in the FEIS.

- On page 3-7, summer flounder is listed as a "northeast multispecies." This is inaccurate and should be corrected. If the intent was to list species by management group, summer flounder should be grouped with scup and black sea bass.
- A numerical value is missing from this sentence on page 3-19: "Long-term changes to benthic habitat within the SFWF, SFEC, and Montauk O&M facility would result from the conversion of approximately of soft-bottom benthic habitat to hard-bottom (e.g., steel piles, rock scour protection, bulkhead improvements) habitat."
- In the first paragraph under "Regional Setting" on page 3-70, the Summer Flounder, Scup, and Black Sea Bass FMP should be listed with the other Mid-Atlantic Fishery Management Council FMPs with the citation of MAFMC 2019. Similarly, the Herring FMP should be listed with the other New England Fishery Management Council FMPs with the citation of NEFMC 2019. In both cases, these FMPs are jointly managed with the Atlantic States Marine Fisheries Commission. The associated footnote is sufficient to indicate this.
- This statement on page 3-86 is misleading and inaccurate: "Nevertheless, state permit holders must report their catch to state agencies, including the statistical area within which fishing occurred." It would be more accurate to say, "Of all the states considered in this document, only New York, Rhode Island, and Maryland require all for-hire vessels with state permits to submit trip-level information on catch and areas fished."

Conclusion

We appreciate the opportunity to provide comments to ensure the FEIS provides a comprehensive and effective evaluation of expected impacts from the South Fork project. The Councils look forward to working with BOEM to ensure that any wind development in our region minimizes impacts on the marine environment and can be developed in a manner that ensures coexistence of our fisheries with future wind development activities.

Please contact us if you have any questions.

Sincerely,

Thomas A. Nies
Executive Director, New England Fishery Management Council

Dr. Christopher M. Moore
Executive Director, Mid-Atlantic Fishery Management Council

cc: J. Bennett, A. Lefton, M. Luisi and W. Townsend

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Sustainable and Cooperative Management of Atlantic Coastal Fisheries

February 12, 2021

Colonel Benjamin A. Bennett, Commander
U.S. Army Corps of Engineers Wilmington District
69 Darlington Avenue
Wilmington, North Carolina 28403-1398

Dear Colonel Bennett,

The Atlantic States Marine Fisheries Commission (Commission), which was formed by the 15 East Coast states and chartered by Congress in 1942, is tasked with management of the nation's estuarine, diadromous and marine fishery resources which occupy habitats in the member states' jurisdictional waters along the Atlantic Coast. The Commission's mission is "to promote the better utilization of the fisheries, marine, shell and anadromous, of the Atlantic seaboard by the development of a joint program for the promotion and protection of such fisheries, and by the prevention of physical waste of the fisheries from any cause." On occasion, the Commission elects to express concern regarding proposals which it believes could adversely affect resources under its jurisdiction, and this is one of those occasions. Specifically, the Commission is concerned about a recent decision by the U.S, Army Corps of Engineers to eliminate a two decade long hopper dredging window in portions of Wilmington Harbor and Morehead City Harbor. Please consider these comments during your further evaluations.

The Commission has reviewed the Wilmington and Morehead City Harbors Maintenance Dredging and Bed Leveling Draft Environmental Assessment (EA), dated August 2020, and the corresponding letter from the U.S. Army Corps of Engineers (USACE) Wilmington District dated August 19, 2020. We have further reviewed the Corps Addendum to the Federal Consistency Determination Wilmington Harbor and Morehead City Harbor Hopper Maintenance Dredging and Bed Leveling, dated December 23, 2020. The proposed action is elimination of the existing hopper dredging window in portions of Wilmington Harbor and Morehead City Harbor so maintenance dredging and bed leveling can occur year-round with offshore or nearshore placement of dredged material. The Addendum would limit the proposal to a three-year period ending December 31, 2023, and commits to a number of studies, yet to be completely specified, to assess the impacts of hopper dredging in the two localities. The proposed action seeks to provide maximum flexibility to obtain contract dredges for maintenance dredging. The dredging window, which limited hopper dredging to the period of December 1 to April 15 and has been in place for over 20 years, has been used to minimize impacts from dredging to fishery resources migrating between ocean and vital nursery areas and to the habitats used by the migrants. The Commission is concerned with the USACE decision to move ahead with the proposed action, as modified, and recommends the Wilmington District instead prepare an Environmental Impact Statement (EIS) which will fully address the potential impacts of the proposal.

In addition to reviewing the USACE's EA and Addendum, the Commission has reviewed comments provided to you previously by NOAA Fisheries (dated October 2, 2020), the North Carolina Division of

Marine Fisheries (NCDMF; May 7, 2020), the North Carolina Wildlife Resources Commission (NCWRC), the South Atlantic Fishery Management Council (SAFMC; October 2, 2020), and the Southern Environmental Law Center (SELC; October 2, 2020), the latter of which filed its comments on behalf of multiple conservation organizations (Audubon North Carolina, Cape Fear River Watch, Defenders of Wildlife, North Carolina Coastal Federation and North Carolina Wildlife Federation). The Commission also reviewed the memorandum from the NCDMF to the NC Division of Coastal Management (NCDCM; November 3, 2020) which provided the NCDMF comments for consideration during the NCDCM consistency determination process. That process was completed and the Commission has reviewed the issued consistency concurrence dated December 31, 2020, as well as additional electronic correspondence from the NCWRC prior to that date in which the NCWRC expressed additional concerns and/or requested clarification of the USACE's modified proposal. By reference, the Commission incorporate all of the concerns expressed within those previous communications but focus herein on concerns which are most relevant to the species and jurisdictions for which the Commission and its member states are responsible.

The Commission is responsible, either solely or in collaboration with the Regional Fishery Management Councils (New England [NE], Mid-Atlantic [MA] and South Atlantic [SA] FMCs), the two federal fishery management agencies (NOAA Fisheries and the U.S. Fish and Wildlife Service [USFWS]), and the Potomac River Fisheries Commission and the District of Columbia, for the management of a suite of species, some of which may be adversely affected by the USACE proposal (see Attachment 1). These species are managed under Congressional mandates specified in the Atlantic Striped Bass Conservation Act (1984), the Atlantic Coastal Fisheries Cooperative Management Act (1993) and the Magnuson-Stevens Fishery Conservation and Management Act (1996). There are a total of 27 fishery management plans which collectively address the measures necessary for sustainable management of a collective total of 68 nearshore and pelagic species (several of the plans address multiple species, i.e., coastal sharks—40 species, and shad and river herring—4 species). Since NOAA Fisheries and the SAFMC have already provided comments to you on jointly-managed species via separate letters, this letter focuses on those species which are 1) under sole Commission management authority and 2) occur within the geographic range which includes Beaufort and Cape Fear River inlets.

Those species which meet the two criteria specified above and are most likely to be impacted by the USACE proposal include: alewife, American eel, American shad, Atlantic croaker, Atlantic menhaden, Atlantic striped bass, Atlantic sturgeon (protected under the Endangered Species Act), black drum, blueback herring, hickory shad, red drum, spot, spotted seatrout, and weakfish. Without exception, all of these species are either diadromous (requiring residency in both fresh and salt waters to complete their life cycle or are estuarine-dependent. All of them use ocean inlets as migratory corridors to and from their spawning and nursery habitats (for the anadromous species) or to and from nursery habitats in inland fresh waters (the catadromous American eel) or to and from estuarine or riverine spawning and nursery habitats (the remaining estuarine-dependent species).

The Commission is currently in the process of reviewing each Commission managed species with a view toward clarifying and refining designated Fish Habitats of Concern (FHOCs). While the FHOC designations carry no legal obligations, they are ecologically functionally equivalent to and are defined using the same definition as the Habitat Areas of Particular Concern (HAPCs) under the NOAA Fisheries and federal FMC guidelines (see: https://www.fisheries.noaa.gov/national/habitat-conservation/essential-fish-habitat). It is probable that both North Carolina inlets and associated navigation channels which are the subject of the USACE's proposal will be designated as FHOC for one or more species under Commission management, along with additional inlets within the jurisdiction of Commission member states.

The most recent comprehensive description of the value of environmental dredging windows for the habitats and species that would be impacted by the USACE proposal is found in Wickliffe et al. (2019), "An Assessment of Fisheries Species to Inform Time-of-Year Restrictions for North Carolina and South Carolina" (NOAA Technical Memorandum NOS NCCOS 263. 268 p. https://doi.org/10.25923/7xdd-nw91). The authors address the habitats used by all life stages of 13 managed fish and crustacean species. The Commission is fully engaged in the management of six of those (alewife, American shad, Atlantic sturgeon, blueback herring, red drum, and summer flounder), with four of those (alewife, American shad, blueback herring and red drum) managed solely by Commission. The authors also address the benefits of environmental dredging windows (also called moratoria) to the species and their habitats. In addition to the species that Wickliffe et al. (2019) address, the inlets and navigation channels which are addressed in the USACE proposal are used by all of the green-highlighted species in Attachment 1 for access to spawning and nursery habitats. Maintaining periods in which dredging and associated activities are prohibited ensures that access will occur with limited or no impact.

Wickliffe et al. (2019) conclude (p. 239): "Moratoria, if properly implemented, can protect valuable fisheries species (and protected species), which if lost, would translate into a substantial impact on local and regional economies, ecosystems, and livelihoods." The Commission contends the USACE EA effectively ignored this conclusion, and the elimination of dredging windows would cause a significant environmental impact. Therefore, the Commission requests the USACE develop an EIS which fully analyzes a suite of alternatives, including the status quo (i.e., maintaining existing environmental dredging windows). The bottom line is that seasonal windows effectively mitigate the negative impacts of dredging on Commission-managed species during important phases in their life history.

The Commission acknowledges the USACE's modified proposal as contained in the December 23, 2020 updated federal consistency determination Addendum shortens the period during which moratoria would be eliminated to three years (ending December 31, 2023), and the USACE has committed to conduct studies and various monitoring protocols designed to "…achieve an improved understanding of potential impacts of dredging on marine species and estuarine habitats during the most biologically productive months of the year" [quoted from response letter sent to organizations and members of the public by the NCDEQ, Division of Coastal Management]. Our understanding is that the details of the proposed studies have yet to be finalized, and some of the organizations which have expressed concerns regarding the proposal believe that not all of their concerns were addressed by the modifications and will likely continue to pursue preparation of an EIS.

In closing, the Commission shares the concerns which have been articulated by the other management agencies, organizations, conservation groups, and private citizens provided to you in earlier correspondence. Additionally, should the Wilmington District implement the proposed measures within the EA, even as modified, other USACE Districts to both the north and south within the Commission and member states' jurisdictions may attempt to do the same. This, in turn, could potentially result in more widespread impacts to Commission-managed resources which could lead to population-level impacts. The precedent proposed by the Wilmington District represents a threat of great concern to the Commission. I appreciate the opportunity to provide these comments. Should you have any questions, feel free to contact me or Habitat Coordinator, Dr. Lisa Havel.

Sincerely,

Robert E. Beal

cc: Emily Hughes, ASMFC Habitat Committee, NEFMC, MAFMC, SAFMC

ATTACHMENT 1

Current List of Species Managed by ASMFC (as of December 17, 2020; Under **MANAGEMENT,** ASMFC = sole jurisdiction; JOINT = managed jointly with one or more federal Fishery Management Councils or with NOAA FISHERIES; Atlantic Sturgeon historically has been managed solely by ASMFC but was federally listed by NOAA FISHERIES in 2012 and remains on the federal endangered species list):

[**NOTE**: The 15 species highlighted in green are those managed solely under ASMFC jurisdiction and occurring within the geographic range encompassed by the Beaufort and Cape Fear River inlets in NC; species followed by * are those addressed individually in Wickliffe et al. (2019)]; + Atlantic sturgeon is protected under the Endangered Species Act; therefore it has a recovery plan under NOAA Fisheries.

SPECIES	MANAGEMENT	FISHERY MANAGEMENT PLAN
alewife (*Alosa pseudoharengus*)*	ASMFC	ASMFC Shad and River Herring
American eel (*Anguilla rostrata*)	ASMFC	ASMFC American Eel
American lobster (*Homarus americanus*)	ASMFC	ASMFC American Lobster
American shad (*Alosa sapidissima*)*	ASMFC	ASMFC Shad and River Herring
Atlantic croaker (*Micropogonias undulatus*)	ASMFC	ASMFC Atlantic Croaker
Atlantic herring (*Clupea harengus*)	complementary w/NEFMC	ASMFC Atlantic Herring
Atlantic menhaden (*Brevoortia tyrannus*)	ASMFC	ASMFC Atlantic Menhaden
Atlantic striped bass (*Morone saxatilis*)	ASMFC	ASMFC Atlantic Striped Bass
Atlantic sturgeon (*Acipenser oxyrinchus*)*+	ASMFC	ASMFC Atlantic sturgeon
black drum (*Pogonius cromis*)	ASMFC	ASMFC Black Drum
black sea bass (*Centropristis striata*)	JOINT w/Councils	ASMFC Scup, SFlounder and BSB
blueback herring (*Alosa aestivalis*)*	ASMFC	ASMFC Shad and River Herring
bluefish (*Pomatomus saltatrix*)	JOINT w/Councils	ASMFC Bluefish
coastal sharks (40 species; see the FMP)	JOINT w/NOAA Fisheries	ASMFC Coastal Sharks
cobia (*Rachycentron canadum*)	ASMFC	ASMFC Cobia
hickory shad (*Alosa mediocris*)	ASMFC	ASMFC Shad and River Herring
horseshoe crab (*Limulus polyphemus*)	ASMFC	ASMFC Horseshoe Crab
Jonah crab (*Cancer borealis*)	ASMFC	ASMFC Jonah Crab
Northern shrimp (*Pandalus borealis*)	ASMFC	ASMFC Northern Shrimp
red drum (*Scianops ocellatus*)*	ASMFC	ASMFC Red Drum
scup (*Stenotomus chrysops*)	JOINT w/Councils	ASMFC Scup, SFlounder and BSB
Spanish mackerel (*Scomberomorus maculatus*)	complementary w/SAFMC	ASMFC Spanish Mackerel
spiny dogfish (*Squalus acanthias*)	complementary w/Councils	ASMFC Spiny Dogfish
spot (*Leiostomus xanthurus*)	ASMFC	ASMFC Spot
spotted seatrout (*Cynoscion nebulosus*)	ASMFC	ASMFC Spotted Seatrout
summer flounder (*Paralichthys dentatus*)*	JOINT w/Councils	ASMFC Scup, SFlounder and BSB
tautog (*Tautoga onitis*)	ASMFC	ASMFC Tautog
weakfish (*Cynoscion regalis*)	ASMFC	ASMFC Weakfish
winter flounder (*Pleuronectes americanus*)	complementary w/NEFMC	ASMFC Winter Flounder

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 01930-2276

February 12, 2021

Colonel John T. Litz
District Engineer
U.S. Army Corps of Engineers
Baltimore District
2 Hopkins Plaza
Baltimore, Maryland 21201

RE: City of Havre de Grace/Water Street Living Shoreline & Heritage Park Boating Access Project; NAB-2020-60853-P13

Dear Col. Litz:

We have reviewed the Public Notice (PN) 20-69, dated December 3, 2020, which describes an application by the Mayor and City Council of Havre De Grace to stabilize shorelines, construct stormwater management structures, and install boating access facilities on the Susquehanna River in the City of Havre de Grace, Harford County, Maryland. The applicant is seeking authorization to install approximately 2,900 linear feet of living shorelines, multiple stormwater conveyance basins, both hard and soft boat launching facilities with a floating pier, and replace approximately 600 linear feet of existing bulkhead. The proposed fill associated with establishing a living shoreline channelward of an existing bulkhead will result in approximately 4.1 acres of impacts to subtidal and intertidal shallows, including approximately 2.1 acres of permanent impacts to mapped, annually recurring submerged aquatic vegetation (SAV), for which no compensatory mitigation is currently proposed. The applicant proposes to create approximately 0.8 acres of low marsh habitat and 0.4 acres of high marsh habitat as part of the living shoreline approach. The stated goals of the project are to create estuarine habitat and generate total maximum daily load (TMDL) credits.

Based upon the available information, we conclude that the project as currently proposed will have substantial and unacceptable impacts to aquatic resources of national importance including SAV and several anadromous fish species. Because the applicant has not clearly demonstrated that less environmentally damaging alternatives that avoid impacting SAV are not practicable, these impacts appear avoidable. As a result, we recommend that the project <u>not</u> be authorized as currently proposed in accordance with Part IV, Paragraph 3(b) of the Memorandum of Agreement (MOA) between our agencies.

As discussed in the attached document, there are several significant outstanding issues associated with this project that need to be addressed before the full nature and scope of the project's impacts can be evaluated. These issues include a full evaluation of the short- and long-term direct, indirect, synergistic, and cumulative effects of the proposed project on NOAA-trust

resources including SAV and diadromous fish; measures to avoid and minimize impacts to SAV, mudflats, and shallow water habitat; and whether compensatory mitigation is needed to offset impacts to aquatic habitats. Additionally, the extent to which the applicant intends to monitor the site following construction to evaluate potential changes to environmental conditions as a result of the project is unclear, as monitoring and adaptive management plans have not been provided for review. In addition, information on the project impacts and site conditions provided in the public notice and alternatives analysis appear to be incomplete. A more clearly defined description of all components of the project, the exact acreages of aquatic habitat to be affected, the types of impacts, and an analysis of the alternatives considered for each project goal to minimize these impacts is also needed.

The Fish and Wildlife Coordination Act (FWCA), as amended in 1964, requires that all federal agencies consult with us when proposed actions might result in modifications to a natural stream or body of water. It also requires that they consider effects that these projects would have on fish and wildlife and must also provide for improvement of these resources. From the information provided, the project as currently proposed will have substantial and unacceptable impacts to aquatic resources that we seek to conserve and enhance under the FWCA, particularly designated spawning and rearing habitat for anadromous fish species such as striped bass (*Morone saxatilis*), American shad (*Alosa sapidissima*), hickory shad (*A. mediocris*), alewife (*A. pseudoharengus*), and blueback herring (*A. aestivalis*). In addition, the loss and degradation of important habitat for these species, and the lack of compensatory mitigation to offset the adverse effects, do not support the FWCA's requirement to provide for the improvement of fish and wildlife resources (16 U.S.C. 662(a)).

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) also requires federal agencies to consult with one another on projects such as this that may adversely affect essential fish habitat (EFH), as designated by us under the Act. In turn, we must provide recommendations to conserve EFH. These recommendations may include measures to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH resulting from actions or proposed actions authorized, funded, or undertaken by that agency. Adverse effects to EFH may result from action occurring within EFH and include impacts to prey species and their habitat. The proposed placement of fill along the shoreline will adversely affect EFH through the direct loss of subtidal shallows and SAV habitat used by prevalent prey species for a number of federally managed species of fish including bluefish (*Pomatomus saltatrix*) and summer flounder (*Paralichthys dentatus*) which have EFH designated downstream of the project site

Threatened or endangered species under our jurisdiction including Atlantic sturgeon (*Acipenser oxyrhynchus*) may be present in the project area. As the lead federal action agency, you are responsible for determining the nature and extent of effects and for coordinating with our Protected Resources Division as appropriate. Our website (https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-consultations-greater-atlantic-region) has guidance and tools to assist action agencies with their description of the action and analysis of effects to support their determination. Should your staff have any questions about the section 7 consultation process, please contact Brian Hopper at 410-573-4592 or brian.d.hopper@noaa.gov.

We appreciate efforts the applicant and your staff have made regarding their shared commitment for continued coordination with us and other agencies and we look forward to working with your staff, the applicant, and the other federal and state agencies as we collectively work to resolve the outstanding issues regarding impacts to our resources, avoidance and minimization, and compensatory mitigation. Since receiving the Public Notice for this project in December 2020, and additional supplemental materials in January 2021, we have participated in interagency meetings arranged by your staff to gain a better understanding of the proposed project and discuss agency concerns and information needs. At the most recent interagency meeting held on February 5, 2021, our staff committed to continued coordination to work to resolve the remaining issues. While we remain committed to this continued coordination, we also recognize that the comment period on the proposed project is ending and your staff need our formal comments for the record.

Based upon the information available to us at this time, and for the reasons outlined in the attached document, we conclude that the project as currently proposed will have substantial and unacceptable impacts to aquatic resources of national importance including SAV and several anadromous fish species. Because the applicant has not clearly demonstrated that less environmentally damaging alternatives that avoid impacting SAV are not practicable, these impacts appear avoidable. As a result, we recommend that the project not be authorized as currently proposed in accordance with Part IV, Paragraph 3(b) of the MOA between our agencies. We will continue to coordinate with your staff so that this project can move forward efficiently and expeditiously as possible while still meeting our joint responsibilities to protect and conserve aquatic resources. If you have any questions or need additional information, please contact Jonathan Watson in our Annapolis field office at jonathan.watson@noaa.gov or (410) 295-3152.

Sincerely,

Michael Pentony
Regional Administrator

cc: USACE – A. Elliot, W. Chandler
PRD – B. Hopper
FWS – J. Slacum, C. Guy
EPA, Region III – M. Fitzgerald
MDNR – R. Limpert
MDE – D. Spendiff, A. Belfield
MAFMC – C. Moore
NEFMC – T. Nies
ASMFC – L. Havel

ATTACHMENT – NOAA FISHERIES Comments

City of Havre de Grace/Water Street Living Shoreline & Heritage Park Boating Access Project; NAB-2020-60853-P13

Introduction

We have significant concerns about the proposed project, its impacts to NOAA-trust resources including SAV and diadromous fish, the measures considered to avoid and minimize impacts to SAV, mudflats, and shallow water habitat, and whether compensatory mitigation is needed to offset impacts to aquatic habitats. As a result, we must recommend that Department of the Army permit for this project not be issued at this time in accordance with Part IV, Paragraph 3(b) of the Clean Water Act Section 404 Memorandum of Agreement (MOA) between our agencies due to the substantial and unacceptable impacts that this project will have on aquatic resources of national importance including submerged aquatic vegetation (SAV), American shad (*Alosa sapidissima*), alewife (*A. pseudoharengus*), blueback herring (*A.aestivalis*) and striped bass (*Morone saxatilis*),

Project Description

The Mayor and City Council of Havre De Grace propose three distinct, but interrelated activities along the shoreline of the Susquehanna River in the City of Havre de Grace, Harford County, Maryland. These activities include:

> (1) to construct approximately 2,900 linear feet of living shoreline channelward of existing shoreline contained in bulkheads,
> (2) to construct several stormwater conveyance structures, and
> (3) to relocate an existing boat launching facility in anticipation of a future railroad infrastructure project.

These activities span across multiple parcels which are owned by various private and public entities. The stated goals of the project are to create estuarine habitat and to generate total maximum daily load (TMDL) credits.

The existing shoreline is characterized by earthen piers contained with deteriorated bulkheads. These earthen piers were initially constructed in the early/mid twentieth century to accommodate water-based commerce activities in the City. These piers likely fragmented existing SAV beds located in shallow waters along the shoreline at the time of construction and created embayments with low river current velocity that, in turn, frequently collect floating debris. The proposed headland-bay design is intended to address this recurring issue and establish a vegetated shoreline channelward of the existing bulkhead. The existing earthen piers have also been characterized as containing sediments contaminated with total petroleum hydrocarbons, although the extent of this contamination remains unclear.

To establish a planted shoreline the applicant proposes to remove an unspecified quantity of existing bulkhead and emplace approximately 27,400 cubic yards of clean sand/cobble fill material channelward of the remaining/removed bulkhead to create sloping shorelines which will subsequently be planted with wetland vegetation. To accommodate the existing site conditions, a headland and bay shoreline design is proposed. Fill material will extend channelward of the existing bulkhead approximately 90 linear feet in the proposed embayments and 50 to 91 feet at the proposed headlands. Fill materials proposed in the embayments consist of sand/wood chip mix that will be graded to achieve a 20:1 slope extending from the existing bulkhead to mean low water (MLW) with a cobble toe proposed below MLW at a 3:1 slope to contain the sand fill and minimize channelward encroachment. Cobble material of unspecified size is also proposed to be used channelward of existing earthen piers to stabilize existing bulkheads containing potentially contaminated fill material and create headland features. Finally, large, wooded debris structures (i.e., partially submerged trees anchored to the shore) are proposed to be established in three locations downstream of the proposed headlands.

An existing boat launching facility is also proposed to be relocated. While it is not included in this proposal, project plans indicate that new bridge piers are planned in the project area to accommodate the anticipated expansion of the existing railroad bridge that bisects the project shoreline area and crosses the Susquehanna River. Presumably, this track expansion has necessitated the relocation of the boat launching facility. To establish this new facility on parcels 470 and 472, an unspecified quantity of material will be excavated from Parcel 472 to expand an existing basin. This material is proposed to be used as upland grading material on-site prior to the paving of the boat launch and associated parking facilities. An unspecified length of new steel bulkhead is proposed to be constructed along the shorelines of these two parcels to stabilize this expanded basin and contain sediments along shorelines where the existing bulkhead will remain in place.

To treat surface water runoff, several step-pool stormwater conveyance (SPSC) structures are proposed to be constructed in both upland areas and in areas of new in-water fill within the Susquehanna River. These structures are intended to delay the delivery of surface stormwater runoff from adjacent uplands and allow it to infiltrate porous fill materials (e.g., cobble, sand) to retain the fine sediments and nutrients contained in this runoff. Most of the proposed pools are located in low-lying uplands that become inundated with surface waters (i.e., flood) during high Susquehanna River discharges. The two largest SPSC structures proposed adjacent to the existing railroad bed are intended to intercept runoff waters from approximately 36 acres of uplands which are extensively covered with impervious (e.g., paved) surfaces. Surface waters from these uplands currently flow into the Susquehanna River via existing stormwater outfalls in the vicinity of the proposed boat launching facility.

Finally, there is no compensatory mitigation currently proposed to offset the permanent losses of vegetated/unvegetated subtidal shallows. The conversion of approximately two (2) acres of vegetated tidal shallows (i.e., SAV) to create approximately 0.8 acres of intertidal vegetated wetlands is proposed to offset the ecological impacts of the fill. The extent to which SAV may colonize filled sediments with surface contours below MLW has not been estimated, although it is unlikely that recolonization could further offset this loss due to the limited extent of this area and the substrates proposed to be used (e.g., cobble).

Project History

We were made aware of this project through PN 20-69, dated December 3, 2020. We received the EFH assessment on December 8, 2020 and were later forwarded a copy of the applicant's alternatives analysis on January 8, 2021. By letter dated December 10, 2020, and in accordance with the Section 404 Memorandum of Agreement between our agencies, we requested a 30-day extension to the comment period along with an interagency meeting. By letter dated December 11, 2020, you responded to our extension request, affirming the new comment period date of February 7, 2021 and indicated an interagency meeting was being scheduled. Our request was made due to the complex nature of the project, scope of proposed impacts and activities, and wide variety of NOAA-trust resources occurring in the area of the proposed project. Prior to this interagency meeting, we provided technical assistance comments to your staff on January 15, 2021. The interagency meeting was organized by the Maryland Department of the Environment (MDE) and was held on January 27, 2021. The meeting included all relevant parties including our agency, the Baltimore District, Environmental Protection Agency (EPA), Maryland Department of Natural Resources (MDNR), MDE, and the applicant team - including members of the design-build team and a representative of the City of Havre de Grace. The meeting was a productive and collaborative discussion regarding several outstanding issues including impact calculations, alternatives analyses, avoidance, and minimization.

Because the January 27, 2021, meeting was limited by the time allotted, several questions remained unanswered. To discuss the project further, we requested a meeting with the Baltimore District, EPA, MDE, and MDNR, which was held February 5, 2021. As a result of this second meeting, the Baltimore District agreed to continue to work with the relevant federal and state agencies to address outstanding issues. We appreciate efforts the applicant team and the Baltimore District have made regarding their shared commitment for continued coordination with us and other agencies and we look forward to working with your staff, the applicant, and the other federal and state agencies as we collectively work to resolve the outstanding issues regarding impacts to our resources, avoidance and minimization, and compensatory mitigation.

Magnuson-Stevens Fishery Conservation and Management Act (MSA)

The lower Susquehanna River provides valuable nursery habitat for a variety of finfish, including American shad, hickory shad, alewife, blueback herring as well as various important prey species such as bay anchovy (*Anchoa mitchilli*) and spot (*Leiostomus xanthurus*). High water column detritus and zooplantion content associated with the Estuarine Turbidity Maximum (ETM) (North and Houde, 2001) make this nursery area critical to the maintenance of stock abundance for several federally managed fish species. The project location and water quality data available from MDNR (see: www.eyesonthebay.dnr.maryland.gov) indicate that the project is proposed in low salinity (i.e., less than 0.3 ppt) waters, which suggests that federally managed fish species such as bluefish (*Pomatomus saltatrix*) and summer flounder (*Paralichthys dentatus*) infrequently use habitats available in the project area. However, given the importance of the lower Susquehanna River for a variety of prey species, including those described above, impacts

to structural habitats in the project area, especially SAV, will adversely affect these federally managed species.

The MSA requires federal agencies, such as the U.S. Army Corps of Engineers, 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. The level of detail in an EFH assessment should be commensurate with the complexity and magnitude of the potential adverse effects of the action.

Essential fish habitat is defined as, "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." For the purpose of interpreting the definition of EFH:

- "waters" include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate;
- "substrate" includes sediment, hard bottom, structures underlying the waters, and associated biological communities;
- "necessary" means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem;
- "spawning, breeding, feeding, or growth to maturity" covers a species' full life cycle.

The EFH final rule published in the Federal Register on January 17, 2002 defines an adverse effect as: "any impact which reduces the quality and/or quantity of EFH." The rule further states that:

> An adverse effect may include direct or indirect physical, chemical or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat and other ecosystems components, if such modifications reduce the quality and/or quantity of EFH. Adverse effects to EFH may result from action occurring within EFH or outside EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

The EFH final rule also states that the loss of prey may be an adverse effect on EFH and managed species. As a result, actions that reduce the availability of prey species, either through direct harm or capture, or through adverse impacts to the prey species' habitat may also be considered adverse effects on EFH.

Based on the information provided, the placement of fill along the shoreline will adversely affect EFH through the direct loss of subtidal shallows and SAV habitat used by prevalent prey species for a number of federally managed species of fish. According to the project plans, at least 2.1 acres of SAV will be filled for the construction of a living shoreline and the establishment of stormwater management structures. The SAV, and subtidal shallows to be filled are spawning, nursery, and foraging habitat for a variety of fish and small forage species.

Submerged Aquatic Vegetation

SAV has been mapped within the proposed project area. Aerial imagery and SAV maps from the Virginia Institute of Marine Science (VIMS) indicate the consistent presence of moderate (40% - 70% coverage) and dense (70 % - 100% coverage) SAV beds within the project footprint in each of the last five years of available surveys (2014 – 2018). While field surveys have not recently occurred in the project area, previous surveys described these beds as consisting primarily of hydrilla (*Hydrilla verticillata*), eurasian watermilfoil (*Myriophyllum spicatum*), and wild celery (*Vallisneria americana*). The U.S. Environmental Protection Agency has designated SAV as a special aquatic site under Section 404(b)(1) of the federal Clean Water Act because of its important role in the marine ecosystem for nesting, spawning, nursery cover, and forage areas for fish and wildlife. It is a priority habitat for us for the same reasons.

SAV and their associated epiphytes are highly productive, produce a structural matrix on which many other species depend, improve water quality, and stabilize sediments (Fonseca et al., 1998). Seagrasses are among the most productive ecosystems in the world and perform a number of irreplaceable ecological functions which range from chemical cycling and physical modification of the water column and sediments to providing food and shelter for commercial, recreation as well as economically valuable organisms (Stephan and Bigford 1997; Orth et al., 2017). SAV meadows support a complex estuarine food web – a single acre of seagrass can support up to 40,000 fishes and 50 million small invertebrates (Miththapala, 2008). Studies from the Chesapeake Bay found that SAV beds provide ideal structural habitat for the brooding of eggs and for fishes with demersal eggs and as habitat for the larvae of spring-summer spawners such as anchovies (*Anchoa* spp.), weakfish (*Cynoscion regalis*), and silver perch (*Bairdiella chrysoura*) (Stephan and Bigford 1997). Heckman and Thoman (1984) concluded that SAV beds also provide nursery habitats and refugia for blue crab (*Callinectes sapidus*).

SAV also provides preferred structural habitat for anadromous fish species that occur in the project area. For example, Ross et al. (1997) found that the only habitat with which juvenile American shad abundance was significantly correlated was SAV cover, indicating that this habitat provides crucial cover and foraging habitat for juvenile Alosines during their early life history stages. Furthermore, Odom (1997) indicated that juvenile American shad favored riffle/run habitat colonized by SAV because it provided flow-boundary feeding positions where juveniles could both feed on drifting macroinvertebrates and reduce energy costs. Ultimately, while preferred riverine habitat for pre-migration juvenile Alosines has not been thoroughly evaluated (Greene et al., 2009), existing studies suggest that SAV is important habitat for juveniles prior to their outmigration.

Aside from its inherent ecological value, SAV meadows can perform functions that both align with stated project goals and improve water quality. For instance, robust SAV beds, such as those observed in the project area, can dampen wave energy (Lei and Nepf, 2019), reduce current velocities (Fonseca et al., 1982), and facilitate sediment deposition over large spatial scales (Zhang and Nepf, 2019). Reducing the amount of SAV in the project area by filling shallow water habitat could potentially reduce sediment accretion/stabilization in the project vicinity. SAV can also improve water quality by assimilating excess dissolved nitrogen and phosphorus and promoting sediment denitrification (McGlathery et al., 2007). Su et al. (2020) recently described a process in which SAV beds in the vicinity of the project area can generate calcium carbonate crystals that buffer (i.e., maintain more neutral pH conditions) Chesapeake Bay waters

during periods of summer anoxia. Finally, SAV is considered an efficient, long-term carbon sink for their ability to sequester carbon in their biomass and in soil (Hiraishi et al., 2014). Unlike other sources, SAV beds can sequester carbon that has been accumulated by rivers and tides and store it in soils for millennia (Duarte et al., 2005; Kennedy et al. 2010; Mcleod et al., 2011). Because SAV meadows can store relatively high quantities of carbon, the disturbance of SAV meadows can result in the release of stored gasses back into the atmosphere. Together, these important functions underscore the multifaceted benefits that SAV has on habitat and water quality.

Anadromous Fish Spawning Habitat

Migratory fish (e.g., anadromous fish) exhibit complex life histories where individuals spend most of their lives at sea and migrate great distances to generally return to their natal freshwater rivers to spawn, though some straying does occur (Pess et al., 2014). The upper Chesapeake Bay north of Worton Point in Kent County, and Robbins Point in Harford County (mainstem and tidal tributaries) and the lower Susquehanna River below Conowingo Dam are documented spawning and nursery ground for seven species of anadromous fish including striped bass, white perch, yellow perch (*Perca flavescens*), American shad, alewife, blueback herring, and hickory shad (Lippson, 1973; O'Dell et al., 1975). Physical features of this area include: (1) abundance of shallow depths (< 3 feet, mean low water); particularly in the Susquehanna Flats area, (2) low spring salinities (< 2 ppt), (3) abundance of coarse bottom substrate of sand, gravel, and cobble, and (4) the tidal/freshwater discharge circulatory retention of platonic eggs and larvae associated with the Bay mainstem ETM (North and Houde, 2001). Together, this makes the upper Bay and lower Susquehanna River the most important migratory fish spawning ground in the Chesapeake Bay. The hydropower projects located upstream of the project area have been the focus of decades of research and adaptive management in an attempt to restore local diadromous fish populations. Activities which adversely affect these migratory species are counterintuitive to the achievement of anadromous fish passage/population targets and goals.

Migratory Alosines (e.g., American shad, alewife) are prevalent forage for several species managed by the New England Fishery Management Council and the Mid-Atlantic Fishery Management Council as they provide trophic linkages between freshwater/estuarine and marine food webs. Buckel and Conover (1997) in Fahay et al. (1999) report that diet items of juvenile bluefish include Alosines. Additionally, juvenile Alosines have all been identified as prey species for summer flounder, and windowpane flounder in Steimle et al. (2000). As a result, actions that reduce the availability of prey species, either through direct harm or capture, or through adverse impacts to their spawning habitat may adversely impact federally managed fisheries.

Alewife and blueback herring, collectively known as river herring, formerly supported the largest and most extensive commercial and recreational fisheries throughout their range, with fishing activities spanning across rivers (both fresh and saltwater), tributaries, estuaries, and the ocean. Commercial landings for these species have declined dramatically from historic highs (ASMFC 2018). In the Mid-Atlantic, landings of river herring have declined since the mid-1960's and have remained very low in recent years (ASMFC 2017). The 2012 river herring benchmark stock assessment found that of the 52 stocks of alewife and blueback herring assessed, 23 were depleted relative to historic levels, one was increasing, and the status of 28 stocks could not be determined due to a lack of long-term data (ASMFC 2012a).

The most recent benchmark stock assessment and peer review completed in 2020 indicate American shad remains depleted coastwide. The "depleted" determination is used instead of "overfished" to indicate factors besides fishing have contributed to the decline, such as channelization of rivers, water withdrawals, habitat degradation, and pollution. Coastwide adult mortality is unknown but was determined to be unsustainable for some system-specific stocks, indicating the continued need for management action to reduce adult mortality. The 2020 benchmark stock assessment continued work from the 2007 coastwide stock assessment for American shad, which also identified stocks as highly depressed from historical levels. The 2007 assessment concluded that new protection and restoration actions needed to be identified and applied, which led to the development of Amendment 3 to the Interstate Fishery Management Plan for Shad and River Herring (American Shad Management). Amendment 3 identified significant threats to American shad, including spawning and nursery habitat degradation or blocked access to habitat, resulting from dam construction, increased erosion and sedimentation, and losses of wetland buffers (ASMFC 2007). Protecting, restoring and enhancing American shad habitat, including spawning, nursery, rearing, production, and migration areas, are necessary for preventing further declines in American shad abundance, and restoring healthy, self-sustaining, robust, and productive American shad stocks to levels that will support the desired ecological, social, and economic functions and values of a restored Atlantic Coast American shad population (ASMFC 2010).

Because landing statistics and the number of fish observed on annual spawning runs indicate a drastic decline in alewife and blueback herring populations throughout much of their range since the mid-1960s, river herring have been designated as a Species of Concern by NOAA. Species of Concern are those about which we have concerns regarding their status and threats, but for which insufficient information is available to indicate a need to list the species under the Endangered Species Act (ESA). For these reasons, we wish to draw proactive attention and conservation actions to these species. In further recognition of the declines in populations for these species, recreational fishing in Maryland waters is closed for alewife, blueback herring, American shad and hickory shad.

Fish and Wildlife Coordination Act (FWCA)

The Fish and Wildlife Coordination Act (FWCA), as amended in 1964, requires that all federal agencies consult with us when proposed actions might result in modifications to a natural stream or body of water. It also requires that they consider effects that these projects would have on fish and wildlife and must also provide for improvement of these resources. Under this authority, we work to protect, conserve and enhance species and habitats for a wide range of aquatic resources such as shellfish, diadromous species, and other commercially and recreationally valuable species that are not managed by the federal fishery management councils and do not have designated EFH. The lower Susquehanna River and the associated flats at its mouth serve as preferred habitat for many aquatic species and their forage including striped bass, bay anchovy, blue crab, Atlantic menhaden (*Brevoortia tyrannus*), American eel (*Anguilla rostrata*), hickory shad, and other baitfishes and shrimps.

The area of the proposed project is regionally significant for striped bass because of its importance as migration, spawning, nursery, foraging, and resting habitat. Atlantic striped bass stocks have formed the basis of one of the most important and valuable commercial and

recreational fisheries on the Atlantic coast for centuries; the fishery is also strongly tied to the cultural heritage of the eastern U.S. (ASMFC, 1981). However, overfishing and poor environmental conditions lead to the collapse of the fishery in the 1970s and 80s and the development of the Striped Bass Fishery Management Plan (FMP) in 1981 (ASMFC, 2003). After years of increasing numbers following implementation of the FMP, commercial and recreational landings of striped bass as well as female spawning stock biomass and recruitment, have declined since their peak in the early- to mid-2000s (ASMFC, 2019). Most recently, the 2019 Atlantic Striped Bass Benchmark Stock Assessment found the resource overfished and that overfishing is occurring (ASMFC, 2019). For this reason, recreational fishing limits for striped bass have been severely limited in Maryland and limited or closed in other Mid-Atlantic states. However, these accelerated declines in striped bass populations may result from the cumulative and synergistic effects of overfishing and non-fishing related activities such as in-water construction, that impact reproduction, recruitment, and survival.

Mature female striped bass (i.e., age six and older) produce large quantities of eggs, which are fertilized by mature males (i.e., age two and older) as they are released into riverine spawning areas, including the lower Susquehanna River. While developing, the fertilized eggs drift with the downstream currents and eventually hatch into larvae (ASMFC, 1981). Late larvae and early juveniles favor shallower water with slower currents, and likely reside in nearshore areas for increased feeding opportunities and reduced predation risk. Boynton et al. (1981) reported that approximately five times as many juvenile striped bass were collected in the nearshore habitat of the Potomac River Estuary than in the offshore habitat, which also suggests that the former habitat is preferred, as appears to be the case in other estuaries (Chadwick 1964; Setzler et al. 1980). Juveniles subsequently move into the deeper waters of the Chesapeake Bay to overwinter (Lipson and Lipson, 2006). They remain in coastal nursery habitat for two to four years and then join the coastal migratory population in the Atlantic Ocean. In the ocean, fish tend to move north during the summer and south during the winter. With warming water temperatures in the spring, resident and coastal contingents move upriver to the freshwater reaches of coastal rivers, including the Susquehanna River, to complete their life cycle. The spawning population of the major Chesapeake Bay tributaries contributes significantly to the coastal migratory stock (ASMFC, 2003).

The area of the proposed project is migration, nursery, and foraging habitat for the American eel. Catadromous American eels spawn in the Sargasso Sea and transit the Chesapeake Bay/Susquehanna River as part of their migration. They inhabit these freshwater areas until they return to the sea as adults. According to the 2012 benchmark stock assessment, the American eel population is depleted in U.S. waters. The stock is at or near historically low levels due to a combination of historical overfishing, habitat loss, food web alterations, predation, turbine mortality, environmental changes, exposure to toxins and contaminants, and disease (ASMFC 2012b). Actions being considered as part of the proposed project may reduce the quality and/or quantity of habitat available for this species in a number of ways including filling shallow water habitats and potentially mobilizing contaminated sediments.

Project Impacts

The proposed filling of approximately four (4) acres of subtidal/intertidal shallow waters, approximately two of which are annually colonized by robust areas of SAV, will reduce habitat

quantity and have unknown impacts on the quality of remaining habitats. While the proposed embayments may experience greater flushing due to their proposed design, fills that extend approximately 90 linear feet from existing MHW will reduce the amount of vegetated and unvegetated shallows available for various fish species. The lower Susquehanna River and the Susquehanna Flats support some of the most robust SAV beds in the Maryland portion of the Chesapeake Bay. This area has been designated as "Northern Chesapeake Bay Segment 2", which has a SAV restoration goal of 12,149 acres set by the Chesapeake Bay Program. The most recent available data from 2019 described approximately 8,460 acres of SAV in the segment which is still far short of its restoration goal. The permanent loss of approximately two (2) acres of SAV from this area is in opposition to these restoration goals.

The primary justification offered for the proposed impacts to SAV rests on the assumption that these beds will eventually "drown" due to sea level rise (SLR) and this approach will present the opportunity for shoreward migration. While increasing water depths associated with sea level rise may impact SAV in these areas, there has been no evaluation of the sediment accretion rates in the embayments which may mitigate the impacts of SLR in this particular site. In addition, the upland areas landward of the project area are largely developed or likely to be developed and do not afford the opportunity for landward migration of wetlands or SAV. Ultimately, this narrative is not based on site-specific evidence and does not create the conditions suitable for tidal marsh landward migration associated with sea-level rise. Thus, the proposed permanent impacts to vegetated/unvegetated tidal waters are not adequately justified.

Aside from direct impacts to vegetated and unvegetated aquatic shallows, several additional impacts remain possible. For example, several references have been made to the existence of contaminated sediments on parcels 470 and 472; this has been used to justify the need for filling to begin at MHW and the construction of smaller SPSC structures in filled waters, rather than achieving desired grades through a combination of upland grading and filling. Conversely, this potentially contaminated material is proposed to be used as on-site fill in parcel 472 and the largest SPSC structures are proposed in excavated soils in adjacent lots. These inconsistencies raise concerns regarding the extent and severity of contamination in the project area. The potential reuse of contaminated sediments and the construction of SPCP structures in potentially contaminated areas could further perpetuate the exposure of aquatic organisms to toxic substances. Finally, the cobble proposed to constitute the headland structures is of an unspecified size. To avoid the mobilization of this material onto adjacent SAV during substantial highwater events in the lower Susquehanna River, such as those observed during the flooding of 2011 and 2018/2019, this material should be of sufficient size to stabilize the existing shoreline in all expected conditions. Potential impacts include the burial of adjacent SAV beds by mobilized sediments.

Additional Required Information

We provided initial technical assistance comments on January 15, 2021, indicating what aspects of the project required further clarification. While some comments were addressed during the January 27, 2021, resource agency meeting, several uncertainties remain. As always, we look forward to working with your staff to resolve our concerns regarding the impacts to vegetated/ unvegetated shallow water habitats and availability of practicable alternatives to meet project

goals. To accomplish this the following additional information should be provided/prepared:

- An alternatives analysis that separately addresses each primary project goal. For those goals that are applicable to the City of Havre de Grace (e.g., TMDL credit fulfillment), provide an alternatives analysis that is similarly expanded in scope.
- An alternate design that meets the project goals while avoiding extensive impacts to mapped SAV habitat. This could include limiting channelward encroachment by employing landward grading, limiting channelward encroachment in headlands, or increasing slopes of proposed embayment shorelines. Field surveys during the SAV growing season may further elucidate the distribution of preferred (e.g., wild celery) and less valuable (e.g., filamentous algae) vegetated shallow water habitat which could facilitate future discussions regarding minimizing adverse impacts.
- Documentation of empirical evidence of contaminated sediments throughout the project area and, in places where contaminated soils are present, provide a plan for long-term containment.
- Complete accounting of where bulkheads will remain and where they will be removed. In locations where bulkheads are proposed to remain and/or be installed, the primary purpose for this action (e.g., contaminated sediment containment) should be established.
- Documentation of the planned railroad bridge expansion and what effects that it may have on the project as proposed, including on proposed vegetative plantings, SPCS structures, and shoreline hydrodynamics.
- The development of a project schedule that avoids in-water work during the SAV growing season (April 15 through October 15).
- The development of a compensatory mitigation plan to address unavoidable impacts to subtidal shallows and SAV.

EFH Conservation Recommendations

As discussed above, the project as currently proposed will adversely affect EFH for federally managed species such as bluefish and summer flounder due to the loss and degradation of habitat for prey species including anadromous fish. Additional information as listed above is necessary to fully evaluate the adverse effects, options for avoidance and minimization and the potential need for compensatory mitigation. As a result, we recommend pursuant to Section 305(b)(4)(A) of the MSA that you adopt the following EFH conservation recommendations to minimize adverse impacts on EFH and aquatic resources of national importance:

- Authorization for the project as currently proposed be withheld until the additional information described above is provided and impacts to EFH and SAV are minimized to the maximum extent practicable.

Please note that Section 305(b)(4)(B) of the MSA requires you to provide us with a detailed written response to these EFH conservation recommendations, including a description of measures adopted by you for avoiding, mitigating, or offsetting the impact of the project on EFH. In the case of a response that is inconsistent with our recommendations, Section 305(b)(4)(B) of the MSA also indicates that you must explain your reasons for not following the recommendations. Included in such reasoning would be the scientific justification for any

disagreements with us over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects pursuant to 50 CFR 600.920(k). Though other state regulations may place additional restrictions on project design specifications (e.g., MDE stipulating a 2:1 sand fill to sill footprint ratio), these regulations alone do not provide adequate scientific justification. This response must be provided at least 10 days prior to permit issuance.

Please also note that further EFH consultation must be reinitiated pursuant to 50 CFR 600.920(j) if new information becomes available, or if the project is revised in such a manner that affects the basis for the above determination.

Endangered Species Act

Threatened or endangered species under our jurisdiction including Atlantic sturgeon (*Acipenser oxyrhynchus*) may be present in the project area. As the lead federal action agency, you are responsible for determining the nature and extent of effects and for coordinating with our Protected Resources Division as appropriate. Our website (https://www.fisheries.noaa.gov/new-england-mid-atlantic/consultations/section-7-consultations-greater-atlantic-region) has guidance and tools to assist action agencies with their description of the action and analysis of effects to support their determination. Should you have any questions about the section 7 consultation process, please contact Brian Hopper at 410-573-4592 or brian.d.hopper@noaa.gov.

Conclusion

As discussed above and in technical assistance comments dated January 15, 2021, there are a number of significant unresolved issues regarding the proposed project and the adverse effects to NOAA-trust resources have not been fully evaluated. The applicant also has yet to demonstrate that impacts are unavoidable or that alternatives do not exist that would avoid or minimize these impacts. A compensatory mitigation plan has also not yet been provided, nor has a post-construction monitoring/adaptive management plan. Therefore, we must conclude that the proposed project will have substantial and unacceptable impacts to aquatic resources of national importance in accordance with Part IV, Paragraph 3(b) of the MOA between our agencies. We recommend that the Corps hold its permit decision in abeyance until complete information and assessments of the potential impacts of the project are provided to us for review and the applicant provides additional information on efforts to avoid and minimize impacts, and a full and complete mitigation plan. We look forward to our continued coordination so that it can move forward efficiently and expeditiously as possible while still meeting our joint responsibilities to protect and conserve aquatic resources.

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New England Fishery Management Council
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John F. Quinn, J.D., Ph.D., *Chairman* | Thomas A. Nies, *Executive Director*

February 12, 2021

The Honorable Scott De la Vega
Acting Secretary of the Interior
Department of the Interior
1849 C. Street, N.W.
Washington, DC 20230

Dear Mr. Secretary:

On January 20, 2021, the President issued an Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis. Section 3 of that order directs you to conduct a review of Proclamation 10049 of June 5, 2020. That proclamation modified the conditions of the Northeast Canyons and Seamounts Marine National Monument (Marine Monument) by removing restrictions on commercial fishing. Your review is to develop a recommendation on whether restrictions on commercial fishing that were in place as of January 20, 2017 should be restored. We urge you to support the current condition and to oppose a reversion to the status in place in 2017.

The New England Fishery Management Council (Council) is one of eight regional councils established by the Magnuson-Stevens Fishery Conservation and Management Act, more commonly referred to as the Magnuson-Stevens Act (MSA). The Councils are charged under this Act with managing, conserving, and using fishery resources throughout the entire Exclusive Economic Zone (EEZ) of the United States. Our responsibilities include not only managing fisheries but identifying and protecting essential fish habitat and minimizing bycatch. Since the establishment of the Council process in 1977, we have fulfilled this responsibility with a science-based approach that provides an open and transparent process that fosters participation by all stakeholders. Council actions must comply with the National Environmental Protection Act and are subject to review and approval by the Secretary of Commerce. We believe the partnership between the Councils and the Department of Commerce, prescribed by the MSA, is the best way to manage fishery resources, including within the boundaries of the Marine Monument. Our June 29, 2017 letter to the Department of the Interior (attached) explains our stance in detail.

Our Council has a lengthy record of using area-based restrictions to enhance fishery productivity, protect essential fish habitat, and reduce interactions with protected species. One of our recent actions is particularly relevant to the Monument. We adopted measures designed to protect deep-sea corals that were under development when our 2017 letter was written. The Council's coral action prohibits almost all bottom-tending fishing gear in an area that dwarfs the Marine

Monument[1], as shown in the attached figure. As a result, not only does it protect corals, but it also protects a wide range of bottom-dwelling species from fishing and minimizes potential future interactions of protected species with gear in this area. Our analyses show that it protects 87 percent of the area within the Monument boundaries, while balancing the impacts on the sustainable use of fisheries resources - uses that provide important economic benefits to communities. When combined with an adjacent area adopted by the Mid-Atlantic Fishery Management Council, deep-sea corals are protected in an area the size of Florida. This is relevant to your review, as it demonstrates that fisheries management under the MSA can successfully protect valuable resources while supporting sustainable economic activity. This action was approved by the Department of Commerce in November 2019, and implementation is imminent.

We urge you to carefully examine arguments that support using the Antiquities Act to adopt fishing restrictions in the Marine Monument. As noted in our 2017 letter, there isn't a transparent process that solicits input from all stakeholders for developing those restrictions, nor are the impacts analyzed before implementation. The effects of climate change on fishery resources in the Marine Monument are unlikely to be mitigated by a blanket ban on fishing with fixed and mobile gear. This is particularly the case for highly mobile species that are in the area for only brief periods. In areas where highly sensitive species such as deep-sea coral beds have been identified, the Council has deliberately prohibited fishing gears that adversely affect them. Some note that the revenues from the Monument area are a fraction of total fishing revenues, but this minimizes the effects on individual fishermen and their communities. Finally, claims that the Monument's restrictions have had no impact on fishing revenues ignores that two high-value fisheries – red crab and lobster – have not yet been prohibited from the area.

In conclusion, the MSA has proved to be the gold-standard for effective and sustainable fisheries management for over forty years. The regime it establishes is the best way to manage fisheries throughout the EEZ. We believe that our targeted approach is successful and management of fishing in the Marine Monument should be the responsibility of the Council. Thank you for considering our comments. I would be happy to answer any questions your staff may have.

Sincerely,

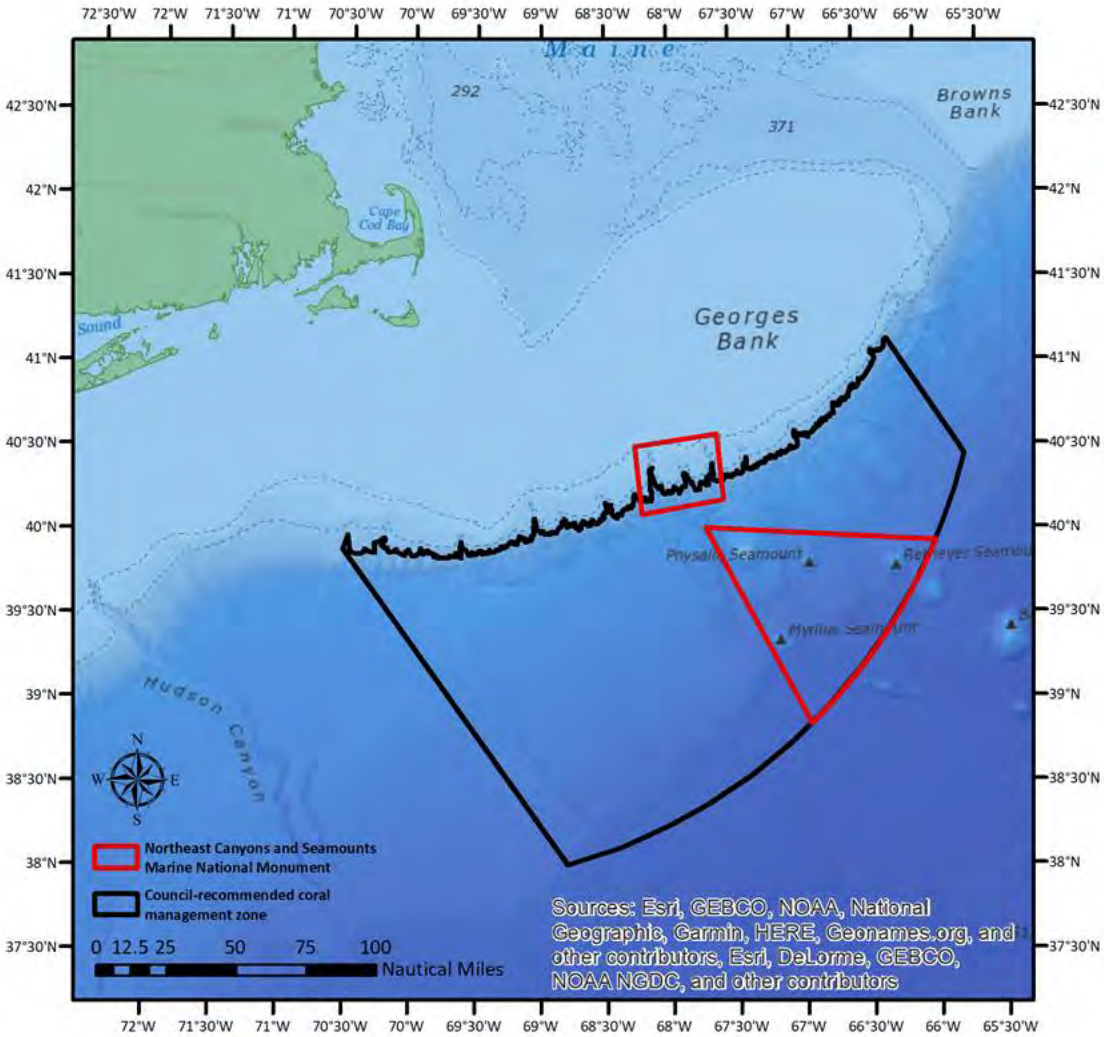
.

Thomas A. Nies
Executive Director

cc: The Honorable Wynn Coggins, Acting Secretary of Commerce
Mr. Paul Doremus, Assistant Administer For Fisheries (Acting) NOAA/NMFS

[1] Deep-sea red crab fishing, which is limited to a maximum of six vessels and occurs at depths below 600 meters, is allowed. Fishing for highly migratory species using mid-water gear is managed by the Secretary of Commerce in this area.

Figure 1 – Comparison of the deep-sea coral protection area (approved 2019) and the Northeast Canyons and Seamounts National Marine Monument



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June 29, 2017

The Honorable Ryan Zinke
Secretary
Department of the Interior
1849 C Street, N.W.
Washington, DC 20240

The Honorable Wilbur L. Ross Jr.
Secretary
Department of Commerce
1401 Constitution Avenue N.W.
Washington, DC 20230

Dear Secretary Zinke and Secretary Ross:

Please accept these comments from the New England Fishery Management Council (Council) regarding the U.S. Departments of the Interior and Commerce joint review of National Marine Monuments. Specifically, we are commenting on the Northeast Canyons and Seamounts National Marine Monument, which was designated during September 2016 and overlaps five canyons and four seamounts in the New England region. We plan to submit these comments via regulations.gov in response to DOI's May 11 request for comments; we ask that you consider them a response to NOAA's June 26 request for comments as well.

The Council has management jurisdiction over 28 marine fishery species in federal waters of the New England region, and a number of these are harvested on southeastern Georges Bank in the shallower depths of the canyon section of the monument. We have thoroughly evaluated the overlap between the monument and commercial bottom-tending gear fisheries through our ongoing Deep-Sea Coral Amendment (see excerpts in Attachment 1). This analysis used vessel trip reports (logbooks) and satellite-based vessel monitoring system data on vessel location, combined with information from at-sea observers, to estimate revenue generated, species landed, and hours fished within the monument and other management areas under consideration.

The primary gear types used in and around the monument include bottom trawls, lobster pots, and scallop/clam dredges, with smaller amounts of effort from separator trawls and Ruhle trawls. Top species include lobster, Jonah crab, red crab, scallops, silver hake, longfin squid, butterfish, flounders, Atlantic mackerel, and haddock. Total annual fisheries revenue associated with the monument was estimated to be $1.8M for the period 2010-2015, based on logbook data. Based on information collected in a lobster permit holder survey conducted by the Atlantic States Marine Fisheries Commission, this total may underestimate revenue in the lobster pot fishery because of the way the data are collected. The results indicate that 12-14% of the offshore lobster fishery effort and 13-14% revenue ($2.4-2.8M annually) for the lobster and Jonah crab fishery comes from the area of the National Monument. We also assessed dependence of individual owners on the monument. While many vessel owners have a low percentage of their revenue or

effort attributed to the monument, others appear to be more dependent on the area, particularly those using fixed gears.

Our coral amendment process has demonstrated that:

- Council stakeholders with diverse backgrounds support the conservation of canyon and seamount habitats and the species within those habitats, in particular deep-sea corals, which are ecologically important and vulnerable to disturbance.
- Fish distributions and fishing activities in the canyons are strongly governed by depth. The spatial extent of a management area, particularly how shallow the area is, has a large influence on how much fishing effort will be displaced.

The two points above are strongly linked. Except for the red crab fishery, which is exclusively prosecuted below 600 meters, fishing effort in the monument occurs in shallower depths. Thus, in the context of the Council's coral amendment, fishery closures in deeper parts of the canyons (600 meters and greater) generally received broad support from stakeholders, provided that the Council authorizes an exemption for the red crab pot fishery. We have seen broad support for fishery closures on the seamounts as well, and there are no indications that bottom tending gears are used at present on or near the seamounts. Because depth changes rapidly in the canyons and along the slope, a distance of just a few kilometers at the surface can represent a large difference in depth, and thus have a substantial effect on the amount of fishing activity displaced by a fishery closure. With respect to consideration (i) in the DOI notice, we note that deep-sea corals are not common except in the canyons and deeper, steeper, areas of the continental slope. Specifically, coral habitats along the continental margin tend to occur beyond the shelf break, which occurs between 200-300 meters. Roughly half of the part of the Monument that protects the canyons is shallower than 200 meters, the depth typically used to indicate the inshore canyon boundary. It is unlikely that many corals are in this area. To the extent that deep-sea coral habitats are considered "objects to be protected", the footprint of the canyon section of the monument may exceed "the smallest area compatible with proper care and management".

The Council recognizes that there are activities beyond the Council's authority which may be appropriate to regulate within marine national monuments. However, we agree with the position taken by the Council Coordination Committee (CCC) in May 2016 and May 2017 that the management of fisheries in marine monuments should remain under the jurisdiction of the Councils and NMFS, administered through the Magnuson Stevens Fishery Conservation and Management Act. As noted by the CCC in its May 2017 letter, designation of marine national monuments disrupts the Council's ability to manage species throughout their range as required by MSA. Specific to consideration (B) in the NOAA notice, we would argue that pre-designation consultation with Federal, State, and tribal entities affected fell short of the process fisheries stakeholders expected, based on their experience with the public process for fisheries regulation conducted under the Magnuson Stevens Act.

Compare the process used during development of our Deep-Sea Coral Amendment with that used to develop the Monument. The Council used a technical team that compiled and analyzed fishery and deep-sea coral information. This team consulted with industry and the Atlantic States Marine Fisheries Commission to supplement available data on the lobster fishery. The team reported to a Committee that identified alternative management areas in a series of public meetings that spanned nearly two years. The Committee worked to balance coral protection with limited impacts on fisheries using the data developed by the technical team. Two workshops were held to solicit additional input on proposed area boundaries and the expected impacts. Public hearings were held throughout New England to explain the alternatives and solicit input.

A suggestion offered at these meetings was added for consideration and will be analyzed fully before the final decision this fall.

In contrast, the initial Monument proposal was developed by a closed group of environmental organizations without any public input or notice that it was being developed. After a public affairs event, it was submitted for consideration to the federal government. While staff of the Council on Environmental Quality did meet several times with interested parties over a period of about seven months, they never provided a chart showing the boundaries that they were considering, and never circulated a proposal that detailed specific restrictions until the Monument was announced. The impacts of the action were never analyzed in any formal manner – or, if they were, the analyses were never published for public review.

It is our view that if the Northeast Canyons and Seamounts Marine National Monument is retained, the limitations on fishing activity implemented by its designation should be rescinded. A clear purpose and need for the Monument should be identified, and any fishing restrictions needed to meet that purpose and need should be developed through the Council process and implemented under the provisions of the Magnuson-Stevens Act. If necessary, the Secretary of Commerce should adopt measures for fisheries beyond the Council's jurisdiction.

We stand ready to work with the National Oceanic and Atmospheric Administration and the Department of the Interior as you complete you review of this national marine monument. If there is any additional information we can provide, please contact Executive Director Thomas Nies at 978-465-0492.

Sincerely,

John Quinn
Council Chairman

Attachment – Excerpts from NEMFC Omnibus Deep-Sea Coral Amendment, June 2017

cc: Mr. Chris Oliver, NMFS Assistant Administrator for Fisheries
Mr. John Bullard, GARFO Regional Administrator
Regional Fisheries Management Councils

1 Introduction

The New England Fishery Management Council (Council) develops fishery management plan amendments in compliance with the Magnuson Stevens Fishery Conservation and Management Act (MSA), the National Environmental Policy Act (NEPA), and other applicable laws. Under NEPA, the Council evaluates a range of possible alternative approaches to addressing identified issues, and the analysis includes evaluation of the no action alternative, i.e. the ongoing management approach should no action be taken by the Council. In the case of the coral amendment, the No Action alternative (Section 4.1 of the amendment document) includes two closures with the same boundaries in both the Monkfish and Mackerel/Squid/Butterfish (MSB) Fishery Management Plans, three closures in the Tilefish Fishery Management Plan, and the Northeast Canyons and Seamounts Marine National Monument.

While none of these areas was designated under the discretionary coral protection authority in section 303(b) of the MSA, they all encompass coral habitats and provide some measure of protection for coral habitats through fishing gear restrictions. The monkfish and MSB closures in Oceanographer and Lydonia canyons are closed to vessels using days at sea in those fisheries. The tilefish gear restricted areas are in shallower parts of Oceanographer, Lydonia, and Veatch Canyons. These areas are closed to mobile bottom-tending gear. The Monument areas were closed to all commercial fishing on November 15, 2016, except red crab and lobster trap fisheries, closure of which will take effect seven years from the date of designation (i.e., 2023).

The following discussion, figures, and tables were adapted from the Omnibus Deep-Sea Coral Amendment. A recent draft of the amendment is available on the Councils webpage at http://www.nefmc.org/library/omnibus-deep-sea-coral-amendment. Because the fishery management closures in the monkfish, mackerel/squid/butterfish, and tilefish plans overlap with the marine national monument, the impacts described here are not additive.

2 Impacts on human communities

Under No Action, the fishing restrictions would remain in place associated with the two closures in the Monkfish and Mackerel/Squid/Butterfish (MSB) FMPs, three closures in the Tilefish FMP, and the Northeast Canyons and Seamounts National Monument. The Monument has been closed to all commercial fishing since November 2016, with the exception of the lobster and red crab fisheries, which have seven years to cease operations within the Monument.

With the Monument implementation, it is difficult to determine if fishermen would be precluded from fishing altogether or be able to shift effort to other areas. The lobster fishery is particularly territorial (Acheson 1987; 2006), such that efforts to shift effort to areas remaining open may be difficult for those displaced by the closures. The industry input from the NEFMC coral workshops was consistent with this (NEFMC, 2017). To the degree that these closures provide habitat for fishery species, there may be long-term benefits to fisheries and society, but these are difficult to project.

2.1 Fishery impacts

2.1.1 Prior impacts of the No Action Monkfish/MSB/Tilefish areas

Monkfish Areas: It is unlikely that the monkfish fishery was substantially impacted by closing Lydonia and Oceanographer canyons, and continuing this closure under No Action would likely have negligible impact. Since 2005, though Amendment 2 to the Monkfish FMP, fishing with any gear type while on a monkfish Day-at-Sea (DAS) in these Canyons (deeper than 200 m) has been prohibited. At the time, the impacts analysis indicated that this closure was designed to "prevent an expansion of the offshore monkfish into the deeper (>200 m) portions" of these canyons, and that the directed fishery was not operating within the closure. Thus, no negative economic impacts to the directed fishery were associated with the closure (In 2001, there were four non-directed trips with a combined monkfish revenue of $68,000; NEFMC 2004, p. 41, 423).

Mackerel/Squid/Butterfish Areas: It is unlikely that the mackerel, squid, or butterfish fisheries were substantially impacted by closing Lydonia and Oceanographer canyons, and continuing this closure under No Action would likely have negligible to potentially positive impacts on the fishery in the long-term if protecting essential fish habitat improves the resource. In 2008, these canyons (same boundaries as the monkfish closure) became closed to bottom trawl fishing for mackerel, squid, or butterfish via Amendment 9 to that FMP – with the intent of reducing essential fish habitat impacts. At the time, the impacts analysis indicated that this closure would "have a minimal impact on revenues both for vessels and ports" (MAFMC, 2008; p, xi).

Tilefish Areas: It is unlikely that the tilefish fishery was substantially impacted by closing Lydonia, Oceanographer, Veatch and Norfolk canyons (Norfolk is outside the New England region), and continuing this closure under No Action would likely have negligible to potentially positive impacts on the fishery in the long-term if protecting essential fish habitat improves the resource. In 2008, these canyons were closed to all bottom-tending mobile gear via Amendment 1 to the Tilefish FMP – with the intent of reducing impacts known clay outcrop tilefish habitat. At the time, the impacts analysis (based on VTR data) indicated that, in 2005, $207,096 in revenue from all fisheries in was derived from these canyons (just Oceanographer and Veatch), and just $1,287 from tilefish. These totals were much smaller than what was derived from other canyons in the Mid-Atlantic that remained open through this action ($6M).

2.1.2 Estimates of recent fishing activity within the No Action areas

Due to data limitations, it is impossible to know the true amount of fishing activity that has occurred within the No Action areas. Thus, multiple approaches are used to estimate fishing activity, and thus characterize the potential fishery impacts of No Action.

VTR analysis: Vessel Trip Report data were used to estimate recent (2010-2015) fishing activity within the No Action areas. Note that the No Action Monkfish/MSB/Tilefish areas were in effect during the period encompassed by this analysis, but the National Monument was implemented subsequently. Except for lobster trap gear, revenue results were unscaled. Because some lobster vessel operators are not required to submit VTRs (their vessels do not carry other federal permits), total lobster revenue was expanded (method explained in Section 7.1.3.2 of the coral

amendment). Maps of revenue by gear type and species are in Section 13 of the coral amendment.

Revenue: From 2010-2015, an annual average of $0.4M of fishing revenue is attributed to the area of the Monkfish/MSB/Tilefish areas, with higher than average values in 2014 and 2015 (Figure 1). The recent revenue attributed to fishing with mobile bottom-tending gear from these areas is about 47% of the total, or $207K annually. In terms of specific gears, revenue is primarily attributed to bottom trawls, lobster pots, other pots, and scallop/clam dredges; separator and Ruhle trawls and sink gillnet revenues are minor. Since bottom trawl was prohibited in these areas during 2010-2015, comparison with the more spatially refined VMS data below helps shed additional light on this finding.

The National Monument (Figure 2), which is larger, shallower and encompasses most of the Monkfish/MSB/Tilefish areas, has a more revenue attributed to it, averaging $1.8M annually. During 2010-2015, there was a substantial scallop dredge fishery on the southeastern part of Georges Bank, close to, but not within, the Monument boundary – the spatial imprecision of VTR data may explain these high revenues inferred to the Monument. The recent revenue attributed to fishing with mobile bottom-tending gear from the Monument area is about 62% of the total, or $1.1M annually. In terms of specific gears, revenue is primarily attributed to bottom trawl, lobster pot, and scallop/clam dredges, with smaller contributions from separator and Ruhle trawls.

Species: Lobster, Jonah and red crabs, and scallops are the highest value species of the top 10 species with landings attributed to the Monkfish/MSB/Tilefish areas (Figure 3), although an increase in revenue from butterfish is evident in 2012-2015. Longfin squid is consistently in the top ten, but more variable from year to year. Silver hake, another small mesh trawl species, is also a consistent contributor to revenues in these areas. Other trawl-caught resources include flounders, mackerel, and haddock. There have been recent increases in effort in the Jonah crab fishery, and a spike in red crab revenue generated from the area occurred in 2014. Revenues in the Jonah crab fishery are likely to remain above historic levels for the foreseeable future (Megan Ware, ASMFC, pers. comm., 2017). Revenue from sea scallops is particularly prominent in 2015.

The results for the National Monument (Figure 4) are similar in terms of the top 10 species by revenue, but emphasize sea scallop revenues relative to the Monkfish/MSB/Tilefish. This is likely the result of the Monument's larger size overall, and its extension into shallower areas of the continental shelf.

Focusing on monkfish, to determine how the 2005 closure of Oceanographer and Lydonia Canyons has impacted the fishery, the VTR analysis indicates that for the five discrete canyon zones that overlap the monument, monkfish was not within the top ten species landed by revenue (see section 7.4.3 of amendment document). Monkfish revenue was within the top ten species attributed to the 15 canyons that do not overlap the monument, each year during this recent time period, but just about $100,000 or less annually (see section 7.4.3 of amendment document). Thus, there may be recent monkfish fishing in canyons other than Oceanographer and Lydonia,

though at least some of this revenue may be an artifact of the VTR analysis, with true fishing locations in shallower waters.

Focusing on mackerel, squid and butterfish, to determine how the 2008 closure of Oceanographer and Lydonia Canyons has impacted the fishery, the VTR analysis indicates that for the five discrete canyon zones that overlap the monument, mackerel, squid, and butterfish were within the top ten species landed by revenue (see section 7.4.3 of amendment document) each year during this recent time period, but it about $120,000 or less annually. For the 15 canyons that do not overlap the monument, revenue for butterfish and squid were within the top ten species attributed each year during this recent time period, about $250,000 or less annually (see section 7.4.3 of amendment document). Thus, there may be recent MSB fishing in canyons other than Oceanographer and Lydonia, though at least some of this revenue may be an artifact of the VTR analysis, with true fishing locations in shallower waters. Fishery stakeholders have emphasized recent increases in butterfish effort along the entire shelf break, owing to quota increases since 2013. Thus, butterfish revenues prior to 2014 underestimate future revenues from this species.

Owners: Between 2013 and 2015, the number of vessel owners with revenue attributed to the Monkfish/MSB/Tilefish areas and the National Monument respectively average 120 and 90 annually. For both, the percent revenue for owners fishing within these regions is typically in the low single digit percentages, but higher for some individuals, with some outlier owners generating as much as 5-10% of their revenue in these areas (Figure 9, Figure 11). This indicates that most of the potentially affected owners generate only a small fraction of their annual revenue from these areas, but a few owners derive a larger fraction of their annual revenue from the area. The most highly exposed owners fishing within the Monkfish/MSB/Tilefish areas tend to be pot fishermen, which is not surprising given the existing gear restrictions in these areas on mobile bottom-tending gears. This is in contrast with the National Monument, where a small number of owners employing mobile bottom-tending gears appear to be highly exposed.

VTR vs. VMS comparison: Between 2010 and 2015, an average of 317 bottom trawl trips and 266 lobster pot trips overlap the National Monument and 388 bottom trawl trips and 419 lobster pot trips overlap the Monkfish/MSB/Tilefish areas. Together, bottom trawl and lobster pot are the dominant gear types used on VTR-documented trips occurring in and around the No Action areas. The VMS data deemphasize scallop and clam dredge effort, with an average of 41 dredge trips overlapping the Monkfish/MSB/Tilefish and 51 trips overlapping the National Monument areas respectively.

For the permits (i.e., vessels) with 2010-2015 fishing attributed to either the Monkfish/MSB/Tilefish areas or the National Monument, bottom trawl gear is the most common gear type, though there is a decline through time, from ~120 to ~50 vessels fishing with bottom trawls in each area. Around 25 lobster vessels fished in the vicinity of these areas, again, with slightly more permits being fished around the Monkfish/MSB/Tilefish areas (including Veatch Canyon). Vessels with scallop and clam permits also report fishing in and around the areas. As noted above, larger numbers of permits report activity near the National Monument than in the Monkfish/MSB/Tilefish areas, likely because the Monument extends into shallower waters. There is a small number of permits that report using separator or Ruhle trawls in each of the

areas, and some permits reporting the use of gillnet gear in the Monkfish/MSB/Tilefish areas only. This reflects the concentration of gillnet effort in offshore RI and southeastern MA, but not further to the east where the Monument is located.

For both the Monkfish/MSB/Tilefish areas and the National Monument, the percent of VTR trips with Vessel Monitoring System (VMS) data in 2010-2012 is high for scallop dredge (93-100%), bottom trawl (84-94%), and Separator and Ruhle trawl trips (71-84%; Table 1). This indicates that these gears in these areas are well represented in the VMS data. For these gears, the VMS analysis represents fishing effort at a much more refined scale, and covers the vast majority of trips in the region. The same cannot be said for lobster pot and other gears, whose low level of VMS coverage (0-16%) would result in greater error when extrapolating the VMS results. It is unknown whether these same levels of overlap between VMS and VTR trips existed prior to 2010, given that VMS coverage has not been consistent across time. Bottom longline and gillnet VMS data have not yet been processed.

In general, the more spatially refined analysis using VMS data indicates that only 15-35% of permits attributed to fishing in the No Action management areas by the VTR analysis had VMS points falling within the regions of interest, for gears with good coverage (Table 2). Although the magnitude differs substantially, the interannual trends are generally consistent between the VTR and VMS analyses for trips and permits in the No Action areas. About 15% of VTR trips identified to be fishing within the Monkfish/MSB/Tilefish areas have VMS points falling within those regions, and the probability-weighted hours fished indicates a relatively small amount of effort is being expended in these regions by bottom trawl, squid trawl, and scallop dredges. This is intuitive, because these areas are currently closed to these gears. While more spatially precise than VTR data, VMS data nonetheless are a model of fishing distribution, and there are likely some errors in the attribution of specific VMS polling locations as fishing vs. non-fishing. The larger National Monument encompasses substantially more effort by bottom and squid trawls, although there is also substantial inter-annual fluctuation. About 25% of trips identified in the VTR analysis as having fished in the National Monument between 2010 and 2012 have corresponding VMS polls falling within the area.

The relative magnitude of effort estimated between the Monkfish/MSB/Tilefish areas and the National Monument are very similar between the VTR and VMS analyses. For 2010 to 2012, the ratio of revenue (VTR) and hours fished (VMS) in the Monkfish/MSB/Tilefish areas to the revenue/hours fished in the National Monument ranges from 14-20% in the VTR and 9-20% in the VMS, for trawls. This indicates both VMS and VTR paint a similar picture regarding the relative amount of fishing across the two regions. The scallop dredge ratios conform less across the two analyses, with the VMS analysis indicating no real concentration of fishing effort in either of these two areas using this gear. This is expected given the depths at which sea scallops generally occur in commercial abundance (i.e., below 110 m).

Figure 9, Figure 10, Figure 11, and Figure 12 provide the percentage of a permit's overall probability-weighted VMS effort within the Monkfish/MSB/Tilefish areas and the National Monument. Although this is expected to differ at least slightly from the percentage of owner revenue generated in each of these regions (Figure 5, Figure 6, Figure 7, Figure 8), due to the fact that multiple permits can belong to the same ownership group, there is substantial

concurrence between the two metrics. Both metrics indicate that the vast majority of individuals fishing within the Monkfish/MSB/Tilefish areas expend less than 1% of effort and generate less than 1% of total revenue in this region. For a similar majority, less than 5% of effort expended and total revenue generated is calculated to fall within waters of the National Monument.

It should be noted that most VMS transponders are programmed to send spatial coordinates once an hour. Given that bottom trawl vessels in the region tend to fish at a speed of 2-5 knots, while scallop dredges fish at 2-7 knots (Palmer and Wigley, 2007), there is potential for this VMS point analysis to underestimate the actual numbers of fishermen fishing within a relatively small region such as the Monkfish/MSB/Tilefish areas. Although less of an issue with the larger National Monument, the VMS data indicate a mismatch between the size of the management areas under consideration and the spatial precision of the data available to assess the impacts of the areas.

Figure 10 and Figure 12 present the percentage of a permit's overall VMS-derived effort generated from MBTG falling within the No Action alternatives. A comparison with Figure 9 and Figure 11 highlights that the most exposed permit holders in the Monkfish/MSB/Tilefish areas tend to be pot fishermen. As was the case with the VTR data, this is not a surprise given the gear restrictions already in place in that area. The distribution of permit-level exposure for bottom-tending and mobile bottom-tending gears in the National Monument is more consistent, indicating that some mobile bottom-tending gear fishermen are exerting a substantial portion of their effort within the bounds of the National Monument. These findings are consistent with the VTR-derived owner exposure.

ASMFC survey: The trap fishery for lobster and Jonah crab is not constrained by the Monkfish/MSB/Tilefish areas, but the National Monument will be closed to this gear type starting in 2023. The ASFMC survey of Area 3 lobster permit holders did not ask lobstermen to identify their fishing activity within the No Action Monkfish/MSB/Tilefish areas specifically, but there is likely to be less gear conflict with mobile gear in these areas relative to areas of similar depth open to mobile gear. Thus, the Monkfish/MSB/Tilefish may be more important to lobstermen relative to surrounding areas.

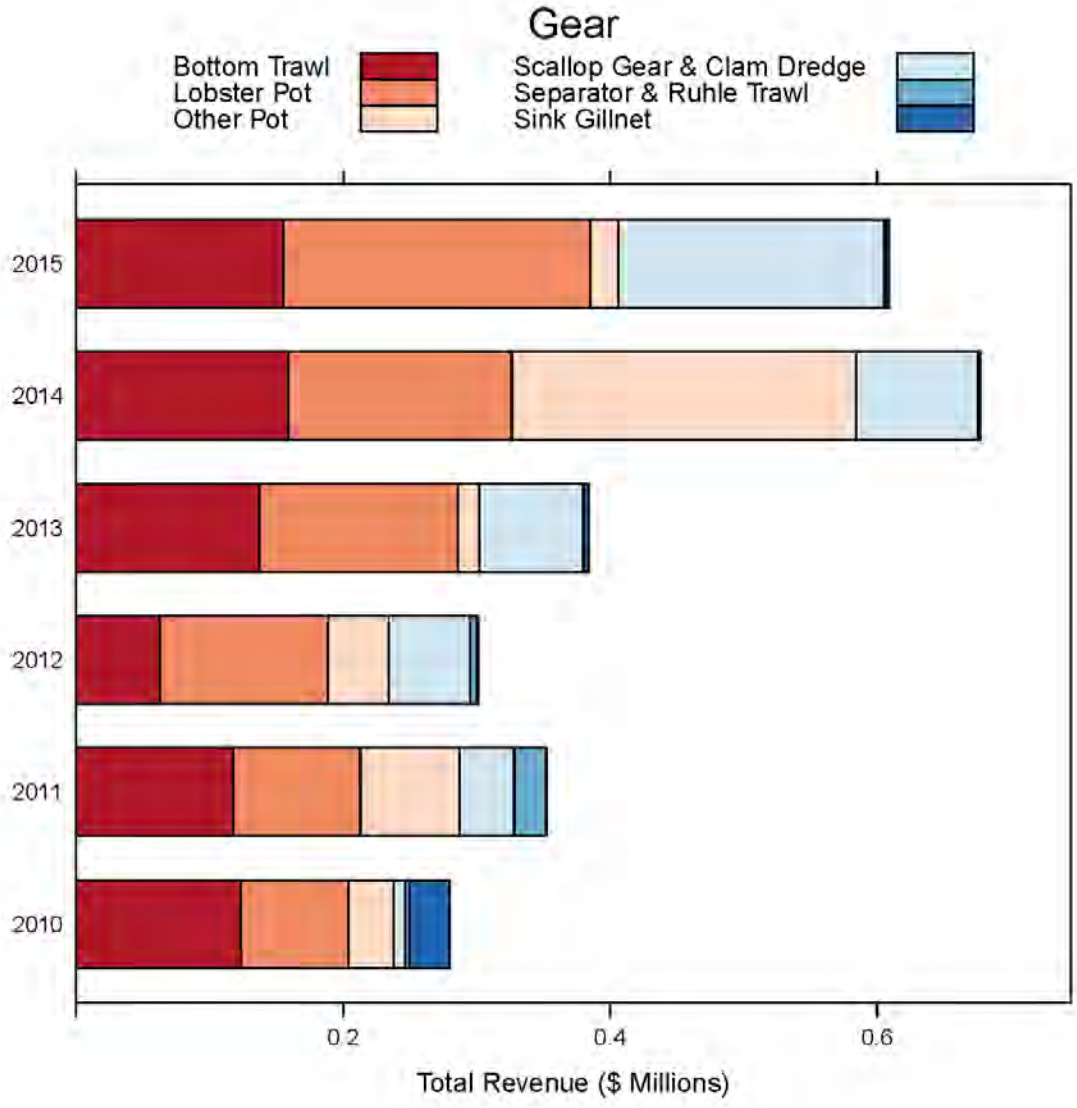
The survey did identify recent (2014-2015) fishing activity within the boundaries of the National Monument that will be closed to the fishery in the future. The results indicate that 12-14% of the offshore lobster fishery effort and 13-14% revenue ($2.4-2.8M annually) for the lobster and Jonah crab fishery comes from the area of the National Monument. This revenue is higher than that derived from the VTR analysis (about $0.7M annually, Figure 4).

2.1.3 Summary of fishery impacts

Given the high VMS coverage for bottom trawl, scallop dredge, and separator and Ruhle trawls in these areas, for these gears the estimates of fishing activity exposed are better assessed through VMS rather than VTR. Conversely, given the low coverage of lobster pot fishing in the region, the ASMFC survey provides an upper bound (~$2.4-$2.8M), while VTR provides a lower bound ($0.7M), on the uncertainty in revenue generated from regarding the trips and permits historically fishing within the Monkfish/MSB/Tilefish areas and the National Monument. For sink gillnets and clam dredges, only the VTR analysis is currently available.

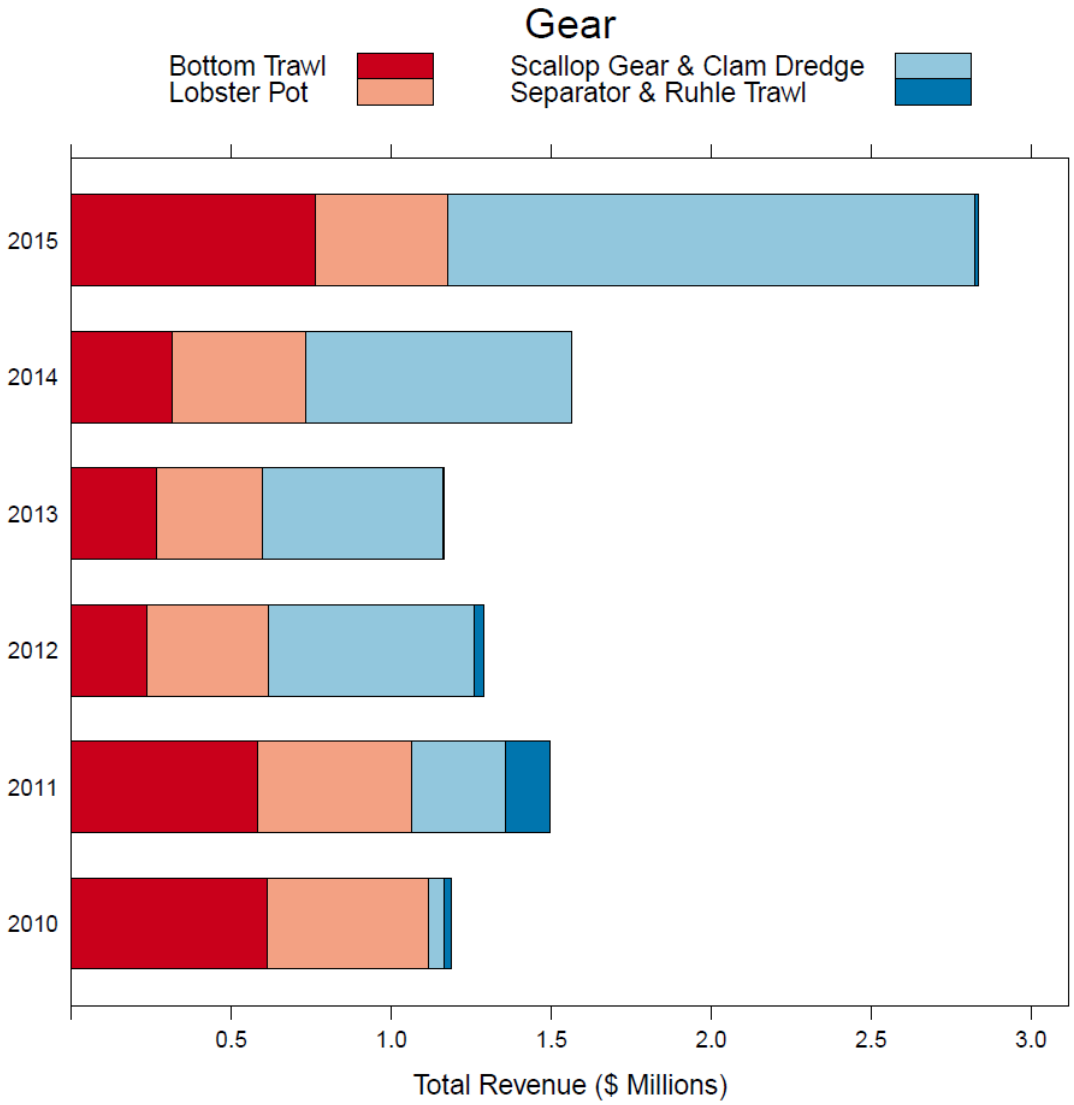
Although the high uncertainty regarding these estimates might upon first blush seem problematic, the percentage of revenue and effort, assessed at the owner and permit level respectively, consistently indicate a low level of fishing activity for the vast majority of individuals estimated to use these waters. However, a very small number of individuals seem to be using these areas more intensively.

Figure 1 – Revenue by gear type attributed to the No Action Monkfish/MSB/Tilefish areas within Veatch, Oceanographer, and Lydonia Canyons, 2010-2015.



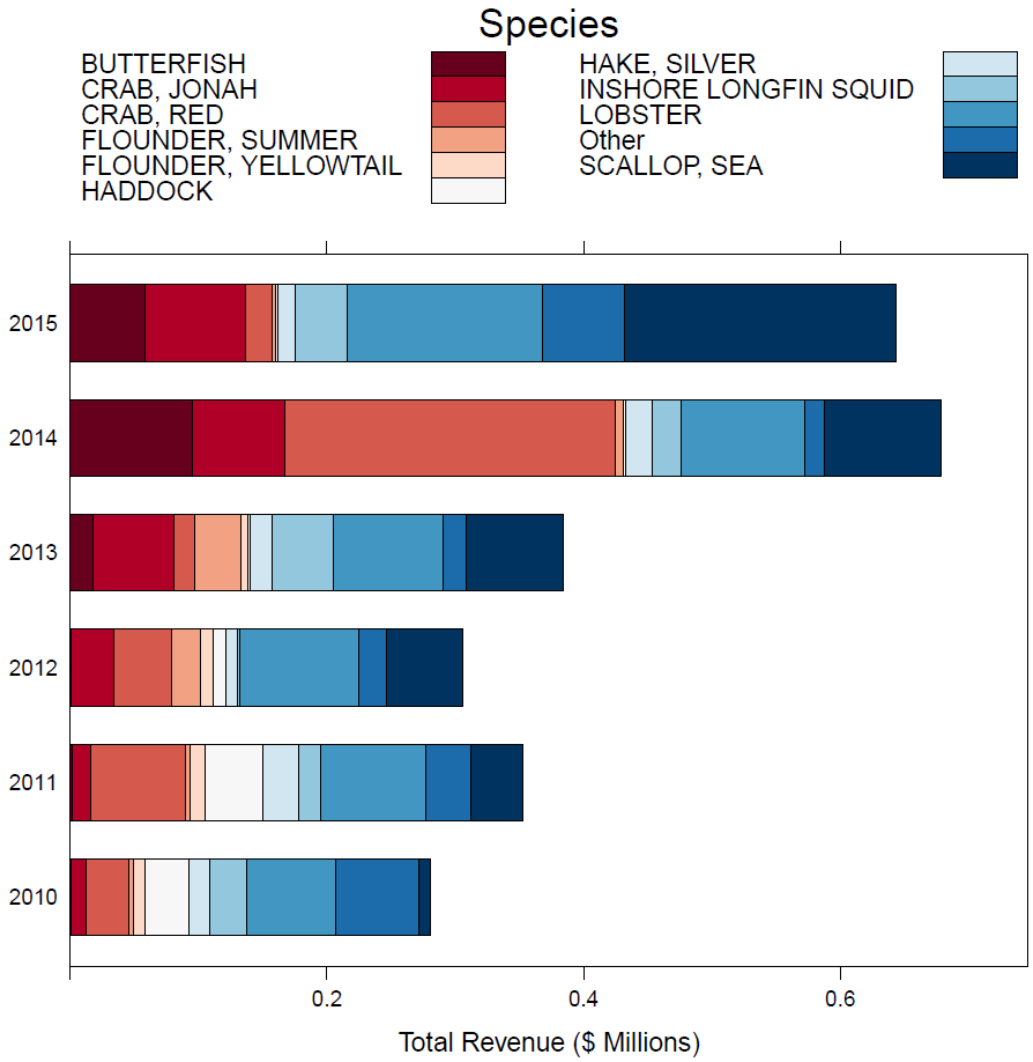
Source: **VTR analysis.**

Figure 2 – Revenue by gear type attributed to the Northeast Canyons and Seamounts Marine National Monument, 2010-2015.



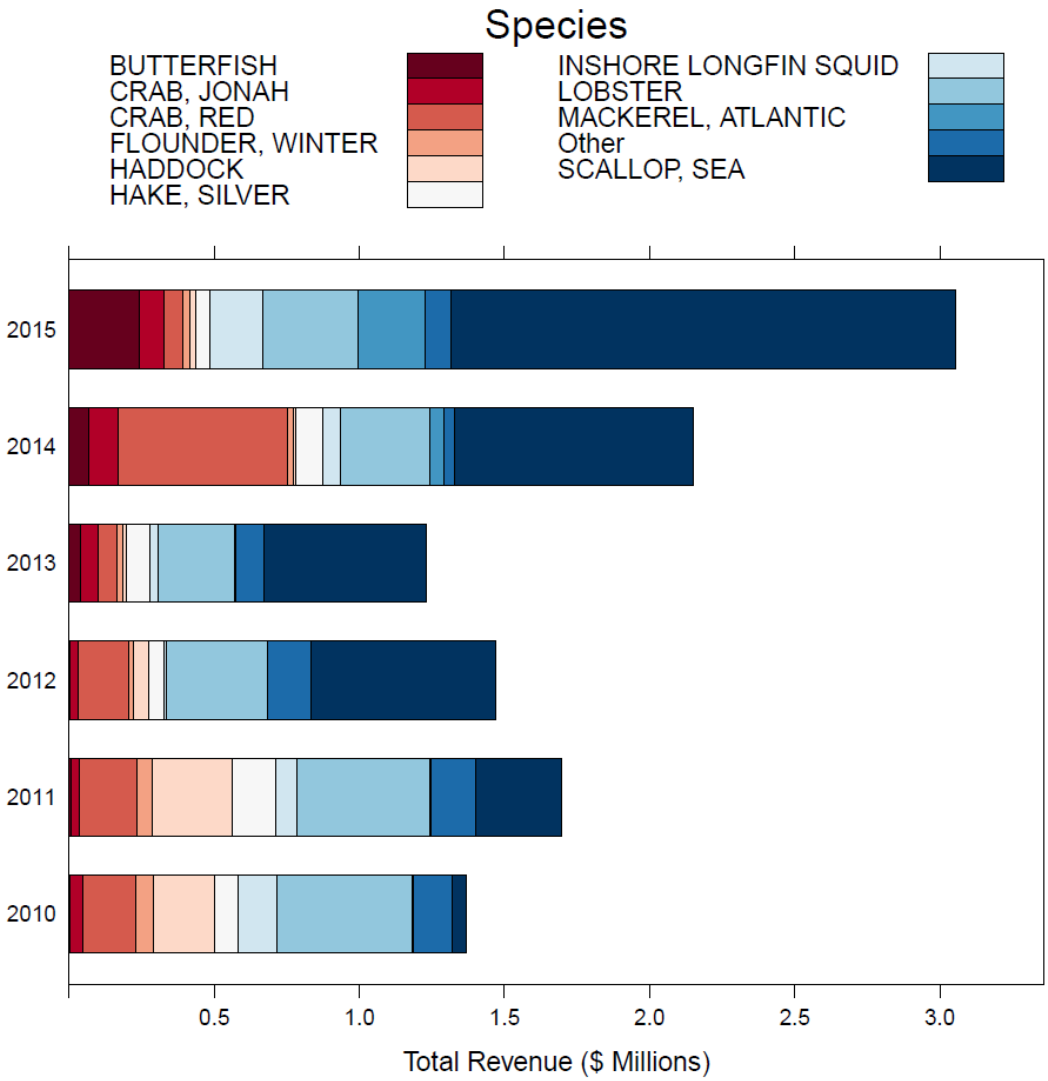
Source: **VTR analysis.**

Figure 3 – Revenue by species (top 10) attributed to the No Action Monkfish/MSB/Tilefish areas within Veatch, Oceanographer, and Lydonia Canyons, 2010-2015.



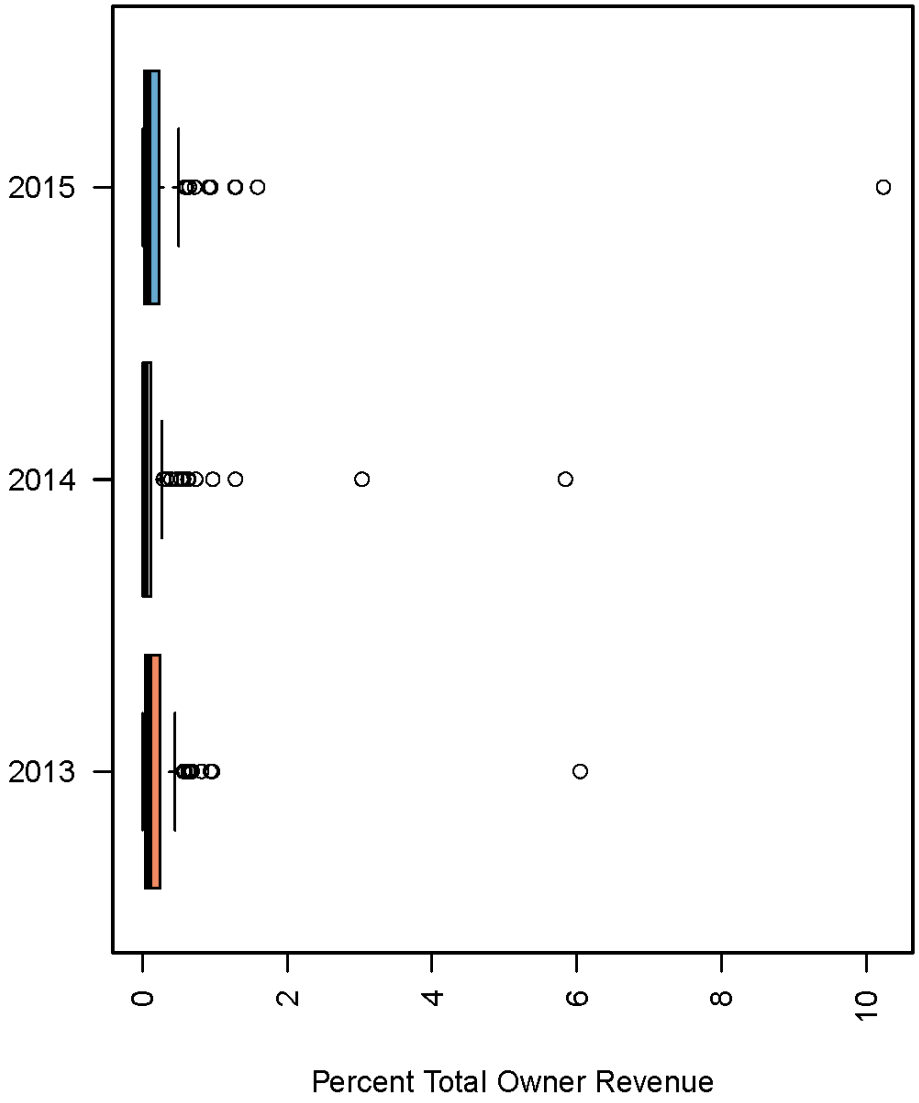
Source: **VTR analysis.**

Figure 4 – Revenue by species (top 10) attributed to the Northeast Canyons and Seamounts Marine National Monument, 2010-2015.



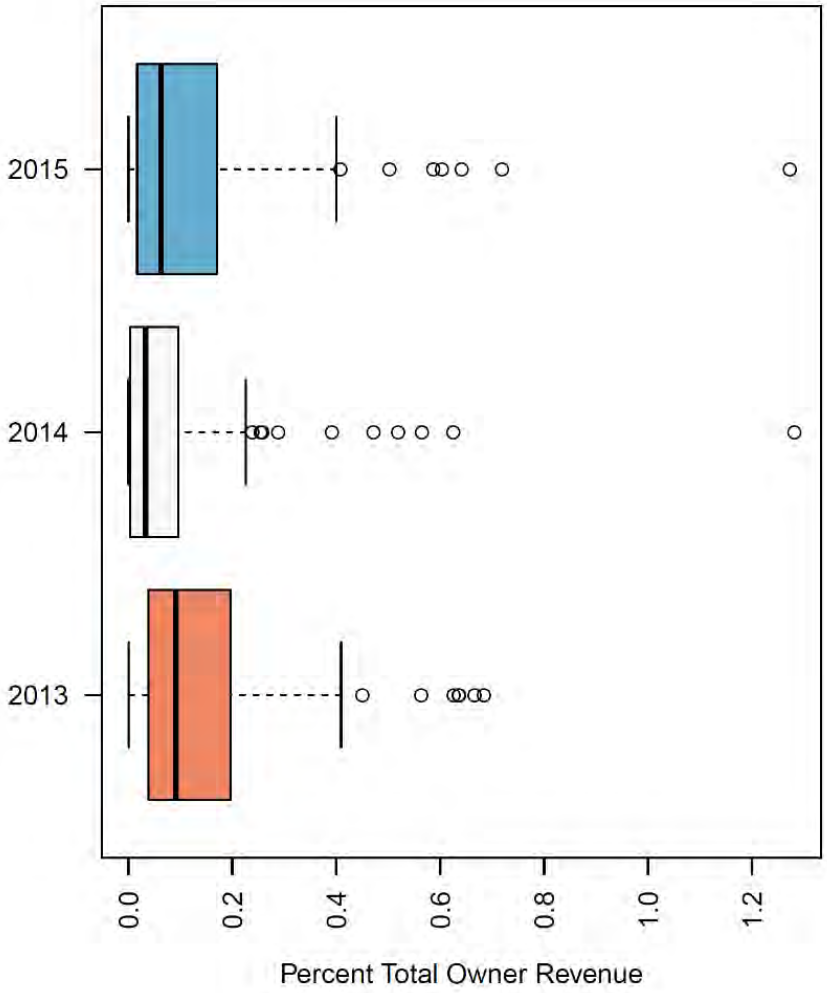
Source: **VTR analysis.**

Figure 5 – Percent of vessel owner revenue attributed to the No Action Monkfish/MSB/tilefish areas, 2013-2015.



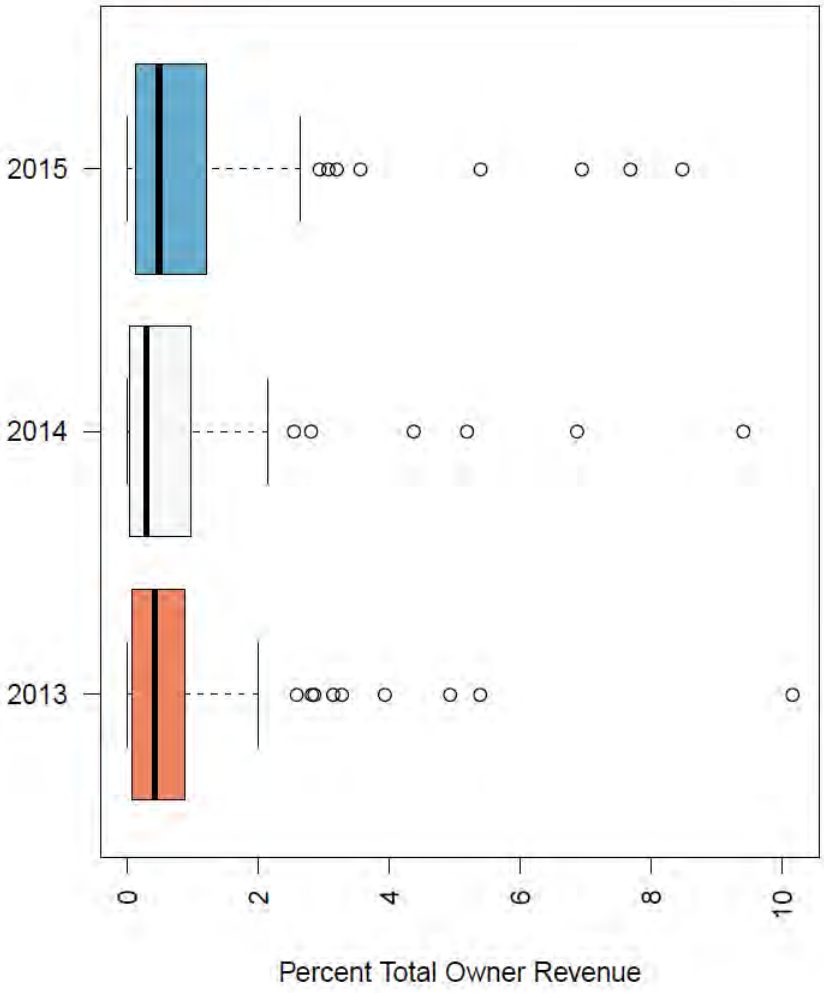
Source: **VTR analysis. Open circles are individual owners with a % total revenue 1.5 time above the 75% percentile.**

Figure 6 – Percent of vessel owner revenue attributed to MBTG within the No Action Monkfish/MSB/tilefish areas, 2013-2015.



Source: **VTR analysis. Open circles are individual owners with a % total revenue 1.5 time above the 75% percentile.**

Figure 7 – Percent of vessel owner revenue attributed to the Northeast Canyons and Seamounts Marine National Monument, 2013-2015.



Source: **VTR analysis. Open circles are individual owners with a % total revenue 1.5 times above the 75% percentile.**

Figure 8 – Percent of vessel owner revenue attributed to MBTG within the Northeast Canyons and Seamounts Marine National Monument, 2013-2015.

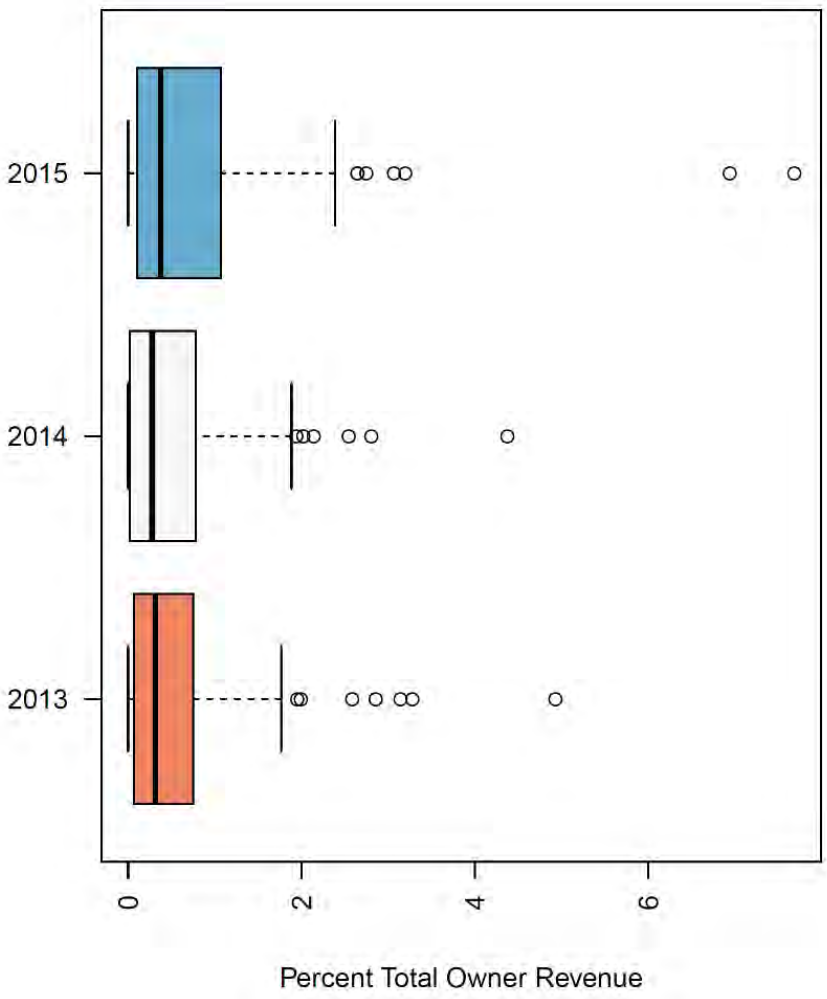


Table 1 – Percentage of VTR trips by gear type attributed to the No Action management areas that have VMS coverage, 2010-2012.

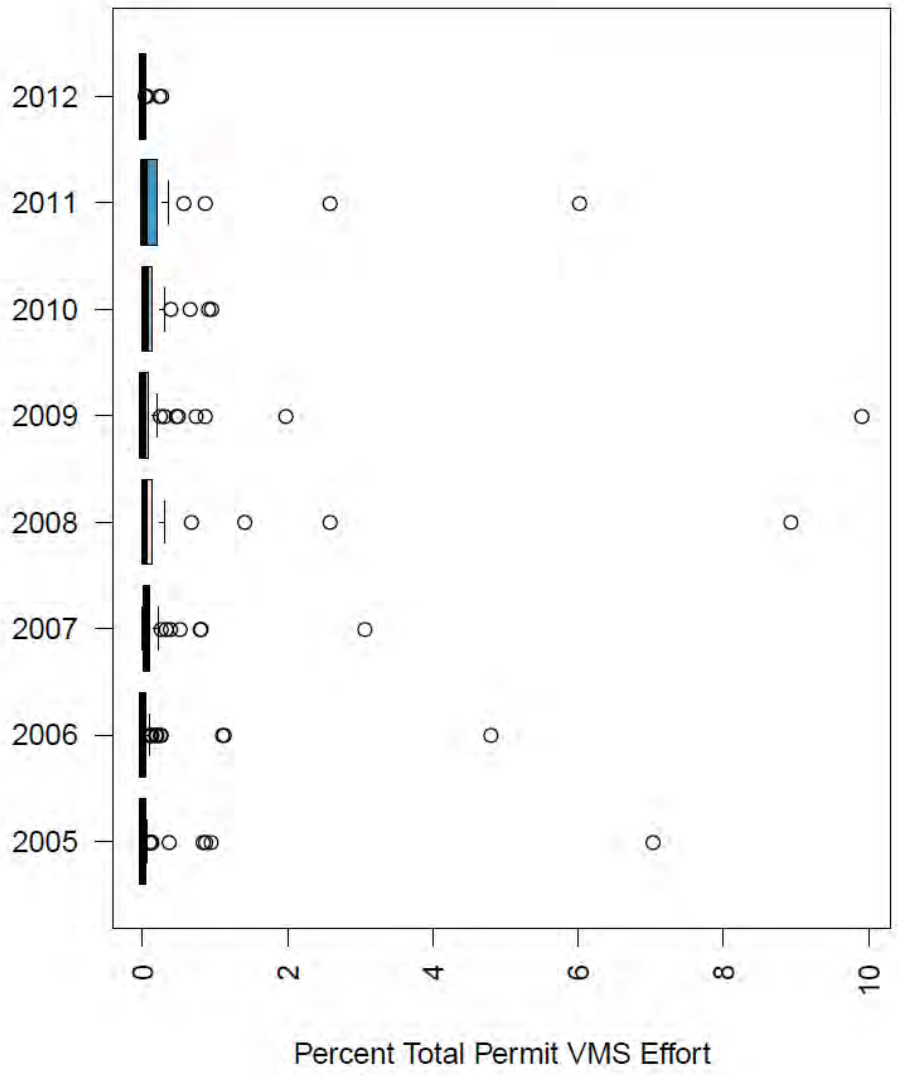
		No Action Monkfish Tilefish Areas				National Monument			
Gear	Year	Permits	VTR Trips	VMS Trips	Coverage	Permits	VTR Trips	VMS Trips	Coverage
Bottom Trawl	2010	117	575	539	94%	107	545	513	94%
Bottom Trawl	2011	99	481	430	89%	90	459	411	90%
Bottom Trawl	2012	100	351	296	84%	71	280	235	84%
Lobster Pot	2010	30	491	76	15%	21	309	49	16%
Lobster Pot	2011	30	420	28	7%	22	296	9	3%
Lobster Pot	2012	22	370	0	0%	18	257	1	0%
Scallop Gear & Clam Dredge	2010	8	8	8	100%	15	17	16	94%
Scallop Gear & Clam Dredge	2011	21	22	20	91%	27	30	28	93%
Scallop Gear & Clam Dredge	2012	29	35	35	100%	42	57	57	100%
Separator & Ruhle Trawl	2010	12	30	24	80%	14	40	30	75%
Separator & Ruhle Trawl	2011	30	110	92	84%	32	113	94	83%
Separator & Ruhle Trawl	2012	18	45	32	71%	19	46	33	72%
Other Pot	2010	4	27	0	0%	-	-	-	-
Other Pot	2011	3	20	0	0%	-	-	-	-
Other Pot	2012	5	31	0	0%	-	-	-	-
Sink Gillnet	2010	9	53	0	0%	-	-	-	-
Sink Gillnet	2011	7	29	0	0%	-	-	-	-
Sink Gillnet	2012	9	53	0	0%	-	-	-	-

Table 2 – VMS-derived estimates of effort (hours fished, permits, and trips) within the No Action management areas, by gear type

		No Action Monkfish Tilefish Areas			National Monument		
Gear	Year	Hours Fished	Permits	Trips	Hours Fished	Permits	Trips
Bottom Trawl	2005	19.32	20	39	614.52	50	149
Bottom Trawl	2006	48.51	25	44	373.21	49	101
Bottom Trawl	2007	57.70	46	71	756.01	55	127
Bottom Trawl	2008	23.41	23	61	433.21	31	103
Bottom Trawl	2009	22.14	19	70	256.56	36	137
Bottom Trawl	2010	40.54	33	85	243.10	37	132
Bottom Trawl	2011	51.33	18	53	305.25	22	91
Bottom Trawl	2012	7.99	11	41	105.40	17	73
Squid Trawl	2005	16.26	33	60	210.59	34	62
Squid Trawl	2006	27.19	32	70	32.41	23	41
Squid Trawl	2007	37.71	39	87	580.87	38	102
Squid Trawl	2008	8.02	8	13	3.84	5	5
Squid Trawl	2009	26.59	8	16	1.87	4	4
Squid Trawl	2010	9.46	10	21	187.75	10	17
Squid Trawl	2011	15.29	12	22	22.42	13	13
Squid Trawl	2012	1.71	6	7	2.71	3	3
Raised Footrope	2006	-	1	-	-	1	-
Trap	2005	1.83	3	5	13.76	3	5
Trap	2006	31.88	3	40	-	2	-
Trap	2007	22.53	3	28	-	2	-
Trap	2008	18.17	3	11	-	2	-
Trap	2009	10.11	3	17	-	1	-
Trap	2010	-	1	-	0.00	0	0
Trap	2011	-	2	-	-	2	-
GC Scallop	2006	-	1	-	-	1	-
GC Scallop	2009	0.00	0	0	-	1	-
GC Scallop	2011	0.00	0	0	-	1	-
GC Scallop	2012	-	1	-	-	1	-
LA Scallop	2005	0.16	25	28	0.20	9	10
LA Scallop	2006	0.18	28	35	1.34	28	40
LA Scallop	2007	0.00	0	0	1.05	3	3
LA Scallop	2008	0.00	0	0	-	1	-
LA Scallop	2009	0.22	12	12	0.56	13	13
LA Scallop	2011	0.73	8	9	0.73	7	7
LA Scallop	2012	0.09	9	9	0.14	9	9

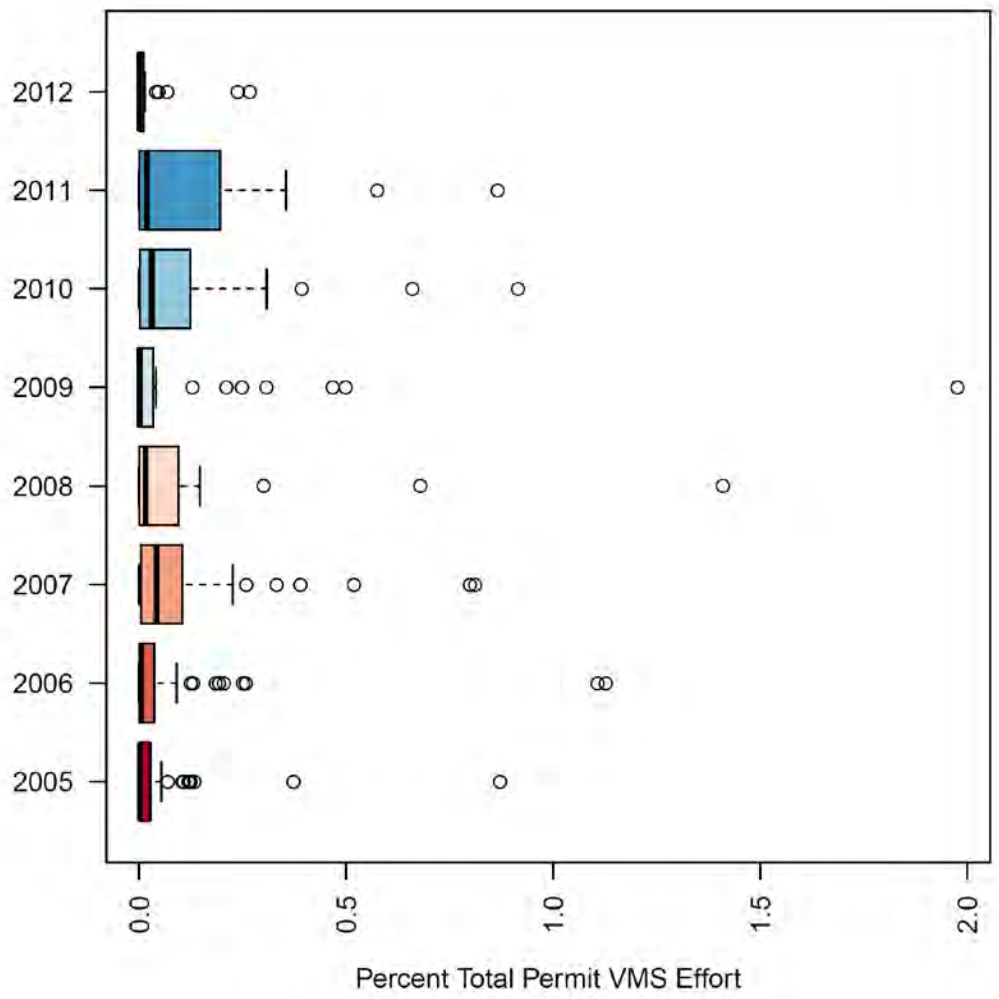
Note: LA and GC refer to limited access and limited access general category scallop gears, respectively.

Figure 9 - Percent of total annual permit fishing activity attributed to the No Action Monkfish/MSB/tilefish areas between 2005 and 2012, as derived from VMS



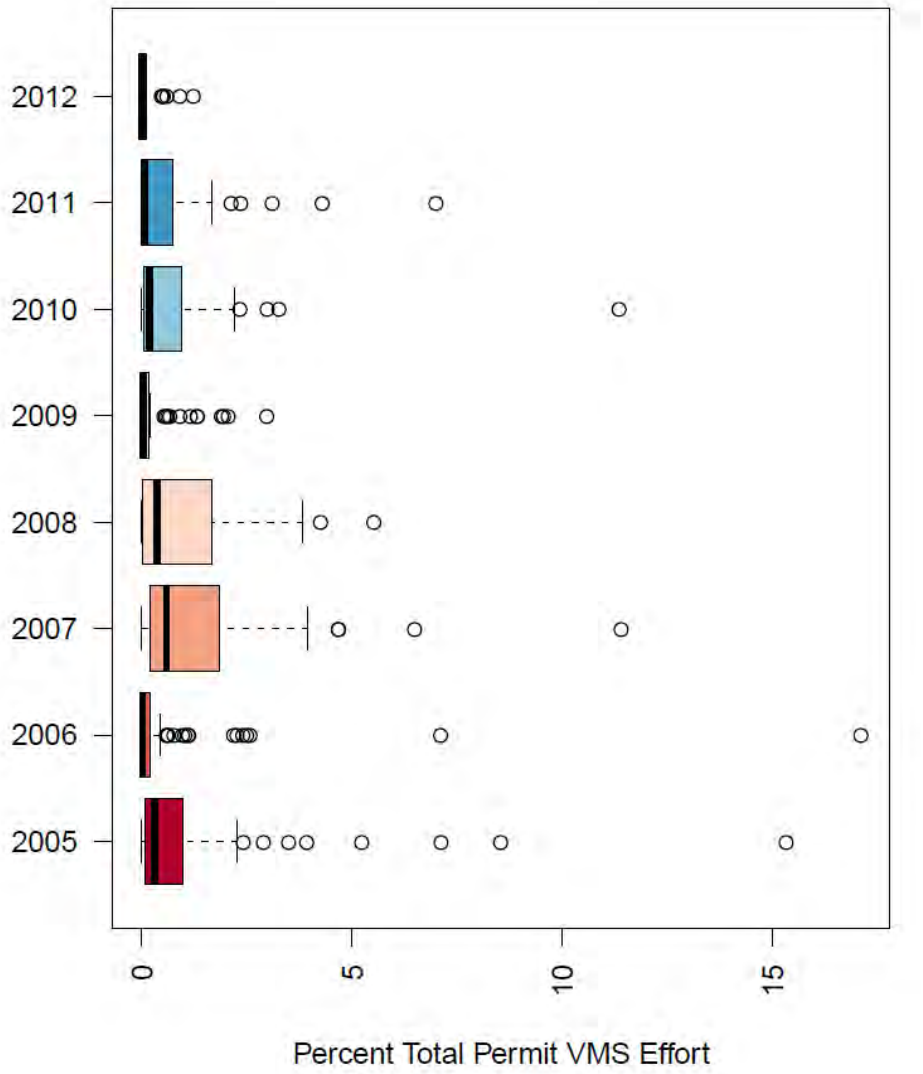
Source: VMS. Note: Open circles are individual owners with a % total revenue 1.5 times over the 75% percentile.

Figure 10 - Percent of total annual permit MBTG fishing activity attributed to the No Action Monkfish/MSB/tilefish areas between 2005 and 2012, as derived from VMS



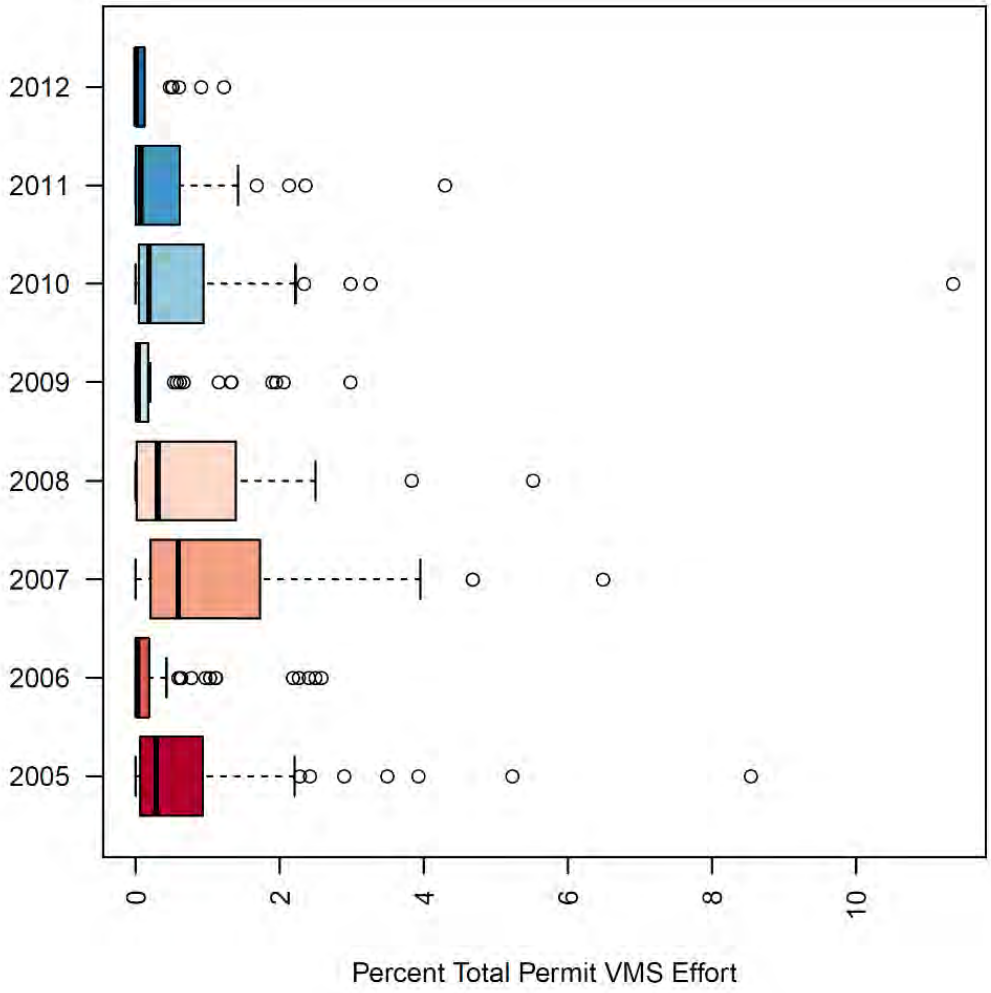
Source: VMS. Note: Open circles are individual owners with a % total revenue 1.5 times over the 75% percentile.

Figure 11 - Percent of total annual permit fishing activity attributed to the Northeast Canyons and Seamounts Marine National Monument between 2005 and 2012, as derived from VMS



Source: VMS. Open circles are individual owners with a % total revenue over 1.5 times over the 75% percentile.

Figure 12 – Percent of total annual permit MBTG fishing activity attributed to the Northeast Canyons and Seamounts Marine National Monument between 2005 and 2012, as derived from VMS



2.2 Fishing community impacts

General community impacts of the alternatives under consideration are described in Section 7.1.2 of the amendment document, which also describes the method, caveats, and data confidentiality standard used to develop Table 3 and Table 4, the revenue by state, region, and port attributed (using the VTR analysis) to recent fishing within the No Action coral zones.

No Action Monkfish/MSB/Tilefish Areas: Although the VTR analysis has some degree of error, it suggests that the fishing communities that may be active within the No Action Monkfish/MSB/Tilefish Areas are primarily located in Massachusetts, with lesser activity attributed to ports in Rhode Island, New York, Virginia, and other states (Table 3). The VTR analysis attributes recent (2010-2015) landings revenue to 45 ports and 411 permits, and 57% of this revenue to ports in Massachusetts. New Bedford (253 permits), Newport (9 permits), and Point Judith (61 permits) are among the top ten landing ports, and 28% of the revenue is attributed to other ports, indicating that the No Action areas may be particularly relevant for those three communities. According to the NMFS Community Vulnerability Indicators, New Bedford, Newport, and Narragansett (includes Point Judith) have a medium-high to high degree of engagement in commercial fishing. Of these three communities, Narragansett ranks highest in terms of reliance on commercial fishing, with a medium-high index, while Newport ranks lowest, with a low index.

The revenue attributed to Massachusetts and Rhode Island from the No Action Monkfish/MSB/Tilefish Areas is about 0.05% and 0.19% of all revenue, respectively, for these states during 2010-2015 (ACCSP data, 2017). Though these are minor fractions, certain individual permit holders could have as much as 10% of their revenue attributed to fishing from these areas (Figure 5, p. 11).

Table 3 – Landings revenue to states, regions, and top ports attributed to fishing within the No Action Monkfish/MSB/Tilefish Areas, 2010-2015 - ALL BOTTOM TENDING GEARS

State/Region/Port	Landings Revenue 2010-2015		Total Permits 2010-2015[a]
	Total $	Average $	
Massachusetts	$1,500K	$250K	301
New Bedford	$1,332K	$222K	253
Sandwich	$109K	$18K	3
Gloucester	$31K	$5K	25
Other (n=13)	$28K	$5K	57
Rhode Island	$879K	$146K	70
Newport	$399K	$67K	9
Point Judith	$183K	$31K	61
Other (n=4)	$297K	$48K	12
Connecticut	$14K	$2K	10
New York	$73K	$12K	12
Montauk	$72K	$12K	10
New Jersey	$27K	$4K	14
Virginia	$60K	$10K	55
Newport News	$26K	$4K	29
Other (n=3)	$34K	$6K	33
North Carolina	$4K	$1K	27
Other state(s)[b]	$87K	$15K	15
Total	**$2,645K**	**$441K**	**407**

Notes: Ports listed are the top 10 ports by landing revenue that are non-confidential.
[a] Totals may not equal the sum of the parts, because permits can land in multiple ports/states.
[b] Includes confidential state(s).
Source: VTR analysis.

National Monument: Although the VTR analysis has some degree of error, it suggests that the fishing communities that may be active within the Northeast Canyons and Seamounts Marine National Monument are primarily located in Massachusetts, with lesser activity attributed to ports in Rhode Island, New Jersey, New York, and other states (Table 4). The VTR analysis attributes recent landings revenue to 35 ports and 359 permits, and 67% of this revenue to ports in Massachusetts. New Bedford, (253 permits) Newport, (6 permits) and Sandwich (38 permits) are among the top ten landing ports, and 27% of the revenue is attributed other ports, indicating that the areas near the Monument may be particularly relevant for those three communities.

The revenue attributed to Massachusetts and Rhode Island from the National Monument is about 0.22% and 0.54% of all revenue, respectively, for these states during 2010-2015 (ACCSP data, 2017). Though these are minor fractions, certain individual permit holders could have as much as 10% of their revenue attributed to fishing from these areas.

Table 4 – Landings revenue to states, regions, and top ports attributed to fishing within the National Monument, 2010-2015 – ALL BOTTOM TENDING GEARS

State/Region/Port	Landings Revenue 2010-2015		Total Permits, 2010-2015[a]
	Total $	Average $	
Massachusetts	$7,316K	$1,219K	285
New Bedford	$6,426K	$1,071K	253
Sandwich	$485K	$81K	3
Gloucester	$241K	$40K	22
Other (n=11)	$164K	$27K	42
Rhode Island	$2,579K	$430K	44
Newport	$1,132K	$189K	6
Point Judith	$578K	$96K	38
Other (n=3)	$869K	$145K	5
Connecticut	$92K	$15K	6
New York	$241K	$46K	6
Montauk	$240K	$40K	5
New Jersey	$278K	$40K	8
Virginia	$67K	$11K	30
Other state(s)[b]	$396K	$66K	16
Total	**$10,969K**	**$1,828K**	**353**

Notes: Ports listed are the top 10 ports by landing revenue that are non-confidential.
[a] Totals may not equal the sum of the parts, because permits can land in multiple ports/states.
[b] Includes confidential state(s).
Source: VTR analysis.

3 References

ASMFC. (2017). Analysis of potential fishery impacts as a result of the NEFMC coral amendment. Memorandum from the American Lobster Technical Committee to the American Lobster Management Board. 26pp.

MAFMC (2008). Amendment 9 to the Atlantic Mackerel, Squid, Butterfish Fishery Management Plan. Includes Final Supplemental Environmental Impact Statement, Preliminary Regulatory Economic Evaluation and Essential Fish Habitat Assessment. 415pp.

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Palmer, M. C. and S. E. Wigley (2007). Validating the stock apportionment of commercial fisheries landings using positional data from vessel monitoring systems**:** 44.

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 01930-2276

February 3, 2021

Daniel Swenson, Chief
Regulatory Branch
U.S. Army Corps of Engineers
Baltimore District
2 Hopkins Plaza
Baltimore, Maryland 21201

RE: NAB-2020-60046; Baynes, Isabel/ Living Shoreline

Dear Mr. Swenson:

We have reviewed the essential fish habitat (EFH) assessment, received on January 8, 2021, and the December 29, 2020, Public Notice (PN 20-70), for Isabel Baynes's proposal to construct a living shoreline in a cove adjacent to Seneca Creek, Baltimore County, Maryland. The proposed project would include:

- Partially removing approximately 450 linear feet of existing failing timber bulkhead;
- Constructing a 450-foot stone/coir log containment sill, approximately 4-feet wide at the base and 2-feet wide at the top, extending up to 14 feet channelward of the approximate mean high water line;
- Depositing 150 cubic yards of sand fill along 450 linear feet of shoreline; and
- Planting *Spartina alterniflora* and *Spartina patens* to stabilize the fill.

The proposed project would have direct impacts to approximately 3,609 square feet (0.08 acres) of mapped, annually recurring submerged aquatic vegetation (SAV) habitat which is proposed to be converted to emergent marsh or filled to create a sill structure. We recommend that the project not be authorized as currently proposed due to the avoidable impacts to ecologically valuable SAV, aquatic resources, and EFH and the availability of alternatives that would meet the applicant's project purpose while minimizing those adverse effects.

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the Fish and Wildlife Coordination Act (FWCA) require federal agencies to consult with one another on projects such as this that may adversely affect EFH and other aquatic resources. In turn, we must provide recommendations to conserve EFH. These recommendations may include measures to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH resulting from actions or proposed actions authorized, funded, or undertaken by that agency. 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 this consultation procedure.

Based upon the public notice, the EFH assessment, and other supplemental information received, we are concerned about the conversion of existing SAV habitat to emergent wetland or fill in an area where maps indicate SAV coverage has occurred in the last five years and imagery indicates that wetland vegetation may be successfully established landward of the existing bulkhead.

Magnuson-Stevens Fishery Conservation and Management Act (MSA)

Seneca Creek has been designated as EFH for several federally managed species of finfish, including juvenile windowpane flounder (*Scophthalmus aquosus*), juvenile and adult bluefish (*Pomatomus saltatrix*), and juvenile and adult summer flounder (*Paralichthys dentatus*).

The EFH final rule published in the *Federal Register* on January 17, 2002 defines an adverse effect as "any impact which reduces the quality and/or quantity of EFH". Based on the information provided, the placement of fill along the shoreline will adversely affect EFH through the direct loss of subtidal shallows and SAV habitat used by federally managed species of fish. According to the project plans, at least 3,609 square-feet of SAV will be filled for the construction of the stone/coir sill and creation of intertidal marsh. The subtidal shallows to be filled are spawning, nursery, and foraging habitat for federally managed fish and their forage.

Although the current design proposes to limit channelward encroachment to within 14 feet of MHW, impacts to SAV could be further avoided/minimized. Several recent aerial images of the project location (e.g., Maryland High Resolution Imagery, 2017; see: https://gisapps.dnr.state.md.us/MERLIN/index.html) indicate that areas landward of the existing bulkhead are inundated with tidal waters relatively frequently. This suggests that grading of banks located landward of the existing revetment and subsequent planting of appropriate tidal vegetation could be a successful approach to achieve a nature-like design without filling mapped SAV. Furthermore, the location of this site in a fetch-limited environment (i.e., max fetch < 0.25 miles) indicates that such an approach would likely be effective at limiting subsequent erosion. While we acknowledge that some areas of shoreline may have a sufficient slope to necessitate more structural approaches (e.g., coir log), this is likely not imperative for the entirety of the project shoreline.

Submerged Aquatic Vegetation

SAV habitat has been mapped within the project area. SAV maps from the Virginia Institute of Marine Science (VIMS) indicate the presence of SAV beds within the project footprint in 2015 and 2016. The density of these beds was characterized as "dense (70% - 100%)" in 2015 and 2016, "sparse (10% - 40%)" in 2017, "dense (70% - 100%)" in 2018, and was only documented during qualitative (i.e., no density estimate) during field surveys in 2019. According to field observations available through VIMS, SAV beds in the project area consist of a mix of several species typical of low-salinity waters, including: *Ceratophyllum demersum*, *Myriophyllum spicatum*, *Potamogeton crispus,* and *Vallisneria americana*. The Chesapeake Bay Program has set a goal for the subwatershed in which the project is proposed (Middle River) of 879 acres of SAV coverage and has described that goal as "attainable", pending water quality improvements. Filling of annually recurring, mapped SAV is contrary to that goal.

SAV has been designated as a habitat area of particular concern (HAPC) for summer flounder by

the Mid-Atlantic Fishery Management Council. HAPCs are subsets of EFH identified based on one or more of the following considerations: 1) the importance of the ecological function; 2) extent to which the habitat is sensitive to human-induced degradation; 3) whether and to what extent, development activities are stressing the habitat type; and/or 4) rarity of habitat type (50 CFR 600.815(a)(8)). In addition, the U.S. Environmental Protection Agency has designated SAV as a special aquatic site under Section 404(b)(1) of the federal Clean Water Act because of its important role in the marine ecosystem for nesting, spawning, nursery cover, and forage areas for fish and wildlife. It is a priority habitat for us for the same reasons.

The project plans suggest that stone toe and coir logs would be placed directly on top of existing SAV that recurs annually in the shallow waters adjacent to the existing bulkhead. The presence of a stone/coir sill along the shoreline will also likely have indirect impacts to the remaining SAV by changing features such as nearshore hydrology, water clarity, and sediment composition. Changing this land-water interface may cause further avoidable SAV loss and result in lower habitat availability for SAV.

EFH Conservation Recommendations

We recommend pursuant to Section 305(b)(4)(A) of the MSA that you adopt the following EFH conservation recommendations to minimize adverse impacts on EFH, including summer flounder HAPC:

- Limit channelward encroachment to MLW by grading the shoreline landward of the existing bulkhead and deploying soft shoreline stabilization techniques (e.g., coir fiber matting, vegetative plantings). This approach would meet the project goals while avoiding impacts to mapped SAV habitat.
- Conduct no in-water work during the SAV growing season (April 15 through October 15) to reduce impacts to SAV and EFH for summer flounder.

Please note that Section 305(b)(4)(B) of the MSA requires you to provide us with a detailed written response to these EFH conservation recommendations, including a description of measures adopted by you for avoiding, mitigating, or offsetting the impact of the project on EFH. In the case of a response that is inconsistent with our recommendations, Section 305(b)(4)(B) of the MSA also indicates that you must explain your reasons for not following the recommendations. Included in such reasoning would be the scientific justification for any disagreements with us over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects pursuant to 50 CFR 600.920(k). Though other state regulations may place additional restrictions on project design specifications (e.g., MDE stipulating a 2:1 sand fill to sill footprint ratio), these regulations alone do not provide adequate scientific justification. This response must be provided within 30 days after receiving our EFH conservation recommendations and at least 10 days prior to permit issuance.

Please also note that further EFH consultation must be reinitiated pursuant to 50 CFR 600.920(j) if new information becomes available, or if the project is revised in such a manner that affects the basis for the above determination.

Endangered Species Act
Threatened or endangered species under our jurisdiction including the endangered Atlantic sturgeon (*Acipenser oxyrhynchus*) may be present in the project area. As the lead federal action agency, you are responsible for determining the nature and extent of effects and for coordinating with our Protected Resources Division as appropriate. Should you have any questions about the section 7 consultation process, please contact Brian Hopper at (410) 573-4592 or brian.d.hopper@noaa.gov.

As always, we are available to coordinate with your staff so that this project can move forward efficiently and expeditiously as possible while still meeting our joint responsibilities to protect and conserve aquatic resources. If you have any questions or need additional information, please contact Jonathan Watson in our Annapolis field office at jonathan.watson@noaa.gov or (410) 295-3152.

Sincerely,

Louis A. Chiarella
Assistant Regional Administrator
for Habitat Conservation

cc:
USACE – J. DaVia, M. Teresi
NMFS PRD – B. Hopper
FWS – J. Slacum
EPA – M. Fitzgerald
MDE – D. Spendiff
MDNR – G. Golden
MAFMC – C. Moore
NEFMC – T. Nies
ASFMC – L. Havel

STATE OF MAINE
OFFICE OF THE GOVERNOR
1 STATE HOUSE STATION
AUGUSTA, MAINE
04333-0001

Janet T. Mills
GOVERNOR

January 22, 2021

To Maine fishermen and fishing organizations,

I wanted you to hear from me directly regarding my administration's proposal for a floating offshore wind research array in the Gulf of Maine. I am keenly aware that offshore wind (OSW) is a concern for some of you. However, I feel strongly that Maine must be committed to the development of clean energy, to the fight against climate change, and to the pursuit of innovation to create economic opportunity for our people.

We are all seeing the results of climate change firsthand – warming temperatures, violent weather events, rising and warming ocean waters. Make no mistake about it, OSW is coming to the Gulf of Maine, even without my support. It would be irresponsible for me to ignore both the potential benefit of offshore wind as part of Maine's clean energy portfolio, and the possible impacts it may have on Maine's natural resources and heritage industries such as fishing which are a vital part of our economy and our cultural identity.

The economic and job creation opportunities were reaffirmed in 2019 with the passage of the Maine Aqua Ventus legislation and recent state economic reports. States across the country are racing to lead in OSW technology, job creation, and port development. This industry is also growing rapidly in other parts of the world, leading to new opportunities in sectors from boat building to construction to engineers. Maine is approaching OSW development in a way that maximizes good paying jobs for Maine people and economic benefits for our state while seeking to minimize impacts through a phased approach.

I ask that you remain at the table for what I know are hard conversations. We need to work with the fishing industry on a number of aspects of this new technology. I believe that starting small and taking a stepwise approach through this proposed research array is a valuable opportunity to understand potential impacts and ensure we can inform federal decision-making in the future.

While we may not agree on the best response to offshore wind development in the Gulf of Maine, please know that I am being fully briefed on the feedback you are providing to the Energy Office and DMR, and I understand your concerns. I want to make it clear that my focus is the research array, proposed for federal waters. New, commercial-scale offshore wind projects do not belong in state waters that support the majority of the State's lobster fishing activity, that provide important habitat for coastal marine and wildlife species and that support a tourist industry based in part on Maine's iconic coastal views. To ensure state waters are appropriately considered in any future energy development, I will submit legislation to create a 10-year moratorium on any new

state waters wind energy development. I will also direct state agencies to review their authority related to use of state waters for leasing and permitting of energy projects.

With regard to the research array, I cannot push the timeline for the submission to BOEM off as far as some would like. Development will not be halted completely because of Covid-19, nor should we delay action indefinitely. I have extended the timeline of the pre-application phase for a few months to allow for additional substantive input from the fishing industry. The State will form a working group of impacted fishing industry members to inform the siting process and research plan, with the goal of reducing potential impacts. If Covid-19 numbers decline, we will also hold in-person meetings in small groups this spring to obtain additional input.

We have the opportunity to work proactively to learn how best offshore wind can coexist with fishing and other existing uses. If Maine doesn't take the lead, I believe we – the state, and the fishing industry in particular – will be at a great disadvantage in the future. I remain steadfast in my commitment to work with the fishing industry to find creative, innovative solutions to help our communities and economies thrive.

Sincerely,

Janet T. Mills
Governor

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 01930-2276

January 14, 2021

Mr. William Kavanaugh
Project Manager
U.S. Army Corps of Engineers
New England District
696 Virginia Road
Concord, MA 01742-2751

Re: Hyannis Harbor FNP Breakwater repair and maintenance

Dear Mr. Kavanaugh:

We received your letter and Essential Fish Habitat (EFH) Assessment dated December 14, 2020, regarding proposed repair and maintenance of the Hyannis Harbor FNP Breakwater in Hyannis, MA. Originally constructed in the 1890's, the structure extends roughly 1,200 linear feet (LF) southeast off the end of the Commonwealth of Massachusetts-owned portion of the breakwater (approx. 2,000 LF long). The purpose for the proposed project is to restore full functionality of the FNP breakwater to meet its authorized purpose and to extend repairs made in the 1960's to enhance the durability of the structure using modern construction methods and practices. The most recent maintenance of the FNP breakwater at Hyannis Harbor was performed in the 1960's when approximately 800 feet of the originally constructed, parapet stone breakwater was adaptively reconstructed. This was accomplished by repurposing some of the original parapet stones and by adding new armor-stone to form a rubble mound configuration. The last 400 feet of the outer end of the FNP breakwater has not been repaired since its original construction in the 1890's.

The need for the proposed project is to address damages to the structure that have occurred since previous maintenance of the FNP breakwater. These damaged areas have resulted in decreased functionality of the authorized structure and in an overall loss of protection of the 15.5-foot deep, FNP anchorage area behind it. The proposed work would be accomplished within the scope of authority of the FNP's original authorizations and would not expand the crest height or length of the structure. The last 400 feet of the structure would be adaptively reconstructed by repurposing some of the parapet stones and by adding new armor stone, in a rounded, rubble-mound configuration that would dovetail into the 1960's repair area. Adding new 5 to 7-ton armor stone to the last 400 feet of the FNP breakwater is anticipated to result in an expansion of this portion of the structure's dimensions at the toe and at its seaward end, and result in a conversion of approximately 7,125 square feet (0.164 acres) of sandy, subtidal habitat to stone. The remaining length of the FNP breakwater (approximately 800 feet) would be repaired to its existing dimensions by adding

similarly sized stones and replacing stones that have been displaced from the structure. There will be no staging or equipment located on the beach adjacent to the breakwater.

The majority of the proposed repair work will occur within the subtidal zone, below mean lower low water (MLLW), as the toe of the structure is expanded by approximately 7,125 feet. No eelgrass or sensitive resources have been identified in the vicinity of the Hyannis Harbor breakwater repair project. All repairs for this project will be conducted from land-based equipment or by a floating barge. Eelgrass beds have been identified on the west side of the State owned Hyannis Harbor breakwater. No construction or access vessels will be permitted to anchor, spud, or transit within the eelgrass bed. All stone will be barged in, and placed with equipment from the top of the existing structure.

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the Fish and Wildlife Coordination Act require federal agencies to consult with one another on projects such as this. Insofar as a project involves EFH, as this project does, 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 relevant consultation procedure. We offer the following comments and recommendations on this project pursuant to the above referenced regulatory process.

General Comments

Hyannis Harbor contains productive fishery habitats that support numerous important living marine resources including federally managed finfish including Atlantic cod, winter flounder, pollock, red hake, scup, butterfish, and bluefish. MassDEP has identified eelgrass beds in subtidal waters along the western side of the breakwater each year they have surveyed the area. The most recent eelgrass survey was completed in 2015-2017 and shows the edge of the eelgrass beds closer to the shallow portion of the breakwater, over 1500 feet from the proposed reconstruction work, which was confirmed through the ACOE side scan sonar and video survey investigation in July 2019. The U.S. Environmental Protection Agency has designated submerged aquatic vegetation, including eelgrass, as "special aquatic sites" under the Section 404(b)(1) of the federal Clean Water Act, due to its important role in the marine ecosystem for nesting, spawning, nursery cover and forage areas for fish and wildlife. Direct and indirect impacts to this critical habitat should be minimized to the greatest extent possible.

The project area also provides habitat for winter flounder spawning and juvenile development. Winter flounder eggs, once deposited on the substrate, are vulnerable to sedimentation effects in less than 1 mm of sediment. Decreased hatching success of winter flounder eggs is observed when covered in as little as 1 mm of sediment and burial in sediments greater than 2.5 mm may cause no hatch (Berry et al. 2011). Elevated turbidity can also impact fish species through greater utilization of energy, gill tissue damage and mortality. Egg and larval life stages may be more sensitive to suspended sediments, resulting in both lethal and sub-lethal impacts (Newcombe and Jensen 1996). To avoid such impacts, turbidity producing activities should be suspended during periods when these sensitive life stages are present.

Essential Fish Habitat

Hyannis Harbor is designated as EFH under the MSA for multiple managed fish species, including winter flounder, Atlantic cod, winter flounder, and pollock. In addition, this area is designated as a

Habitat Area of Particular Concern (HAPC) for juvenile Atlantic cod. As described above, the proposed Hyannis Harbor Breakwater repair project may adversely affect EFH by impacting nearby winter flounder habitat, eelgrass beds, complex rocky habitats, and shellfish habitat located within the project area. We recommend pursuant to Section 305(b)(4)(A) of the MSA that you adopt the following EFH conservation recommendations:

1. No turbidity producing repair or stone recovery activities below mean high water should occur from January 15 to May 31 to protect winter flounder early life stages.

Please note that Section 305(b)(4)(B) of the MSA requires you to provide us with a detailed written response to these EFH conservation recommendations, including a description of measures you adopt for avoiding, mitigating or offsetting the impact of the project on EFH. In the case of a response that is inconsistent with our recommendations, Section 305(b)(4)(B) of the MSA also indicates that you must explain your reasons for not following the recommendations. Included in such reasoning would be the scientific justification for any disagreements with us over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate or offset such effects pursuant to 50 CFR 600.920(k).

Please also note that a distinct and further EFH consultation must be reinitiated pursuant to 50 CFR 600.920(l) if new information becomes available or the project is revised in such a manner that affects the basis for the above EFH conservation recommendations.

Endangered Species Act

Threatened and endangered species under our jurisdiction may be present in the action area. A consultation pursuant to section 7 of the Endangered Species Act of 1973 is required. Our Protected Resources Division has reviewed your determination that the proposed project is not likely to adversely affect any species listed by us as threatened or endangered under the ESA of 1973 and has concurred with your determination in a letter dated December 18, 2020. If you have any questions regarding the status of this consultation, please contact Roosevelt Mesa at 978-281-9186 or roosevelt.mesa@noaa.gov.

Conclusion

In summary, we recommend that no repair or stone recovery activities below mean high water should occur from January 15 and May 31 to protect winter flounder. If this time of year restriction is not feasible, work between January 15 and May 31 should take place behind turbidity controls. We look forward to your response to our EFH conservation recommendations, and continued coordination on this project. Please contact Kaitlyn Shaw at 978-282-8457 or kaitlyn.shaw@noaa.gov if you would like to discuss this further.

Sincerely,

Louis A. Chiarella
Assistant Regional Administrator
for Habitat Conservation

cc: Roosevelt Mesa, PRD
Tim Timmermann, USEPA
John Logan, MA DMF
Grace Moses, US ACOE
Tom Nies, NEFMC
Chris Moore, MAFMC
Lisa Havel, ASMFC

References

Berry, W.J., Rubentstein, N.I., Hinchey, E.K., Klein-Mac-Phee, G. and Clarke, D.G. 2011. Assessment of dredging-induced sedimentation effects on winter flounder (*Pseudopleuronectes americanus*) hatching success: results of laboratory investigations. Proceedings of the Western Dredging Association Technical Conference and Texas A&M Dredging Seminar. Nashville, TN June 5-8, 2011.

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The Commonwealth of Massachusetts
Division of Marine Fisheries

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Secretary

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Commissioner

DANIEL J. MCKIERNAN
Director

January 13, 2021

NOAA Fisheries Service
Greater Atlantic Regional Fisheries Office
Attn: Mr. Kevin Madley
Regional Aquaculture Coordinator
55 Great Republic Drive
Gloucester, MA 01952
VIA email

Dear Mr. Madley:

The Division of Marine Fisheries (MA DMF) has reviewed the pre-application information for Blue Water Fisheries proposed net-pen offshore finfish aquaculture project. MA DMF attended a pre-application meeting hosted by NOAA regarding the project on December 10, 2020. Blue Water Fisheries is interested in developing an offshore aquaculture project that will grow 12,800 tons of steelhead trout per year. Their operational set-up includes the use of 40 InnovaSea net pens in two grids where the net pens are arranged in a 2x10 grid. The proposed system will be anchored by 66 1m^2 (33 per grid) ballast block anchors.

The proposed project was sited in federal waters off the mouth of the Merrimack River using a GIS-based spatial analysis to identify sites with relatively less suitability constraints in an Area of Interest (AOI) within 12 nautical miles of preferred ports (Newburyport, Hampton, Rye, and Portsmouth) in federal waters 52-90 meters deep. Eight proposed sites were identified and Blue Water Fisheries is seeking to permit two of the eight sites, occupying a total of 530 acres.

NOAA has requested pre-application review to identify major concerns with the project. MA DMF has the following comments:

<u>No leasing provision</u>
Under current permitting requirements, this project will need a U.S. Army Corps of Engineers permit and a U.S. EPA National Pollution Elimination System (NPDES) permit. There may be other permits from FDA and USFWS required. There is no leasing process for aquaculture in federal waters. MA DMF is very concerned with private corporations being allowed to exclusively occupy offshore waters, thereby preventing other uses in the area including energy development, fishing, or competing aquaculture projects. It would benefit future reviews to

have a description of the specific permitting process, including the roles of the individual federal agencies, and the project and permitting timeline.

Cod Spawning

The AOI overlaps with the Gulf of Maine (GOM) Cod Spawning Protection Area, commonly known as 'Whaleback" (Figure 1). Atlantic cod (*Gadus marhua*) spawning is known to be sensitive to disturbance (Dean et al. 2012). Even a relatively short duration disturbance (several hours locally) could critically impact cod spawning behavior and habitat. A preliminary literature review revealed studies that documented that spawning cod avoided areas where salmon aquaculture was initiated (Maurstad et al. 2007). There are very few areas remaining where cod spawn in the Gulf of Maine.

Cetaceans

The project has the potential to impact the North Atlantic Right Whale (NARW) (*Eubalaena glacialis*) and Humpback Whale (*Megaptera novaeangliae*) (Figure 2), both endangered species. The GOM is a feeding ground for these whales. The site assessment did not include these species since the data was not at a scale relevant for siting aquaculture. However, it is known that right whales use this area. There is no "whale-safe" aquaculture gear. The states and the federal government have been undertaking extensive efforts to address the use of vertical lines in the lobster fishery. Allowing a project that will introduce additional gear is contradictory to the goals of those efforts.

Commercial Fishing

This project is in direct conflict with wild fisheries. The site assessment presented indicated areas that were relatively more suitable, but the AOI as a whole is in an area with considerable commercial fishing by Massachusetts fishermen. While some areas within the AOI have less relative fishing activity, it is still very high from an absolute or regional perspective. We also note that the technical report does not adequately address the high amount of fixed gear, highly migratory species (e.g. bluefin tuna), and recreational fishing in the area since there is relatively poor mapping of such fisheries compared to the VMS fisheries. Additional information about the relative fisheries value of the area should be prepared and reference work such as NOAA's Fishing Footprints (https://apps-nefsc.fisheries.noaa.gov/read/socialsci/fishing-footprints.php) and Offshore Wind Socioeconomic assessments (https://www.fisheries.noaa.gov/resource/data/socioeconomic-impacts-atlantic-offshore-wind-development). Information regarding the compatibility of the proposed activities and these other uses and resources has not yet been provided, but it is certain that wild fishing cannot occur in or around the aquaculture sites.

Water and sediment quality

Downstream alterations to grain size, organic carbon content, and contaminants associated with disease and anti-fouling treatments could have unintended impacts. The coastal current would put downstream impacts in Massachusetts Bay and Cape Cod Bay. Recent fish kills due to depleted dissolved oxygen in Cape Cod Bay (Pugh 2020 and Xue et al 2014) suggest that the area may be more sensitive to eutrophication effects than it has been in the past.

Questions regarding this review may be directed to Kathryn Ford (kathryn.ford@mass.gov) or Kate Frew (kate.frew@mass.gov).

Sincerely,

Daniel J. McKiernan
Director

cc: Lisa Engler, Bob Boeri, Todd Callaghan, Mass CZM
Michelle Bachman, NEFMC
Lou Chiarella, Chris Schillaci, NOAA
Eric Nelson, Danielle Gaito, EPA
Dean, Griffin, McKiernan, Armstrong, Hoffman, Pugh, Glenn, Petitpas, Kennedy, Shields MA DMF
Scott Flood, Blue Water Fisheries

DM/KF/sd

References:

Dean, M.J., W.S. Hoffman, and M.P. Armstrong. 2012. Disruption of an Atlantic Cod Spawning Aggregation Resulting from the Opening of a Directed Gill-Net Fishery. North American Journal of Fisheries Management. 32:1, 124-134.

Maurstad, A., T. Dale, and P.A. Bjorn. 2007. You wouldn't spawn in a septic tank, would you? Human Ecology. 35: 601-610.

Jossart, J., L.C. Wickliffe, K.L. Riley, and J.A. Morris Jr. 2020. CASS Technical Report. Site Suitability Analysis: Blue Water Fisheries LLC, Northeastern Federal Waters.

Pugh, T. 2020 Cape Cod Bay dissolved oxygen monitoring summary. MA DMF Memorandum, November 18, 2020. See also: https://www.mass.gov/doc/121020-mfac-business-meeting-materials-2/download pages 101-136

Xue, P., C. Chen, J. Qi, R.C. Beardsley, R. Tian, L. Zhao, H. Lin. 2014. Mechanism studies of seasonal variability of dissolved oxygen in Mass Bay: A multi-scale FVCOM.UG-RCA application. Journal of Marine Systems. 131: 102-119.

Figures:

Figure 1. Cod Spawning Area. (Jossart et al. 2020. Figure A-6 (A), pg. 142/145.)

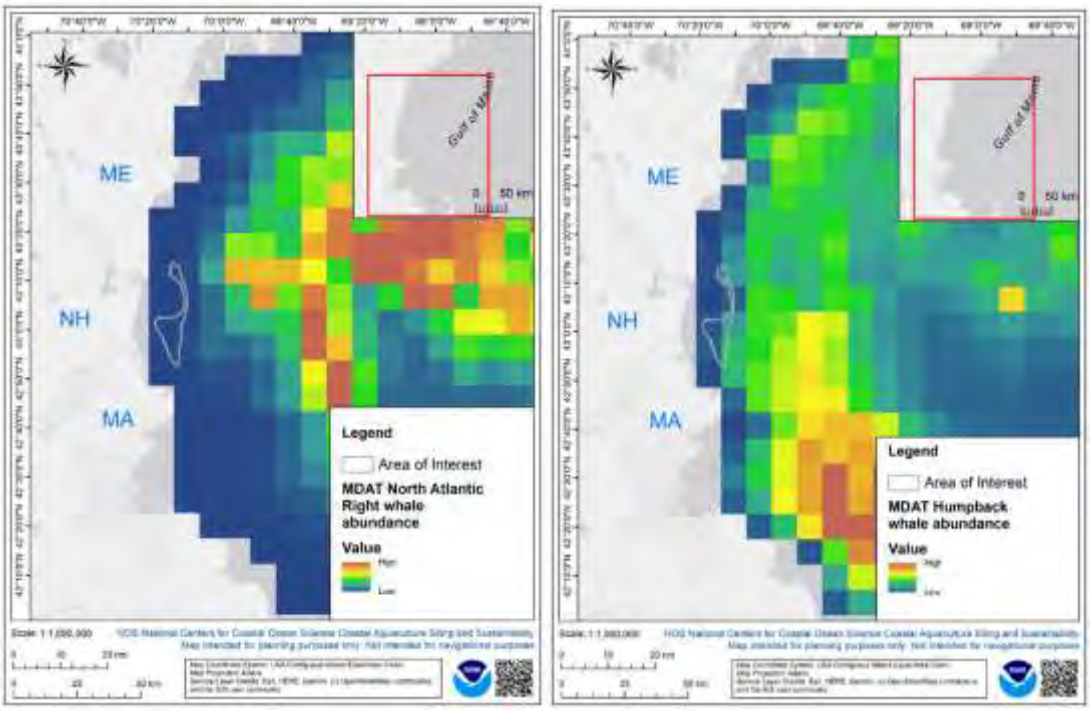

Figure 2. North Atlantic Right Whale and Humpack Whale abundance. (Jossart, et al. 2020. Figure A-5 (A),pg. 115/145 and Figure A-5 (D), pg. 118/145.)

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Governor	Lt. Governor	Secretary	Commissioner	Director

December 22, 2020

Kristy Beard
Via: Federal e-Rulemaking Portal

Dear Ms. Beard:

The Division of Marine Fisheries (MA DMF) has reviewed the Federal Register Notice, request for information for Aquaculture Opportunity Areas [RTID 0648-XA406] by NOAA. MA DMF viewed a webinar given to the Northeast Regional Ocean Council (NROC) regarding this project, as well. NOAA requests that interested parties provide relevant information on the identification of areas within Federal waters of the Gulf of Mexico and off Southern California, south of Point Conception, for the first two Aquaculture Opportunity Areas (AOA) and on what areas NOAA should consider nationally for future AOAs.

Federal waters of the Gulf of Mexico and Southern California, south of Point Conception, are being focused on first because there is existing spatial analysis data and current industry interest in developing sustainable aquaculture operations in these regions. MA DMF comments are focused on the questions posed in the request for information under the section, "Input Requested to Inform the Identification of Future AOAs, Nationally."

What regions of the country should be considered for future AOAs?

- The New England region is facing development pressure from offshore wind as well as offshore aquaculture. Furthermore, there is availability of existing spatial analysis data (which has already been used in the site selection for a finfish aquaculture site in the Gulf of Maine).
- There are many competing uses and resources in New England waters that are incompatible with offshore aquaculture development. Most notably, there is continuing pressure to reduce the use of vertical lines in offshore waters to protect the critically endangered North Atlantic Right Whale.
- Prior to the development of future AOAs, we recommend NOAA define the permitting process for aquaculture projects which should include leasing requirements.

If states express interest in developing offshore aquaculture, should we also consider state waters as areas for future AOAs?

- AOAs should not be defined in Massachusetts waters due to state jurisdiction over such projects.
- If spatial modeling efforts are pursued in New England, they can and should include state waters to understand the relative suitability of state waters compared to adjacent federal waters.
- AOA development should include the creation of a task force which includes state fishery representatives.

What resource use conflicts should we consider as we identify future AOAs?

- Understanding how much space is needed or anticipated to be needed is useful. A "start small" approach, was mentioned in the NROC webinar. However, what are the limits on buildout? NOAA should develop predicted aquaculture space usage over certain timeframes.
    - Economic analyses are needed that clearly identify how economically feasible aquaculture is in the North Atlantic region since the area already has a very productive wild fishery.
    - The types of aquaculture expected should be identified; AOAs may need to be species/gear type specific.
    - Mitigation for impact to wild fisheries should be clarified early in the process.
    - Specific social assessments of the effect of multiple fixed sites on nomadic wild fisheries in the area are needed.
- The footprint of the lobster fishery is poorly known, particularly at the scale relevant for siting aquaculture. This is a key data need that should be addressed if the types of aquaculture expected in the New England region are incompatible with fixed gear fishing. There are existing strategies working on addressing this data need that should be supported.
- Site assessment work needs to consider risk of harmful algal blooms (HABs) and other water quality components relevant to aquaculture.
- In New England, the co-location of offshore wind and aquaculture needs to be explored.
- Spawning protection areas should be avoided, including those areas identified for cod and herring spawning (1, 2). Other important sensitive seafloor areas, including spawning and early life history areas can be found in the New England Fishery Management Council's Omnibus Habitat Amendment documents (3).
- Hard and complex seafloor, particularly with deep sea corals, should be avoided.
    - The seafloor is relatively poorly mapped in the Gulf of Maine.
    - The Northeast Regional Ocean Council's Coastal and Ecosystem Health Committee is conducting a mapping initiative that should be reviewed for relevance to any spatial modeling exercise.
- The North Atlantic Right Whale is a primary consideration in the New England region. Information from the marine mammal stock assessments and the North Atlantic Take Reduction Team should be taken into consideration when planning for aquaculture (4, 5).

- There are several resource assessment surveys in the New England region, including for shrimp, scallop, and groundfish. These surveys may be significantly impacted by the placement of aquaculture by altering the space available for selection of stations.
- There is expansion of scallop biomass in very specific areas in the New England region. This information can be accessed through the Scallop Fishery Management Plan and Scallop Committee documents (6).
- The Gulf of Maine is warming more rapidly than other waterbodies on Earth (7). The impact of a rapidly changing ecosystem will make spatial predictions and future planning more uncertain. Modeling techniques that can address these uncertainties should be used.

Other recommendations:

- AOA development should have a clear process that includes a Request for Information period and a task force, similar to Wind Energy Area development.
- The spatial modeling used by NOAA to support the development of the Blue Water Fisheries aquaculture project in the Gulf of Maine used a 12 mile distance from shore due to access constraints. Future modeling efforts will need to more broadly understand access constraints for offshore aquaculture.
- All modeling assumptions need to be defined and model sensitivity to various inputs should be quantified.
- MA DMF recommends continued coordination with the Northeast Ocean Data Portal.
- MA DMF has a project which outlines the permitting steps for aquaculture in Massachusetts and an online mapper, both of which are available to the public (8, 9).
- Review and include relevant information from FMPs.

Questions regarding this review may be directed to Kathryn Ford (kathryn.ford@mass.gov.)

Sincerely,

Daniel J. McKiernan
Director

cc: Lisa Engler, Bob Boeri, Mass CZM
Michelle Bachman, NEFMC

DM/KF/sd

References

(1) https://www.fisheries.noaa.gov/new-england-mid-atlantic/commercial-fishing/northeast-multispecies-closed-area-regulations-gulf

(2) http://www.asmfc.org/uploads/file/5f64fc77AtlHerringSeason2DaysOutMeasures_WM_MANH_Closures_Sept2020.pdf

(3) https://www.nefmc.org/library/omnibus-habitat-amendment-2

(4) https://www.fisheries.noaa.gov/national/marine-mammal-protection/marine-mammal-stock-assessments

(5) https://www.fisheries.noaa.gov/new-england-mid-atlantic/marine-mammal-protection/atlantic-large-whale-take-reduction-plan *and* https://repository.library.noaa.gov/view/noaa/3411

(6) https://www.nefmc.org/management-plans/scallops

(7) Saba, V. S., et al. (2016), Enhanced warming of the Northwest Atlantic Ocean under climate change, *J. Geophys. Res. Oceans*, 121, 118– 132, doi:10.1002/2015JC011346.

(8) https://www.massaquaculturepermitting.org/

(9) https://www.arcgis.com/apps/webappviewer/index.html?id=b6e90602c8804455917e654a018a1ba0

New England Fishery Management Council
50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492 | FAX 978 465 3116
John F. Quinn, J.D., Ph.D., *Chairman* | Thomas A. Nies, *Executive Director*

December 22, 2020

Lou Chiarella
Assistant Regional Administrator
NOAA Fisheries Greater Atlantic Regional Office
Habitat Conservation and Ecosystem Services Division
Via e-mail

Dear Lou,

Please accept these comments from the New England Fishery Management Council (Council) regarding Blue Water Fisheries aquaculture project in federal waters off Massachusetts and New Hampshire. As you know, the Council has primary management jurisdiction over 28 marine fishery species in federal waters and is composed of members from Connecticut to Maine. Many of the fisheries and species we manage occur in and around the identified project area.

We appreciate the opportunity to engage with staff from NOAA, the Environmental Protection Agency, the U.S. Army Corps of Engineers, and the developer on this project during the pre-application phase. Council staff reviewed the November 2020 siting analysis prepared by NOAA's National Centers for Coastal Ocean Science and attended the December 10 interagency pre-application meeting. Below, we provide some specific comments on this analysis. We are also enclosing the Council's new aquaculture policy, which was approved on December 1. We would be happy to discuss specific ideas for socializing the site amongst the fishing and fishery management community in more detail in the coming months, including at our own meetings.

Per our aquaculture policy, the Council has concerns about siting aquaculture operations in sensitive habitat types. The Council recommends that aquaculture development avoid areas of complex seafloor habitat when possible, complex meaning pebble, cobble, or boulder-sized sediments, especially those with attached epifauna. In terms of epifauna, we recommend avoiding deep-sea coral and sponge habitats in particular. These species do occur in the Gulf of Maine although not, to our knowledge, at this location. These recommendations seem consistent with the developer's desire to site the project on areas of soft bottom.

The challenge will be determining exactly where these complex habits occur. We know from our habitat conservation work that data on coarse grained sediments in offshore location can be somewhat sparse. It seems that that bathymetric data collected by the University of New Hampshire and evaluated in the siting report are detailed and will be useful for identifying seafloor features at relevant spatial scales, but we are concerned the U.S. Geological Survey (USGS) sediment texture and usSEABED databases may be missing areas of coarse sediment in the project area, given that these sources rely mostly on grab samples which are not well suited to identifying larger grain sizes. Looking briefly at the USGS data sets, there seem to be a relatively small number of observations from these sources in and around the eight candidate sites. We recommend that the environmental survey plan includes a detailed characterization of sedimentary features. We expect that acoustic methods would be used to characterize the site and

suggest that the developer should consider verifying acoustic data with seafloor imagery if possible.

Moving into the baseline environmental surveys phase, we suggest that GARFO habitat staff be included in conversations about seafloor mapping efforts to ensure that the data gathered are useful for evaluating potential impacts to essential fish habitat. As you are aware, in the context of offshore wind development, your office has developed habitat mapping recommendations that should allow us to understand seafloor characteristics in project areas in relation to the sorts of habitat features used by fishes. These recommendations (which we have shared via our offshore wind website) include suggested substrate classifications under the Coastal and Marine Ecological Classification Standard (CMECS) framework. Aquaculture projects are developed within smaller areas than offshore wind farms, so the wind-oriented recommendations may not map exactly to this issue in terms of spatial scale, but we expect many elements of those recommendations to be useful in an aquaculture context.

In addition to avoiding areas of complex benthic habitat, we are very concerned about potential intersections between the project area and spawning locations used by Atlantic cod. Gulf of Maine cod stock biomass is low, and the Council has enacted many restrictions on harvest, including catch limits and spatial and temporal fishery closures, to protect the resource. The Whaleback closure (formally known as the Gulf of Maine Cod Spawning Protection Area) was developed by the Council around ten years ago to minimize fishery interactions with spring spawning fish[1]. We know that cod are sensitive to physical and acoustic disturbance when aggregating to spawn[2]. We also know that they exhibit site fidelity, returning to specific seafloor features over multiple years[3]. While an aquaculture installation might have a relatively small footprint, it would nonetheless be problematic if one of the arrays were located on or close to one of these features. Maintenance of all inshore spawning components is important, in part because there is movement of fish between spawning sites (e.g., Whaleback) and within and among spawning grounds (e.g., Ipswich Bay, Massachusetts Bay) which allows for genetic exchange in the population.[4]

The Council's aquaculture policy also recommends caution around siting aquaculture projects in areas with substantial amounts of fishing activity or vessel transit that could be impeded by the presence of fish cages and mooring lines. In terms of characterizing fishing activity, we recommend using a combination of vessel trip report (VTR), vessel monitoring system (VMS), and automatic identification system (AIS) data, since each source has limitations and gaps. Desktop analyses should be combined with discussions with participants in potentially affected fisheries to understand patterns of activity in more detail. We have found that looking at both

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[1] Armstrong, M. P., M. J. Dean, W. S. Hoffman, D. R. Zemeckis, T. A. Nies, D. E. Pierce, P. J. Diodati and D. J. McKiernan (2013). "The application of small scale fishery closures to protect Atlantic cod spawning aggregations in the inshore Gulf of Maine." Fisheries Research **141**: 62-69.

[2] Dean, M., W. Hoffman and M. Armstrong (2012). "Disruption of an Atlantic Cod Spawning Aggregation Resulting from the Opening of a Directed Gillnet Fishery." North American Journal of Fisheries Management **32**: 124-134.

[3] Zemeckis, D. R., W. S. Hoffman, M. J. Dean, M. P. Armstrong and S. X. Cadrin (2014). "Spawning site fidelity by Atlantic cod (*Gadus morhua*) in the Gulf of Maine: implications for population structure and rebuilding." ICES Journal of Marine Science **71**(6): 1356-1365.

[4] Zemeckis, D. R., C. Liu, G. W. Cowles, M. J. Dean, W. S. Hoffman, D. Martins, S. X. Cadrin and J. Watson (2017). "Seasonal movements and connectivity of an Atlantic cod (*Gadus morhua*) spawning component in the western Gulf of Maine." ICES Journal of Marine Science **74**(6): 1780-1796.

catch and revenue information is useful to provide a more complete perspective on activity, because some fisheries are higher volume and some are higher value.

VMS data are useful for showing where many types of fishing vessels are located, but do not cover all fleets. Relative to this site, activity of vessels targeting lobster and whiting will most likely be missing from VMS data, underscoring the importance of investigating activity using VTRs. Filtering VMS data for vessel speed can better indicate locations likely to represent fishing activity, and different filters are appropriate for different gear types. With the aquaculture gear generally below the surface, it may be that transiting vs. fishing near the net pens and mooring system would pose distinct concerns, which might vary by type of gear (fixed or mobile). If this is the case, it would be useful to distinguish transiting vs. fishing behavior as clearly as possible.

VTR data provide much more information including landings by species and are readily linked to dealer data to estimate ex-vessel revenues. GARFO and the Northeast Fisheries Science Center's fishing activity analysis tool uses the VTR- and observer-based 'fishing footprints' data products referenced on page 17 of the siting report. See here and here for more information. While the tool was developed for offshore wind siting analysis, it should be possible to evaluate fishing information for any set of coordinates, including Blue Water Fisheries' area of interest. We understand that Ben Galuardi and Doug Christel at GARFO are good contacts for providing products based on the fishing footprints data.

Below, we provide some additional information on fishing activity in fisheries that we manage, plus the lobster fishery, based on VTR data from 2014-2018, unless otherwise noted. We also looked at clam dredge data and note that this fishery does not appear to overlap the area of interest. Neither VTR nor VMS data provide information on private angler recreational fishing activity.

- **Groundfish:** Groundfish are caught commercially in bottom trawls, gillnets, longlines, and handlines. In terms of the commercial fleet, this location appears to be an important area for bottom trawl fishing (**Map 1**) for species including American plaice, witch flounder, and Atlantic cod. This activity is concentrated along the western/landward edge of the area of interest. Gillnet and longline fishing activities seem to occur outside of the area, to the east. In addition, the groundfish fishery includes a recreational hook and line component, which is active in this general location. Unfortunately, spatial data depicting recreational fishing activity, both in the for-hire fleet and among private anglers, is limited regardless of data source. During development of the Whaleback spawning closure, there were many comments that this general area is frequently used by private anglers who do not use VMS or AIS, and who do not submit VTRs. An effort should be made to contact these fishermen to determine areas that may be of particular interest to them.
- **Whiting:** Whiting are harvested with small mesh bottom trawls, which means that the fishery requires an exemption from broader regulated mesh areas to operate. All eight candidate areas are within the whiting exemption area referred to as Small Mesh Area I. This area is open to fishing between July 15 and November 15 and is one of a few locations in the Gulf of Maine where whiting can be targeted. Small mesh multispecies revenue appears to have a strong degree of overlap with the area of interest (**Map 2**; data are from 2013-2017). In this location, the spatial distribution of revenue associated with all bottom trawls (**Map 1**) is similar to revenue associated with just small mesh multispecies (**Map 2**), suggesting that the whiting fishery is a major contributor to bottom

trawl revenues in this location. The two maps diverge in other locations (see map insets for comparison)

- **Herring:** Purse seine fishing occurs to the northeast of the area of interest, and mid-water trawling occurs to the southeast (both sets of data are overlaid on **Map 3**). Thus, at least for the period 2014-2018, this specific location does not seem to be used by the herring fishery.
- **Sea Scallops:** We compared the plots in the siting report to recent estimates of activity based on VMS data prepared for our scallop fishery management plan. The data were filtered to represent vessel speeds between 2-5 kts and binned into three-minute squares. Grids indicating less than 20 hours annual fishing activity, or within state waters, were removed. This evaluation, for calendar years 2015, 2016, 2018, 2019, and 2020 (through mid-October; we did not have these data for 2017 on hand) suggested little overlap between scallop fishing and the general area of interest for the project. VTR data show similar patterns (both VMS and VTR data are shown on **Map 4**). Overall, the scallop fishery in Ipswich Bay appears to occur southwest of the project site. More information on the scallop resource in this region is available in a 2018 stock assessment workshop document, starting on page 199.
- **Lobster:** Based on VTR data (**Map 5**), there appears to be lobster pot activity in and around the sites, especially 1, 6, 7, and 8. Since not all lobster fishermen are required to submit VTRs, it is possible that other sites are fished as well. From our experience, many pot fishermen have very specific and consistent spatial patterns of activity.

We look forward to continued engagement on fisheries issues as this project moves forward. Please contact Michelle Bachman on my staff (mbachman@nefmc.org; 978-465-0492 x 120) if you need further information.

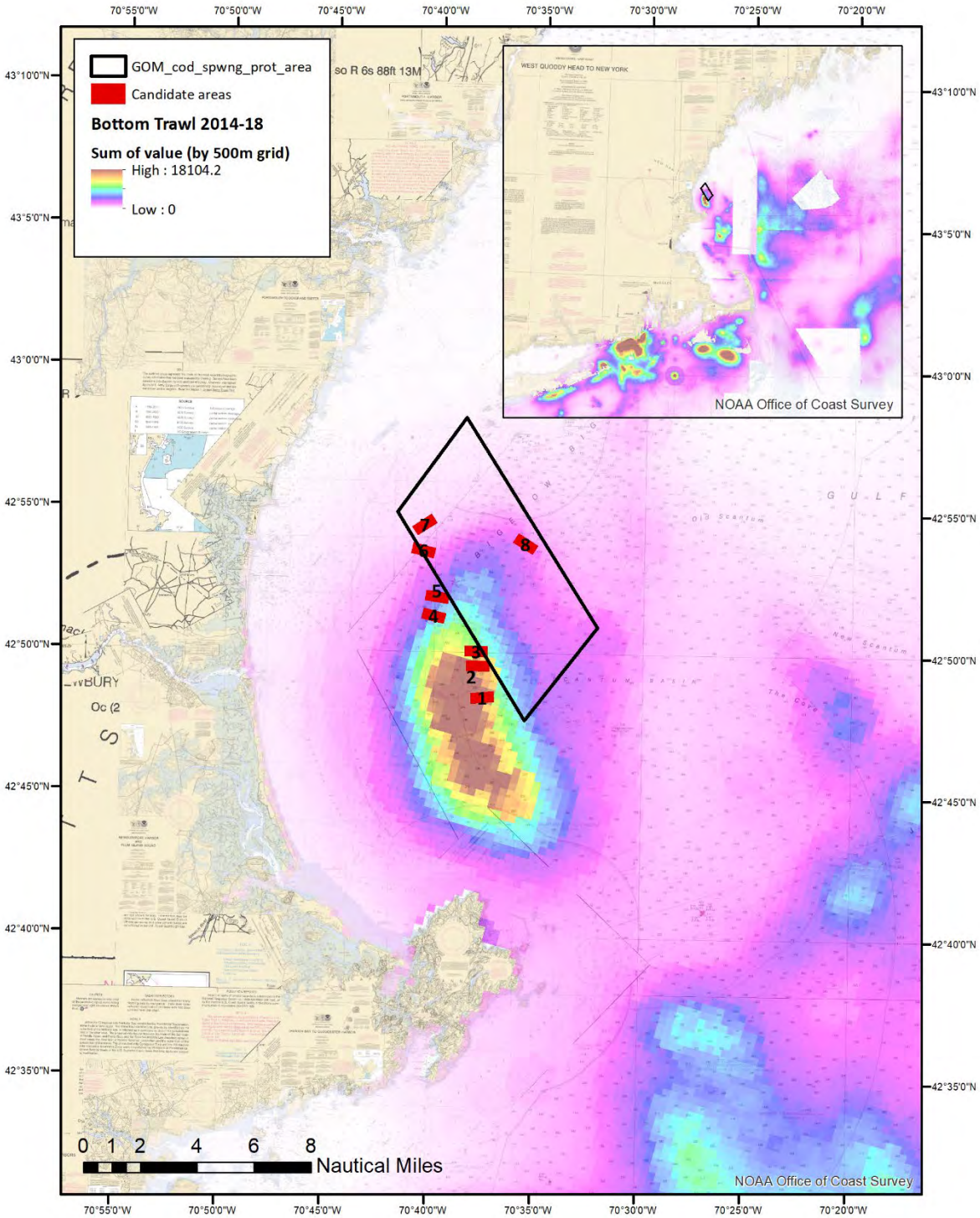
Sincerely,

Thomas A. Nies

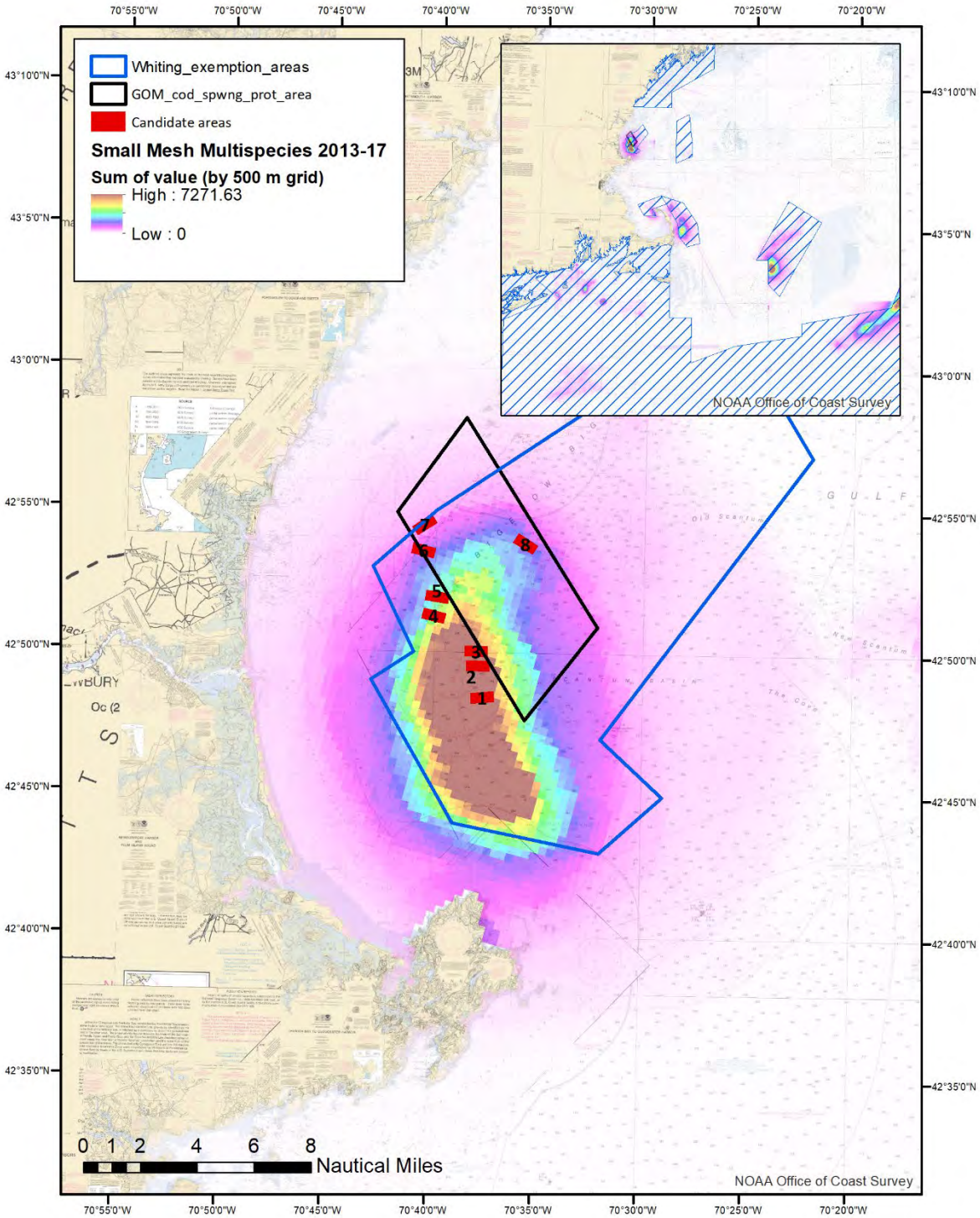
Thomas A. Nies
Executive Director

cc: Kevin Madley, Eric Nelson, Rick Kristoff, Chris Moore, Scott Flood
Enclosure: NEFMC Aquaculture Policy, approved December 1, 2020

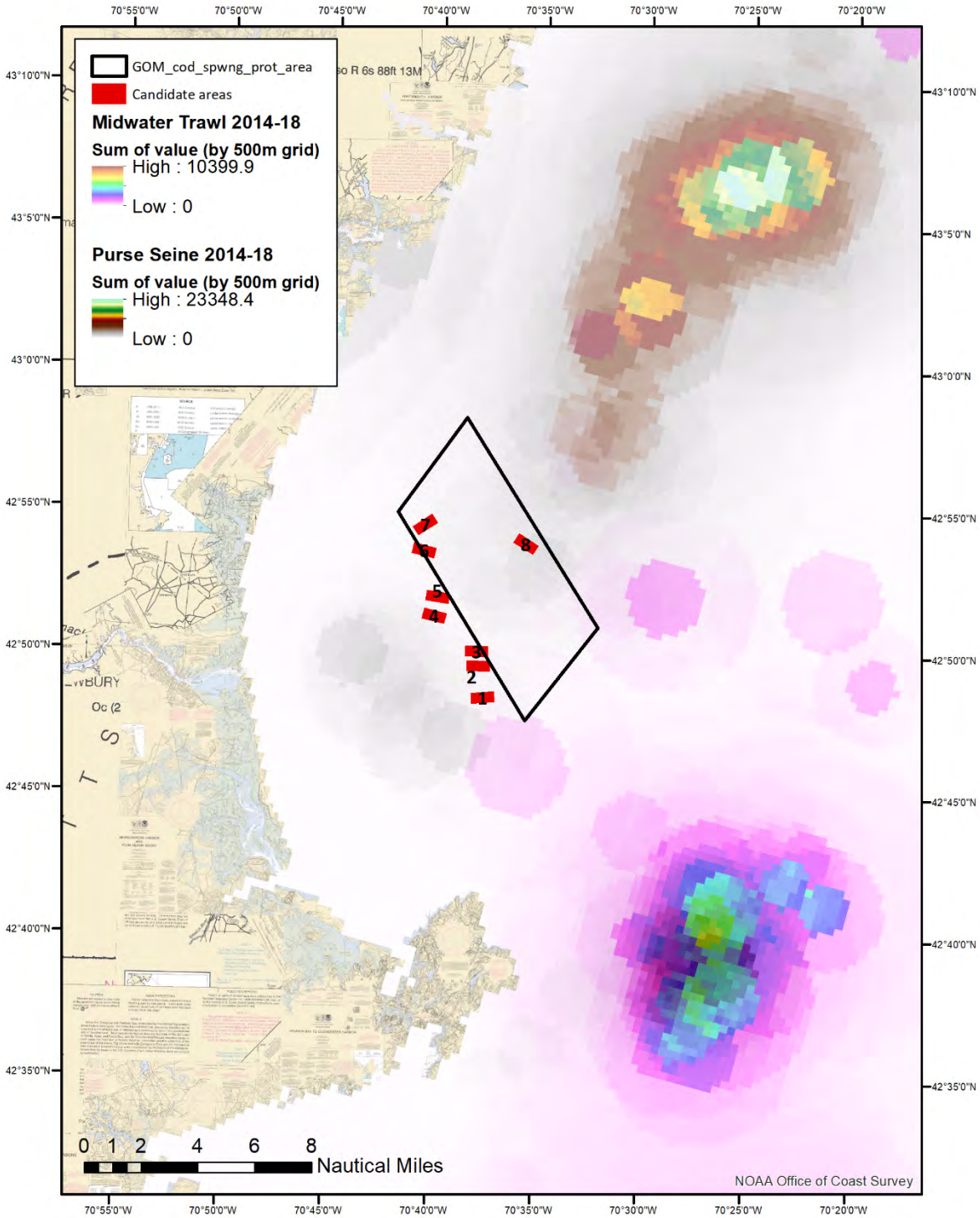
Map 1 – Bottom trawl revenue from VTR, sum of 2014-2018 data. Includes both large mesh (groundfish, and any other large mesh species) and small mesh (whiting, and any other small mesh species).



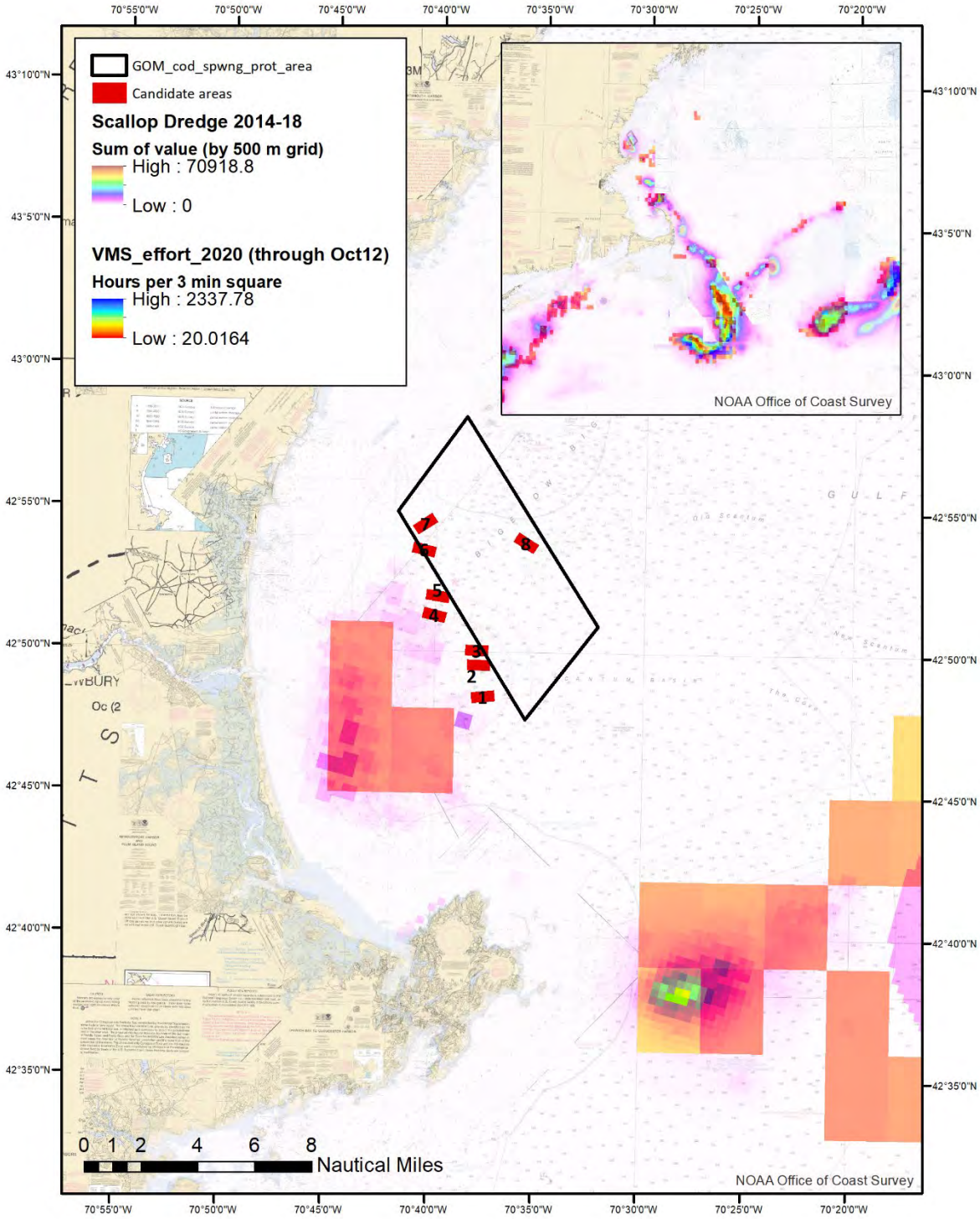
Map 2 – Small mesh multispecies revenue from VTR (mostly whiting, also referred to as silver hake; this data set also includes red and offshore hake). As shown in the inset, effort in this fishery is associated with specific exemption areas, outlined in blue.



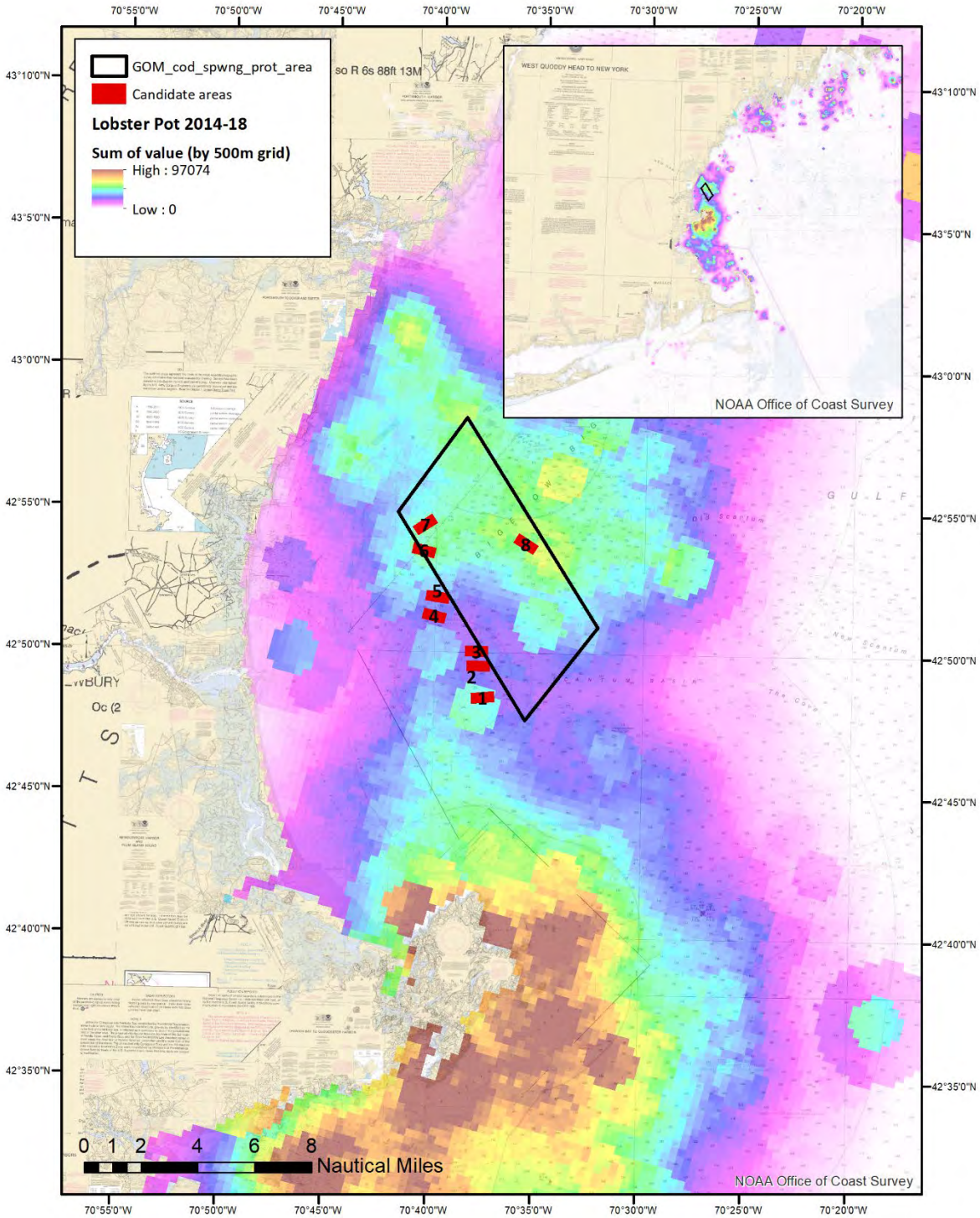
Map 3 – Purse seine (green/brown) and midwater trawl (pink/blue) revenue from VTR. These data sets are likely to represent the Atlantic herring fishery, although other species harvested by these gears would also be reflected in these data.



Map 4 – Scallop revenue (VTR, by 500 m grids) overlaid on hours of effort (VMS, by larger three-minute squares). These data suggest that scalloping occurs just south and west of the area of interest. There is also a state waters fishery for scallops off this part of Massachusetts (data not shown).



Map 5 – Lobster pot revenue based on VTR. Lobster vessels are not required to submit VTRs unless they hold another federal permit; our understanding is that data for the areas offshore MA and NH are fairly complete, but data off Maine are spotty.



New England Fishery Management Council
50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492 | FAX 978 465 3116
John F. Quinn, J.D., Ph.D., *Chairman* | Thomas A. Nies, *Executive Director*

December 18, 2020

Kristy Beard
Policy Analyst
NOAA Fisheries Office of Aquaculture
Via email

Dear Ms. Beard:

The New England Fishery Management Council (Council) appreciates the opportunity to comment on NOAA Fisheries' Aquaculture Opportunity Areas (AOA) spatial planning process. We also appreciate being clearly identified as an entity with which NOAA plans to consult during the AOA identification process and will strive to be a productive partner in this endeavor. We have substantial expertise with spatial data on fish, fish habitats, and fishing activities, and look forward to working with you to evaluate which areas of the EEZ might have fewer conflicts with fish, fish habitats, and fishing.

The Council approved the enclosed aquaculture policy on December 1 (also available at this link). The purposes of this policy are to facilitate efficient and streamlined development of Council comments, related to both specific projects and regional-scale planning, and to communicate Council conservation priorities and concerns with federal and state agencies, aquaculture developers, and the public. Sections of the policy relate to aquaculture siting, which an important issue for the Council both in the context of avoiding impacts to sensitive fish habitats, and to reduce the potential for conflicts with wild capture fisheries operations.

The request for information poses four questions in relation to future AOAs. Our responses focus on the possibility of aquaculture development in offshore, federal waters, and we are not offering comments as to whether AOAs should be considered in state waters.

7. What regions of the country should be future AOAs?
8. Are there specific locations within those regions identified in response to #7 that should be considered for future AOAs?
9. Within those regions identified in response to #7, what resource use conflicts should we consider as we identify future AOAs? Please describe specific considerations that might make an area unfavorable, including ongoing or planned activities or ocean uses.
10. Is there ongoing environmental, economic, or social science research that would assist in the identification and implementation of future AOAs?

In response to question 7, the Council's recently adopted aquaculture policy recognizes that, 'like wild capture fisheries, aquaculture contributes to food production and food security, and that aquaculture is a valid and valuable use of the coastal zone and the EEZ'. This statement is neither an endorsement of nor a recommendation against identifying aquaculture opportunity areas in New England. In the context of other types of offshore development, specifically offshore wind, the Council has expressed interest in a deliberative, inclusive, and broad scale

planning process, in contrast to one where developers identify possible sites on a project-by-project basis. Thus, assuming there is industry interest in offshore aquaculture in our region, the Council would prefer the AOA process vs. one that is initiated due to developer interest. While we are pleased to be included in pre-application conversations around specific projects, we cannot as a single entity represent even a fraction of the feedback you might get from a wider scoping process that fishermen might directly participate in. We expect that the AOA process will allow for earlier identification of space use and other potential conflicts and provide opportunities for a broader array of interested parties to provide direct input. We recognize that the developer-driven process may continue to occur, regardless of whether AOAs are identified in New England.

From an operational perspective, aquaculture developers will understand their site requirements best, so we do not have a specific response to question 8. From what we have learned discussing two offshore projects in the pre-application phase, the preference seems to be for sites that are relatively close to shore, with moderate water depths and a gently sloping seabed, avoiding areas of complex bottom. We have ample experience evaluating seabed habitat data through our essential fish habitat work and would caution that additional survey effort will likely be required to identify and avoid complex features at a fine scale. At least some survey work might be needed to effectively locate AOAs, with additional site assessment work required as specific projects are proposed. Also, it would be helpful as part of the AOA process for participants who are not aquaculture experts to gain a better understanding of why certain site conditions are required or desired. For example, how far offshore is too far from an operational standpoint? What sorts of slopes or substrate types are not workable, vs. being less desirable? A broad understanding of these issues should facilitate an informed discussion of tradeoffs around siting.

To question 9, our aquaculture policy speaks to various concerns about use conflicts. From a fisheries perspective, these include important fishing grounds and sensitive habitats. In some cases, important habitat areas have been identified by the Council as either habitat or spawning closures; the latter are typically intended to protect certain species during particular months. Both Atlantic cod and Atlantic herring are species that spawn in areas relatively close to shore where aquaculture projects could be located. Spawning site fidelity has been documented for both species. In addition to areas that are actively fished, frequently transited corridors should also be avoided, especially if aquaculture installations cannot not be transited (we are not sure if this is the case). Overall, it would be useful for the AOA process to provide some clarity on which types of activities are or are not compatible with specific types of aquaculture operations.

Offshore renewable energy development is an emerging issue in New England. Substantial areas offshore Massachusetts and Rhode Island have been leased and projects are currently in the planning and permitting phases. In the Gulf of Maine, no lease areas have been identified yet, but early conversations about siting are already underway. It seems likely that aquaculture sites may be located inshore of wind energy areas, but this is not clear yet. Wind development, during the construction and operations phases, will alter existing patterns of vessel traffic, and this increased traffic could in turn affect the suitability of an area for aquaculture. The cumulative effects of a combination of aquaculture sites and wind farms (or other uses) should be part of the conversation.

In terms of available research (question 10) it is imperative that NOAA Fisheries Office of Aquaculture work with the regional office and science center to obtain fisheries data for use in siting analysis. We appreciate that the siting analyses developed to date by NOAA's National Centers for Coastal Ocean Science already include a wide range of data inputs and are easy to understand, but if the data incorporated in these analyses do not accurately reflect fisheries uses,

the results will be far less useful for assessing tradeoffs. We typically use a combination of VMS, VTR, and sometimes at-sea observer data in our own analyses to paint a fuller picture of fishing activity in an area. Consultation with the fishing industry is also extremely important, especially for activities that are not fully captured in fishery-dependent data sets (e.g., recreational fishing, lobster pot fishing). Relative to VMS data, VTR data provide much more information including landings by species and are readily linked to dealer data to estimate ex-vessel revenues. NOAA's GARFO and Northeast Fisheries Science Center recently collaborated on a fishing activity analysis tool. See here and here for more information. While their reports were developed for offshore wind siting analysis, it should be possible to evaluate fishing information for any set of coordinates, such as a potential AOA.

In addition to the spatial siting analyses including a more comprehensive array of data about fishing activity, we suggest convening a dialog up front about methods and model assumptions. To our point above about siting requirements and preferences, these parameters should be discussed by all participants in the AOA process. We assume that different types of offshore aquaculture projects that might be considered in the region would have different siting parameters, depending on the gear types used and species cultured. It would be informative to test the sensitivity of model outputs to different siting parameters. It would also be useful to examine various sets of suitability multipliers to determine how they affect the results.

We also recommend that other topics be discussed as part of the AOA process, including how aquaculture might need to interact with fishery management (for example, if there is a desire to culture a federally managed species), and how the permitting and regulatory process works. Questions around shared use of public trust resources and equity of access for multiple ocean users are also likely to arise. We recognize that aquaculture governance is complex and involves other federal or state agencies, but we have found that it is impossible to separate environmental, siting, and permitting issues when discussing aquaculture with the Council. It will also be important to consider the longevity of any AOAs identified. Is there a point at which they are retired if no projects are proposed? Is it appropriate to reconsider their suitability at intervals given changing ocean conditions and uses? What are the incentives to proposed projects inside AOAs, vs. in other areas?

Again, thank you for the opportunity to comment. We look forward to a continued partnership with NOAA Fisheries around aquaculture issues in New England. Please let us know if you have questions or need any additional information.

Sincerely,

Thomas A. Nies

Thomas A. Nies
Executive Director

cc: Lou Chiarella, Chris Moore
Enclosure: NEFMC Aquaculture Policy

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 01930-2276

December 14, 2020

Michelle Morin
Chief, Environmental Branch for Renewable Energy
Bureau of Ocean Energy Management
45600 Woodland Road, VAM-OREP
Sterling, Virginia 20166-4281

Dear Michelle,

We reviewed the Draft Essential Fish Habitat (EFH) Assessment, received October 13, 2020, for the proposed South Fork offshore wind energy project, which includes the construction, operation, maintenance, and decommissioning of a commercial scale offshore wind energy facility, known as the South Fork Wind Farm (SFWF), within Lease Area OCS-A-0517, located southeast of Block Island within the Rhode Island/Massachusetts Wind Energy Area. The SFWF project proposes construction of up to 15 wind turbine generators (WTGs) with a 6 to 12 MW generation capacity, and an offshore substation (OSS) with a submarine cable network connecting the WTGs and the OSS. The project also includes the construction and installation of the South Fork Export Cable (SFEC) using alternating current to export energy from the SFWF to a mainland electric grid in East Hampton, NY. In addition to the EFH assessment, we reviewed the supplemental information included with the assessment, the SFWF Construction and Operation Plan (COP), and the preliminary Draft Environmental Impact Statement for cooperating agency review.

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) and Fish and Wildlife Coordination Act require Federal agencies to consult with us on projects such as this. Because the project involves EFH, the consultation process is guided by the EFH regulatory requirements under 50 CFR 600.920, which mandates the preparation of EFH assessments and generally outlines your obligations.

At this time we do not have enough information to comment on the impacts of the proposed project on living marine resources nor recommendations to avoid, minimize and mitigate adverse effects on EFH and other marine resources. You have not yet provided a complete EFH assessment in accordance with the mandatory and additional information requirements for such assessments pursuant to 50 CFR 600.920(e). A completed EFH assessment is a prerequisite to begin the EFH consultation process as specified in 50 CFR 600.920(i)(2). This letter outlines additional information we require to consult on this project.

INFORMATION REQUESTED

Habitat Delineations within the Project Area

Your Draft EFH Assessment does not provide adequate characterization or delineation of habitats within the project area. We note that you are aware of this issue and have been working with us to address this deficiency. As we have discussed with your staff, the habitat information you provided is based upon data and methodologies that do not allow for the differentiation between coarse (i.e. sand) soft sediment substrates and small-grained hard bottom (i.e. pebble, cobble, boulder) substrates. We are working with your staff to determine the best path forward using the available data to accurately describe the extent and characteristics of the habitats within the project area. This will allow for the revised habitat information to be updated and accurately presented in the Final EFH assessment. We look forward to continued cooperation on this project to ensure that complex habitats within the project area are accurately characterized and delineated.

The updated characterization and delineations of habitat are necessary for your evaluation of project impacts in the EFH Assessment. You provided a breakdown of project impact areas by project component in Table 5 of the current assessment. However, the impact area calculations by habitat type are based upon the existing habitat delineations. The habitat type calculations will need to be updated based on the revised delineations to ensure the existing conditions are accurately reflected in the Final EFH assessment. Further, it is not clear what parameters the calculations in Table 5 are based upon, and the calculations are not consistent with those presented in Table 1 in the assessment, or those provided in the preliminary DEIS and COP. The specifications for each project component should be clearly described and presented in the text and/or table and the information should be consistent across the DEIS, COP, and EFH assessment, and within each document.

Evaluation of Impacts to Essential Fish Habitat

The EFH assessment states that you allow leasees to use a Project Design Envelope (PDE) in the preparation of their COP, and that the use of a PDE requires you to analyze the maximum impacts that would occur from the range of design parameters presented in the COP. As we have discussed in the past, while this type of analysis may be appropriate for your evaluation of the COP and for your NEPA analysis, such an approach to analyze project impacts to EFH is not consistent with the EFH regulations. Specifically, CFR 600.920(e) lays out the requirements for the preparation of an EFH assessment. You are required to include in your assessment an analysis of the potential adverse effects on designated EFH and the site-specific effects of the project. Further, CFR 600.920(d) requires that you use the best available scientific information in your assessment of the effects of an action on designated EFH and the measures that can be taken to avoid, minimize, or offset such effects. The use of the maximum impact analysis does not allow for an evaluation of potential adverse effects, nor measures that can be taken to avoid, minimize, or offset such effects, for the different design parameters that may actually be selected.

As we have discussed, for the EFH consultation, BOEM must assess the potential adverse impacts that would occur as a result of the range of design parameters under consideration. Without this assessment, it is not possible to provide appropriate EFH conservation

recommendations for the project. Further, any recommendations provided based on the analysis of a maximum impact design, may or may not ultimately be applicable to the final selected design parameters. This could lead to the reinitiation of consultation once the final design is determined. It would be most efficient for the process, and consistent with the EFH regulations, if the EFH assessment analyzed potential impacts from the range of proposed design parameters, rather than a maximum impact scenario. We would be happy to discuss this with you further, as it is an important issue that has implications for future projects as well as the South Fork Project.

The analysis of impacts to EFH must also be revised in the Final EFH Assessment. The current assessment and evaluation in both the Environmental Effects and Effects Analysis document sections use methods and criteria that are not appropriate, or applicable, in the analysis of project impacts to designated EFH. The assessments and determinations appear to be confusing how project impacts are evaluated under the National Environmental Policy Act (NEPA) process and how adverse impacts to EFH must be evaluated for an EFH assessment. Specifically, the document defines an "analysis area," and compares all the identified EFH impacts against this calculated "analysis area" rather than assessing the actual effect of the project impacts to designated EFH. Further, the effects analysis for EFH are qualified based on the amount of EFH available within the defined analysis area. For example, the loss of soft-sediment habitat for cable protection of over 179.3 acres was determined to be insignificant due to the availability of soft-sediment habitat within this defined "analysis area." This approach is not consistent with the EFH regulations and your responsibilities under these regulations. The EFH regulations require you to evaluate the site-specific project impacts to designated EFH and measures that would avoid, minimize, and offset identified potential adverse impacts. The existence of similar habitat within a defined geographic area surrounding or adjacent to, the project impact area does not diminish, reduce, or affect: 1) the analysis and evaluation of potential adverse effects a project will have on designated EFH; nor 2) the requirement to use the best scientific information available to determine what measures can be taken to avoid, minimize, or offset such effects. The analysis should be revised to be consistent with the requirements under the EFH regulations.

The approach taken for assessing adverse effects to EFH in the current document has resulted in a deficient EFH Assessment that should be modified prior to initiation of the EFH consultation. Of particular concern is a lack of evaluation of how each identified project impact will affect different habitat types. Similarly, in the evaluation of effects to EFH for each species there is no assessment of project effects by habitat type, nor by species life history stage. It appears that the EFH effects analysis for each species is based on the total calculated impact areas presented in Table 5 of the EFH assessment rather than designated EFH for the species within the project impact areas (i.e. the assessment does not appear to be refining mapped EFH by the habitat text descriptions). While we do not need the impacts to each species designated EFH to be individually calculated, we do need impacts to each habitat type to be quantified and fully assessed for each component of the project. For example, deposition of suspended sediments will occur as a result of cable laying activities. Soft and hard sediment habitats will be affected differently by the sediment deposition, and the differences between the effects should be quantified and fully evaluated. Without information on the extent and location of impacts by habitat types, it is not possible to evaluate avoidance or minimization measures that could be employed to reduce adverse impacts to EFH.

General Additional Information Needed
As discussed above, the approach to the EFH assessment and evaluation of potential adverse effects of the project to EFH needs to be revised to align with the EFH regulations. The EFH assessment should clearly present the extent of habitat types within the project area and evaluate all potential project impacts that could occur to such habitats. In summary, this assessment needs to include: 1) the location of where impacts will occur for each impact type; 2) the extent of each habitat type that will be impacted for each impact type; and 3) an evaluation of any potential avoidance and minimization measures to reduce the identified impacts, including an assessment of the extent of habitat impacts that would be avoided or minimized. As you develop the revised EFH assessment, please include citations of relevant and currently accepted literature to support your determinations and to inform the evaluation of identified avoidance and minimization measures that may reduce adverse impacts to EFH.

Specific Additional Information Needed
It also is not clear whether all potential adverse impacts to EFH have been identified and evaluated. Of particular concern is the absence of an assessment of the potential for construction and operation impacts to Atlantic cod EFH. Further, there is no discussion of the ongoing study you are funding to assess cod spawning activity in an overlapping area with the proposed project. The assessment should fully analyze and evaluate, using the best available information, how the project may affect Atlantic cod EFH, particularly spawning activity. The effects of habitat alterations and changes that may affect the suitability of the project area to support Atlantic cod, and the overlap with any confirmed and/or documented spawning aggregation areas should be fully assessed and described.

The current EFH assessment does not fully evaluate impacts to EFH from cable installation. The document does not evaluate the potential for habitat conversion that would occur from cable trenching within coarse sediment habitats. There is also no discussion on how obstructions (e.g. relocation of large boulders) to cable laying would be addressed. Specifically, it is not clear if any preparation of the cable corridor would occur, either prior to in conjunction with cable laying activities. The EFH assessment must identify and assess all potential adverse impacts that would occur as a result of the project.

Detailed Additional Information Needed
To facilitate continued coordination and avoid detailing all of our more limited scope comments in this letter, we will provide you with an annotated version of the Draft EFH assessment with additional comments for you to consider as you update and revise the EFH assessment. Below is a general list of additional information needs to assist you in revising the EFH assessment. We include additional details and clarifications in the list, where feasible.

List of information necessary for a complete EFH assessment:

- Mapping and Habitat Information:
    - Revised habitat delineations and calculations for the lease area and cable corridor. The EFH assessment should be revised to reflect the changes to the habitat classifications as appropriate. We will continue to work with you on this evaluation.
    - Areas consistent with HAPC designations should be clearly identified on the project plans.
    - A delineation of known shellfish beds located in the project area.

- Project Design and Construction Methodology
    - The scope and range of the PDE for each project component. The EFH assessment should evaluate the full range of the design parameters and assess the impacts to EFH for each project component.
    - Detailed information on the proposed turbine locations' proximity to complex habitats should be provided. Potential impacts to complex habitats from turbine, scour protection, and vessel anchoring should be fully assessed. Please include an analysis of the impacts that would occur from cable routing to and from the turbine location.
    - Detailed information on each method of cable installation proposed within SFWF and SFEC. If multiple methods are being considered, an assessment of impacts to EFH for each method should be included for all habitat types.
    - Specific information related to how the cable will be laid through any identified HAPC and an assessment of the anticipated impacts. The EFH assessment should also describe in detail how impacts to HAPC will be avoided and minimized.
    - Detailed information related to the proposed use of cable and scour protection within the SFWF and SFEC. Specifically, the extent of area to be covered by the protection, the type of protection to be used, a description of habitats to be impacted, and all locations where cable protection is anticipated to be necessary.
    - Information related to vessels proposed for construction and maintenance, including potential impacts to benthic habitat from vessel anchors or spuds. Proposed plans to avoid and minimize impacts to sensitive habitats from vessel anchoring should also be provided.
    - Information related to the proposed dredging for the project, including plans for material disposal and dredging associated with the O&M port facility and HDD activity.
    - Provide additional information summarizing the results of sediment dispersal modelling, including the grain sizes used for each modelling exercise, and how impacts from silt habitats were considered. Further analysis on the levels of TSS from project activities and associated impacts to EFH.
    - Information related to the project construction schedule, including a schedule for cable installation. The proposed timing for pile driving, including the months of proposed pile driving and the number of hours each day pile driving is anticipated.

- Pile Driving and Noise Impacts

- A summary of proposed pile driving activities for this project, including an acoustic analysis for each pile installation method, which evaluates the timing, duration, and spatial extent of underwater sound and particle motion during pile installation, and a threshold analysis which examines the thresholds of these impacts on physiological injury, mortality, and behavior for relevant life stages of EFH species (fish and invertebrates).
- A map with depth contours and habitat type with a delineation of the location, intensity, and areal extent of acoustic impacts (sound and particle motion) expected within and outside of the project area. This should include the radial distance from pile driving to threshold boundaries of physiological injury, mortality, and behavioral impacts for EFH species (fish and invertebrates). The cod spawning study area should also be overlain on the map and potential impacts of pile driving on cod spawning habitat should be evaluated.
- Detailed information on avoidance, minimization, and mitigation measures for pile driving impacts (for both sound and particle motion), and an adaptive monitoring plan to ensure target attenuation levels are met throughout the duration of the project.
- A schedule for the time of year proposed for pile driving activities and an analysis of the impacts of scheduled activities to relevant life stages of EFH species (fish and invertebrates). This should include a full review of the literature related to noise effects on Atlantic cod, and the best available information on the spatial and temporal distribution of cod aggregations within and adjacent to the project area.
- A summary of normal operational noise for one turbine and for the entire wind energy facility, including an acoustic analysis which evaluates the timing, duration, and spatial extent of underwater sound and particle motion, and a full threshold analysis which examines the thresholds of these impacts on physiological injury, mortality and behavior for relevant life stages of EFH species (fish and invertebrates).

Benthic Monitoring Plan

We received a revised copy of the benthic monitoring plan for this project, dated September 30, 2020. We will follow up with you in more detail, but wanted to provide some initial feedback. As currently proposed, we have significant concerns about the ability of the design to detect changes. Specifically, it is not clear that there is adequate sampling or replication to detect meaningful changes (i.e. the statistical power of the study to detect changes). The proposed lack of multi-year, and seasonal, pre-construction data collection will also place unnecessary constraints on the study's ability to distinguish between annual and seasonal variability and changes related to the project construction and operation. We will provide specific comments and questions on the plan to you in spreadsheet format by early January. Once you have reviewed our comments, we would recommend setting up a meeting to discuss our concerns so they can be addressed prior to commencement of the study.

Conclusion

In summary, we are requesting additional information related to the evaluation of adverse effects to EFH, the delineation and assessment of habitat within the project area, the project design parameters and construction methodology, and pile driving and acoustic impacts of the project. A completed

EFH assessment that incorporates this information is necessary for us to be able to provide appropriate EFH conservation recommendations, and complete our consultation with you for this project. Accordingly, we seek to extend the consultation process pursuant to 50 CFR 600.920(i)(5) so that you may provide us with better information for our evaluation of impacts and the development of EFH conservation recommendation. Upon receipt of a complete EFH assessment, our consultation can be initiated and we will require up to 60 days to review the assessment and develop EFH conservation recommendations. Consistent with the timeline under One Federal Decision, we must initiate consultation no later than 90 days from the date of the Notice of Availability of the DEIS. We hope the information provided will help inform and guide you as the lead federal agency to ensure we receive the necessary information to complete our consultations in a timely and effective manner. If you have any questions regarding the EFH consultation process, please contact Alison Verkade at 978-281-9266 or alison.verkade@noaa.gov.

Thank you for the opportunity to comment on this important project and we look forward to working collaboratively with you to address these information needs.

Sincerely,

Peter W. Burns

Peter Burns
Ecosystem Management Branch Chief
Habitat and Ecosystem Services Division

Cc:

Brian Hooker, BOEM
Ursula Howson, BOEM
Thomas Nies, NEFMC
Christopher Moore, MAFMC
Lisa Havel, ASMFC

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 01930-2276

December 11, 2020

James Bennett
Chief, Office of Renewable Energy Programs
Bureau of Ocean Energy Management
United States Department of the Interior
45600 Woodland Road VAM-OREP
Sterling, Virginia 20166

Dear Mr. Bennett:

We have reviewed your December 1, 2020 response to our June 27, 2019 letter regarding the essential fish habitat (EFH) conservation recommendations for the Vineyard Wind Project. I provide these comments to clarify our EFH conservation recommendations and also confirm our agencies' mutual understanding of these recommendations based on our October 22nd interagency discussion.

Prior to receipt of your December 1st response, your staff and our habitat team had a call to discuss our recommendations on October 22, 2020. We appreciate the opportunity to discuss these recommendations with you. Based, upon our review of your response to our recommendations, particularly your responses to recommendations #1, #10, and #11 involving habitat characterization and monitoring, we think it is important to clarify the intent of our conservation recommendations, and provide feedback on ways to improve our offices coordination on EFH issues.

Habitat Characterization

We appreciate BOEM requiring additional sampling along the Muskeget Channel area to better characterize benthic habitats, including the juvenile cod Habitat Area of Particular Concern (HAPC), that will be impacted by cable installation. However, as we discussed on October 22, 2020, it is not clear, based on the information you provided, the methodology that Vineyard Wind will use to collect, analyze, and interpret the additional data that will be collected in the channel. We also appreciate that you reference our Recommendations for Habitat Mapping. As we discussed, coordination with us will also be critical to ensure that the additional data characterizes habitat sufficiently to help minimize project impacts, including impacts associated with cable routing, dredge disposal, and anchoring. Although this topic was discussed on our October 22nd call, it does not appear that any coordination component was incorporated into your written response. Therefore, we recommend that the Term and Condition be revised to specify a coordination requirement to ensure our comments are addressed prior to additional sampling. This will not only ensure that our

concerns are addressed, but will also make the best use of project resources by providing for a more thorough result from Vineyard Wind's sampling efforts.

As we have discussed in the past, and as provided in our June 27, 2019 letter, we disagree with the portion of your December 1, 2020 response that suggests that the habitat data provided was adequate and the EFH Assessment represented the best available information. The maps provided in the EFH assessment were based on state definitions that are not appropriate for the federal consultation process, as they do not align with federal mandates and resource definitions. Further, these maps did not depict the extent of complex habitat evident in the benthic sampling and sidescan sonar frame grabs included in the project documents. The updated figure from your December 1st response demonstrates our concern. Based on the Coastal and Marine Ecological Classification Standard (CMECS) definitions illustrated in Figure 2, approximately half of the offshore export cable corridor (OECC) is hard bottom and/or coarse sediment, which is ten times the area considered in the EFH assessment. This is new information that could affect the basis of our EFH conservation recommendations.

Despite our concern with this new information provided in Figure 2 of your December 1st response, we are not requesting reinitiation of consultation at this time. You have agreed to include an additional provision to monitor and evaluate the effectiveness of natural and engineered stone placed as cable protection within juvenile cod HAPC to assess its value as mitigation, and we find that satisfactory. We appreciate that you have included a requirement for Vineyard Wind to coordinate and address our comments for this monitoring provision. We would like to see this requirement duplicated in your provision related to the selection of source material. As currently proposed, Vineyard Wind is only required to solicit our comments prior to their final selection of source material, and there is no requirement for them to address our comments. The requirement to use natural and engineered stone that provides complexity is intended to mitigate impacts to juvenile cod HAPC and comply with our CR #5; therefore, it is crucial to ensure that the final design and seafloor expression of materials is consistent with the HAPC designation. If particular types and sizes of materials that are inconsistent with the habitat needs of juvenile cod as described in the HAPC definition are needed for engineering purposes, further coordination will allow for the evaluation of potential alternatives (e.g. placing a layer of rounded mixed diameter pebble and cobble over the selected engineered stone). Due to the importance of this issue, we recommend that the Term and Condition for cable protection material selection be revised to include a provision for Vineyard Wind to solicit and address our comments.

We would also like to clarify our position on the evaluation of impacts for the EFH assessment and consultation. Based on your December 1st response, and our October 22nd discussion, there appears to be confusion related to how project impacts must be addressed for the purposes of assessing EFH impacts compared to the National Environmental Policy Act (NEPA) criteria. Your December 1st response assumes the entire OECC impact area (186 acres) is hard and complex habitat, consistent with the juvenile cod HAPC. This impact would only account for 0.12% of the available gravel and boulder habitat within your defined analysis area. While defining an analysis area for the NEPA process is standard, this approach is not consistent with the EFH regulations and your responsibilities under these regulations. Specifically, the EFH regulations require you to evaluate the site-specific project impacts to designated EFH and measures that would avoid, minimize, and offset identified potential adverse impacts. The existence of similar habitat within a defined geographic area surrounding or adjacent to, the project impact area does not diminish, reduce, or

affect: 1) the analysis and evaluation of potential adverse effects a project will have on designated EFH; nor 2) the requirement to use the best scientific information available to determine what measures can be taken to avoid, minimize, or offset such effects. This is the reasoning behind our June 27, 2019 CR#1, as accurate baseline data is not only necessary to adequately assess impacts to EFH, but also to assess any proposed avoidance and minimization measures.

Monitoring of Project Impacts

Trawl Survey

Our conservation recommendation for the development of a hypothesis driven, gradient design monitoring plan (CR#10) was intended to assess the localized effects (i.e. at the project level) of the project. Specifically, we were seeking an evaluation of the effects of habitat alteration to finfish and invertebrate communities along a gradient at increasing distances from the turbine sites within the Wind Development Area (WDA). Your response suggests that you are meeting our recommendation because a fishery monitoring trawl survey is already underway by Vineyard Wind within the WDA; however, these surveys do not address the study design considerations or include beam trawls as we recommended. We provided comments on this trawl survey on February 28, 2019 in a letter submitted by our Northeast Fisheries Science Center, however, these comments were never addressed nor did we receive a response to these comments from the applicant. In your December 1st response to our CR#10, you state that switching methodologies, or including additional sampling methods in the ongoing trawl survey would not be feasible. Without modification, it is not clear how the ongoing survey will provide useful information that would address our conservation recommendation. We want to clarify that the ongoing trawl survey was not a recommendation under CR#10.

Drop Camera Study

Your response also discusses a drop camera study that is included in the monitoring plan, and referenced in your letter and draft Terms and Conditions as addressing our CR#10. Unfortunately, we have not been consulted on this proposed drop camera monitoring plan. While we believe that it may provide some useful information on the distribution of habitats in the offshore WDA, it is not currently designed in a way that it could be used to assess benthic habitat changes resulting from the project at a meaningful scale. We would be happy to follow up with specific comments but this survey should not be considered as addressing part of our recommendation.

Benthic Monitoring Plan

We understand that you are choosing not to require additional fisheries sampling methods. However, we do think that the benthic monitoring plan could help partially address our recommendations (#10 and #11) if additional components are included and the monitoring plan is revised to allow for the assessment of changes to specific habitat types. The addition of other non-impact survey gear such as baited underwater video cameras to the benthic monitoring plan could allow for an assessment of changes in juvenile fish use of habitat and partially address this conservation recommendation.

We have reviewed the updated Benthic Monitoring Plan that you plan to use to address our CR #11. We have some significant concerns that, as designed, it is not likely to generate the data needed for hypothesis-driven comparisons pre- and post-construction. It is critical to ensure any monitoring plan is designed to collect adequate baseline information and to detect changes by habitat type that

can be attributed to project activities and not confounded by other factors (e.g., natural environmental changes). We appreciate that you have included a requirement for Vineyard Wind to coordinate with us and address our comments prior to finalizing the benthic monitoring plan. We will follow up shortly with additional comments on the proposed benthic monitoring plan and look forward to further coordination and discussion on this plan as it is developed.

Nantucket Monitoring Requirements

As we have previously stated and discussed with you on October 22, 2020, it is not clear why you do not plan to expand the Town of Nantucket monitoring requirements outside of Nantucket waters. The proposed monitoring requirements will provide data and information that would address questions that should be a component of benthic monitoring, but the use of these data will be severely limited if monitoring is not expanded beyond Nantucket waters. We recommend that you reconsider expansion of these monitoring measures to include the entire OECC within Muskeget Channel.

Provisions for Coordination

We appreciate that you have incorporated coordination with our agency into many of your recommended Terms and Conditions for the COP approval. Based on our discussion on October 22, 2020, we expected that the requirement for coordination would also include a corresponding provision to ensure that our comments are addressed prior to finalizing any reviewed document. As we discussed in October, without such a provision there is no assurance that our comments will be incorporated in a meaningful manner. Without a requirement to address our comments, there is the potential for our comments to be misunderstood, or incorporated in a manner that does not adequately address the basis for our comments. Therefore, we recommend this be added to the provisions for the identification and selection of dredge disposal locations and the anchoring plan.

Your response indicates that you have also included Vineyard Wind's post-construction cable monitoring reports as partially addressing our CR #2. While we do not agree that these reports will serve to address our CR, within Nantucket waters where pre-construction surveys are also required, they will allow for an evaluation of how effective the measures employed were in avoiding particular habitat types. Currently, your draft Term and Condition for this item does not require Vineyard Wind to provide us with a copy of these reports. We request that such a provision be included so that the reports are also submitted to our office for review.

Agency Coordination

In your letter you noted the coordination timeline for this consultation. To clarify, the EFH regulations under 50 CFR 600.920(k)(1) states that a federal action agency should provide a response to our recommendations within 30 days of receipt and that this response must be provided at least 10 days prior to final approval of the federal action if the response is inconsistent with our recommendations. While a response to our recommendations is technically due 10 days prior to the agency decision, we recommend that, going forward, the response and/or discussions occur much earlier in the process. We are extremely interested in a coordinated and collaborative approach to these projects to ensure that we can address any questions or implementation issues and concerns related to our EFH conservation recommendations early in the process. We encourage you to reach out to us for clarification related to any comments or recommendations that we provide. This will

allow for better collaboration on projects going forward and ensure there are no unexpected issues raised late in the project review timeline.

Conclusion

We appreciate your December 1, 2020 response to our EFH conservation recommendations for the Vineyard Wind Project and your willingness to discuss these issues in October. We hope this letter clarifies the points raised in your response letter and those discussed during the inter-agency call in October. Specifically, we want to ensure that the provisions put forward in BOEM's Terms and Conditions for the project include coordination and measures to incorporate our feedback related to the additional habitat data to be collected, the anchoring plan to be developed, the scour protection and subsequent monitoring to mitigate for impacts to juvenile cod HAPC, and evaluation of dredge disposal sites. We also want to clarify that the ongoing trawl survey was not intended to be part of our CR#10, but rather we were recommending a hypothesis-driven monitoring plan using different sampling techniques to evaluate the effects of site specific habitat alteration.

Should you have any questions, please feel free to contact Alison Verkade at alison.verkade@noaa.gov. We look forward to further coordination with you on this project and future offshore wind projects.

Sincerely,

Louis A. Chiarella
Assistant Regional Administrator
for Habitat Conservation

cc:
Brian Hooker, BOEM
Michelle Morin, BOEM
Jennifer Bucatari, BOEM
Thomas Nies, NEFMC
Christopher Moore, MAFMC
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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
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December 11, 2020

Peter Weppler
Chief, Environmental Analyses Branch
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Jacob K. Javits Federal Building
26 Federal Plaza
New York, New York, 10278-0090

RE: EFH Consultation for the New York-New Jersey Harbor Deepening Channel Improvement Study for Port Jersey Port Authority Marine Terminal, Elizabeth Port Authority Marine Terminal, and Port Newark, New Jersey.

Dear Mr. Weppler:

We have received your request for consultation and the accompanying essential fish habitat (EFH) assessment for the New York District (District), U.S. Army Corps of Engineers' New York-New Jersey Harbor Deepening Channel Improvement Study (HDCI). The HDCI involves deepening and widening the existing 50-foot deep (mean low water [MLW]) federal navigation channel to allow for the navigation of a Triple E Class vessel to transit from sea to Port Elizabeth and Port Jersey, New Jersey. The request for consultation was provided on November 9, 2020, following the issuance of a Public Notice of a Draft Finding of No Significant Impact (FONSI) and the Draft Integrated Feasibility Report and Environmental Assessment (Draft FR/EA). The Tentatively Selected Plan (TSP) identified in the draft FR/EA includes the dredging of 28,377,000 cubic yards (cy) of sediments to deepen a number of navigation channels in the study area including the Ambrose Channel, Anchorage Channel and Port Jersey Channel, the Kill Van Kull, Newark Bay Channel, South Elizabeth Channel and Elizabeth Channel by up to 5 feet. While not clearly stated, widening of these channels is also assumed to be included as part of the project based on some of the information in the EFH assessment.

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) requires federal agencies to consult with us on projects such as this which may adversely affect EFH and other aquatic resources. In turn, we must provide recommendations to conserve EFH. These recommendations may include measures to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH resulting from actions or proposed actions authorized, funded, or undertaken by that agency. 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 this consultation procedure.

The Fish and Wildlife Coordination Act (FWCA) also requires federal agencies to consult with us on projects such as this that may result in the modification of a natural stream or body of water. The FWCA requires agencies to consider the effects that these projects would have on fish and wildlife and to provide for improvement of these resources. Under this authority, we work to protect, conserve and enhance species and habitats for a wide range of aquatic resources such as diadromous species, shellfish, and other commercially and recreationally important species that are not managed by the federal fishery management councils and therefore do not have designated EFH.

Magnuson Stevens Fishery Conservation and Management Act (MSA)

The project area has been designated as EFH under the MSA for winter flounder (*Pseudopleuronectes americanus)*, windowpane (*Scophthalmus aquosus)*, Atlantic sea herring (*Clupea harengus*), bluefish (*Pomatomus saltatrix*), Atlantic butterfish (*Peprilus triacanthus*), summer flounder (*Paralichthys dentatus*), Atlantic mackerel (*Scomber scombrus*), scup (*Stenotomus chrysops*), black sea bass (*Centropristis striata*), clearnose skate (*Raja eglanteria*), little skate (*Leucoraja erinacea*), winter skate (*Leucoraja ocellata*), red hake (*Urophycis chuss*), and others. EFH is defined as, "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." For the purpose of interpreting the definition of EFH:

- "waters" include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate;
- "substrate" includes sediment, hard bottom, structures underlying the waters, and associated biological communities;
- "necessary" means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem;
- "spawning, breeding, feeding, or growth to maturity" covers a species' full life cycle.

The activities proposed in the TSP including the deepening and widening of the channels in the study area will have an adverse effect on EFH and consultation with us is required under the MSA. The EFH final rule published in the Federal Register on January 17, 2002 defines an adverse effect as "any impact which reduces the quality and/or quantity of EFH" and further states that:

> An adverse effect may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystems components, if such modifications reduce the quality and/or quantity of EFH. Adverse effects to EFH may result from action occurring within EFH or outside EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

The EFH final rule also states that the loss of prey may be an adverse effect on EFH and managed species. As a result, actions that reduce the availability of prey species, either through direct harm or capture, or through adverse impacts to the prey species' habitat may also be

considered adverse effects on EFH.

Our evaluation of this project has been complicated by the lack of detail in the EFH assessment and the FR/EA. The information provided is not sufficient for us to consider the EFH assessment complete. As a result, the EFH consultation cannot be initiated at this time. The assessment does not include a clear and detailed description of all of the construction activities proposed, the alternatives considered, a discussion of the avoidance or minimization measures adopted, a comprehensive evaluation of direct, indirect, individual, cumulative, and synergistic effects of all of the proposed activities on EFH, or provide compensatory mitigation for unavoidable impacts.

Due to the size and scope of the project and the potentially substantial adverse effects to NOAA Trust resources, expanded EFH consultation procedures are necessary for this project. An expanded EFH consultation allows the maximum opportunity for us to work together to review the project's impacts on EFH and to develop EFH conservation recommendations. For expanded consultations, you must submit your EFH assessment to us at least 90 days prior to a final decision on the action, and we in turn will respond within 60 days of submission of a full and complete EFH assessment.

To initiate the required EFH consultation with us, please provide a revised EFH assessment that fully evaluates all of the direct, indirect, individual and cumulative effects of the proposed project on EFH. The mandatory contents of an EFH assessment include:

- A full description of the action.
- An analysis of the potential adverse effects of the action on EFH and the managed species.
- The federal agency's conclusions regarding the effects of the action on EFH.
- Proposed mitigation, if applicable.

Additional information, such as the results of an on-site inspection to evaluate the habitat and the site-specific effects of the project, the views of recognized experts on the habitat or species that may be affected, a review of pertinent literature and related information, and an analysis of alternatives to the action including alternatives that could avoid or minimize adverse effects on EFH should also be provided as part of the expanded consultation.

Based upon the definition and description of adverse effect, the EFH assessment should also consider the full range of effects of the construction activities associated with the dredging, dredged material disposal, and mitigation. Additional information should also include an evaluation of the impacts of the proposed project including both temporary and permanent changes to the habitat such as the loss or conversion of aquatic habitat, water quality and flow changes, and impacts to prey species, as well as detailed plans for compensatory mitigation for the permanent loss of habitat. Also, while we appreciate the plethora of studies and documentation related to the original Harbor Deepening Project (HDP), references, when made to relevant materials, should be appropriately cited for a more efficient review.

We offer the following additional technical assistance comments to assist you in the development of the revised EFH assessment. As always, we are available to discuss this project

and the required EFH consultation with you or your staff if you have any questions or require clarification on our comments.

Project Description

As discussed in the EFH assessment, the TSP identified for this study includes deepening Ambrose Channel, Anchorage Channel and Port Jersey Channel, the Kill Van Kull, Newark Bay Channel, South Elizabeth Channel and Elizabeth Channel, by up to 5 feet to allow for the navigation of a Triple E Class vessel to transit from sea to Port Elizabeth and Port Jersey. A table is provided in the EFH assessment (Table 1) with the quantities and type of material to be dredged within each channel, which totals 28,377,000 cy. Widening is also assumed to be included as part of the project based on footnotes included in Table 1 and further mentioned throughout the EFH assessment. However, without a visual depiction of the proposed activities in comparison to existing conditions, it is unclear where the work is proposed, which areas will be widened and/or deepened, and the total area that will be disturbed. Additionally, Table 1 provides footnotes with undefined shorthand of what is assumed to be sub-areas of the channels, but it is difficult to understand what these footnotes are referencing.

The shallow habitat present within the project area is also discussed in the EFH assessment but the document lacks a visual depiction of where these areas exist and how the project will affect these areas. The limited figures provided are generalized and do not include cross sectional views and lack details to assist in the evaluation of effects. A revised EFH assessment should include site plans that can be:

- directly linked to Table 1 and the discussion of the HDCI Study Description (Section 3 of the EFH assessment),
- that are easily referenced,
- depict the project area,
- include existing versus proposed expansion areas with overlapping bathymetry; and
- include cross sections.

Additionally, the revised EFH assessment should provide a clear summary table which quantifies the total, permanent, and temporary impacts to the different water areas and habitats, including EFH for species with demersal life stages such as winter flounder, and that is consistent with the project plans. This information would assist in the evaluation of effects of this project on EFH and habitats used by NOAA trust species.

Of particular concern is the project details that appear to be missing by omission or lack of reference within the EFH assessment. The description of the HDCI within the EFH assessment fails to include any details on materials and methods, best management practices, and the final disposition of the 28,377,000 cy material to be dredged. It is also unclear from the EFH assessment how maintenance dredging and berth deepening (which is depicted on Figure 2 of the EFH assessment and captioned as “not to be deepened under the HDCI Project”), will be addressed. Without a clear project description, it is difficult to understand the full range of potential impacts and evaluate the effects of the proposed action on the aquatic environment and to NOAA trust resources.

Three impacts highlighted in the EFH assessment include:

- Physical disturbance and re-suspended sediments/re-deposition of suspended sediments (short-term direct and indirect impacts including potential burial and/or release of contaminants)
- Entrainment of early life stages (eggs and larvae) as a form of short-term direct impact due primarily due to hydraulic dredging and capture of eggs and possibly larvae in the dredge
- Loss of EFH function (i.e. loss of habitat) as a long-term indirect impact due to increased sedimentation and/or changes in depths, currents, substrate types, and/or in-water structures that reduce or eliminate the suitability of habitat for EFH-managed species.

However, as indicated in the EFH assessment, these impacts are based on 2017 conservation recommendations related to the original HDP. As stated in our February 7, 2017, those EFH conservation recommendations only apply to maintenance dredging within the channels identified in the HDP, and that any channel improvements proposed in the future would require additional consultation. Without a complete project description, it is unclear if the impacts discussed as part of the earlier consultation on the maintenance activities encompass the full suite of potential adverse effects that will result from further deepening and widening of the channels. Additionally, there is limited discussion as to where the impacts will occur and to what habitats, as well as an omission of potential effects due to erosion, sloughing of sidewalls, and resuspension of potentially contaminated materials.

According to the EFH assessment, it appears that some impacts to aquatic resources will be permanent, and include impacts to the shallow water habitat and EFH for winter flounder early life stages. Although the District recognizes that compensatory mitigation will be required for the shallow water impacts and states that a mitigation plan will incorporate benefits of the channel improvements, a mitigation plan has not yet been provided and the ecological benefits of the channel deepening and widening are unclear. Additionally, the EFH assessment discusses the District's involvement with several large-scale environmental programs in the NY/NJ Harbor that focus on improving shallow, aquatic habitat through the beneficial use of dredged material. While we recognize the work that has been done previously, including the list of past projects related to the original HDP related water quality improvements and enhancement of intertidal and subtidal habitat functions, and intentions to continue implementing such projects, the EFH assessment does not provide any detail on proposed plans to implement habitat enhancement or beneficial use of material related to the HDCI. The revised EFH assessment should clearly identify both the temporary and permanent impacts to all habitat types, explain measures taken to avoid and minimize those adverse effects, and provide a compensatory mitigation plan to offset any unavoidable losses. Additionally, if the District intends to provide habitat enhancement and beneficial use of material as part of the HDCI, those projects as well as their locations and details related to the work should be included in the revised EFH assessment.

We agree that some of the impacts of the dredging can be minimized through the use of implementing best management practices (BMPs) and seasonal work windows to protect sensitive life stages of federally managed species such as winter flounder and anadromous fish. However, the specific work windows referenced in the EFH assessment were developed for the

maintenance dredging of the channels identified in the HDP. As discussed in our February 7, 2017, letter, consultation with us is required for any future improvements that require new work dredging and the expansion of the width of some of the channels, or if blasting is proposed, and that additional EFH conservation recommendations may be provided.

Winter flounder

EFH for winter flounder has been designated in the project area. Winter flounder ingress into spawning areas within mid-Atlantic estuaries when water temperatures begin to decline in late fall. Tagging studies show that most return repeatedly to the same spawning grounds (Lobell 1939, Saila 1961, Grove 1982 in Collette and Klein-MacPhee 2002). Winter flounder typically spawn in the winter and early spring, although the exact timing is temperature dependent and thus varies with latitude (Able and Fahay 1998); however, movement into these spawning areas may occur earlier, generally from mid- to late November through December. Winter flounder have demersal eggs that sink and remain on the bottom until they hatch. After hatching, the larvae are initially planktonic, but following metamorphosis they assume an epibenthic existence. Winter flounder larvae are negatively buoyant (Pereira et al. 1999) and are typically more abundant near the bottom (Able and Fahay 1998). Young-of-the-year flounder tend to burrow in the sand rather than swim away from threats. Increased turbidity and the subsequent deposition of the suspended sediments can smother the winter flounder eggs and would adversely affect their EFH.

In your EFH assessment, you provide project minimization measures which specifically include seasonal restrictions protective of winter flounder early life stage (January 15 through May 31) for Port Jersey outer channel. We appreciate that the seasonal work windows have been incorporated into project planning based on previous maintenance dredging permits and coordination with us. However, for your planning purposes, should project activities widen the top dimensions of the channels beyond the boundaries originally identified as part of the HDP or impact areas less than 20 feet deep, sediment disturbing in-water work, such as dredging, should be avoided when winter flounder eggs and larvae may be present - between January 15 and May 31. This is consistent with the past discussions we have had with District staff regarding both the maintenance work as well as any proposed future improvements.

Anadromous Fishes

Alewife and blueback herring, collectively known as river herring, spend most of their adult life at sea, but return to freshwater areas to spawn in the spring. Both species are believed to be repeat spawners, generally returning to their natal rivers (Collette and Klein-MacPhee 2002). Because landing statistics and the number of fish observed on annual spawning runs indicate a drastic decline in alewife and blueback herring populations throughout much of their range since the mid-1960s, river herring have been designated as Species of Concern by NOAA. Species of Concern are those about which we have concerns regarding their status and threats, but for which insufficient information is available to indicate a need to list the species under the Endangered Species Act (ESA). We wish to draw proactive attention and conservation action to these species.

The project area serves as a migratory pathway to spawning and nursery habitat for these anadromous fish species. The activities associated with dredging can create undesirable turbidity and noise levels that can impede migration. Increases in turbidity due to the resuspension of sediments into the water column during construction can degrade water quality, lower dissolved oxygen levels, and potentially release chemical contaminants bound to the fine-grained estuarine/marine sediments. Suspended sediment can also mask pheromones used by migratory fishes such as these to reach their spawning grounds and impede their migration and can smother immobile benthic organisms and demersal newly-settle juvenile fish (Auld and Schubel 1978; Breitburg 1988; Newcombe and MacDonald 1991; Burton 1993; Nelson and Wheeler 1997). Noise from the construction activities may also result in adverse effects. Effects may include (a) non-life threatening damage to body tissues, (b) physiological effects including changes in stress hormones or hearing capabilities, or (c) changes in behavior (Popper et al. 2004).

Additionally, juvenile river herring are a food source for several federally managed species. Buckel and Conover (1997) in Fahay et al. (1999) reports that diet items of juvenile bluefish include *Alosa* species such as these. Juvenile *Alosa* species have also been identified as prey species for windowpane flounder and summer flounder in Steimle et al. (2000). The EFH final rule states that the loss of prey may be an adverse effect on EFH and managed species because the presence of prey makes waters and substrate function as feeding habitat and the definition of EFH includes waters and substrate necessary to fish for feeding. Therefore, actions that reduce the availability of prey species, either through direct harm or capture, or through adverse impacts to the prey species' habitat may also be considered adverse effects on EFH. As a result, activities that adversely affect the spawning success and the quality for the nursery habitat of these anadromous fish can adversely affect the EFH for juvenile windowpane and summer flounder by reducing the availability of prey items.

In the EFH assessment, you provide project minimization measures which specifically include seasonal restrictions protective of migratory and spawning anadromous fish (March 1 through May 31) for the Kill Van Kull and Newark Bay. We appreciate that the seasonal work windows have been incorporated into project planning. However, because it appears that the scope of the HDCI exceeds that considered as part of the maintenance dredging operations, the revised EFH assessment should consider avoidance of in-water work from March 1 to June 30 during the upstream migration of anadromous fish to their spawning grounds to minimize the adverse effects of suspended sediment and noise throughout the study area.

Cumulative Impacts

The EFH assessment does not adequately evaluate the cumulative effects of the proposed project. There is some mention of other projects ongoing within the Harbor as part of the cumulative effects section of the EFH assessment, but there does not appear to be any meaningful discussion. Cumulative impacts analyses are not restricted to spatial and temporal overlap of projects. Several small, medium, and large past, present, and future actions have not been considered. For example, large dredging (new and maintenance) and port projects are underway or have been proposed in the region such as maintenance dredging and other activities at the various port facilities operated by the Port Authority of NY and NJ, the NY NJ Anchorages project, as well as various construction and maintenance projects along the Hudson River, Upper

Bay, Newark Bay, and the Kill van Kull.

A full assessment of the cumulative effects of the proposed project should be undertaken that includes the consideration of the cumulative effects of all past, present, and reasonably foreseeable future actions on aquatic resources. Some of the issues that should be addressed include the cumulative effects of the loss of aquatic water column and benthic habitat on NOAA trust resources, loss of prey species, ballast water withdrawals, water discharges, increased vessel traffic (i.e. tugs), vessel collisions, and new dredging (e.g. berths and other dredging) and future maintenance dredging needs.

Endangered Species Act

Federally listed species may be present in the project area. Consultation, pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, may be necessary. The District is responsible for determining whether the proposed action is likely to affect listed species. When project plans are complete, you should submit your determination of effects, along with justification for the determination, and a request for concurrence to nmfs.gar.esa.section7@noaa.gov. After reviewing this information, we would then be able to conduct a consultation under Section 7 of the ESA.

Conclusion

We hope that the information provided above will assist you in the development of a revised EFH assessment that evaluates fully all of the direct, indirect, individual and cumulative effects of the proposed project, provides a project schedule that minimizes impacts to EFH and other NOAA trust resources, and includes a mitigation plan for any unavoidable losses. We also look forward to working with you to pursue beneficial use options in the region. As always, please do not hesitate to contact Jessie Murray (Jessie.Murray@noaa.gov, 732-872-3116) in our Sandy Hook field office if you have any questions or need assistance.

Sincerely,

GREENE.KAREN.M.1365830785

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Date: 2020.12.11 08:11:56 -05'00'

Karen M. Greene
Mid-Atlantic Field Offices Supervisor
Habitat Conservation Division

cc: GARFO PRD - E. Carson-Supino
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New England Fishery Management Council
50 WATER STREET | NEWBURYPORT, MASSACHUSETTS 01950 | PHONE 978 465 0492 | FAX 978 465 3116
John F. Quinn, J.D., Ph.D., *Chairman* | Thomas A. Nies, *Executive Director*

December 8, 2020

Ms. Donna Lanzetta
CEO, Manna Fish Farms
Via email

Dear Ms. Lanzetta:

Please accept these comments from the New England Fishery Management Council (Council) regarding Manna Fish Farm's project in federal waters off New York. The Council has primary management jurisdiction over 28 marine fishery species in federal waters and is composed of members from Connecticut to Maine. More information about our management plans is available at www.nefmc.org. We appreciate the opportunity to engage with you during the pre-application phase and thank you for including our staff in the September 21 interagency pre-application meeting.

Council staff reviewed the July 2020 siting analysis prepared by NOAA's National Centers for Coastal Ocean Science, and we shared this report with the Council members in early December to solicit their feedback. Staff also reviewed the September 2020 Baseline Environmental Survey Plan. Below, we provide some specific comments related to the siting analysis and the survey plan. We are also enclosing the Council's new aquaculture policy, which was approved on December 1. Generally, the Council has concerns about siting aquaculture operations in sensitive habitat types, and in areas with substantial amounts of fishing activity or vessel transit that could be impeded by the presence of fish cages and mooring lines.

The Council recommends that aquaculture development avoid areas of complex seafloor habitat when possible, complex meaning pebble, cobble, or boulder-sized sediments, especially those with attached epifauna. This appears consistent with your intent to site the project in areas with finer grain sizes. We know from our habitat conservation work that data on coarse grained sediments in offshore location can be somewhat sparse, since grabs and other frequently used types of geophysical sampling are not especially useful for capturing larger classes of gravels. Given these data gaps, we are pleased to see that the environmental survey plan includes a detailed characterization of bathymetry and sedimentary features. We recommend that you consider verifying the acoustic data with seafloor imagery if possible.

In addition to the academic, survey, and agency partners already identified in the baseline survey plan, we suggest consulting with NOAA Fisheries Greater Atlantic Regional Office (GARFO) habitat staff on seafloor mapping efforts to ensure that the data gathered is useful for evaluating potential impacts to essential fish habitat. In the context of offshore wind development, NOAA GARFO staff have developed habitat mapping recommendations that will help them to understand seafloor characteristics in project areas in relation to the sorts of habitat features used by fishes. These recommendations include suggested substrate classifications under the Coastal and Marine Ecological Classification Standard (CMECS) framework. A May 2020 draft of the recommendations is available here. We understand that these recommendations should be consider a living document, so it would be prudent to check with NOAA staff for updates before survey plans are finalized.

In terms of characterizing fishing activity, we agree that using a combination of vessel trip report (VTR), vessel monitoring system (VMS), and automatic identification system (AIS) data is best,

since each source has limitations and gaps. Unfortunately, spatial data depicting recreational fishing activity, both in the for-hire fleet and among private anglers, is limited regardless of data source. Recreational fishing targets in this location likely include fluke, winter flounder, cod, red hake, striped bass, and highly migratory species. We suggest you reach out to the New York Recreational & For-Hire Fishing Alliance (https://nyrfhfa.com/) for more insight into patterns of recreational fishing at and transit through the potential sites.

VMS data are useful for showing where many types of fishing vessels are located and filtering these data for vessel speed can indicate locations likely to represent fishing activity. However, it is important to remember that the high/low values depicted in the data portal products are relative to each data set, and that high intensity in one fleet could represent a very different number of vessels or volume of landings as compared another fleet. VTR data provide much more information including landings and are readily linked to dealer data to estimate ex-vessel revenues. NOAA's GARFO and Northeast Fisheries Science Center recently collaborated on a fishing activity analysis tool, which uses the VTR- and observer-based data products referenced on page 17 of the siting report. See here and here for more information. While these reports were developed for offshore wind siting analysis, it should be possible to evaluate fishing information for any set of coordinates, including the Manna Fish Farm area of interest.

One fishery of interest to us in terms of possible overlap is the Atlantic sea scallop fishery. We looked at the plots in the siting report compared to recent estimates of activity based on VMS data prepared for our scallop fishery management plan. The data were filtered to represent vessel speeds between 2-5 kts and binned into three-minute squares. Grids indicating less than 20 hours annual fishing activity, or within state waters, were removed. This evaluation, for calendar years 2015, 2016, 2018, 2019, and 2020 (through mid-October) suggested little overlap between scallop fishing and the general area of interest for the project. Specifically, during 2016, 2018, 2019, and 2020 the fishery worked offshore of the potential project area, and there was no overlap. During 2015, a year when scallop fishing activity was less spatially concentrated across the entire resource, there appears to be some activity within the area of interest. Overall, this suggests some overlaps with the scallop resource and fishery, but not during all years.

Finally, we noted that the siting report identifies many fishery management areas that overlap the area of interest for the project. As noted in the report, these have a wide variety of measures associated with them. For those that pertain to our suite of fishery management plans, please feel free to reach out with any questions about the possible relevance of the areas to your project.

We look forward to continued engagement on fisheries issues as your project moves forward. Please contact Michelle Bachman on my staff (mbachman@nefmc.org; 978-465-0492 x 120) if you need further information.

Sincerely,

Thomas A. Nies

Thomas A. Nies
Executive Director

Enclosure: (1)

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 01930-2276

December 3, 2020

Lt. Colonel David Park
District Engineer
Philadelphia District
U.S. Army Corps of Engineers
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

RE: PSEG Nuclear LLC; Salem County, New Jersey Port Facility ("Hope Creek")
CENAP-OP-R-2019-01084-39

Dear Lt. Colonel Park:

With respect to the PSEG Nuclear LLC (PSEG) permit application noted above and for the reasons described below, at this time we must recommend that the Department of the Army (DA) not issue the permit for the Hope Creek Port Site project as currently proposed. We have reviewed the following information provided to us regarding PSEG's DA permit to construct a new port facility on the mainstem Delaware River adjacent to their Salem Nuclear Power Plant in Lower Alloways Creek Township, Salem County, New Jersey, to cater to the U.S. East Coast offshore wind industry:

- Public Notice (PN) No. CENAP-OP-R-2019-01084-39, dated October 5, 2020;
- Various applicant materials/package(s) submitted to the Philadelphia District, Corps of Engineers including, but not limited to, *Application for Department of the Army Permit* dated June 16, 2020 and *General Conformity Analysis* dated June 17, 2020;
- The New Jersey Wind Port – *Technical Information for Offshore Wind Developers and Component Manufacturer*s found on the NJ Wind Port website (nj.gov/windport/about/index);
- Various information pages and press releases on the New Jersey Economic Development Authority website (njeda.com).

Based on the information provided, as well as publicly available information, we have significant concerns about the proposed project, its impact to aquatic resources, the lack of comprehensive impact analyses, and a full and complete analysis of alternatives to avoid or minimize the adverse effects, and compensatory mitigation for unavoidable impacts. We are also concerned that the District and PSEG have not yet provided a complete essential fish habitat (EFH) assessment or Biological Assessment (BA) for review. We recommend that the DA permit for this project not be issued in accordance with Part IV, Paragraph 3(b) of the Clean Water Act

Section 404 Memorandum of Agreement (MOA) between our agencies because of the substantial and unacceptable impacts to aquatic resources of national importance that will result from this project, as well as the incomplete consultations, and the inadequacies of the Districts' analysis of effects as discussed in the attached document. These resources include: American shad (*Alosa sapidissima*); alewife (*Alosa pseudoharengus*); blueback herring (*Alosa aestivalis*); striped bass (*Morone saxatilis*); Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*); and shortnose sturgeon (*Acipenser brevirostrum*); as well as the potential permanent impacts to productive habitats for a number of commercially and recreationally important species.

We are concerned about the lack of comprehensive evaluation of direct, indirect, individual, cumulative, and synergistic effects in the project information provided and the lack of habitat or fisheries data. The applicant's Estuary Enhancement Program/Biological Monitoring Program has collected vast amounts of fisheries information within the Delaware Estuary for the past 25 years and should be used within the analysis. This is especially concerning since, during early coordination phone calls on March 9 and April 28, 2020, and through emails dated June 25 and September 11, 2020, our Habitat Conservation and Protected Resources Divisions provided the District and applicant with technical information regarding the consultations that would be required, various on-site surveys/inspections that should occur to evaluate the habitat and the site-specific effects of the project, aquatic resources under our purview, and site-specific resources and habitats. These early coordination efforts, including guidance for on-site surveys/inspections and habitat characterizations were also discussed in our October 14, 2020, letter requesting a 30-day extension to the public comment period. Furthermore, we are concerned with inconsistencies in the PN and materials provided by the applicant, as well as publicly available information that indicates the proposed project is much larger, and impacts more wide-ranging, than what is described in the PN.

Based upon the substantial impacts resulting from the construction and operation of the proposed project, and pursuant to the National Environmental Policy Act (NEPA), we also recommend the District prepare a comprehensive Environmental Assessment (EA) for the project that, when complete, is provided to the public, federal and state agencies, and regional experts for review and comment. If the EA determines that the environmental impacts of the proposed action will be significant, an Environmental Impact Statement should be prepared.

Magnuson Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) requires federal agencies to consult with one another on projects such as this that may adversely affect EFH. In turn, we must provide recommendations to conserve EFH. These recommendations may include measures to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH resulting from actions or proposed actions authorized, funded, or undertaken by that agency. 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 this consultation procedure. To date, EFH consultation has not been initiated, as we have not been provided with a complete EFH assessment, per 50 CFR 600.920.

In the attached document, we discuss the inadequacies of the information provided for the

project, how the adverse impacts to EFH have not been adequately evaluated, and the information needed for the EFH assessment to be considered complete and sufficient to initiate consultation

Fish and Wildlife Coordination Act

The Fish and Wildlife Coordination Act (FWCA), as amended in 1964, requires that all federal agencies consult with us when proposed actions might result in modifications to a natural stream or body of water. It also requires that they consider effects that these projects would have on fish and wildlife and must also provide for improvement of these resources. From the information provided, the project will have substantial and unacceptable impacts to aquatic resources that we seek to conserve and enhance under the FWCA, particularly anadromous fish species such as alewife, blueback herring, American shad, and striped bass. In addition, the loss and degradation of important habitat for these species, the impacts to early life stages from the operation of the facility, and the lack of compensatory mitigation to offset the adverse effect do not support the FWCA's requirement to provide for the improvement of fish and wildlife resources (16 U.S.C. 662(a)).

Endangered Species Act

The Endangered Species Act (ESA) of 1973, as amended, requires federal agencies (in this case, the District) to ensure, in consultation with us, that any action authorized, funded, or carried out by them is not likely to jeopardize species listed under the ESA or destroy or adversely modify critical habitat. The federal agency shall review its actions at the earliest possible time to determine whether any action may affect listed species or critical habitat. If it is determined that the proposed action may affect listed species, pursuant to section 7 of the ESA, then you would need to provide us with a written request to initiate consultation that includes a biological assessment, or other documents, with all the information described and required by the ESA implementing regulations [50 CFR 402.14(c)].

As stated in our October 14, 2020, request for an extension of the public comment period, the following protected species and critical habitat may be affected by the proposed project: Shortnose sturgeon; Atlantic sturgeon; Kemp's Ridley turtle (*Lepidochelys kempii*); Leatherback turtle (*Dermochelys coriacea*); Loggerhead turtle (*Caretta caretta*); Green turtle (*Chelonia mydas*); North Atlantic right whale (*Eubalaena glacialis*); and Fin whale (*Balaenoptera physalus*). In addition, critical habitat of Atlantic sturgeon has also been designated within the Delaware River.

Based on the information previously provided to us as well as information in the Public Notice, proposed project activities may affect all listed species present within the action area. We have not yet received a Biological Assessment but you have informed us that you, together with the applicant, are currently analyzing proposed project activities for their effects on listed species and are developing a biological assessment for the project. It is important to note that in the regulations implementing section 7(a)(2) of the ESA (interagency consultation), "effects of the

action" are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur.

Conclusion

The construction of the proposed PSEG Nuclear LLC Wind (Hope Creek Port) Facility should not be authorized unless, through the preparation of a comprehensive EA or other publicly reviewed comprehensive NEPA document, as well as a comprehensive EFH Assessment and Biological Assessment, it can be demonstrated that:

- there is a justifiable project purpose and need;
- no practicable alternate sites are available;
- the impacts to aquatic resources have been avoided and minimized to the maximum extent practicable; and
- suitable compensatory mitigation can be provided that offsets fully all of the project's direct and indirect effects on aquatic resources and their habitats, including the effects on anadromous fishes and benthic and pelagic habitats.

As always, we hope that this issue can be resolved at the staff level and we welcome the opportunity to meet with you to discuss our comments and concerns. If you would like to discuss this matter further, please contact Keith Hanson at (410) 573-4559 or keith.hanson@noaa.gov with our Habitat Conservation Division and/or Peter Johnsen at (978) 281-9416 or peter.b.johnsen@noaa.gov with our Protected Resources Division.

Sincerely,

Michael Pentony
Regional Administrator

cc: USACE - L. Slavitter, M. Hayduk, T. Schaible, A. DiLorenzo,
NMFS GARFO - P. Johnsen; M. Murray-Brown
USFWS - S. Mars, E. Schrading, C. Guy, J. Thompson
EPA Region III - M. Finocchiaro, B. Montgomerie, L. Knutson
DNREC - M. Stangl, M. Greco
NJDEP- K. Davis, C. Keller, S. Biggins, B. Neilan
PFBC - D. Pierce, T. Grabowski, C. Good
MAFMC – C. Moore
NEFMC -T. Nies
ASFMC - L. Havel

ATTACHMENT – NOAA FISHERIES Comments
PSEG Nuclear LLC (Hope Creek); CENAP-OP-R-2019-01084-39

Introduction

We have significant concerns about the proposed project, its impact to aquatic resources, the adequacy of the project purpose and need documentation, and the lack of a full and complete analysis of project impacts, alternatives to avoid or minimize the adverse effects, and compensatory mitigation for unavoidable impacts. In addition, we have not been provided a complete EFH assessment or Biological Assessment for review. As a result, we must recommend that Department of the Army permit for this project not be issued at this time in accordance with Part IV, Paragraph 3(b) of the Clean Water Act Section 404 Memorandum of Agreement (MOA) between our agencies due to the substantial and unacceptable impacts that this project will have on aquatic resources of national importance including American shad (*Alosa sapidissima*), alewife (*Alosa pseudoharengus*), blueback herring (*Alosa aestivalis*) and striped bass (*Morone saxatilis*), Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*), and shortnose sturgeon (*Acipenser brevirostrum*). We also recommend the District prepare a comprehensive Environmental Assessment (EA) for the project that, when complete, is provided to the public, federal and state agencies, and regional experts for review and comment. Furthermore, if the EA determines that the environmental impacts of the proposed action will be significant, an Environmental Impact Statement should then be prepared.

Project Description

According to the Public Notice (PN), PSEG is seeking authorization for new dredging of approximately 86 acres of the Delaware River to a depth of -35.5 ft. mean lower low water with ± 1.5 ft. overdraft removing approximately 1,960,000 cubic yards (cy) of material described as primarily silt covering sand. Approximately 1.98-acres adjacent to the shoreline would be dredged using an on-shore dragline (mechanical dredging) while the remaining 84 acres would be dredged using a hydraulic cutter head dredge. Dredged material is proposed to be transported via scows (mechanical dredging) or pumped via pipeline (hydraulic dredging) into the confined disposal facility (CDF) adjacent to the project site. However, there appears to be some inconsistencies with the District's PN and application materials provided by the applicant regarding dredging. For example, in documents such as the *General Conformity Analysis*, the applicant describes 1,960,000 cubic yards of hydraulic dredging for the approach channel and turning basin, with an additional 170,000 cy of mechanical dredging for the berthing slope. This same document also indicates hydraulic dredging would occur for approximately 112 days evenly divided over two years (56 days per year); while there appears to be no discussion of the duration of mechanical dredging. The PN also describes proposed maintenance dredging for a period of 10 years after the initial dredging cycle using the same methods for material removal and disposal. However, the estimated acreages, volumes, frequency, and duration of maintenance dredging activities remains unknown.

PSEG also proposes to install 1,080 linear feet (lf) hot rolled interlocking sheet bulkhead immediately adjacent to an existing timber bulkhead using a vibratory hammer. Approximately 1.86 acres of 4-feet thick rock riprap would be installed in the waterway along the bulkhead at a

3:1 slope. Additionally, PSEG proposes the construction of 1,080 lf cast-in-place "low deck" concrete docking structure extending approximately 57 feet waterward of the mean high water (MHW) line (approximately 1.41 acres over water) supported with 1,056 thirty-inch square pre-cast concrete piles installed via impact hammer below the MHW line. These piles will permanently impact approximately 0.15 acre of aquatic habitat. Based on the plans, the bottom of the concrete deck structure is located at the mean higher high water (MHHW) line.

The application materials also describe approximately 2.15 acres of wetlands and intertidal mudflat that are currently east of the existing timber bulkhead that will be excavated to create an open water area beneath the overhanging wharf. It is unclear from their description if the term "east" means landward or waterward of the proposed bulkhead since east of the existing bulkhead would be landward of this bulkhead and more likely would be filled for the port development, not excavated. Due to the inconsistencies between PN and the application materials, it is difficult to determine what habitats exist along the shoreline - mudflat, wetlands, and unvegetated intertidal shallows - and how much of each will be impacted. In total, based on information from the application materials and PN, which are unclear at times, it appears between 2.15 acres and 3.65 acres of areas described by the applicant as intertidal shallows and unvegetated mudflats will be covered by overhanging platform below the mean higher high water line. Furthermore, an approximately 2.57-acre area of river bottom will also be covered in gravel for a proposed gravel mat. This area will be overdredged and then filled with crushed gravel to remain level with the adjacent dredged river bottom.

In addition to the low deck concrete docking structure, a 250 ft. by 450 ft. (2.58 acre) concrete pad waterward of the delivery section of the dock, two 19 ft. by 39 ft. mooring dolphins and one 29 ft. by 39 ft. breasting dolphin supported with 29 piles of unknown size or composition, and three steel walkways (33 ft., 50 ft., and 55 ft.) between the dolphins for pedestrian access are also proposed. Project documents and the PN also describe the construction of an approximately 296 lf in-water wall perpendicular to the shoreline at the southernmost portion of the site to protect existing subsea cables as part of the proposed project, though little else is known about the wall, its impacts, required maintenance, or other elements. Furthermore, the PN describes that approximately 30 acres of on-shore work is proposed to take place within an existing active CDF, which appears to be dominated by wetlands.

Although the District does not state in the PN whether or not compensatory mitigation will be required, the PN states that the applicant has avoided/minimized impacts to the aquatic environment by incorporating engineering/construction procedures into the process that will substantially reduce impacts to aquatic resources although those measures are not described in the PN. Additionally, the applicant states they have redesigned the channel leading to the proposed dock to minimize dredging required in the waterway and that no regulated wetlands will be filled as a result of the project. However, it has not been confirmed that the wetlands within the CDF are not regulated by the District and there is some confusion over the existence of wetlands east of the timber bulkhead.

Other Project Elements/Phases

We are concerned that the currently proposed project as described above is only a portion of a

larger project planned for this site. Publicly available information on two New Jersey State websites (https://nj.gov/windport/about/index.shtml; https://www.njeda.com/Press-Room/News-Articles/Press-Releases/N-Offshore-Wind-Port) describe additional phases of this proposed port project slated for construction in 2024 – 2026. No mention of these additional phases is included in the PN or appear to be included in the application materials provided to us. Additionally, this public information describes additional impacts of up to 150-acres for expanded marshalling, berthing, and manufacturing at the Hope Creek site. Furthermore, we are aware from the past proposal by PSEG to add an additional nuclear reactor to the site of the potential need for a future roadway to facilitate transportation and access to/from the site. There is no mention of a roadway in the application materials provided, but if the additional development described in the NJ State websites is planned, we would expect additional landside access to the site would be needed as well. As a result, it appears that additional activities in the aquatic environment are planned in these additional phases though no specifics were provided on the State's website or the Corps' PN.

We also understand, based on information from the U.S. Fish and Wildlife Service, New Jersey Field Office, that dredged material from the project site may not be disposed of in CDFs, and may be placed in the aquatic environment (i.e., beneficial use), which would further change the scope of the proposed action and resulting analysis of potential impacts. This information is critical to understanding the proposed single and complete project and the total direct, indirect, individual, cumulative, and synergistic effects of the project at the site and in the region. Therefore, we recommend the District and applicant provide a complete description of the proposed project, specifically discussing all phases of the proposed project. This information should be provided to the public as well as all the relevant agencies. Any comprehensive project description and PN should include all impacts, including those occurring in Waters of the U.S.

For the purpose of the Endangered Species Act (ESA) consultation, you will need to evaluate consequences of other activities that are caused by activities that would not occur but for the proposed action and that are reasonably certain to occur. Therefore, it is necessary to evaluate effects from activities related to the operation of the facility once construction is completed. At this time, we have received incomplete information about the additional activities.

Early Coordination/Permitting Process/Project History

As discussed above and in our Oct 14, 2020, extension request letter, we have had various phone calls and email exchanges with the applicant, their consultant, and the District Regulatory Branch staff regarding the proposed project, information requirements, analyses, and other items necessary to conduct the required consultations with us. During a phone call with the applicant on March 9, 2020, staff from the Habitat Conservation Division detailed site-specific surveys/inspections that should be undertaken to characterize and delineate aquatic habitats, identify aquatic resources present in the project area and adjacent areas, and the analyses that should occur to evaluate the potential adverse effects of the action on EFH, federally managed species, their prey, and other resources under our purview. We recommend those elements be included in a complete EFH assessment. These items, along with additional information regarding ESA consultations, were also discussed by our staff during a larger, interagency call on April 28, 2020.

Our Habitat Division has also relayed information regarding habitat characterization and requirements of EFH assessments through emails dated June 25, 2020, and September 11, 2020. An EFH Worksheet was prepared and forwarded to us by the District on September 11, 2020, via email, however, our EFH Worksheet was designed for use on small projects, typically requiring an Abbreviated Consultation pursuant to 50 CFR 600.920, not large, complex projects such as this where an Expanded Consultation is warranted. We responded to this email on the same day (Sept. 11, 2020) informing the District that the EFH Worksheet was inappropriate for this project and a comprehensive EFH assessment document should be prepared. Our September 11, 2020, email reiterated a number of items in our June 25, 2020, email, specifically that site-specific surveys/inspections, including benthic habitat mapping would be necessary for the EFH assessment. We further reiterated that for the purposes of the EFH consultation, all benthic habitat types throughout the project area should be accurately mapped through the use of acoustic data (e.g., multibeam bathymetry and backscatter; side scan sonar), sediment grain size analysis (grabs, not vibracores), and visual imagery. We also discussed the importance of benthic fauna survey data and stated that this information could be obtained with the same grab samples that are used for sediment grain size analysis.

Although the public notice has now been issued, we have not yet seen the results of any site-specific surveys/inspections or received any of the information we requested during our early coordination discussions with the District and the applicant. The information provided to us so far includes only limited information on the resources present at the site and does not include detailed analyses of the individual, cumulative and synergistic short-, medium- and long-term temporary and permanent/chronic impacts of the proposed project on aquatic resources.

Authorities

As the nation's federal trustee for the conservation and management of marine, estuarine, and anadromous fishery resources, we offer the following comments on resources of concern to us in the study area pursuant to the authorities of the Magnuson Stevens Fishery Conservation and Management Act (MSA), Fish and Wildlife Coordination Act (FWCA), and ESA

<u>Magnuson Stevens Fishery Conservation and Management Act</u>

The MSA requires federal agencies to consult with one another on projects such as this that may adversely affect EFH. In turn, we must provide recommendations to conserve EFH. These recommendations may include measures to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH resulting from actions or proposed actions authorized, funded, or undertaken by that agency. This process is guided by the requirements of our EFH regulation at 50 CFR 600.905, which mandates the preparation of EFH assessments (50 CFR 600.920) and generally outlines each agency's obligations in this consultation procedure.

EFH is defined as, "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." The term "waters" include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and aquatic areas historically used by fish, where appropriate while "substrate" includes sediment, hard bottom, structures underlying

waters and associated biological communities.

The EFH final rule published in the Federal Register on January 17, 2002, defines an adverse effect as: "any impact which reduces the quality and/or quantity of EFH." The rule further states that:

> An adverse effect may include direct or indirect physical, chemical or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat and other ecosystem components, if such modifications reduce the quality and/or quantity of EFH. Adverse effects to EFH may result from action occurring within EFH or outside EFH and may include site-specific or habitat-wide impacts, including individual cumulative, or synergistic consequences of actions.

To date, we have not received a complete and comprehensive EFH assessment. As discussed above and explained to District Regulatory staff, it is not appropriate to use our EFH Worksheet for large, complex projects such as this one that require an expanded consultation to fully evaluate the adverse effects on EFH. The PN or other documents also do not describe or discuss proactive avoidance and minimization measures typical of projects of this type in this section of the Delaware River, such as prohibitions on in-water work (i.e., March 1 to June 30 of any given year to protect fish migrations and spawning activities) or using various noise-reducing measures to install piles. As proposed, the project would result in substantial, significant, and unacceptable impacts to aquatic resources under our purview, including aquatic resources of national importance. Additionally, and in absence of a complete EFH assessment, the information provided fails to fully evaluate the individual, cumulative, and synergistic direct and indirect effects of the project on EFH, and we must consider the information to be incomplete and insufficient to initiate the required EFH consultation.

Fish and Wildlife Coordination Act

The FWCA, as amended in 1964, requires that all federal agencies consult with us when proposed actions might result in modifications to a natural stream or body of water. It also requires that they consider effects that these projects would have on fish and wildlife and must also provide for improvement of these resources. Under this authority, we work to protect, conserve and enhance species and habitats for a wide range of aquatic resources such as shellfish, diadromous species, and other commercially and recreationally important species that are not managed by the federal fishery management councils and do not have designated EFH.

Based upon the information provided, the project will have substantial and unacceptable impacts to aquatic resources that we seek to conserve and enhance under the FWCA, particularly anadromous species such as alewife, blueback herring, American shad, and striped bass. In addition, the loss and degradation of important habitat for these species, the impacts to early life stages from the operation of the facility, and the lack of any compensatory mitigation to offset the adverse effect do not support the FWCA's requirement to provide for the improvement of fish and wildlife resources (16 U.S.C. 662(a)).

Endangered Species Act

The ESA requires federal agencies (in this case, the District) to ensure, in consultation with us, that any action authorized, funded, or carried out by them is not likely to jeopardize species listed under the ESA or destroy or adversely modify critical habitat. As such, the federal agency shall review its actions at the earliest possible time to determine whether any action may affect listed species or critical habitat. If such a determination is made, a biological assessment shall be prepared to evaluate the potential effects of the action on listed species and designated critical habitat to determine whether any such species or habitat are likely to be adversely affected by the action. If such a determination is made, the federal agency shall submit to us a written request to initiate formal consultation that includes all the information required by the regulations for implementing the ESA [50 CFR 402.14(c)]. The federal agency need not initiate a formal consultation with us if we concur with the determination by the federal agency that the proposed action is not likely to adversely affect the listed species or designated critical habitat.

The federal agency requesting formal consultation shall provide us with the best scientific and commercial data available or which can be obtained during the consultation for an adequate review of the effects that an action may have upon listed species or critical habitat. This information may include the results of studies or surveys conducted by the federal agency. The federal agency shall provide any applicant with the opportunity to submit information for consideration during the consultation.

The proposed construction will affect foraging habitat for sturgeon in an area known for sturgeon aggregation and vessel traffic during operation of the facility may result in vessel strikes of listed species. To date we have not received a request and necessary information to initiate consultation. As mentioned above, the PN or other documents do not describe or discuss proactive avoidance and minimization measures typical of projects of this type in this section of the Delaware River. Additionally, documents reviewed by us and discussions during meetings have not provided us with information about serviced lease sites, expected port activity, and vessel traffic to evaluate effects to listed species from operations of the facility.

National Environmental Policy Act (NEPA)

Project Purpose and Need

The PSEG's stated project purpose is to "create a deep water marine terminal that can accommodate vessels that would marshal wind turbine components and then allow these components to be shipped to the offshore wind farms." In the application materials/package, PSEG states that the construction of the marine terminal is in response to demonstrated need to service the offshore wind industry. Additionally, the applicant makes a number of general references to "several detailed assessments… highlighted the need for new, fit-for-purpose port facilities to meet the offshore wind industry's needs," but does not provide specific citations for such documents or include the documents themselves in the application package. Nevertheless, the statements in the application appear to base the purpose and need on a small geographic area and do not consider the broader context of numerous port facilities and existing and potential offshore wind port capacity (via retrofits, repurposing, etc.) in the Delaware River including the 11 other port facilities on the river (Philadelphia, Camden, Paulsboro, Marcus Hook, Gloucester

Marine Terminals, Penn Terminals and others) or the Northeast U.S. more broadly (e.g., Port of Virginia-Norfolk area, Maryland Port Authority-Baltimore, New York-New Jersey Harbor). Moreover, it is our understanding that the Port of Paulsboro (Paulsboro Marine Terminal), has been developed (or will be expanded) specifically to service the offshore wind industry, though this was not described in any of PSEG's application materials. Generally, many of the statements regarding project need in the application materials are not supported by references or documentation and are overly broad. Additionally, the purpose and need statements do not address the expected intermittent/infrequent nature of use of this wind marshalling port during wind farm construction and, more prominently, once wind farms are established and operational, as the lifespan for wind turbines is about 20 years (various sources, including the U.S. Department of Energy's National Renewable Energy Laboratory, Energy Analysis page [accessed November 2020]). Due to the location and lack of supporting landside infrastructure it is unlikely that the proposed port facility can be used for more traditional import/export operations, so the long-term practicability of the proposed port is questionable and has not been discussed or evaluated.

Alternatives

PSEG's purpose and need statement appears narrow and unnecessarily limits the evaluation of alternatives to the Marine Terminal at the Hope Creek Site. This precludes the consideration of other practicable alternate locations that may be less environmentally damaging than this new port development. There are numerous other port facilities on the Delaware River and within the Mid-Atlantic region that are potential practical alternatives to PSEG's proposal, but they do not appear to have been considered. A more robust alternatives analysis is needed before any conclusion regarding the lack of practical alternatives to the proposal should be made. This analysis should consider potential alternate locations within the Delaware River and larger Mid-Atlantic region and include information on the criteria developed to select and to evaluate alternatives, alternate sites considered and the rationale for the rejection of alternate sites. Rehabilitation, retrofits, repurposing, or upgrades to existing facilities, as well as increases in efficiencies (i.e., modernization) at existing facilities should also be considered and fully analyzed. This more thorough analysis of alternatives which could avoid or minimize adverse effects to aquatic resources is consistent with the requirements of NEPA, the Clean Water Act (CWA) Section 404 (b)(1) Guidelines and aquatic resource conservation mandates under the FWCA and MSA. As we have discussed above, should this project move forward in the DA permitting process, we recommend that the District require the preparation of a complete and comprehensive EA to allow for a full and complete evaluation of the effects of the project, as well as alternatives including the "no action" alternative.

Aquatic Resources

The mainstem Delaware River has been designated EFH for a variety of fish managed by the New England Fishery Management Council and Mid-Atlantic Fishery Management Council because these areas provide feeding, resting, nursery, and staging habitat for a variety of commercially, recreationally, and ecologically important species. Various life stages of species for which EFH has been designated in the area of the proposed project include, but are not limited to bluefish (*Pomatomus saltatrix*), black sea bass (*Centropristis striata*), summer flounder (*Paralichthys dentatus*), winter skate (*Leucoraja ocellata*), and windowpane flounder

(*Scophthalmus aquosus*). The Delaware River, including the areas in and around the proposed project site, also serves as important migratory, nursery, resting, foraging, and potentially spawning habitat for anadromous fish such as alewife, blueback herring, American shad, and striped bass. Other aquatic resources and their forage which are of concern to us include, but are not limited to, blue crab (*Callinectes sapidus*), Atlantic menhaden (*Brevoortia tyrannus*), American eel (*Anguilla rostrata*), bay anchovy (*Anchoa mitchilli*), hickory shad (*Alosa mediocris*), Atlantic croaker (*Micropogonias undulatus*), weakfish (*Cynoscion regalis*), and other assorted baitfishes and shrimps, which can be found in the Delaware River and vicinity of the project area. Recent studies have also confirmed that the federally listed Atlantic sturgeon and shortnose sturgeon use the lower tidal river extensively.

River Herring and American Shad

The Delaware River is one of the most important river systems for alewife, blueback herring, and American shad on the East Coast, due in part to its landscape position, large associated estuary and bay with marshes, creeks and tidal flats, lack of significant obstructions/dams, and history of effective multi-state fisheries management. These *Alosa* species have complex lifecycles where individuals spend most of their lives at sea then migrate great distances to return to freshwater rivers to spawn. American shad (stocks north of Cape Hatteras, N.C.), alewife, and blueback herring are believed to be repeat spawners, generally returning to their natal rivers to spawn (Collette and Klein-MacPhee 2002).

American shad, blueback herring, and alewife formerly supported the largest and most important commercial and recreational fisheries throughout their range. However, commercial landings for these species have declined dramatically from historic highs (ASMFC 2018; 2020) and recreational fishing is currently closed for alewife and blueback herring and severely limited for American shad in the Delaware River and Estuary. The most recent benchmark stock assessment and peer review completed in 2020 indicate American shad remains depleted coastwide. The "depleted" determination is used instead of "overfished" to indicate factors besides fishing have contributed to the species decline, such as channelization of rivers, water withdrawals (and resulting impingement and entrainment of larval American shad), habitat degradation, and pollution. Coastwide adult mortality is unknown, but was determined to be unsustainable for some system-specific stocks, indicating the continued need for management action to reduce adult mortality. Specifically, adult mortality was determined to be unsustainable in the Delaware River system (ASMFC 2020).

The 2020 benchmark stock assessment continued work from the 2007 coastwide stock assessment for American shad, which also identified stocks as highly depressed from historical levels. The 2007 assessment concluded that new protection and restoration actions needed to be identified and applied, which led to the development of Amendment 3 to the Interstate Fishery Management Plan for Shad and River Herring (American Shad Management). Amendment 3 identified significant threats to American shad, including spawning and nursery habitat degradation or blocked access to habitat, resulting from dam construction, increased erosion and sedimentation, and losses of wetland buffers (ASMFC 2007). Protecting, restoring and enhancing American shad habitat, including spawning, nursery, rearing, production, and migration areas, are necessary for preventing further declines in American shad abundance, and

restoring healthy, self-sustaining, robust, and productive American shad stocks to levels that will support the desired ecological, social, and economic functions and values of a restored Atlantic Coast American shad population (ASMFC 2010). The 2020 benchmark stock assessment also recognized predation by non-native predators like flathead catfish and northern snakehead as an important stressor that, when combined with anthropogenic habitat alterations and exploitation by fisheries, likely has a significant cumulative and synergistic adverse impact on the species (ASMFC 2020). A number of long-term surveys, some of which are discussed below, have documented the use of the proposed project site by American shad, as well as alewife and blueback herring.

In the Mid-Atlantic, landings of alewife and blueback herring, collectively known as river herring, have declined dramatically since the mid-1960s and have remained very low in recent years (ASMFC 2017). The 2012 river herring benchmark stock assessment found that of the 52 stocks of alewife and blueback herring assessed, 23 were depleted relative to historic levels, one was increasing, and the status of 28 stocks could not be determined because the time-series of available data was too short (ASMFC 2012a). The 2017 stock assessment update indicates that river herring remain depleted at near historic lows on a coast wide basis. The "depleted" determination was used in 2012 and 2017 instead of "overfished" to indicate factors besides fishing have contributed to the decline, including habitat loss, habitat degradation and modification (including decreased water quality), and climate change (ASMFC 2017).

Because landing statistics and the number of fish observed on annual spawning runs indicate a drastic decline in alewife and blueback herring populations throughout much of their range since the mid-1960s, river herring have been designated as Species of Concern by NOAA. Species of Concern are those about which we have concerns regarding their status and threats, but for which insufficient information is available to indicate a need to list the species under the ESA. We strive to draw proactive attention and conservation action to these species.

These Alosine fishes are important forage for several federally managed species and provide trophic linkages between inshore and offshore systems. Buckel and Conover (1997) in Fahay et al. (1999) reports that diet items of juvenile bluefish include these species. Additionally, juvenile *Alosa* species have all been identified as prey species for summer flounder, winter skate, and windowpane flounder, in Steimle et al. (2000). The EFH final rule states that prey species are an important component of EFH and that loss of prey may be an adverse effect on EFH and managed species. As a result, actions that reduce the availability of prey species, either through direct harm or capture, or through adverse impacts to the prey species' habitat may also be considered adverse effects on EFH.

Striped Bass

The project area is also regionally and nationally significant for striped bass because of its importance as migration, spawning, nursery, foraging, and resting habitat. Atlantic striped bass have formed the basis of one of the most important and valuable commercial and recreational fisheries on the Atlantic coast for centuries; the fishery is also strongly tied to the cultural heritage of the eastern U.S (ASMFC 1981). The spawning population of the Delaware River system contributes significantly to the coastal migratory stock (ASMFC 2003). However, overfishing and poor environmental conditions lead to the collapse of the fishery in the 1970s

and 80s and development of the Striped Bass Fishery Management Plan (FMP) in 1981 (ASMFC 2003). After years of increasing numbers following implementation of the FMP, commercial and recreational landings of striped bass as well as female spawning stock biomass and recruitment, have declined since their peak in the early- to mid-2000s (ASMFC 2019). Most recently, the 2018 Atlantic Striped Bass Benchmark Stock Assessment found the resource overfished and that overfishing is occurring (ASMFC 2019). The 2018 benchmark assessment, which used updated recreational catch estimates, found the stock to have been overfished since 2013 and experiencing overfishing, and as a result, initiated efforts to end overfishing including catch and size limits. Additionally, female spawning stock biomass (SSB) in 2017 was estimated to be nearly 50 million pounds below the SSB threshold of 202 million pounds and nearly 100 million pounds below the SSB target (ASMFC 2019). Accelerated declines in striped bass populations may result from the cumulative and synergistic effects of overfishing and non-fishing related activities that impact reproduction, recruitment and survival.

Mature female striped bass (age six and older) produce large quantities of eggs, which are fertilized by mature males (age two and older) as they are released into riverine spawning areas, including the Delaware River. While developing, the fertilized eggs drift with the downstream currents and eventually hatch into larvae (ASMFC 1981). Late larvae and early juveniles favor shallower water with slower currents, and likely reside in nearshore areas for increased feeding opportunities and reduced predation risk. Boynton et al. (1981) reported that approximately five times as many juvenile striped bass were collected in the nearshore habitat of the Potomac River Estuary than in the offshore habitat, which also suggests that the former habitat is preferred, as appears to be the case in other estuaries (Chadwick 1964; Setzler et al. 1980). Juveniles overwinter in the lower Delaware River and upper Delaware Bay (Weisberg et al. 1996). Juvenile striped bass remain in coastal nursery estuarine and riverine habitat for two to four years and then join the coastal migratory population in the Atlantic Ocean. In the ocean, fish tend to move north during the summer and south during the winter. Important wintering grounds for the mixed stocks are located from offshore New Jersey to North Carolina. With warming water temperatures in the spring, resident and coastal contingents move upriver to the freshwater reaches of coastal rivers, including the Delaware and its tributaries, to complete their life cycle.

American Eel

The area of the proposed project is also migration, spawning, nursery, and foraging habitat for the American eel. Catadromous American eels spawn in the Sargasso Sea and transit the Delaware River up to the freshwater reaches of the main stem and its tributaries as part of their migration. They inhabit these upstream freshwater areas until they return to the sea as adults. According to the 2012 benchmark stock assessment, the American eel population is depleted in U.S. waters. The stock is at or near historically low levels due to a combination of historical overfishing, habitat loss, food web alterations, predation, turbine mortality, environmental changes, exposure to toxins and contaminants, and disease (ASMFC 2012b). Actions being considered as part of the proposed project may impede the movements of these species between important freshwater habitats and the Atlantic Ocean in a number of ways including altering hydrologic conditions such as velocity and flow patterns, as well as changing water quality.

Threatened and Endangered Species

As stated in our October 14, 2020, letter, Atlantic sturgeon and shortnose sturgeon are known to be present year-round within the reach of the Delaware River where the construction and operation of a new terminal will occur. The river is also designated as critical habitat for the New York Bight distinct population segment of the Atlantic sturgeon. The reach provides important habitat and environmental conditions for juvenile Atlantic sturgeon foraging and physiological development, especially as it relates to juveniles' oceanward migration. Future vessels visiting the terminal will cross waters where federally listed sea turtles and whales including the Kemp's Ridley turtle (*Lepidochelys kempii*), Leatherback turtle (*Dermochelys coriacea*), Loggerhead turtle (*Caretta caretta*), Green turtle (*Chelonia mydas*), North Atlantic Right whale (*Eubalaena glacialis*), Fin whale (*Balaenoptera physalus*) as well as sturgeon may be present.

Existing Fisheries Studies

The New Jersey Department of Environmental Protection (NJDEP) Division of Fish and Wildlife conducts several surveys each year to study the status of species populations within the Delaware River and Estuary. The Delaware River Seine Survey, which has been conducted in portions of the river near the project area since 1980. It is currently the Bureau of Marine Fisheries' longest running fishery-independent survey and the data provides an annual abundance index for striped bass. Results have been corroborated by other independent surveys, such as the Delaware Division of Fish & Wildlife's (DFW) striped bass spawning stock survey and other Delaware state surveys. Additionally, NJDEP conducts its own striped bass stock survey and juvenile finfish 16-foot otter trawl survey, both of which have been conducted since 1991. These NJDEP long-term surveys document the use of this section of the river by a wide variety of species including striped bass, blueback herring, alewife, American shad, American eel, Atlantic herring, Atlantic menhaden, bay anchovy, gizzard shad (*Dorosoma cepedianum*), hogchoker (*Trinectes maculatus*), yellow perch (*Perca flavescens*), white perch (*Morone americana*), Atlantic silverside (*Menidia menidia*), and many others (NJDEP 2020). These data provide support that the area of the proposed project is important habitat for a diverse assemblage of finfish and shellfish.

Additionally, Weisberg et al. (1996) captured more than 25 different species near the area of the proposed project in the Delaware River including yellow perch, hickory shad, hogchoker, banded killifish (*Fundulus diaphanus*) and mummichog (*Fundulus heteroclitus*). Impingement studies done at the Eddystone Generating Station, located on the Pennsylvania side of the Delaware River near the project site, identified 53 species of fish in this section of the river including alewife, American eel, American shad, Atlantic menhaden, bay anchovy, blueback herring, gizzard shad, hogchoker, spot (*Leiostomus xanthurus*), striped bass and white perch (Waterfield et al. 2008).

Delaware Division of Fish and Wildlife has also conducted a 16-foot trawl survey in the area of the proposed project, which shows that a diverse fish community exists in the area of the proposed project. This survey, which has been consistently conducted since 1980, is primarily

used to monitor juvenile fish abundance and is conducted monthly from April through October at 39 fixed stations in the Delaware Estuary. Various trawl survey stations near the site of the proposed project provide insight into the species using the area, specifically juveniles; the time-series data from these trawl surveys have contributed to our understanding that the Delaware Bay, Estuary, and River is an important, productive, and highly valued area for commercially, recreationally, and ecologically important species.

DFW trawl survey data near the site of the proposed project indicate that a strong juvenile fish community consisting of alewife, American eel, American shad, Atlantic croaker, Atlantic herring (*Clupea harengus*), Atlantic menhaden, Atlantic sturgeon, bay anchovy, black drum (*Pogonias cromis*), black sea bass, blue crab, blueback herring, bluefish, bluegill (*Lepomis macrochirus*), brown bullhead (*Ameiurus nebulosus*), carp (*Cyprinus carpio*), channel catfish (*Ictalurus punctatus*), crevalle jack (*Caranx hippos*), eastern silvery minnow (*Hybognathus regius*), gizzard shad, hickory shad, hogchoker, naked goby (*Gobiosoma bosci*), northern hog sucker (*Hypentelium nigricans*), northern kingfish (*Menticirrhus saxatilis*), northern pipefish (*Syngnathus fuscus*), pumpkinseed (*Lepomis gibbosus*), shortnose sturgeon, silver perch (*Bairdiella chrysoura*), spot, spottail shiner (*Notropis hudsonius*), spotted hake (*Urophycis regia*), striped anchovy (*Anchoa hepsetus*), striped bass, striped searobin (*Prionotus evolans*), summer flounder, tessellated darter (*Etheostoma olmstedi*), weakfish, white catfish (*Ameiurus catus*), white perch, yellow bullhead (*Ameiurus natalis*), and yellow perch exists at the site. Alewife, American eel, Atlantic croaker, bay anchovy, blue crab, channel catfish, hogchoker, striped bass, weakfish, and white perch dominated DFWs captures. Moderate numbers of American shad, Atlantic menhaden, blueback herring, and spot were also encountered (DFW 2020). Striped bass, alewife, blueback herring, American shad, and American eel all appeared regularly in large numbers during the time-series, with the frequency of encounters varying between species; striped bass and American eel were encountered in high numbers every month (April - October) of the survey (DFW 2020).

As is clear above, numerous fisheries sampling programs exist in the area of the proposed project. However, the applicant's own Estuary Enhancement Program's Biological Monitoring Program (BMP) also provides valuable insights into the area. Although the BMP includes numerous sampling methodologies, locations, and purposes, the impingement and entrainment abundance monitoring at the Salem Generating Station, the bottom trawl program and the baywide beach seine program are most relevant to the proposed project. Together, these elements of the BMP, which were initiated in 1995 (and are conducted annually), support other multi-decadal time-series data from NJDEP and DFW that the area is important habitat for various commercially, recreationally, and ecologically important species such as striped bass, blue crabs, American shad, alewife, weakfish, and others (most recent BMP report available to NMFS: PSEG 2014).

Project Impacts

Although some of the project elements need to be clarified, and the project as a whole may be much larger than what is described in the PN, we have concluded the currently proposed project will have substantial and unacceptable impacts on aquatic resources of national importance including the many species identified at the site. These adverse effects will result from fill, pile

placement, wharf construction, dredging, vessel traffic and propeller wash, and ballast water intake associated with this project. Should this application continue to move forward in the permitting process, a full and complete analysis of all of the direct, indirect, individual, cumulative, and synergist effects of the construction and operation of the proposed port should be undertaken and a complete EFH assessment should be provided to allow for an expanded EFH consultation. This analysis should be based upon detailed habitat mapping of the project site and the biological information found in the many available sources including those discussed above and the available literature. It should also include information of the nature and scope of any contamination and the potential for contaminant release and aquatic resource exposure.

The direct and indirect physical, chemical, and biological alterations of the waters and substrate, and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components, site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions should be comprehensively addressed by the District and applicant. Actions should be broken down into their components and subcomponents and related directly to the stressors generated from each, exposure of habitats and species to the stressors, and resulting responses, or effects (known as the stressor-exposure-response framework). From there, the effects to habitats and species should be identified, described, and analyzed in the context of short-, medium-, and long-term temporary and permanent/chronic impacts at the site, river, and regional level. Analysis of individual, synergistic, and cumulative effects should also be undertaken.

Habitat Loss and Conversion

It is unclear whether the placement of the proposed bulkhead on the existing shoreline will result in the permanent loss of Delaware River habitat including shallow areas important for juvenile fishes and bait fishes. As noted above, this should be more thoroughly described to us in an updated project description. However, the proposed new vertical wall structure will be placed in the aquatic environment, which will permanently and completely disconnect the aquatic environment from any natural shoreline. This will adversely impact system wide primary and secondary production and overall energy flow-food web support, nutrient cycling, and other ecosystem processes. Additionally, the placement of the vertical man-made wall structures will lead to a cascade of permanent and chronic adverse impacts, including increased wave energy, scour, turbidity, and sedimentation, degradation and elimination of benthic habitat, decreased benthic faunal diversity, beach steepening, and others (USACE 1981; NOAA 2015; Gittman & Scyphers 2017; Dugan et al. 2018; and others). Some of these impacts will be exacerbated by the proposed placement of 4-feet thick rock riprap over 1.86 acres of the river bottom along the bulkhead and an additional 2.57-acre area of the river to be covered in gravel for a proposed gravel mat, which also represent conversions of shoreline and unvegetated flat habitat.

The construction of the wharf structure and the associated piles and decking will also result in the permanent loss of between 2.15 acres and 3.65 acres of aquatic habitat within the Delaware River. The exact number is unclear from the information provided and should be clarified in the EFH assessment and Biological Assessment provided to us. The proposed wharf will be supported by 1,056 thirty-inch square pre-cast concrete piles. Due to the number and close placement of the pilings, we consider the wharf construction to be a loss of aquatic habitat. As

stated in 33 CFR § 232.3(c)(1) (Discharge requiring permits -Pilings):

> Placement of pilings in waters of the United States constitutes a discharge of fill material and requires a section 404 permit when such placement has or would have the effect of a discharge of fill material. Examples of such activities that have the effect of a discharge of fill material include, but are not limited to, the following: Projects where the pilings are so closely spaced that sedimentation rates would be increased; projects in which the pilings themselves effectively would replace the bottom of a waterbody; projects involving the placement of pilings that would reduce the reach or impair the flow or circulation of waters of the United States; and projects involving the placement of pilings which would result in the adverse alteration or elimination of aquatic functions.

There are many studies that demonstrate that large pile supported structures degrade fish habitat. For example, studies on the effects of large pile-supported structures (Able et al. 1995) found that fishery habitat quality is poor under large pile-supported structures as compared to pile fields (piles with no deck or overwater component) and interpier areas. Also, diversity, abundance and growth rates of juvenile fishes were lower under large pile-supported structures than in pile fields and interpier areas (Able et al. 1998, Duffy-Anderson and Able 1999). It is likely that the adverse conditions begin at the point where the low light levels under the pier begin to impair the success of sight feeding fish including species such as yellow perch (Granqvist and Mattila 2004) and blueback herring (Janssen 1982 in Collette and Klein-MacPhee 2002). In addition to severely decreased light penetration, the area under the pier may also be subjected to increased turbidity and reduced water circulation. The decrease in water circulation can also adversely affect striped bass survival as strong current is needed to keep the eggs suspended in the water column and prevent them from being smothered by silt (Bigelow and Schroeder 1953).

Shading from over-water structures, including the proposed wharf, will also adversely affect EFH, federally managed species, their prey, and other aquatic resources under our purview by degrading habitat quality in, and near, the shadow cast by the structure and by altering behavior and predator-prey interactions (Nightingale and Simenstad 2001; Hanson et al. 2003). Under-structure light levels can fall below the threshold for photosynthesis for many primary producers, adversely affecting photosynthetic organisms, habitat complexity, and overall net primary production, and for large projects, adversely impact secondary and tertiary production (Kenworthy and Haunert 1991; Haas et al. 2002; Struck et al. 2004). In the aquatic environment, floating and emergent vegetation are adversely impacted by shading, as well as less conspicuous primary producers, such as benthic microalgae. Benthic microalgae are an important trophic resource, and aid in the stabilization of sediments, controlling scour and resuspension of bottom sediments (Wolfstein and Stal 2002). Furthermore, benthic microalgae are important components of nutrient cycling and exchange in the water column, and contribute significantly to the overall primary production of ecosystems (Stutes et al. 2006). Communities in shaded areas are generally less productive than unshaded areas; light limitation is detrimental to benthic microalgae primary production, sediment primary production and metabolism (e.g., soil respiration) (Whitney and Darley 1983; Meyercordt and Meyer-Reil 1999; Stutes et al. 2006). Shading impacts are considered permanent due to the long-term placement of structures (Hanson et al. 2003; Struck et al. 2004; Johnson et al. 2008).

Many aquatic species, primarily fish, rely on visual cues for spatial orientation, predator-prey interactions (e.g., prey capture and predator avoidance), migration, and other essential behaviors. Early life history stages of fish are primarily visual feeders that are highly susceptible to starvation - a primary cause of larval mortality in marine fish populations (May 1974; Hunter 1976). Juvenile and larval fish survival is likely a critical determining factor for recruitment, with survival linked to the ability to locate and capture prey, and to avoid predation (Seitz et al. 2006). The reduced-light conditions found under overwater structures limit the ability of fishes, especially juveniles and larvae, to perform these essential prey capture and predator avoidance activities. Total abundances of fish can be substantially reduced in areas shaded by piers (Southard et al. 2006; Able, Grothues & Kemp 2013; Munsch et al. 2017). Overall, it appears that overwater structures that create dark environments can reduce localized habitat value by impairing visual tasks (e.g., feeding, predator vigilance) and reducing prey availability and habitat connectivity by constraining movements (Munsch et al. 2017).

Reductions in sub- and intertidal benthic and primary productivity, may in turn adversely affect patterns of invertebrate abundance, diversity, and species composition (Nightingale and Simenstad 200l). Structures that attenuate light may also adversely affect food webs by reducing micro- and macro-phyte growth, soil organic carbon and by altering the density, diversity, and composition of benthic invertebrates that are prey for numerous fishery species (Alexander and Robinson 2006; Whitcraft and Levin 2007). Prey resource limitations affect movement patterns and the survival of many juvenile fish species (Seitz et al. 2006; Johnson et al. 2008). The shadow cast by a structure may also increase predation on species by creating a light-dark interface that allows ambush predators to remain in darkened areas and wait for prey to swim by against a bright background, resulting in high contrast and high visibility (Helfman 1981). Prey species moving around the structure may be unable to see predators in the dark area under the structure or have decreased predator reaction distances and times, thus making them more susceptible to predation (Helfman 1981; Bash et al. 2001). Decreased predator avoidance (and increased mortality from predation) may be particularly important at the site of the proposed project for shad and river herring as the Northern snakehead (*Channa argus*), a sit-and-wait invasive piscivore, now occurs in Delaware River system (USGS Nonindigenous Aquatic Species clustered specimen observation records). Northern snakeheads are voracious fish predators, representing a significant threat to shad and river herring through predation and to striped bass through competition for prey (Saylor et al. 2012; Philadelphia Water Department and DNREC personal communication 2019 and 2020).

American shad and river herring appear to be particularly susceptible to the shadow cast by overwater structures (Moser and Terra 1999). American shad tend to be diurnal in their migratory habits and tend to migrate primarily during the day, while falling back to lower-velocity zones at night; adults and juveniles use side-channel and shallower areas near shorelines at day and night (Fisher 1997; Haro and Kynard 1997; Theiss 1997; Sullivan 2004). American shad are reluctant to immediately pass under darkened areas of channels, specifically under low bridges or strong shadows, or where there is a strong light transition (Haro and Castro-Santos 2012). American shad school as both juveniles and adults and have a low likelihood of separating from a school in order to pass a structure or its shadow (Larinier and Travade 2002). River herring require light to form schools and are most active during the day and have difficulty avoiding obstacles at night (Blaxter and Parrish 1965; Blaxter and Batty 1985). Similarly,

laboratory observations of alewives indicated that both juveniles and adults are most active during the day (Richkus and Winn 1979). Moser and Terra (1999) performed a field study to investigate low light as an impediment to river herring migrations and found significantly higher numbers of herring passed through unshaded treatments, as compared to shaded treatments. Fish often require visual cues for orientation and exhibit faster swimming speeds at increased light levels (Pavlov et al. 1972, Katz 1978).

The proposed dredging will result in the permanent conversion of shallow water habitat in the project area to deepwater habitat resulting in the loss of habitat for juvenile anadromous fish species. As stated above, Boynton et al. (1981) reported that approximately five times as many juvenile striped bass were collected in the nearshore habitat of the Potomac River Estuary than in the deeper, offshore habitat, highlighting the importance of shallow nearshore habitat. Other studies in other estuaries also support Boynton's result including Chadwick (1964) and Setzler et al. (1980). In addition, white perch are also ordinarily found in shallow water, usually not deeper than four meters (Beck 1995, Collette and Klein-MacPhee 2002.). Dredging also removes benthic organisms that many species rely on for prey; frequent repeated maintenance dredging events will likely prevent recolonization of the benthos by invertebrates and reduce site-wide productivity (Van Dolah et al. 1984; Wilber and Clarke 2001; 2010).

Turbidity and Sedimentation

Anthropogenic-induced elevated levels of turbidity and sedimentation, above background (e.g., natural) levels can lead to various adverse impacts on fish and their habitats. These increased levels can be caused by construction activities such as the dredging, pile driving, bulkhead installation, and filling proposed by PSEG, as well as the operation of the facility including vessel movements, changes in hydrodynamics due to the alteration of the river bottom from dredging, the pile installation and changes in shoreline alignment due to bulkheading.

Increases in turbidity due to the suspension or resuspension of sediments into the water column during activities such as dredging can degrade water quality, lower dissolved oxygen levels, and potentially release chemical contaminants bound to the fine- grained sediments (Johnson et al. 2008). Suspended sediment can also mask pheromones used by migratory fishes to reach their spawning grounds and impede their migration and can smother immobile benthic organisms and demersal newly-settle juvenile fish (Auld and Schubel 1978; Breitburg 1988; Newcombe and MacDonald 1991; Burton 1993; Nelson and Wheeler 1997). Additionally, other effects from suspended sediments may include (a) lethal and non-lethal damage to body tissues, (b) physiological effects including changes in stress hormones or respiration, or (c) changes in behavior, reduced predator avoidance, and others (Wilber and Clarke 2001; Kjelland et al. 2015). Increases in turbidity will also adversely affect the ability of some species, such as larval striped bass, to locate and capture prey and evade predation, leading to decreased survivorship (Fay et al. 1983 in Able and Fahay 1998). Species with low foraging plasticity have been shown to experience high mortality compared with other species during acute elevated turbidity conditions (Sullivan and Watzin 2010). Turbidity can also decrease photosynthesis and primary production, resulting in reduced oxygen levels.

Elevated rates of sedimentation can lead to numerous negative effects to aquatic systems. These

can include loss of habitat heterogeneity and reduction in organic matter retention and stable substrate (Allan 2004). Furthermore, the sedimentation (burying/covering) of individual organisms and habitats and changes in benthic environments via alteration to sediment quality, quantity, and changes in grain size can reduce species diversity and decrease overall ecosystem function (Thrush and Dayton 2002). The smothering of benthic prey organisms and chronic elevated sedimentation can prevent recolonization, which reduces the quality of the habitat by making it unsuitable for foraging (Wilber and Clarke 2001). Additionally, particle size is one of the main drivers of benthic faunal biodiversity and community composition; therefore, changes to sediment composition from sedimentation will affect the benthic prey resources of various species, including NOAA-trust resources (Wood and Armitage 1997; Wilber and Clarke 2001).

Noise

Noise from the construction activities, such as wharf and bulkhead construction, may also result in adverse effects to various fish species. Our concerns about noise effects come from an increased awareness that high-intensity sounds have the potential to adversely impact aquatic vertebrates (Fletcher and Busnel 1978; Kryter 1985; Popper 2003; Popper et al. 2004). Effects may include (a) lethal and non-lethal damage to body tissues including hearing/sensory structures, (b) physiological effects including changes in stress hormones, hearing capabilities, or sensing and navigation abilities, or (c) changes in behavior (Popper et al. 2004). More specifically, adverse non-lethal impacts of hearing loss in fish relate to reduced fitness through disrupted communication, reduced predation and feeding success, reduced prey detection, and/or inability to assess the environment or inability to move and migrate in desired or appropriate directions (Pooper et al. 2004). Additionally, anthropogenically generated sound may also lead to the masking of other biologically relevant sounds species use to carry out essential life functions, which could combine with hearing loss and other impacts to have additive effects on species and populations (Popper et al. 2004).

Impingement and Entrainment

<u>Dredging</u>

Impacts on benthic communities from dredging have been well-documented in numerous studies (e.g., Van Dolah et al. 1984; Clarke et al. 1993; Wilber and Clarke 2001; Wilber and Clarke 2010). However, dredging can also result in the impingement and entrainment of eggs, larvae and free swimming organisms, including diadromous fish, which can lead to injury and mortality (Thrush and Dayton 2002). This direct impact may be significant for various life stages of certain species: impingement and entrainment risk is generally low for juvenile and adult fish and higher for eggs and larvae. Impingement and entrainment mortality is specifically identified as a significant impact to young-of-year American shad in the Delaware River and is viewed as a significant barrier to species recovery (ASMFC 2020). This pattern is not consistent in shellfish species such as crabs and shrimp, where all life stages are susceptible to impingement and entrainment; for example, egg-bearing female blue crabs are at high risk for impingement and entrainment when buried in sediments during winter months and are too lethargic to avoid dredges (Reine and Clarke 1998; Wilber and Clarke 2001; Thrush and Dayton 2002). Impacts from impingement and entrainment to important prey species can reduce overall habitat quality by reducing availability of prey. For example, sand shrimp (*Crangon spp*), are important prey

for many estuarine organisms in the Delaware River system, including various life stages of species found in the project area. Armstrong et al. (1982) found sand shrimp were the most numerically abundant organism entrained by dredges during dredging studies in the Pacific Northwest. This study estimated entrainment rates for sand shrimp as high as 3.4 shrimp per cubic yard of material, and based on an annual shrimp population of 80 million, estimated that total loss to the population through entrainment during the course of a "typical" dredging project could range from 960,000 to 5,200,000 individuals, or 1.2% to 6.5% (Armstrong et al. 1982).

Ballast Water

It is unclear if the types of vessels mooring at the facility will require the intake and discharge of ballast water as cargo (turbine components) are unloaded and loaded. However, the intake of any ballast water will entrain fish eggs, larvae and other early life stages of aquatic organisms. We are particularly concerned about the impacts to the early life stages of river herring, American shad and striped bass. As discussed above, numerous life stages of species, including young-of-year, occur within the proposed project area. Ballast capacity can range from several cubic meters in sailing boats and fishing boats to hundreds of thousands of cubic meters in large cargo carriers. Large tankers can carry in excess of 200,000 m3 of ballast with container vessels holding tens of thousands of cubic meters of ballast water (NAP 1996). Ballasting intake rates can be as high as 15,000 to 20,000 m3/h (NAP 1996). The project documents lack any mention of this potentially significant effect on aquatic resources, nor is there any discussion of discharges into the Delaware River from the vessels mooring at the proposed facility.

Vessel Traffic

Atlantic sturgeon is a long lived iteroparous species with late maturation, high fecundity, and low survival of early life stages but high survival of the large older individuals. As such, mortality of older individuals can significantly impact population growth, and vessel strike mortality has been identified as a major threat to the Delaware River Atlantic sturgeon population (Brown and Murphy 2010). Recent and ongoing unpublished studies show that subadult and adult Atlantic sturgeon congregate at the mouth of the Delaware River and within Delaware Bay. These areas generally overlap with the shipping lanes into the Delaware Bay and the navigation channel within the Delaware Bay and River. In addition, Atlantic sturgeon swim higher in the water column and may actively follow the navigation channel during spawning migrations, which increases the risk of mature adult sturgeon interacting with vessels and their propellers (Fisher 2011). At last, the construction and existence of an access channel will further reduce Atlantic sturgeon up- and downstream movements unrestricted by vessel traffic. Based on these considerations, it is possible that operation of the terminal will increase the risk of adult and subadult Atlantic sturgeon vessel strike by adding additional vessels to the existing baseline traffic and reducing the cross-section of the river that is free of vessel activity.

Cumulative Effects

The EFH assessment and other application materials do not adequately evaluate the cumulative effects of the proposed project. There is some mention of some projects proposed, underway, or completed within the Delaware River, but there does not appear to be any meaningful analysis or discussion. Cumulative impacts analyses are important for any project and are not restricted to

spatial and temporal "overlap" of projects. Furthermore, several small, medium, and large past, present, and future actions have not been considered. For example, large dredging (new and maintenance) and port projects are underway or have been proposed in the region such as those in/at the Navy Pier 4, Sunoco Refinery, Delaware City Refinery, Delaware River Federal Navigation Channel, Delaware River Partners Gibbstown Facilities, Edgemoor Port, and several smaller port development projects are also proposed, underway, or completed in Philadelphia, Camden and Paulsboro areas.

Also concerning is the lack of cumulative effects discussion or analyses of the applicant's Salem and Hope Creek Nuclear Generating Stations located on the same property and along the same shoreline as the proposed project. These existing facilities conduct maintenance dredging activities and have existing water intakes, both of which adversely impact aquatic organisms. While the Hope Creek Unit employs closed cycle cooling, the Salem Unit has a once-through cooling system that draws in billions of gallons of water from the Delaware River each day. PSEG's BMP has extensive impingement and entrainment data, collected annually since 1995, allowing for quantitative and qualitative impacts analyses. For example, the 2014 BMP Report showed that juvenile striped bass dominated entrainment abundance surveys with 45,479 individuals encountered, while blue crab and weakfish dominated impingement abundance surveys with 24,004 and 21,270 encounters, respectively. Cumulatively, and in some cases such as the Edgemoor Port Site, these projects will have a substantial adverse effect on the aquatic environments of the Delaware River, Estuary, and Bay as well as NOAA-trust resources. A full assessment of the cumulative effects of the proposed project should be undertaken that includes the consideration of the cumulative effects of all past, present, and reasonably foreseeable future actions on aquatic resources. Some of the issues that should be addressed include the cumulative effects of the loss of aquatic water column/pelagic and benthic habitat on NOAA trust resources, loss of prey species, ballast water withdrawals, water discharges, vessel collisions and new dredging and future maintenance dredging needs.

Compensatory Mitigation

The *Final Rule on Compensatory Mitigation for the Losses of Aquatic Resources* (33 CFR 325 and 332 and 40 CFR 230) published in the Federal Register on April 10, 2008, does not limit compensatory mitigation only to impacts to wetlands and special aquatic sites, as some of the application materials suggest. The rule refers to "waters of the United States." As stated in Part 332.1 (a)(1) of the rule, "the purpose of this part is to establish standards and criteria for the use of all types of compensatory mitigation, including on-site and off-site permittee-responsible mitigation, mitigation banks, and in-lieu fee mitigation to offset unavoidable impacts to waters of the United States authorized through the issuance of DA permits pursuant to section 404 of the Clean Water Act (33 U.S.C. 1344) and/or sections 9 or 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 401, 403)." These standards do not only apply to wetlands and special aquatic sites. They apply to all regulated waters of the U.S. including the Delaware River. In addition, because compensatory mitigation is intended to offset unavoidable impacts, it must first be demonstrated that the less damaging alternatives are not practicable and the impacts are unavoidable.

The Clean Water Act section 404(b)(1) guidelines outline the sequence to be followed prior to

considering compensatory mitigation including the demonstration that potential impacts have been avoided and minimized to the maximum extent practicable. Due to the lack of adequate purpose and need, robust alternatives analysis, and comprehensive analyses of the effects, it is not possible to evaluate the appropriateness of current avoidance and minimization measures. As a result, we cannot agree that avoidance and minimization has taken place and the remaining impacts are unavoidable.

Lastly, the area of the proposed project is habitat for a wide variety of aquatic resources including those of national importance. Should this project move forward in the permitting process, compensatory mitigation for all unavoidable impacts to waters of the US should be provided. Additionally, because of the potential for significant adverse impacts to important species such as striped bass, river herring, and American shad, mitigation for losses in recruitment and overall production should be required. We recommend the District and PSEG engage with us and other federal agencies to discuss relevant mitigation.

EFH Conservation Recommendations

A complete and comprehensive EFH Assessment has not been provided to us for the proposed project. Therefore, we are unable to initiate consultation or provide EFH conservation recommendations.

Due to the lack of information provided to us we recommend that the construction of the proposed PSEG Nuclear LLC Wind (Hope Creek Port) Facility should not be authorized unless, through the preparation of a comprehensive EA or other publicly reviewed comprehensive NEPA document, as well as a comprehensive EFH Assessment and Biological Assessment, it can be demonstrated that:

- there is justifiable project purpose and need;
- no practicable alternate sites are available within the region;
- the impacts to aquatic resources have been avoided and minimized to the maximum extent practicable; and
- suitable compensatory mitigation can be provided that offsets fully all of the project's direct and indirect effects on aquatic resources and their habitats, including the effects on anadromous fishes and benthic and pelagic habitats.

Conclusion

As currently proposed, this project will have a substantial and unacceptable impact on aquatic resources of national importance pursuant to Part IV, Paragraph 3(b) of the MOA between our agencies due to the loss, alteration and degradation of important aquatic habitats in the Delaware River used by striped bass, American shad, alewife, blueback herring and other aquatic resources of national importance. We also note that the project document provided to us lacks a clearly defined purpose and need, a full and complete evaluation of alternatives, and does not address fully the individual, cumulative, direct and indirect effects of the construction and operation of the proposed project. Lastly, the lack of proposed compensatory mitigation is not only inadequate, but concerning for a project of this size and scale. Consequently, we must

recommend that the permit for this project be denied in accordance with the MOA between our agencies.

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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 01930-2276

November 24, 2020

Jennifer T. Nersesian
Superintendent,
US Department of the Interior
National Park Service
Gateway National Recreation Area
210 New York Ave
Staten Island, New York, 10305

RE: Essential Fish Habitat Coordination for West Pond Living Shoreline Project at Gateway National Recreation Area, Jamaica Bay, Brooklyn and Queens, New York

Dear Ms. Nersesian:

We have reviewed the essential fish habitat (EFH) assessment provided with your letter dated October 29, 2020, for the proposed construction of a living shoreline and marsh restoration project along West Pond at Gateway National Recreation Area (GATE) on Jamaica Bay in Brooklyn and Queens, New York. The project is being conducted by the National Park Service (NPS) with the Jamaica Bay and Rockaway Parks Conservancy to restore and protect a stretch of an eroding levee along the southern portion of West Pond within the Jamaica Bay Unit at GATE. West Pond, an approximately 70-acre, man-made freshwater pond was created by the construction of levees within Jamaica Bay. In 2012, a portion of the southern shore of West Pond was breached due to storm surge from Super Storm Sandy, causing an influx of saltwater into the freshwater pond and converting it into a lagoon. The breach was repaired following an Environmental Assessment (EA) and Finding of No Significant Impact, issued in February 2016. Details of the living shoreline and marsh restoration project were not available when the EFH consultation associated with the EA was initiated. However, we supported the breach repair project and conceptualized effort to develop a comprehensive habitat restoration and resiliency plan.

The proposed project consists of the construction of a living shoreline to protect the southern border of West Pond from erosional forces caused by wind and wave action, as well as restoring native salt marsh habitat. Plans include restoring 14.66 acres (ac) of historic saltmarsh habitat by importing and placing approximately 47,300 cubic yards (CY) of clean sand along with planting of native vegetation to enhance existing and eroded marsh. This project also proposes to install a series of integrated and overlapping erosional control structures (i.e., coir logs, shell bags, and tree vanes) to provide protection, create breakwaters, and encourage accretion of sediment to protect the new marsh from wind and waves and allow the newly planted vegetation to take root.

Additionally, project activities include the relocation of a current water control structure to a historical location at the western border of the pond to resolve issues related to water management and facilitate a larger and more uniform living shoreline.

The proposed project will result in temporary impacts to wetland and intertidal areas and the permanent loss of sand habitat (1.42 ac) and open water habitat (4.33 ac of intertidal and 2.14 ac of subtidal) to enhance and restore the ecological function of the marsh. Project activities are expected to take several months between 2020 and 2021 and include soil disturbance, sand placement, and access to the project area by large machinery from November 1 to March 31 and planting between April 1 and May 15. Compensatory mitigation is not proposed as the project aims to restore 14.66 ac of saltmarsh habitat, providing ecological uplift and a net benefit to EFH.

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the Fish and Wildlife Coordination Act (FWCA) require federal agencies to consult with one another on projects such as this that may adversely affect EFH and other aquatic resources. In turn, we must provide recommendations to conserve EFH. These recommendations may include measures to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH resulting from actions or proposed actions authorized, funded, or undertaken by that agency. 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 this consultation procedure. We offer the following comments and recommendations on this project pursuant to the MSA and the FWCA.

Magnuson-Stevens Fishery Conservation and Management Act (MSA)
Jamaica Bay has been designated as EFH for a number of federally managed species including Atlantic butterfish (*Peprilus triacanthus*), red hake (*Urophycis chuss*), scup (*Stenotomus chrysops*), summer flounder (*Paralichthys dentatus*), winter flounder (*Pseudopleuronectes americanus*), windowpane flounder (*Scophthalmus aquosus*), and others. Additional aquatic resources associated with tidal marshes or adjacent habitats in Jamaica Bay and their forage which are of concern to us include, but are not limited to, Atlantic menhaden (*Brevoortia tyrannus*), American eel (*Anguilla rostrata*), striped bass (*Morone saxatilis*), horseshoe crab (*Limulus polyphemus*), and hard clam (*Mercenaria mercenaria*). We have reviewed the EFH assessment for this project and agree with your conclusion that the adverse effects of this project on EFH will not be substantial.

As discussed in the EFH assessment, project activities have been designed to avoid and minimize impacts to the aquatic environment as practical. Such minimization and avoidance measures for soil disturbances, sand placement, and access within the project area include working in the dry/during low tide, transporting equipment and materials from land, and the use of temporary sediment and erosion measures which include the installation of a cofferdam and turbidity curtain around the existing pond outlet while it is decommissioned and buried. Additionally, the goals of the project aim to increase wetland functions and provide a net benefit to fisheries by enhancing of nursery and forage habitat for prey/forage species, young-of-year of marsh-dependent transient fishes, and macroinvertebrates while additionally improving water quality and promoting ecological resiliency within the Jamaica Bay Estuary. As such, we offer only a few minor EFH conservation recommendations to minimize impacts to winter flounder and

monitor the progress of the marsh restoration.

Winter flounder typically spawn in the winter and early spring and have demersal eggs that sink and remain on the bottom until they hatch. After hatching, the larvae are initially planktonic, but following metamorphosis they assume an epibenthic existence. Young-of-the-year flounder tend to burrow in the sand rather than swim away from threats. These life stages are less mobile and thus more likely to be affected adversely by increased turbidity and the subsequent deposition of the suspended sediments. As a result, we typically recommend that in-water work that disturbs the sediments including sand and other material placement be avoided when winter flounder eggs and larvae are present, generally from January 1 to May 31. We are happy to continue to work with you as project construction details are more fully developed to determine if the seasonal construction window that we recommend below can be further refined.

Essential Fish Habitat Conservation Recommendations
Pursuant to Section 305(b)(4)(A) of the MSA that you adopt the following EFH conservation recommendations to minimize or offset adverse impacts on EFH:

- Avoid in-water activities within subtidal areas from January 1 to May 31 to minimize adverse effects to winter flounder early life stages.

- Provide us with a copy of the monitoring and maintenance plan that documents success, identifies if corrective actions are needed, and maintains the integrity and health of the wetland restoration and living shoreline project.

Please note that Section 305(b)(4)(B) of the MSA requires the NPS to provide us with a detailed written response to these EFH conservation recommendations, including a description of measures adopted by the NPS for avoiding, mitigating, or offsetting the impact of the project on EFH. In the case of a response that is inconsistent with our recommendations, Section 305(b) (4) (B) of the MSA also indicates that the NPS must explain its reasons for not following the recommendations. Included in such reasoning would be the scientific justification for any disagreements with us over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects pursuant to 50 CFR 600.920(k). This response must be provided within 30 days after receiving our EFH conservation recommendations and at least 10 days prior to final approval of this action.

Please also note that further EFH consultation must be reinitiated pursuant to 50 CRF 600.920 (j) if new information becomes available, or if the project is revised in such a manner that affects the basis for above determination.

Endangered Species Act
Federally listed species may be present in the project area. Consultation, pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, may be necessary. The NPS will be responsible for determining whether the proposed action is likely to affect listed species. When project plans are complete, the NPS should submit their determination of effects, along with justification for the determination, and a request for concurrence to nmfs.gar.esa.section7@noaa.gov. After reviewing this information, NOAA Fisheries will be able to conduct a consultation under Section

7 of the ESA.

Conclusion

As always, we are available to coordinate with your staff so that this project can move forward efficiently and expeditiously as possible while still meeting our joint responsibilities to protect and conserve aquatic resources. We look forward to continued coordination on this project. If you have any questions or need additional information, please call Jessie Murray at (732) 872-3116 or by e-mail (jessie.murray@noaa.gov). Should you have any questions about the Section 7 consultation process in general, please contact Edith Carson-Supino at (978) 282-8490 or by e-mail (edith.carson-supino@noaa.gov).

Sincerely,

GREENE.KAREN.M.1365830785 Digitally signed by GREENE.KAREN.M.1365830785 Date: 2020.11.24 16:12:44 -05'00'

For:

Louis A. Chiarella
Assistant Regional Administrator
for Habitat Conservation

cc:

GARFO PRD – E. Carson-Supino
GATE/NPS – P. Rafferty, M. Powell
ACOE NAN– A. Ryan, R. Miranda
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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
55 Great Republic Drive
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November 24, 2020

Mr. Todd Schiable, Chief
Regulatory Branch
Philadelphia District
Army Corps of Engineers
Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107-3390

RE: 2020 Nationwide Permit Reissuance - Regional Conditions for New Jersey and Delaware

Dear Mr. Schiable:

This letter follows up on our letter dated November 13, 2020, as well as several emails and phone conversations with your staff containing draft comments, questions, and discussion items on the New Jersey and Delaware regional conditions proposed in the Public Notice dated September 24, 2020, for the reissuance of 52 Nationwide Permits (NWPs) and the issuance of five new NWPs. We have worked closely with the Philadelphia District (District) over the years to develop regional conditions to avoid and minimize the direct, indirect, individual and cumulative adverse effects of actions authorized under the NWP program on NOAA trust resources including essential fish habitat (EFH) and diadromous fishes. This year, the process has followed a more compressed timeline than has been common during the previous reissuance and renewals of the NWPs, and we have not had the same opportunity for early coordination as in the past. Fortunately, because of our past coordination, many of our comments involve minor clarifications of the existing regional conditions and the process by which our agencies consult under the Magnuson Stevens Fishery Conservation and Management Act (MSA) and the Fish and Wildlife Coordination Act (FWCA).

As in the past, we hope that EFH conservation recommendations provided below will be incorporated into the regional conditions for the NWPs. This will allow us to issue a General Concurrence for a number of the NWPs and limit the number of activities requiring individual coordination under the MSA. This approach is consistent with Part III - Compliance With Relevant Statutes, Section E - *Compliance With the Essential Fish Habitat Provisions of the Magnuson Stevens Fishery Conservation and Management Act* of the September 15, 2020, Federal Register Notice (FRN 85:179 p. 57361) announcing the Corps' proposal to reissue and modify the NWPs which states that Corps districts that have EFH designated within their geographic areas of responsibility will coordinate with us to develop NWP regional conditions that conserve EFH and are consistent with our EFH conservation recommendations. The FRN

also states that the Corps districts will conduct consultations in accordance with the EFH consultation regulations at 50 CFR 600.920.

EFH has been designated within the marine and estuarine waters of New Jersey and Delaware. The MSA requires federal agencies, such as the Corps, to consult with us on projects that may adversely affect EFH which is defined as "any impact which reduces the quality and/or quantity of EFH." Further, an adverse effect may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystems components, if such modifications reduce the quality and/or quantity of EFH. Adverse effects to EFH may result from action occurring within EFH or outside EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

The FWCA as amended in 1964, requires that all federal agencies consult with us when proposed actions might result in modifications to a natural stream or body of water. It also requires that they consider effects that these projects would have on fish and wildlife and must also provide for improvement of these resources. Through these authorities, we seek to protect, conserve and enhance aquatic resources in marine, estuarine and riverine ecosystems.

Traditionally and in accordance with the EFH regulations, our EFH conservation recommendations are provided in response to an EFH assessment. An EFH assessment has not been provided for the regional conditions and we are not requesting one prior to issuing our conservation recommendations. The EFH conservation recommendations, provided pursuant to Section 305(b)(4)(A) of the MSA, and the FWCA recommendations discussed below are based upon our agencies' previous coordination on the NWPs and regional conditions, the proposed changes to both on the national and District level, and our recent discussions with your staff. Based upon our recent conversations with your staff and the revised regional conditions proposed for Delaware, it appears that most of our preliminary comments have been incorporated into the regional conditions. We greatly appreciate these efforts.

NOAA Trust Resources

The changes we recommend to the NWP regional conditions prior to their reissuance are primarily intended to better protect four different types of aquatic resources for which we frequently issue EFH conservation recommendations – submerged aquatic vegetation (SAV), emergent tidal vegetation, anadromous fish species, and winter flounder (*Pseudopleuronectes americanus*). In previous letters regarding the NWPs and other individual projects we have demonstrated the importance of these aquatic resources, but we include their description here to underscore their sensitivity, ecological productivity, and their associated national importance and value. We also provide scientific justification for requested changes to the NWPs to better protect these important resources.

Submerged Aquatic Vegetation
SAV has been designated as a habitat area of particular concern (HAPC) for summer flounder (*Paralichthys dentatus*) by the Mid-Atlantic Fishery Management Council. HAPCs are subsets of EFH identified based on one or more of the following considerations: 1) the importance of the ecological function; 2) extent to which the habitat is sensitive to human-induced degradation; 3)

whether and to what extent, development activities are stressing the habitat type; and/or 4) rarity of habitat type (50 CFR 600.815(a)(8)). In addition, the U.S. Environmental Protection Agency has designated SAV as a special aquatic site under Section 404(b)(1) of the federal Clean Water Act (CWA) because of its important role in the marine ecosystem for nesting, spawning, nursery cover, and forage areas for fish and wildlife. It is a priority habitat for us for the same reasons.

SAV and their associated epiphytes are highly productive, produce a structural matrix on which many other species depend, improve water quality, and stabilize sediments (Fonseca et al. 1998). Seagrasses are among the most productive ecosystems in the world and perform a number of irreplaceable ecological functions which range from chemical cycling and physical modification of the water column and sediments to providing food and shelter for commercial, recreation as well as economically important organisms (Stephan and Bigford 1997; Orth et al. 2017). SAV meadows support a complex estuarine food web – a single acre of seagrass can support up to 40,000 fishes and 50 million small invertebrates (Miththapala 2008).

Many of the fish species that utilize SAV habitat are either federally managed or important prey species for federally managed species. For example, studies by Weinstein and Brooks (1983), Adams (1976), and Lascara (1981) in Packer et al. (1999) indicate that SAV is important habitat for juvenile summer flounder. Rodgers and Van Den Avyle (1983) also suggest that SAV beds are important to summer flounder, and that any loss of these areas along the Atlantic Seaboard may affect summer flounder stocks. Studies from the lower Chesapeake Bay found that SAV beds area are important for the brooding of eggs and for fishes with demersal eggs and as habitat for the larvae of spring-summer spawners such as anchovies Anchoa spp., gobies, Gobiosoma spp., weakfish (*Cynoscion regalis*), and silver perch (*Bairdiella chrysoura*) (Stephan and Bigford 1997). Heckman and Thoman (1984) concluded that SAV beds are also important nursery habitats for blue crabs (*Callinectes sapidus*). Furthermore, Peterson (1982) in Kenworthy (1988) indicated that shallow dwelling hard clams (*Mercenaria mercenaria*) may be protected from predation by the rhizome layer of seagrass beds. Freshwater SAV such as water celery (*Vallisneria americana*) is equally as important and provides valuable nursery, forage and refuge habitat for a variety of migratory and forage fish species including striped bass (*Morone saxatilis*), alewife (*Alosa pseudoharengus*), blueback herring (*A. aestivalis*), and American shad (*A. sapidissima*).

Aside from its inherent ecological value, SAV meadows can perform functions that both reduce shoreline erosion rates and improve water quality. For instance, robust SAV beds can dampen wave energy (Lei and Nepf 2019), reduce current velocities (Fonseca et al. 1998), and facilitate sediment deposition over large spatial scales (Zhang and Nepf 2019). SAV can also improve water quality by assimilating excess dissolved nitrogen and phosphorus and promoting sediment denitrification (McGlathery et al. 2007). Finally, SAV is considered an efficient, long-term carbon sink for its ability to sequester carbon in their biomass and in soil (Hiraishi et al. 2014). Unlike other sources, SAV beds can sequester carbon that has been accumulated by rivers and tides and store it in soils for millennia (Duarte et al. 2005; Kennedy et al. 2010; Mcleod et al. 2011). Because SAV meadows can store relatively high quantities of carbon, the disturbance of SAV meadows can result in the release of stored gasses back into the atmosphere.

Because of its importance as habitat, the Atlantic States Fishery Management Commission

updated their SAV policy in 2018 (Havel and ASMFC Habitat Committee, 2018). Their primary goal is to preserve, conserve, and restore SAV where possible, in order to achieve a net gain in distribution and abundance along the Atlantic coast and tidal tributaries, and to prevent any further losses of SAV in individual states by encouraging the following:

1. Protect existing SAV beds from further losses due to degradation of water quality, physical destruction to the plants, or disruption to the local benthic environment;
2. Continue to promote state or regional water and habitat quality objectives that will result in restoration of SAV through natural re-vegetation;
3. Continue to promote, develop, attain, and update as needed, state SAV restoration goals in terms of acreage, abundance, and species diversity, considering historical distribution records and estimates of potential habitat.
4. Continue to promote SAV protection at local, state and federal levels and when unavoidable impacts to SAV occur from permitted coastal alterations or other unintended actions, agencies should implement compensatory mitigation for the functional and temporal impacts.

Emergent Tidal Wetlands

Tidal wetlands are another ecologically valuable aquatic habitat and have also experienced extensive anthropogenic impacts (Odum 1970; Kennish 2001). A large body of literature indicates that tidal wetlands are important nursery habitat for many species of fish and invertebrates (see review by Beck et al. 2001). They are also important habitat for forage fish such as killifish which are prey for several federally managed fish species including bluefish (*Pomatomus saltatrix*) and summer flounder. Several studies (e.g., Peterson et al. 2000; Bilkovic and Roggero 2008) have indicated that fringe tidal marshes are preferred habitat for juvenile life stages of commercially important fish species relative to armored shorelines. The extensive use of this habitat by a variety of species underscores its importance for the productivity of our nation's fisheries (Lellis-Dibble et al. 2008). Wetlands also provide many other important ecological functions including water storage, nutrient cycling and primary production, sediment retention, water filtration or purification, and groundwater recharge and they are also considered to be special aquatic sites in the CWA.

Anadromous Fish Species

Anadromous species such as alewife, blueback herring, American shad, hickory shad (*Alosa mediocris*), and striped bass annually migrate from the ocean into freshwater rivers and streams in New Jersey and Delaware to spawn. Thus, the coastal waters of these states, as well as the Delaware River and its tributaries provide either migratory pathways or function as nursery and forage habitat for these species. Because landing statistics and the number of fish observed on annual spawning runs indicate a drastic decline in alewife and blueback herring populations throughout much of their range since the turn of the 20th century and especially since the mid-1960s, river herring (i.e., alewife and blueback herring, collectively) have been designated as Species of Concern by NOAA. Species of Concern are those about which we have concerns regarding their status and threats, but for which insufficient information is available to indicate a need to list the species under the Endangered Species Act (ESA). We wish to draw proactive attention and conservation action to these species.

Both adult and juvenile Alosines are energy-dense and are important prey species for federally managed fish species. For example, Buckel and Conover (1997) in Fahay et al. (1999) report that diet items of juvenile bluefish include Alosa species. Additionally, juvenile Alosines have all been identified as prey species for summer flounder, and windowpane flounder (*Scophthalmus aquosus*) in Steimle et al. (2000). The EFH final rule states that prey species are an important component of EFH and that loss of prey may be an adverse effect on EFH and managed species. As a result, actions that reduce the availability of prey species, either through direct harm or capture, or through adverse impacts to the prey species' habitat, including their ability to access suitable spawning habitat, may also be considered adverse effects on EFH.

Because spawning migrations and the associated physiological changes (e.g., gamete development) are among the most energetically demanding events in the life history of anadromous fishes, we recommend that they are protected from disturbance and allowed to reach their spawning habitats without restriction to the extent practicable. One of the most effective approaches to achieve this protection is to restrict in-water work during the spawning season (i.e., March 1or March 15 depending upon the location to June 30). Thus, we continue to recommend inclusion of a time of year restriction for certain activities.

Winter Flounder

For winter flounder, we focus our protection on winter flounder early life stage EFH because these life stages are relatively immobile and unable to move away from threats including sediment disturbing activities such as dredging or filling. In the estuarine waters of NJ north of Absecon Inlet, the New England Fisheries Management Council has defined winter flounder early life stage EFH as follows:

> Eggs: Bottom habitats with a substrate of sand, muddy sand, mud, and gravel, water temperatures less than 10 °C, salinities between 10 - 30 ‰, and water depths less than 5 meters.
>
> Larvae: Pelagic and bottom waters, sea surface temperatures less than 15 °C, salinities between 4 - 30 ‰, and water depths less than 6 meters.

Omnibus Habitat Amendment 2 adds the following:

> Eggs: Sub-tidal estuarine and coastal benthic habitats from mean low water to 5 meters from Cape Cod to Absecon Inlet (39° 22’ N), including mixed and high salinity zones in the bays and estuaries. The eggs are adhesive and deposited in clusters on the bottom. Essential habitats for winter flounder eggs include mud, muddy sand, sand, gravel, macroalgae, and submerged aquatic vegetation. Bottom habitats are unsuitable if exposed to excessive sedimentation which can reduce hatching success.
>
> Larvae: Estuarine, coastal, and continental shelf water column habitats from the shoreline to a maximum depth of 70 meters from the Gulf of Maine to Absecon Inlet (39° 22’ N), and including Georges Bank, including mixed and high salinity zones in the bays and estuaries. Larvae hatch in nearshore waters and estuaries or are transported shoreward from offshore spawning sites where they metamorphose and settle to the bottom as

juveniles. They are initially planktonic, but become increasingly less buoyant and occupy the lower water column as they get older.

Winter flounder migrate into spawning areas within mid-Atlantic estuaries when water temperatures begin to decline in late fall. Tagging studies show that most return repeatedly to the same spawning grounds (Lobell 1939; Saila 1961; Grove 1982 in Collette and Klein-MacPhee 2002). Winter flounder typically spawn in the winter and early spring, although the exact timing is temperature dependent and thus varies with latitude (Able and Fahay 1998); however, movement into these spawning areas may occur earlier, generally from mid- to late November through December. Winter flounder have demersal eggs that sink and remain on the bottom until they hatch. After hatching, the larvae are initially planktonic, but following metamorphosis they assume an epibenthic existence. Winter flounder larvae are negatively buoyant (Pereira et al. 1999) and are typically more abundant near the bottom (Able and Fahay 1998). Young-of-the-year flounder tend to burrow in the sand rather than swim away from threats.

A number of the activities authorized under the NWPs can adversely affect EFH for these sensitive life stages through the loss of habitat by filling or the destruction of eggs and larvae either by entrainment in a dredge, or due to increased turbidity and the subsequent deposition of the suspended sediments which can smother the winter flounder eggs. We appreciate that the existing proposed regional conditions includes a number of measures to protect winter flounder EFH including a seasonal work restriction from January 1 to May 31 within areas designated as winter flounder early life stage EFH. We recommend that these conditions remain as part of the regional conditions for New Jersey in areas north of Absecon Inlet (39° 22' N). As we have agreed in the past and to make identifying winter flounder early life stage EFH easier for applicants to identify, the Atlantic City Expressway can be used as a surrogate for this latitude line. The location and description of EFH for winter flounder can be found in our EFH Mapper at: https://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-mapper

Nationwide Permits Requiring Individual Coordination

There are also a number of NWPs which have the potential for more than minimal adverse effects to EFH and other NOAA resources. Individual coordination with us, including the submission of a PCN by the District and an EFH assessment is necessary for the following NWPs in tidal waters and non-tidal areas that support anadromous fish (e.g., river herring, striped bass):

- NWP 27 –Aquatic Habitat Restoration, Establishment, and Enhancement Activities
- NWP 38 – Cleanup of Hazardous and Toxic Waste
- NWP 52 – Water-based Renewable Energy Generation Facilities
- NWP 53 – Removal of Low Head Dams
- NWP 54 – Living Shorelines
- NWP A – Seaweed Mariculture Activities
- NWP B – Finfish Mariculture Activities

Essential Fish Habitat Conservation Recommendations

We offer the following EFH conservation recommendations pursuant to Section 305(b)(4)(A) of

the MSA to minimize the adverse effects of the listed NWPs on EFH in addition to the changes already included in the Special Public Notice.

Regional General Conditions

1. On the national level, the Corps has proposed to modify the NWPs that require pre-construction notification to limit the PCN requirement to non-federal permittees. While we do not support this proposed modification, we recognize that the decision to finalize this proposed modification will be made on a national level. We are concerned that for some of these NWPs, the non-Corps lead federal agency may be unaware that they are responsible to ensure compliance with the MSA, including a consultation with us. In the past, the PCN requirements to the Corps ensured impacts to EFH and other NOAA trust resources were considered fully and individual coordination occurred when necessary to avoid, minimize or offset adverse effects to EFH. We appreciate that the District has added language to Regional Condition G-6 Essential Fish Habitat to address this concern.

2. The Regional General Conditions and the NWP specific regional conditions for a number of the NWPs include PCN requirements near certain ecologically important habitats such as submerged aquatic vegetation or if waivers of seasonal work windows to protect EFH or diadromous fish are requested. As discussed above, nationally it has been proposed to eliminate the requirement for federal agencies to provide the Corps with a PCN for the NWPs. If possible, the District's regional conditions require PCNs from federal agencies under limited conditions to ensure impacts to the aquatic environment, including EFH, are avoided and minimized. This conditions are:

    - a waiver of any NWP condition, such as length or quantity of the discharge is sought,
    - a waiver of any regional condition including the time of year restrictions is sought, and
    - whenever an activity occurs within 50 ft. of SAV beds or mapped SAV habitat.

- Regional General Condition G- 6 - Essential Fish Habitat contains a condition requiring a PCN if any work is proposed within SAV habitat or within 50 feet of SAV habitat. As discussed above, SAV is a priority habitat for us for a variety of reasons. We recommend this regional condition continue to be included in the Regional General Conditions, but it should be clarified to ensure all SAV, not just estuarine species are protected. Freshwater species such as water celery found in the Delaware River is equally as ecological valuable as species found in the estuaries.

EFH Conservation Recommendations for Specific NWPs

NWP-13 Bank Stabilization

We are concerned that this NWP can allow the construction of offshore breakwaters or the placement of wave attenuation devices (WADs) offshore of the shoreline. These types of structures have the potential for greater adverse effects to EFH and other NOAA trust resources than shoreline stabilization measures that are placed at, on, or in close proximity to the shoreline

as they can alter the local hydrology, change sedimentation and scour patterns and impact benthic communities and preclude or limit fish access. We recommend NWP-13 not be used to authorize these structures. This is consistent with the positions of the other districts in the Mid-Atlantic that would not use this NWP in this manner. In the absence of this clarification, a PCN should be provided to us by the District if this NWP is used to authorize offshore structures. We also recommend that a PCN be provided to us whenever an applicant requests a waiver of any of the national or regional conditions associated with this NWP.

NWP-27 Aquatic Habitat Restoration, Enhancement, and Establishment Activities
As stated above, a PCN should be sent to us by the Corps for all work under this NWP. In addition, to ensure projects authorized under the NWP actually provide increases in aquatic resource functions and are sustainable in the long-term, the PCN to us should include an EFH assessment and should explain what and how aquatic resource functions will be increased; describe the project goals and objectives, and success criteria; and include a monitoring, adaptive management and long-term maintenance plan.

NWP-48. Commercial Shellfish Mariculture
In our preliminary comments on this NWP, we requested that a PCN be provided to us if the use of a hydraulic clam dredge was proposed in winter flounder egg/larvae EFH within estuarine waters. Based upon information provided to us by the New Jersey Department of Environmental Protection's Bureau of Shellfisheries, the use of this equipment is prohibited by statute in NJ. As a result, we only request a PCN to us when the activities are in and within 50 ft. of SAV as currently required.

NWP-54 - Living Shorelines
Although we have requested a PCN be provided to us by the District for this NWP, we also recommend that the District include some additional regional conditions to assist applicants in developing projects that minimize adverse effects to EFH and other NOAA trust resources while providing the ecological and coastal resilience benefits of a living shoreline. Although some states in the Mid-Atlantic have developed guidance or have coastal zone management rules that help inform project design, not all have done so and the quality of the guidance varies greatly. As a result, some Corps Districts such as the Norfolk District provide specific guidance in the form of the regional conditions for this NWP.

In New Jersey especially, we have seen a number of poorly designed living shoreline projects, some of which were mostly grey structure (i.e., stone or concrete). This has led to instances where we have requested that the District Engineer take discretionary authority and require a more thorough review under the standard permit process. This has also lengthened review times and decreased the utility of this NWP and the permitting and consultation efficiencies NWPs are supposed to provide. We recommend that the regional conditions for this NWP include more specific requirements to help improve the quality of living shoreline projects and the permitting and consultation timelines associated with this NWP.

The following recommendations are based upon those included in the regional conditions used by the Norfolk District. We recommend these be incorporated into the regional conditions for New Jersey and Delaware. We understand that some of these EFH conservation

recommendations may be too detailed to be incorporated into the regional conditions. We are available to work with your staff to provide alternate regional conditions to improve the quality of the living shoreline projects and thus the timelines associated with the use of this NWP.

1. This activity authorizes the placement of sandy fill material, including the placement landward of sill(s) provided the fill is for shoreline protection and/or wetland establishment or enhancement (and not solely a recreational beach). For the purpose of this NWP, a sill is defined as a detached structure (not to exceed +1 ft. above MHW), constructed near shore and parallel to the shoreline for the purpose of building up an existing shoreline by trapping and retaining sand in the littoral zone. Because a sill acts like a natural bar, it is most effective when constructed at or near the mean low water line and low enough to allow wave overtopping.

2. The grain size of the source material used for fill must be the same size or slightly larger than that of the native material and suitable for the proposed project.

3. Coir logs, coir mats, and native oyster shell should be of sufficient weight, adequately anchored, or placed in a manner to prevent them from being dislodged or carried away by wave action.

4. If sills are determined to be necessary, based on site-specific conditions and following an analysis of alternatives, sills should be designed to facilitate aquatic life movement and meet the following conditions:

- Low-profile sills - those with crest heights 2 ft. below the MHW line - should be used in areas with low to moderate energy.
- Sills should be constructed of stone or loose or bagged shell. Alternative materials may be considered for use during the permit review process. The materials should be of sufficient weight or adequately anchored to prevent them from being dislodged and carried away by wave action. Asphalt and materials containing asphalt or other contaminants shall not be used in the construction of sills.
- To ensure aquatic life movement, sills with crest heights within 2 ft. of the MHW line should be designed with windows or gaps, unless waived by the District Engineer. The windows or gaps should be at least 10 feet in width (as measured across the bottom) and placed at least every 100 linear feet along the length of the sill. Staggered or offset windows or gaps may be appropriate based on site-specific conditions. Windows or gaps lined with rock or shell may also be appropriate, provided they do not extend above the mean low water line.
- The sill design, including height, should be based on site-specific conditions (i.e., energy regime), but should not exceed +1 foot above the MHW line. The sill should be placed at a distance no greater than 30 feet from mean low water to the channelward toe of the sill unless waived by the District Engineer.

5. The total amount of existing vegetated wetlands, which may be filled, graded, or

excavated, in square feet, may not exceed the length of the activity along the shoreline in linear feet unless the District Engineer waives this criterion by making a written determination concluding that the project will result in minimal adverse effects. Impacts to sub-tidal, inter-tidal, and/or existing wetland vegetation may require a wetland mitigation plan and must result in no net loss of vegetated wetlands.

6. If the proposed project results in impacts to existing wetland vegetation, then a written monitoring report may be required at the end of the first full growing season following planting, and after the second year of establishment. If required, the monitoring should be undertaken between June and September of each year and should include at a minimum: the project location, the Corps project number, representative photos of the site, and a brief statement on the success of the project.

NWP A - Seaweed Mariculture and NWP B- Finfish Mariculture:
We recommend that the following be incorporated into the regional conditions for these newly proposed NWPs:

1. The new NWPs should follow suit with NWP48, which outright prohibits: (a) The cultivation of a nonindigenous species unless that species has been previously cultivated in the waterbody; and (b) The cultivation of an aquatic nuisance species as defined in the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990- under the NWP.
2. The PCN information requirements for these NWPs should be modified to ensure sufficient information is provided to allow for an evaluation of the effects of the proposed activities on EFH and other aquatic resources. This information includes:

    - A description of the quantity and dimensions of all proposed structure(s), including: culture gear (lines, cages pens, etc.), anchors, and site markers;
    - A map showing the project location(s), including the longitude and latitude of site boundaries;
    - A schematic or drawing showing how the gear will be deployed on the site (A formally engineered schematic is not required);
    - The name(s), including sub-species if applicable, and quantities of the species that will be cultivated during the period this NWP is in effect; and,
    - General water depths, bottom characteristics, and benthic species present (including submerged aquatic vegetation) in the project area(s) (a detailed survey is not required).

Your Response to our EFH CRs

Section 305(b)(4)(B) of the MSA requires you to provide us with a detailed written response to our EFH conservation recommendations, including a description of measures you have adopted to avoid, minimize or mitigate the impact of the project on EFH. In the case of a response that is inconsistent with these conservation recommendations, Section 305(b)(4)(B) of the MSA also indicates that you must explain your reasons for not following the recommendations. Included in

such reasoning would be the scientific justification for any disagreements with us over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects pursuant to 50 CFR 600.920(k). Once a response has been provided to us and the regional conditions are finalized, we will work with you to complete and programmatic consultation which will include a General Concurrence for NWPs that do not require addition coordination, more details on procedures for NWPs that do require individual coordination, and reporting procedures so our agencies can document the consultation efficiencies achieved through coordination on the regional conditions.

Conclusion

Thank you for the opportunity to review and comment on the regional conditions for New Jersey and Delaware for the 2020 NWPs. We look forward to continued coordination as the regional conditions are finalized and programmatic consultation and general concurrence document is developed. Should you have any questions regarding our comments and EFH conservation recommendations, please contact Karen Greene, the supervisor of our Mid-Atlantic field offices at 987 559-9871 or karen.greene@noaa.gov or Keith Hanson in our Annapolis field office at keith.hanson@noaa.gov.

Sincerely,

GREENE.KAREN.M.1365830785 Digitally signed by GREENE.KAREN.M.1365830785 Date: 2020.11.24 10:43:16 -05'00'

For:

Louis A. Chiarella
Assistant Regional Administrator
for Habitat Conservation

cc: NAN- R. Deems, M. Hayduk,
NAD - J. Haggerty
FWS - E. Schrading, G. LaRouche
EPA - M. Finocchiaro
MAFMC - C. Moore
NEFMC- T. Nies
ASMFC - L. Havel

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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 01930-2276

November 23, 2020

Mr. Stephan Ryba, Chief
Regulatory Branch
New York District
Army Corps of Engineers
26 Federal Plaza
New York, NY 10278-0090

RE: 2020 Nationwide Permit Reissuance - Regional Conditions for New York

Dear Mr. Ryba:

This letter follows up on our letter dated November 13, 2020, as well as several emails and phone conversations with your staff containing draft comments, questions, and discussion items on the New York regional conditions proposed in the Public Notice dated September 28, 2020, for the reissuance of 52 Nationwide Permits (NWPs) and the issuance of five new NWPs. We have worked closely with the New York District (District) over the years to develop regional conditions to avoid and minimize the direct, indirect, individual and cumulative adverse effects of actions authorized under the NWP program on NOAA trust resources including essential fish habitat (EFH) and diadromous fishes. This year, the process has followed a more compressed timeline than has been common during the previous reissuance and renewals of the NWPs and we have not had the same opportunity for early coordination as in the past. Fortunately, because of our past coordination, many of our comments involve minor clarifications of the existing regional conditions and the process by which our agencies consult under the Magnuson Stevens Fishery Conservation and Management Act (MSA) and the Fish and Wildlife Coordination Act (FWCA).

As in the past, we hope that EFH conservation recommendations provided below will be incorporated into the regional conditions for the NWPs. This will allow us to issue a General Concurrence for a number of the NWPs and limit the number of activities requiring individual coordination under the MSA. This approach is consistent with Part III - Compliance With Relevant Statutes, Section E - *Compliance With the Essential Fish Habitat Provisions of the Magnuson Stevens Fishery Conservation and Management Act* of the September 15, 2020, Federal Register Notice (FRN 85:179 p. 57361) announcing the Corps' proposal to reissue and modify the NWPs which states that Corps districts that have EFH designated within their geographic areas of responsibility will coordinate with us to develop NWP regional conditions that conserve EFH and are consistent with our EFH conservation recommendations. The FRN also states that the Corps districts will conduct consultations in accordance with the EFH

consultation regulations at 50 CFR 600.920.

EFH has been designated with the marine and estuarine waters of New York State. The MSA requires federal agencies, such as the Corps, to consult with us on projects that may adversely affect EFH which is defined as "any impact which reduces the quality and/or quantity of EFH." Further, an adverse effect may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystems components, if such modifications reduce the quality and/or quantity of EFH. Adverse effects to EFH may result from action occurring within EFH or outside EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

The FWCA as amended in 1964, requires that all federal agencies consult with us when proposed actions might result in modifications to a natural stream or body of water. It also requires that they consider effects that these projects would have on fish and wildlife and must also provide for improvement of these resources. Through these authorities, we seek to protect, conserve and enhance aquatic resources in marine, estuarine and riverine ecosystems.

Traditionally and in accordance with the EFH regulations, our EFH conservation recommendations are provided in response to an EFH assessment. An EFH assessment has not been provided for the regional conditions and we are not requesting one prior to issuing our conservation recommendations. The EFH conservation recommendations, provided pursuant to Section 305(b)(4)(A) of the MSA, and the FWCA recommendations discussed below are based upon our agencies' previous coordination on the NWPs and regional conditions, the proposed changes to both on the national and District level, and our recent discussions with your staff.

Our comments and conservation recommendations apply only to activities within the State of New York. Although portions of New Jersey are under the jurisdiction of the New York District, the Philadelphia District has the lead in developing regional conditions for all of New Jersey, including those areas under the New York District's jurisdiction. We will be providing comments to them separately on their proposed regional conditions. In addition, we are not providing comments on any of the proposed conditions for the Buffalo District since aquatic resources for which we have consultation authorities do not occur within the boundaries of that district.

NOAA Trust Resources

The changes we recommend to the NWP regional conditions prior to their reissuance are primarily intended to better protect four different types of aquatic resources for which we frequently issue EFH conservation recommendations – submerged aquatic vegetation (SAV), emergent tidal vegetation, anadromous fish species, and winter flounder (*Pseudopleuronectes americanus*). In previous letters regarding the NWPs and other individual projects we have demonstrated the importance of these aquatic resources, but we include their description here to underscore their sensitivity, ecological productivity, and their associated national importance and value. We also provide scientific justification for requested changes to the NWPs to better protect these important resources.

Submerged Aquatic Vegetation
SAV has been designated as a habitat area of particular concern (HAPC) for summer flounder (*Paralichthys dentatus*) by the Mid-Atlantic Fishery Management Council. HAPCs are subsets of EFH identified based on one or more of the following considerations: 1) the importance of the ecological function; 2) extent to which the habitat is sensitive to human-induced degradation; 3) whether and to what extent, development activities are stressing the habitat type; and/or 4) rarity of habitat type (50 CFR 600.815(a)(8)). In addition, the U.S. Environmental Protection Agency has designated SAV as a special aquatic site under Section 404(b)(1) of the federal Clean Water Act (CWA) because of its important role in the marine ecosystem for nesting, spawning, nursery cover, and forage areas for fish and wildlife. It is a priority habitat for us for the same reasons.

SAV and their associated epiphytes are highly productive, produce a structural matrix on which many other species depend, improve water quality, and stabilize sediments (Fonseca et al. 1998). Seagrasses are among the most productive ecosystems in the world and perform a number of irreplaceable ecological functions which range from chemical cycling and physical modification of the water column and sediments to providing food and shelter for commercial, recreation as well as economically important organisms (Stephan and Bigford 1997; Orth et al., 2017). SAV meadows support a complex estuarine food web – a single acre of seagrass can support up to 40,000 fishes and 50 million small invertebrates (Miththapala, 2008).

Many of the fish species that utilize SAV habitat are either federally managed or important prey species for federally managed species. For example, studies by Weinstein and Brooks (1983), Adams (1976) and Lascara (1981) in Packer et al., (1999) indicate that SAV is important habitat for juvenile summer flounder. Rodgers and Van Den Avyle (1983) also suggest that SAV beds are important to summer flounder, and that any loss of these areas along the Atlantic Seaboard may affect summer flounder stocks. Studies from the lower Chesapeake Bay found that SAV beds area are important for the brooding of eggs and for fishes with demersal eggs and as habitat for the larvae of spring-summer spawners such as anchovies Anchoa spp., gobies, Gobiosoma spp., weakfish (*Cynoscion regalis*), and silver perch (*Bairdiella chrysoura*) (Stephan and Bigford 1997). Heckman and Thoman (1984) concluded that SAV beds are also important nursery habitats for blue crabs (*Callinectes sapidus*). Furthermore, Peterson (1982) in Kenworthy (1988) indicated that shallow dwelling hard clams (*Mercenaria mercenaria*) may be protected from predation by the rhizome layer of seagrass beds. Freshwater SAV such as water celery (*Vallisneria americana*) is equally as important and provides valuable nursery, forage and refuge habitat for a variety of migratory and forage fish species including striped bass (*Morone saxatilis*), alewife (*Alosa pseudoharengus*), blueback herring (*A. aestivalis*), and American shad (*A. sapidissima*).

Aside from its inherent ecological value, SAV meadows can perform functions that both reduce shoreline erosion rates and improve water quality. For instance, robust SAV beds can dampen wave energy (Lei and Nepf, 2019), reduce current velocities (Fonseca et al., 1998), and facilitate sediment deposition over large spatial scales (Zhang and Nepf, 2019). SAV can also improve water quality by assimilating excess dissolved nitrogen and phosphorus and promoting sediment denitrification (McGlathery et al., 2007). Finally, SAV is considered an efficient, long-term carbon sink for its ability to sequester carbon in their biomass and in soil (Hiraishi et al., 2014).

Unlike other sources, SAV beds can sequester carbon that has been accumulated by rivers and tides and store it in soils for millennia (Duarte et al., 2005; Kennedy et al. 2010; Mcleod et al., 2011). Because SAV meadows can store relatively high quantities of carbon, the disturbance of SAV meadows can result in the release of stored gasses back into the atmosphere.

Because of its importance as habitat, the Atlantic States Fishery Management Commission updated their SAV policy in 2018 (Havel and ASMFC Habitat Committee, 2018). Their primary goal is to preserve, conserve, and restore SAV where possible, in order to achieve a net gain in distribution and abundance along the Atlantic coast and tidal tributaries, and to prevent any further losses of SAV in individual states by encouraging the following:

1. Protect existing SAV beds from further losses due to degradation of water quality, physical destruction to the plants, or disruption to the local benthic environment;
2. Continue to promote state or regional water and habitat quality objectives that will result in restoration of SAV through natural re-vegetation;
3. Continue to promote, develop, attain, and update as needed, state SAV restoration goals in terms of acreage, abundance, and species diversity, considering historical distribution records and estimates of potential habitat.
4. Continue to promote SAV protection at local, state and federal levels and when unavoidable impacts to SAV occur from permitted coastal alterations or other unintended actions, agencies should implement compensatory mitigation for the functional and temporal impacts.

We have included several recommendations intended to protect this sensitive and productive aquatic habitat including retaining the requirement that a PCN be coordinated with us for all projects permitted under the NWPs that are proposed within 50 feet of mapped SAV. These recommendations are intended to maintain the level of protection for SAV established under previous iterations of the NWP regional conditions in New York and to ensure that projects permitted under the NWPs have no more than minimal impacts both individually and cumulatively to this important habitat. As discussed with your staff, we will work with you to identify suitable resources and mapping to identify areas of SAV within NY waters.

Emergent Tidal Wetlands

Tidal wetlands are another ecologically valuable aquatic habitat and have also experienced extensive anthropogenic impacts (Odum, 1970, Kennish, 2001). A large body of literature indicates that tidal wetlands are important nursery habitat for many species of fish and invertebrates (see review by Beck et al., 2001). They are also important habitat for forage fish such as killifish which are prey for several federally managed fish species including bluefish (Pomatomus saltatrix) and summer flounder. Several studies (e.g., Peterson et al., 2000; Bilkovic and Roggero, 2008) have indicated that fringe tidal marshes are preferred habitat for juvenile life stages of commercially important fish species relative to armored shorelines. The extensive use of this habitat by a variety of species underscores its importance for the productivity of our nation's fisheries (Lellis-Dibble et al., 2008). Wetlands also provide many other important ecological functions including water storage, nutrient cycling and primary production, sediment retention, water filtration or purification, and groundwater recharge and they are also considered to be special aquatic sites in the CWA.

Anadromous Fish Species
Anadromous species such as alewife, blueback herring, American shad, hickory shad (*Alosa mediocris*), and striped bass annually migrate from the ocean into freshwater rivers and streams in New York to spawn. Thus, the coastal waters of New York including the Hudson River and its tributaries provide either migratory pathways or function as nursery and forage habitat for these species. Because landing statistics and the number of fish observed on annual spawning runs indicate a drastic decline in alewife and blueback herring populations throughout much of their range since the turn of the 20th century and especially since the mid-1960s, river herring (i.e., alewife and blueback herring, collectively) have been designated as Species of Concern by NOAA. Species of Concern are those about which we have concerns regarding their status and threats, but for which insufficient information is available to indicate a need to list the species under the Endangered Species Act (ESA). We wish to draw proactive attention and conservation action to these species.

Both adult and juvenile Alosines are energy-dense and are important prey species for federally managed fish species. For example, Buckel and Conover (1997) in Fahay et al. (1999) report that diet items of juvenile bluefish include Alosa species. Additionally, juvenile Alosines have all been identified as prey species for summer flounder, and windowpane flounder (*Scophthalmus aquosus*) in Steimle et al. (2000). The EFH final rule states that prey species are an important component of EFH and that loss of prey may be an adverse effect on EFH and managed species. As a result, actions that reduce the availability of prey species, either through direct harm or capture, or through adverse impacts to the prey species' habitat, including their ability to access suitable spawning habitat, may also be considered adverse effects on EFH.

Because spawning migrations and the associated physiological changes (e.g., gamete development) are among the most energetically demanding events in the life history of anadromous fishes, we recommend that they are protected from disturbance and allowed to reach their spawning habitats without restriction to the extent practicable. One of the most effective approaches to achieve this protection in New York is to restrict in-water work during the spawning season (i.e., March 1 to June 30). Thus, we continue to recommend inclusion of a time of year restriction for certain activities, but clarifications are needed in regional conditions for a number of the NWP to ensure this seasonal work windows are applied in the appropriate locations.

In our previous coordination on the 2017 NWPs, we provided you with a list of waterways supporting anadromous fish within NY waters. We will work with your staff to generate a revised list and we will also provide resources to assist in identifying anadromous fish waters.

Winter Flounder
For winter flounder, we focus our protection on winter flounder early life stage EFH because these life stages are relatively immobile and unable to move away from threats including sediment disturbing activities such as dredging or filling. In the estuarine waters of NY, the New England Fisheries Management Council has defined winter flounder early life stage EFH as follows:

Eggs: Bottom habitats with a substrate of sand, muddy sand, mud, and gravel, water temperatures less than 10 °C, salinities between 10 - 30 ‰, and water depths less than 5 meters.

Larvae: Pelagic and bottom waters, sea surface temperatures less than 15 °C, salinities between 4 - 30 ‰, and water depths less than 6 meters.

Omnibus Habitat Amendment 2 adds the following:

Eggs: Sub-tidal estuarine and coastal benthic habitats from mean low water to 5 meters from Cape Cod to Absecon Inlet (39° 22' N), including mixed and high salinity zones in the bays and estuaries. The eggs are adhesive and deposited in clusters on the bottom. Essential habitats for winter flounder eggs include mud, muddy sand, sand, gravel, macroalgae, and submerged aquatic vegetation. Bottom habitats are unsuitable if exposed to excessive sedimentation which can reduce hatching success.

Larvae: Estuarine, coastal, and continental shelf water column habitats from the shoreline to a maximum depth of 70 meters from the Gulf of Maine to Absecon Inlet (39° 22' N), and including Georges Bank, including mixed and high salinity zones in the bays and estuaries. Larvae hatch in nearshore waters and estuaries or are transported shoreward from offshore spawning sites where they metamorphose and settle to the bottom as juveniles. They are initially planktonic, but become increasingly less buoyant and occupy the lower water column as they get older.

Winter flounder migrate into spawning areas within mid-Atlantic estuaries when water temperatures begin to decline in late fall. Tagging studies show that most return repeatedly to the same spawning grounds (Lobell 1939, Saila 1961, Grove 1982 in Collette and Klein-MacPhee 2002). Winter flounder typically spawn in the winter and early spring, although the exact timing is temperature dependent and thus varies with latitude (Able and Fahay 1998); however, movement into these spawning areas may occur earlier, generally from mid- to late November through December. Winter flounder have demersal eggs that sink and remain on the bottom until they hatch. After hatching, the larvae are initially planktonic, but following metamorphosis they assume an epibenthic existence. Winter flounder larvae are negatively buoyant (Pereira et al. 1999) and are typically more abundant near the bottom (Able and Fahay 1998). Young-of-the-year flounder tend to burrow in the sand rather than swim away from threats.

A number of the activities authorized under the NWPs can adversely affect EFH for these sensitive life stages in a number of ways including: the loss of habitat by fill placement or dredging to depths unsuitable for these life stages; the destruction of eggs and larvae by entrainment in a dredge; or the increased turbidity and the subsequent deposition of the suspended sediments which can smother the winter flounder eggs. We appreciate that the existing proposed regional conditions includes a number of measures to protect winter flounder EFH including a seasonal work restriction from January 1 to May 31 within areas designated as winter flounder early life stage EFH. We recommend that these conditions remain as part of the regional conditions for NY for the 2020 reissuance of the NWPs. The location and description of EFH for winter flounder can be found in our EFH Mapper at:
https://www.fisheries.noaa.gov/resource/map/essential-fish-habitat-mapper

Nationwide Permits Requiring Individual Coordination

There are also a number of NWPs which have the potential for more than minimal adverse effects to EFH and other NOAA resources. Individual coordination with us, including the submission of a PCN to us by the District and an EFH assessment is necessary for the following NWPs in tidal waters and non-tidal areas that support anadromous fish (e.g., river herring, striped bass):

- NWP 27 –Aquatic Habitat Restoration, Establishment, and Enhancement Activities
- NWP 38 – Cleanup of Hazardous and Toxic Waste
- NWP 52 – Water-based Renewable Energy Generation Facilities
- NWP 53 – Removal of Low Head Dams
- NWP 54 – Living Shorelines
- NWP A – Seaweed Mariculture Activities
- NWP B – Finfish Mariculture Activities

In our previous coordination on the 2017 NWPs, activities authorized by the NWPs in a number of counties within the New York District's boundaries did not require notification or coordination because they did not contain aquatic resources or habitats under our purview. This list is currently contained in Note 2 of Section 2, G-E-8 *Endangered Species and Essential Fish Habitat* of the public notice. We are not recommending any changes to this list.

EFH Conservation Recommendations Applicable to all NWPs

We offer the following EFH conservation recommendations pursuant to Section 305(b)(4)(A) of the MSA to minimize the adverse effects of the listed NWPs on EFH in addition to the changes already included in the Special Public Notice.

- Several NWPs such as 38 and 53 currently include regional conditions that specify that a PCN should be provided directly to us. This has led to some confusion and extra work on the part of the applicants as well as both of our agencies. We often receive PCNs from applicants for NWPs that do not require coordination with us. Because consultations under both the MSA and FWCA are between NMFS and the Corp, we recommend that the regional conditions requiring an applicant to send us a PCN directly should be removed from all of the NWPs.

- On the national level, the Corps has proposed to modify the NWPs that require pre-construction notification to limit the PCN requirement to non-federal permittees. While we do not support this proposed modification, we recognize that the decision to finalize this proposed modification will be made on a national level. We are concerned that for some of these NWPs, the non-Corps lead federal agency may be unaware that they are responsible to ensure compliance with the MSA, including a consultation with us. In the past, the PCN requirements to the Corps ensured impacts to EFH and other NOAA trust resources were considered fully and individual coordination occurred when necessary to avoid, minimize or offset adverse effects to EFH. We recommend that language be added to the regional conditions to remind federal agencies of their responsibilities under the

MSA. This could be added under the appropriate sections (e.g., Section G-E-8-*Endangered Species and Essential Fish Habitat*) as language applying to all 2020 NWPs since it serves as a reminder to non-Corps federal agencies that they are responsible for consultations.

- Most NWPs currently contain a regional condition that requires a PCN in EFH if any work is proposed within SAV habitat or within 50 feet of SAV habitat. As discussed above, SAV is a priority habitat for us for a variety of reasons. We continue to recommend this regional condition be included in the NWPs, but it should be clarified to ensure all SAV, not just estuarine species are protected. Freshwater species such as water celery found in the Hudson River are equally as ecological valuable as species found in the estuaries. As a result, we recommend the phrase "within Essential Fish Habitat" be deleted from all the regional conditions concerning SAV and PCNs.

  We will work with District staff to develop resources for applicants and agency staff to use to identify areas containing SAV in estuarine waters of NY as well as freshwater areas of the Hudson River.

- A number of the NWPs contain regional conditions that specify seasonal work restrictions to minimize impacts to anadromous fish species. We appreciate that these EFH conservation recommendations have remained part of the regional conditions since the last reissuance, but some clarification is needed to ensure that impacts to EFH, including prey species are avoided and minimized and the anadromous fish seasonal work restriction is applied appropriately. We recommend the phrase "within Essential Fish Habitat" be deleted from all the regional conditions addressing a seasonal restriction for anadromous to ensure migratory pathways and spawning habitat are adequately protected and adverse effects to all components of EFH including prey species are minimized.

EFH Conservation Recommendations for Specific NWPs

NWP-3 - Maintenance
Regional condition f should be clarified to delete the phrase "Within Essential Fish Habitat" to ensure that tide gates allow passage of managed fish species and their prey including diadromous fish species.

NWP-6 Survey Activities
Clarify that in water explosives should not be permitted in NY waters under this NWP.

NWP-13 Bank Stabilization
We are concerned that this NWP can allow the construction of offshore breakwaters or the placement of wave attenuation devices or WADS offshore of the shoreline. These types of structures have the potential for greater adverse effects to EFH and other NOAA trust resources than shoreline stabilization measures that are placed at or in close proximity to the shoreline as they can alter the local hydrology, change sedimentation and scour patterns and impact benthic communities and preclude or limit fish access. We recommend adding language to clarify that

term “sills” are not meant to include offshore breakwater or wave attenuating devices. This could be included under “Notes” section of the regional conditions. In the absence of this clarification, a PCN should be provided to us by the Corps if this NWP is used to authorize offshore structures. We also that a PCN be provided to us whenever an applicant requests a waiver of any of the national or regional conditions associated with this NWP.

NWP-27 Aquatic Habitat Restoration, Enhancement, and Establishment Activities
As stated above, a PCN should be sent to us by the Corps for all work under this NWP. We are concerned that the regional conditions state that “compensatory mitigation is not required for activities authorized by this NWP since these activities must result in increases in aquatic resource functions.” While we agree that increases in aquatic resource functions is the goal of the activities authorized under this NWP, because impacts to SAV, shellfish and other special aquatic sites are not precluded, there may be instances where compensatory mitigation may be appropriate to offset losses to SAV or other ecologically important habitats. We recommend that is condition be modified to allow the District flexibility should adverse impacts to ecologically important habitats such as SAV occur. This could be accomplished by adding the word “generally” before the words “compensatory mitigation” in this note.

In addition, to ensure projects authorized under the NWP actually provide increases in aquatic resource functions and are sustainable in the long-term, the PCN to us should include an EFH assessment and should explain what and how aquatic resource functions will be increased; describe the project goals and objectives, and success criteria; and include a monitoring, adaptive management and long-term maintenance plan.

NWP 31- Maintenance of Existing Flood Control Structures
Regional condition a is not necessary since this type of activity is not known to occur in SAV in NY. We recommend it be deleted.

NWP-35 - Maintenance Dredging of Existing Basins
Currently, the regional conditions require a PCN to us for activities in EFH. This condition can be modified to eliminate the need for individual coordination with us if it is updated to include the recommended seasonal restrictions for anadromous fish and winter flounder as well as clarifying that this NWP is for only those locations that were previously permitted to be dredged under the standard permit process to ensure that “historical” maintenance dredging is not permitted under this activity. These are generally the EFH conservation recommendations we provide when we coordinate with the District on PCNs provided to us. Including them as regional conditions upfront would eliminate the need for individual coordination with us and allow us to include this NWP in the General Concurrence. The SAV PCN requirement should also be included in the regional conditions for this NWP.

NWP-36 - Boat Ramps
Due to the limits placed on the scope of work permitted under this NWP and because these structures cannot be located in special aquatic sites, the seasonal restriction regional conditions (a and b) can be deleted. We recommend c, the notification in and near SAV be retained.

NWP-48. Commercial Shellfish Mariculture

We agree that the requirement to provide a PCN to us in and within 50 ft. of SAV should remain as a regional condition. However, because some aquaculture activities occur within EFH for winter flounder early life stages and have the potential for adverse effects, a PCN should be provided to us if the use of a hydraulic clam dredge is proposed in winter flounder egg/larvae EFH within estuarine waters. This will allow us to evaluate the project and its effects rather than recommending a more general blanket time of year restriction on these actions.

NWP A - Seaweed Mariculture and NWP B- Finfish Mariculture:

We recommend that the following be incorporated into the regional conditions for these newly proposed NWPs:

- The new NWPs should follow suit with NWP48, which outright prohibits: (a) The cultivation of a nonindigenous species unless that species has been previously cultivated in the waterbody; and (b) The cultivation of an aquatic nuisance species as defined in the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990- under the NWP.
- The PCN information requirements for these NWPs should be modified to ensure sufficient information is provided to allow for an evaluation of the effects of the proposed activities on EFH and other aquatic resources. This information includes:
    - A description of the quantity and dimensions of all proposed structure(s), including: culture gear (lines, cages pens, etc.), anchors, and site markers;
    - A map showing the project location(s), including the longitude and latitude of site boundaries;
    - A schematic or drawing showing how the gear will be deployed on the site (A formally engineered schematic is not required);
    - The name(s), including sub-species if applicable, and quantities of the species that will be cultivated during the period this NWP is in effect; and,
    - General water depths, bottom characteristics, and benthic species present (including submerged aquatic vegetation) in the project area(s) (a detailed survey is not required).

NWP C - Electric Utility Line and Telecommunications Activities and NWP D -Utility Line Activities for Water and other Substances

We recommend that the same regional conditions included in NWP-12 should also be as regional conditions for these newly proposed NWPs including requiring a frack-out plan for horizontal directional drilling, seasonal work restrictions for anadromous fish and winter flounder and the PCN requirement for work in or near SAV.

Comments on Section G- Buffalo and New York Regional General Conditions

G-E-8 Endangered Species and Essential Fish Habitat

In addition to our comments above recommending that this section clarify that federal agencies remain responsible for consultations with us under the MSA, the websites currently listed for NMFS are out of date. The new website information is as follows:

EFH/MSA and FWCA: https://www.fisheries.noaa.gov/new-england-mid-atlantic/habitat-conservation/essential-fish-habitat-consultations-greater-atlantic-region

ESA:
https://www.fisheries.noaa.gov/topic/consultations#endangered-species-act-consultations

Your Response to our EFH CRs

Section 305(b)(4)(B) of the MSA requires you to provide us with a detailed written response to our EFH conservation recommendations, including a description of measures you have adopted to avoid, minimize or mitigate the impact of the project on EFH. In the case of a response that is inconsistent with these conservation recommendations, Section 305(b)(4)(B) of the MSA also indicates that you must explain your reasons for not following the recommendations. Included in such reasoning would be the scientific justification for any disagreements with us over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects pursuant to 50 CFR 600.920(k). Once a response has been provided to us and the regional conditions are finalized, we will work with you to complete and programmatic consultation which will include a General Concurrence for NWPs that do not require addition coordination, more details on procedures for NWPs that do require individual coordination, and reporting procedures so our agencies can document the consultation efficiencies achieved through coordination on the regional conditions.

Conclusion

Thank you for the opportunity to review and comment on New York's regional conditions for the 2020 NWPs. We look forward to continued coordination as the regional conditions are finalized and programmatic consultation and general concurrence document is developed. Should you have any questions regarding our comments and EFH conservation recommendations, please contact Karen Greene, the supervisor of our Mid-Atlantic field offices at 987 559-9871 or karen.greene@noaa.gov.

Sincerely,

Louis A. Chiarella
Assistant Regional Administrator
for Habitat Conservation

cc: NAN- A Regan,
NAD - J. Haggerty
FWS - S. Papa
EPA - M. Finocchiaro
MAFMC - C. Moore
NEFMC- T. Nies
ASMFC - L. Havel

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UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
GREATER ATLANTIC REGIONAL FISHERIES OFFICE
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November 23, 2020

Randall G. Hintz
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RE: Essential Fish Habitat Assessment, Maintenance Dredging of Jamaica Bay (Rockaway Inlet), New York, Federal Navigation Project

Dear Mr. Hintz:

We have reviewed the essential fish habitat (EFH) assessment provided with your letter dated October 27, 2020, for the maintenance dredging of the Jamaica Bay – Rockaway Inlet, New York Federal Navigation Project and the placement of the dredged material within the U.S. Army Corps of Engineers' (ACOE) Borrow Area West of the Rockaway Ocean Sand Borrow Area (ROSBA-west) located in the Atlantic Ocean offshore of Queens County, New York. According to the information contained in the assessment, approximately 500,000 cubic yards of sand will be removed from Rockaway Inlet, where shoaling has reduced the depth of the channel, using a small hopper or mechanical dredge with scows. The dredged material will be transported to the ROSBA and released via bottom dumping vessels over the borrow area. It is expected that the sand placed at the ROSBA will be removed from the borrow area at some time in the future as part of one of the ACOE beach nourishment projects whose sand source is the ROSBA. Sand removed from the Jamaica Bay Channel is typically placed at the Historic Area Remediation Site (HARS), an existing, EPA-approved, ocean disposal site.

We offer the following comments and recommendations on this project pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and the Fish and Wildlife Coordination Act.

Magnuson Stevens Fishery Conservation and Management Act

The Jamaica Bay Federal Navigation Channel at Rockaway Inlet and the ROSBA have been designated as EFH for a number of federally managed species including Atlantic butterfish (*Peprilus triacanthus*), Atlantic sea herring (*Clupea harengus*), bluefish (*Pomatomus saltatrix*), black sea bass (*Centropristis striata*), red hake (*Urophycis chuss*), silver hake (*Merluccius*

bilinearis; Rockaway Inlet only), scup (*Stenotomus chrysops*), summer flounder (*Paralichthys dentatus*), winter flounder (*Pseudopleuronectes americanus*), windowpane flounder (*Scophthalmus aquosus*), yellowtail flounder (*Limanda ferruginea*), monkfish (*Lophius americanus*), little skate (*Leucoraja erinacea*), winter skate (*Leucoraja ocellata*), longfin inshore squid (*Loligo pealeii*), and others. The project area is also EFH for several highly migratory species including the Atlantic stock of smoothhound shark complex (*Mustelus*), dusky shark (*Carcharhinus obscurus*), common thresher shark (*Alopias vulpinus*), sandbar shark (*Carcharhinus plumbeus*; ROSBA only), sand tiger shark (*Carcharias taurus*; ROSBA only) and others.

The MSA and the FWCA require federal agencies to consult with one another on projects such as this that may adversely affect EFH and other aquatic resources. In turn, we must provide recommendations to conserve EFH. These recommendations may include measures to avoid, minimize, mitigate, or otherwise offset adverse effects on EFH resulting from actions or proposed actions authorized, funded, or undertaken by that agency. 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 this consultation procedure.

In your letter, it states that the proposed maintenance dredging of the Jamaica Bay Federal Navigation Channel at Rockaway Inlet with dredged material placement at the ROSBA will have no more than minimal impacts to EFH and that changes to EFH and its ecological functions will be temporary as well as relatively small and insignificant. The EFH assessment does not provide sufficient information to support this conclusion, particularly since it is unclear how many acres of habitat at the ROSBA will be affected by the placement of the dredged material and whether or not that portion of the ROSBA has been recently dredged. Also, the assessment does not focus on the effects to EFH, but rather considered primarily the effects on fish. As a result, we cannot agree with your conclusion at this time nor can we consider the EFH assessment to be complete.

EFH is defined as, "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." The term "waters" includes aquatic areas and their associated physical, chemical, and biological properties that are used by fish and aquatic areas historically used by fish, where appropriate while "substrate" includes sediment, hard bottom, structures underlying waters and associated biological communities.

The EFH final rule published in the Federal Register on January 17, 2002, defines an adverse effect as "any impact which reduces the quality and/or quantity of EFH" and further states that:

> An adverse effect may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystems components, if such modifications reduce the quality and/or quantity of EFH. Adverse effects to EFH may result from action occurring within EFH or outside EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

For an EFH assessment to be considered complete it should evaluate the impacts of a project on all of the ecosystem components of EFH, not just the effects to a particular fish species. The

ability of fish to move away from a disturbance, the size of the population, or the distribution of a particular fish species does not address the potential effects to the habitat such as changes in water quality, prey, or the substrate. Also, because the goal of an EFH consultation is to identify ways to avoid, minimize or offset adverse effects to EFH from a specific proposed action, the presence of similar habitat elsewhere or the relative quantity of that habitat is not relevant to the effects determination for that specific project.

Winter Flounder

EFH for winter flounder has been designated in the project area, specifically at the Jamaica Bay Federal Navigation Channel at Rockaway Inlet. Winter flounder ingress into spawning areas within mid-Atlantic estuaries when water temperatures begin to decline in late fall. Tagging studies show that most return repeatedly to the same spawning grounds (Lobell 1939, Saila 1961, Grove 1982 in Collette and Klein-MacPhee 2002). Winter flounder typically spawn in the winter and early spring, although the exact timing is temperature dependent and thus varies with latitude (Able and Fahay 1998); however, movement into these spawning areas may occur earlier, generally from mid- to late November through December. Winter flounder have demersal eggs that sink and remain on the bottom until they hatch. After hatching, the larvae are initially planktonic, but following metamorphosis they assume an epibenthic existence. Winter flounder larvae are negatively buoyant (Pereira et al. 1999) and are typically more abundant near the bottom (Able and Fahay 1998). Young-of-the-year flounder tend to burrow in the sand rather than swim away from threats. Increased turbidity and the subsequent deposition of the suspended sediments can smother the winter flounder eggs and would adversely affect their EFH. We appreciate project activities include measures to reduce entrainment of resources that occupy areas in the lower, middle, and upper level of the water column, through keeping sand extracting pumps turned off until the drag head is at or near the sea bottom and when being lifted from the sea bottom. Additionally, we recommend dredging be avoided from January 1 to May 31 to minimize adverse effects to winter flounder eggs and larvae.

Sand Placement

In the Public Notice, it states an Environmental Impact Statement (EIS) was prepared by the ACOE in 1976 and subsequent Environmental Assessments (EAs) updating this EIS were prepared in 1990, 1996, 1998, 2000, 2002, 2004, and 2012. The use of the ROSBA for temporary sand placement was not included in any of these assessments and is expected to be included in a revised EA which will be prepared prior to the implementation of the proposed work. This revised EA should have been prepared prior to initiating consultation with us and provided to us with the EFH assessment.

The ROSBA has not been designated by the EPA for dredged material disposal under Section 102 of the Marine Protection, Research, and Sanctuaries Act (MPRSA). The use of these designated sites for ocean disposal is required to the extent feasible. The HARS, which was previously used for placement of material dredged from the Jamaica Bay Federal Navigation Channel at Rockaway Inlet, is an EPA-designated ocean disposal site. We understand that the ACOE is also authorized to select sites for ocean disposal under Section 103 of the MPRSA, with EPA concurrence, if use of an EPA-designated site is not feasible. However, without an updated EA, the information contained in the EFH assessment and the public notice does not demonstrate that use of the HARS is not feasible.

The exact location of the proposed placement site within the ROSBA has not been identified in the EFH assessment or the Pubic Notice and the habitat conditions of the placement area have also not been described. We appreciate that recent fish and benthic invertebrate sampling was conducted in the ROSBA, but without more details it is difficult to compare how these sampling locations compare to the proposed placement area.

In the assessment, it states that turbidity caused by the dredging and placement of dredged sand will settle out in a few hours and turbidity levels are unlikely to exceed harmful levels for fish. However, no information is provided on the expected turbidity levels that will be generated when the material is released, the extent of the suspended sediment plume and its expected duration. Increases in suspended sediment in the water can degrade water quality and interfere with fish migration, feeding and spawning, all of which can be considered adverse effects to EFH. For example, if the action causes fish to move from preferred feeding or spawning habitat to other less optimal areas, the action could be considered an adverse effect to EFH. It is possible that these adverse effects could be considered minor and temporary, but the assessment does not provide enough information to reach that conclusion.

Additionally, the EFH assessment concludes that impacts to benthic communities in the ROSBA will be short-term and minor because benthic invertebrate species per USACE 2001, are expected to recolonize the borrow area within 2 to 2.5 years. However, without knowing where the material will be placed in relation to what part of the ROSBA has been last dredged or proposed to be dredged for beach placement, it is not possible to assess how long the benthic community will take to recover or how EFH will be affected.

It is also concerning to us that you indicate a need for clean sand material for near future beach nourishment projects, but have not provided more details on these projects or demonstrated that direct beach placement to avoid re-disturbing the benthic habitat is not possible. As such, we do not recommend the use of the ROSBA for placement of dredged materials and encourage the ACOE to be beneficially reuse the material with direct placement or that the material be placed at the HARS.

Additional Information Needs

Based upon the information provided, we cannot agree with your determination that the dredging of the Jamaica Bay Federal Navigation Channel at Rockaway Inlet with placement of the material at the ROSBA will have no more than a minimal adverse effect to EFH. A revised EFH assessment should be prepared to consider the effects of the sand placement on all of the components of EFH, including water quality, substrate, and prey species. The assessment should include the following information:

- The exact location within the ROSBA where the material will be placed,
- Depths and bottom conditions at the exact placement site,
- The date the exact placement site was last dredged,
- Information on the current and planned future use of the ROSBA and ACOE's management plan for the removal of sand from the site, including how often material is removed, and how much of the borrow area is affected with each beach nourishment project,

- Documentation that the material is suitable for placement,
- Information on the extent and duration of the suspended sediment plume to be generated when the dredged material is released over the placement site, and
- A justification that demonstrates that the use of an existing, EPA approved ocean disposal site such as the HARS is not feasible or is not environmentally preferable to the placement of material at the ROSBA. This information should also include a discussion of what other alternatives were considered and reasoning for the selected disposal site.

In addition, we also recommend that the ACOE evaluate the placement of the sand directly on one of the many beaches served by the ROSBA. The revised EFH assessment can be included as a section of the draft EA being developed for this project or provided separately. In either case, the EA should also be provided to us as part of our coordination under both the MSA and FWCA.

Essential Fish Habitat Conservation Recommendations

Pursuant to Section 305(b)(4)(A) of the MSA that you adopt the following EFH conservation recommendations to minimize or offset adverse impacts on EFH:

- Avoid dredging from January 1 to May 31 to minimize adverse effects to winter flounder early life stages.

In-the absence of a revised EFH assessment that evaluates the effects of sand placement at the ROSBA on EFH, including water quality, sediments and prey, we recommend:

- Place sand dredged either at the HARS or, if of suitable grainsize, directly on to one of the beaches that are part of the ACOE's existing beach nourishment program.

Please note that Section 305(b)(4)(B) of the MSA requires you to provide us with a detailed written response to these EFH conservation recommendations, including a description of measures adopted for avoiding, mitigating, or offsetting the impact of the project on EFH. In the case of a response that is inconsistent with our recommendations, Section 305(b)(4)(B) of the MSA also indicates that you must explain its reasons for not following the recommendations. Included in such reasoning would be the scientific justification for any disagreements with us over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects pursuant to 50 CFR 600.920(k).

Please also note that a district and further EFH consultation must be reinitiated pursuant to 50 CRF 600.920 (j) if new information becomes available, or if the project is revised in such a manner that affects the basis for above determination.

Endangered Species Act

Federally listed species may be present in the project area. Consultation, pursuant to Section 7 of the Endangered Species Act (ESA) of 1973, may be necessary. The ACOE will be responsible for determining whether the proposed action is likely to affect listed species. We understand that you are currently working with our Protected Resources Division on submitting a request for ESA consultation. When project plans are complete, you should submit your determination of

effects, along with justification for the determination, and a request for concurrence to nmfs.gar.esa.section7@noaa.gov. After reviewing this information, we would then be able to conduct a consultation under Section 7 of the ESA.

Conclusion

We look forward to continued coordination on this project. If you have any questions or need additional information, please call Jessie Murray at (732) 872-3023 or by e-mail (jessie.murray@noaa.gov). Should you have any questions about the Section 7 consultation process in general, please contact Edith Carson-Supino at 978-282-8490 or by e-mail (edith.carson-supino@noaa.gov).

Sincerely,

Louis A. Chiarella
Assistant Regional Administrator
for Habitat Conservation

cc: GARFO PRD – E. Carson-Supino
GARFO APDS - J. Pelligrino, V. Vecchio
NY ACOE – S. Ryba, C. Provoncha
NJDEP – S. Biggins, K. Davis
FWS – S. Mars
EPA Region II – M. Finocchiaro
NEFMC – T. Nies
MAFMC – C. Moore
ASMFC – L. Havel

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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 01930-2276

November 20, 2020

Daniel Swenson, Chief
Regulatory Branch
U.S. Army Corps of Engineers
Baltimore District
2 Hopkins Plaza
Baltimore, Maryland 21201

Dear Mr. Swenson:

This letter follows up on our letter dated November 13, 2020, as well as emails and phone conversations with your staff containing draft comments, questions, and discussion items on the proposed regional conditions for the Nationwide Permits (NWPs) for the Commonwealth of Pennsylvania, the State of Maryland, and the District of Columbia. We have worked closely with your staff over the years on the development of the regional conditions to avoid and minimize the direct, indirect, individual and cumulative adverse effects of actions authorized under the Nationwide Permit program on NOAA trust resources including essential fish habitat (EFH) and diadromous fishes. We appreciate the efforts that have been made in the past to address our concerns and to incorporate our recommendations into the regional conditions for the NWPs. This year, the process has followed a more compressed timeline than has been common during the previous reissuance and renewals of the NWPs. As a result, our staff have not had the same opportunity for early coordination as they have had in the past although they have been coordinating over the past few weeks.

As in the past, we hope that EFH conservation recommendations provided below will be incorporated into the regional conditions for the NWPs. This will allow us to issue a General Concurrence for a number of the NWPs and will limit the number of activities requiring individual coordination under the Magnuson Stevens Fishery Conservation and Management Act (MSA). This approach is consistent with Part III - Compliance With Relevant Statutes, Section E - *Compliance With the Essential Fish Habitat Provisions of the Magnuson Stevens Fishery Conservation and Management Act* of the September 15, 2020, Federal Register Notice (FRN 85:179 p. 57361) announcing the Corps' proposal to reissue and modify the NWPs which states that Corps districts that have EFH designated within their geographic areas of responsibility will coordinate with us to develop NWP regional conditions that conserve EFH and are consistent with our EFH conservation recommendations. The FRN also states that the Corps districts will conduct consultations in accordance with the EFH consultation regulations at 50 CFR 600.920.

EFH has been designated within the marine and estuarine waters of the Baltimore District. The MSA requires federal agencies, such as the Corps, to consult with us on projects that may

adversely affect EFH, which is defined as "any impact which reduces the quality and/or quantity of EFH." Further, an adverse effect may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystems components, if such modifications reduce the quality and/or quantity of EFH. Adverse effects to EFH may result from action occurring within EFH or outside EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

In addition, the Fish and Wildlife Coordination Act (FWCA) as amended in 1964, requires that all federal agencies consult with us when proposed actions might result in modifications to a natural stream or body of water. It also requires that they consider effects that these projects would have on fish and wildlife and must also provide for improvement of these resources. Through these authorities, we seek to protect, conserve and enhance aquatic resources in marine, estuarine and riverine ecosystems.

Traditionally and in accordance with the EFH regulations, our EFH conservation recommendations are provided in response to an EFH assessment. For NWP regional conditions, an EFH assessment has not been provided and we are not requesting one prior to issuing our conservation recommendations. The EFH conservation recommendations, provided pursuant to Section 305(b)(4)(A) of the MSA, and the FWCA recommendations discussed below are based upon our agencies' previous coordination on the NWPs and regional conditions, the proposed changes to both on the national and District level, and our recent discussions with your staff. These recommendations should be used to modify the regional conditions proposed in your Public Notice dated September 30, 2020 to allow the issuance of a General Concurrence for a number of NWPs and to streamline consultations for those that would still require individual coordination with us.

NOAA Trust Resources

The changes we recommend to the NWP regional conditions prior to their reissuance are primarily intended to better protect three different types of aquatic resources for which we frequently issue EFH conservation recommendations – submerged aquatic vegetation (SAV), emergent tidal vegetation, and anadromous fish species. In previous letters regarding the NWPs and other individual projects we have demonstrated the importance of these aquatic resources, but we include their description here to underscore their sensitivity, ecological productivity, and their associated national importance and value. We also provide scientific justification for requested changes to the NWPs to better protect these important resources.

Submerged Aquatic Vegetation
SAV has been designated as a habitat area of particular concern (HAPC) for summer flounder (*Paralichthys dentatus*) by the Mid-Atlantic Fishery Management Council. HAPCs are subsets of EFH identified based on one or more of the following considerations: 1) the importance of the ecological function; 2) extent to which the habitat is sensitive to human-induced degradation; 3) whether and to what extent, development activities are stressing the habitat type; and/or 4) rarity of habitat type (50 CFR 600.815(a)(8)). In addition, the U.S. Environmental Protection Agency has designated SAV as a special aquatic site under Section 404(b)(1) of the federal Clean Water Act (CWA) because of its important role in the marine ecosystem for nesting, spawning, nursery

cover, and forage areas for fish and wildlife. It is a priority habitat for us for the same reasons.

SAV and their associated epiphytes are highly productive, produce a structural matrix on which many other species depend, improve water quality, and stabilize sediments (Fonseca et al., 1998). Seagrasses are among the most productive ecosystems in the world and perform a number of irreplaceable ecological functions which range from chemical cycling and physical modification of the water column and sediments to providing food and shelter for commercial, recreation as well as economically important organisms (Stephan and Bigford 1997; Orth et al., 2017). SAV meadows support a complex estuarine food web – a single acre of seagrass can support up to 40,000 fishes and 50 million small invertebrates (Miththapala, 2008).

Many of the fish species that utilize SAV habitat are either federally managed or important prey species for federally managed species. For example, studies by Weinstein and Brooks (1983), Adams (1976) and Lascara (1981) in Packer et al. (1999) indicate that SAV is important habitat for juvenile summer flounder. Rodgers and Van Den Avyle (1983) also suggest that SAV beds are important to summer flounder, and that any loss of these areas along the Atlantic Seaboard may affect summer flounder stocks. Studies from the lower Chesapeake Bay found that SAV beds area are important for the brooding of eggs and for fishes with demersal eggs and as habitat for the larvae of spring-summer spawners such as anchovies *Anchoa* spp., gobies, *Gobiosoma* spp., weakfish (*Cynoscion regalis*), and silver perch (*Bairdiella chrysoura*) (Stephan and Bigford 1997). Heckman and Thoman (1984) concluded that SAV beds are also important nursery habitats for blue crabs (*Callinectes sapidus*). Furthermore, Peterson (1982) in Kenworthy (1988) indicated that shallow dwelling hard clams (*Mercenaria mercenaria*) may be protected from predation by the rhizome layer of seagrass beds. Freshwater SAV such as water celery (*Vallisneria americana*) is equally as important and provides valuable nursery, forage and refuge habitat for a variety of migratory and forage fish species including striped bass (*Morone saxatilis*), alewife (*Alosa pseudoharengus*), blueback herring (*A. aestivalis*), and American shad (*A. sapidissima*).

Aside from its inherent ecological value, SAV meadows can perform functions that both reduce shoreline erosion rates and improve water quality. For instance, robust SAV beds can dampen wave energy (Lei and Nepf, 2019), reduce current velocities (Fonseca et al., 1998), and facilitate sediment deposition over large spatial scales (Zhang and Nepf, 2019). SAV can also improve water quality by assimilating excess dissolved nitrogen and phosphorus and promoting sediment denitrification (McGlathery et al., 2007). Finally, SAV is considered an efficient, long-term carbon sink for its ability to sequester carbon in their biomass and in soil (Hiraishi et al., 2014). Unlike other sources, SAV beds can sequester carbon that has been accumulated by rivers and tides and store it in soils for millennia (Duarte et al., 2005; Kennedy et al. 2010; Mcleod et al., 2011). Because SAV meadows can store relatively high quantities of carbon, the disturbance of SAV meadows can result in the release of stored gasses back into the atmosphere.

Because of its importance as habitat, the Atlantic States Fishery Management Commission updated their SAV policy in 2018 (Havel and ASMFC Habitat Committee, 2018). Their primary goal is to preserve, conserve, and restore SAV where possible, in order to achieve a net gain in distribution and abundance along the Atlantic coast and tidal tributaries, and to prevent any further losses of SAV in individual states by encouraging the following:

1. Protect existing SAV beds from further losses due to degradation of water quality, physical destruction to the plants, or disruption to the local benthic environment;
2. Continue to promote state or regional water and habitat quality objectives that will result in restoration of SAV through natural re-vegetation;
3. Continue to promote, develop, attain, and update as needed, state SAV restoration goals in terms of acreage, abundance, and species diversity, considering historical distribution records and estimates of potential habitat.
4. Continue to promote SAV protection at local, state and federal levels and when unavoidable impacts to SAV occur from permitted coastal alterations or other unintended actions, agencies should implement compensatory mitigation for the functional and temporal impacts.

We have included several recommendations intended to protect this sensitive and productive aquatic habitat including: (1) retaining the requirement that a PCN be coordinated with us for all projects permitted under the NWPs that are proposed within 50 feet of mapped SAV, (2) including a condition in NWP 54 to minimize potential impacts to mapped SAV by requiring that low-profile stone sills be located at MLW when they are proposed adjacent to areas colonized by SAV, and (3) retaining the requirement for horned pondweed surveys for projects permitted under NWP 27 in Maryland due to a paucity of data on this species distribution. These recommendations are intended to maintain the level of protection for SAV established under previous iterations of the NWP regional conditions in the Baltimore District and to ensure that project permitted under a recently reinstated NWP (i.e., NWP 54 in the State of Maryland) have no more than minimal impacts both individually and cumulatively.

Emergent Tidal Wetlands

Tidal wetlands are another ecologically valuable aquatic habitat and have also experienced extensive anthropogenic impacts (Odum, 1970; Kennish, 2001). A large body of literature indicates that tidal wetlands are important nursery habitat for many species of fish and invertebrates (see review by Beck et al., 2001). They are also important habitat for forage fish such as killifish which are prey for several federally managed fish species including bluefish (*Pomatomus saltatrix*) and summer flounder. Several studies (e.g., Peterson et al., 2000; Bilkovic and Roggero, 2008) have indicated that fringe tidal marshes are preferred habitat for juvenile life stages of commercially important fish species relative to armored shorelines. The extensive use of this habitat by a variety of species underscores its importance for the productivity of our nation's fisheries (Lellis-Dibble et al., 2008). Wetlands also provide many other important ecological functions including water storage, nutrient cycling and primary production, sediment retention, water filtration or purification, and groundwater recharge and they are also considered to be special aquatic sites in the CWA.

Although you are proposing to reinstate NWP 54 in the State of Maryland, you have not proposed regional conditions to protect existing emergent tidal vegetation habitats from impacts associated with this action beyond what is required in that NWP nationally. We have recommended that language be included to limit the impacts to one square foot of existing tidal wetlands per linear foot of the project extent, similar to what is required in Virginia. This will ensure that existing habitats are protected and establish a more consistent approach across the

Chesapeake Bay. While we appreciate your goal of allowing flexible living shoreline designs under NWP 54, we continue to recommend that existing tidal wetlands be protected under the regional conditions for this activity in the State of Maryland.

The existence of emergent tidal vegetation along a shoreline likely indicates that such a stabilization approach would be successful. However, this approach should not occur at the expense of existing, functioning tidal wetlands. Because tidal wetlands associated with living shorelines only approximate comparable ecological function to reference tidal wetlands after several years of establishment (Currin, 2019), the disturbance of these existing habitats represents a temporal loss of habitat for our resources when properly constructed. Finally, we are concerned that placement dredged material for the construction of living shorelines permitted under NWP 54 could result in the mobilization of sediment into aquatic habitats unless it is properly executed. We have issued one conservation recommendation related to the potential use of this material under NWP 54 to ensure that potential impacts are no more than minimal.

Anadromous Fish Species
Anadromous species such as alewife, blueback herring, American shad, hickory shad (*A. mediocris*), and striped bass annually migrate from the ocean into the coastal tributaries of the Chesapeake Bay to spawn. Thus, much of the coastal waters of Maryland provide either migratory pathways or function as nursery and forage habitat for these species. Because landing statistics and the number of fish observed on annual spawning runs indicate a drastic decline in alewife and blueback herring populations throughout much of their range since the turn of the 20th century and especially since the mid-1960s, river herring (i.e., alewife and blueback herring, collectively) have been designated as Species of Concern by NOAA. Species of Concern are those about which we have concerns regarding their status and threats, but for which insufficient information is available to indicate a need to list the species under the Endangered Species Act (ESA). We wish to draw proactive attention and conservation action to these species.

Both adult and juvenile Alosines are energy-dense and are important prey species for federally managed fish species. For example, Buckel and Conover (1997) in Fahay et al. (1999) report that diet items of juvenile bluefish include *Alosa* species. Additionally, juvenile Alosines have all been identified as prey species for summer flounder, and windowpane flounder *(Scophthalmus aquosus*) in Steimle et al. (2000). The EFH final rule states that prey species are an important component of EFH and that loss of prey may be an adverse effect on EFH and managed species. As a result, actions that reduce the availability of prey species, either through direct harm or capture, or through adverse impacts to the prey species' habitat, including their ability to access suitable spawning habitat, may also be considered adverse effects on EFH.

Because spawning migrations and the associated physiological changes (e.g., gamete development) are among the most energetically demanding events in the life history of anadromous fishes, we recommend that they are protected from disturbance and allowed to reach their spawning habitats without restriction to the extent practicable. One of the most effective approaches to achieve this protection in Maryland is to restrict in-water work during the spawning season (i.e., February 15 – June 15) in coastal plain and certain piedmont streams where anadromous fish are likely to find suitable spawning habitat. Thus, we continue to recommend inclusion of a time of year restriction for certain activities permitted in areas that are

likely to provide spawning habitat. Furthermore, we are currently working with your staff, the Maryland Department of Natural Resources, and Maryland Department of the Environment to ensure that these areas are adequately mapped and defined.

We have made several recommendations intended to minimize the impacts of different activities permitted under the NWPs to diadromous fish species. Because passage restrictions have been a primary driver for their decline, any actions that limit passage of these species will likely represent an adverse effect. Ensuring that stream crossings are properly designed to maintain low-flow channels and that culverts are properly installed (e.g., countersinking) will help to ensure that impacts are no more than minimal. You have suggested several changes to the regional conditions, including (1) reducing the number of activities for which regional general conditions related to fish passage apply, (2) relaxing restrictions on the restoration of stream bottom following the installation of utility lines, and (3) relaxing the countersinking requirements for culverts under 36 inches in diameter. We are concerned about the potential impacts of these proposed changes both individually and cumulatively and we offer the following recommendations to address our concerns.

EFH Conservation Recommendations

We offer the following EFH conservation recommendations pursuant to Section 305(b)(4)(A) of the MSA to minimize the adverse effects of the listed NWPs on EFH in addition to the changes already included in the Special Public Notice.

- There are a number of NWPs which have the potential for more than minimal adverse effects to EFH and other NOAA resources. Individual coordination with us, including the submission of a PCN by the District and an EFH assessment is necessary for the following NWPs in tidal waters and non-tidal areas that support anadromous fish (e.g., river herring, striped bass):
    - NWP 27 –Aquatic Habitat Restoration, Establishment, and Enhancement Activities
    - NWP 38 – Cleanup of Hazardous and Toxic Waste
    - NWP 52 – Water-based Renewable Energy Generation Facilities
    - NWP 53 – Removal of Low Head Dams
    - NWP 54 – Living Shorelines
    - NWP A – Seaweed Mariculture Activities
    - NWP B – Finfish Mariculture Activities

- Nationally, it has been proposed to modify the pre-construction notification (PCN) requirements to limit the PCN requirement to non-federal permittees for the NWPs. We are concerned that for some of these NWPs, where a PCN has been previously required to ensure adequate evaluation under the MSA, the lead federal agency may be unaware that compliance with the MSA, such as a consultation with NMFS, may still be required for certain NWPs to avoid, minimize or offset adverse effects to EFH. As a result, we request that language be added to the Regional Conditions to remind federal agencies of their responsibilities under the MSA. This could be added under the appropriate sections (e.g., Section II in Maryland) as language applying to all 2020 NWPs since it serves as a

reminder to non-Corps federal agencies that they are responsible for consultations.

- Coordination should take place between NMFS and the Corps, as a result, the PCN should be sent to us by the Corps and not the applicant. The description of this coordination should be changed throughout the NAB regional conditions for Pennsylvania to ensure clarity for applicants and improve regulatory efficiency.
- Ensure that our contact information and reference to our division (Habitat Conservation Division) is correct throughout the NAB regional conditions. For example, we are incorrectly identified as "NOAA Chesapeake Bay Office" in the Maryland conditions. We have recently provided your staff with current information.
- Add a general condition for each State/District that specifies that when a project is complete, bottom contours are restored using clean native materials free of trash, debris, and potential exotic species (e.g., seeds, larvae, eggs), where practicable. At the very least, this should apply to NWPs 5, 6, 12, 33, C and D in states where those permits are not proposed to be suspended.
- We recommend that instances of the phrase "pursuant to the requirements of the MSFCMA" be removed from several places in the NWPs. The MSFCMA is only one of the applicable authorities under which consultation would be required. The FWCA is the other. Neither needs to be mentioned in the regional conditions for individual NWPs.

EFH Conservation Recommendations for Specific NWPs:

Several NWPs have the potential to adversely affect EFH and other aquatic resources directly, indirectly, individually, and/or cumulatively. These adverse effects can be minimized through the use of permit-specific conditions. In the proposed NWP regional conditions published in your Public Notice dated September 30, 2020, you proposed to remove many of the requirements applicable to the previous iterations of the NWPs and currently retained in neighboring Corps districts. While we appreciate the goal of increasing regulatory efficiencies, our mandate directs us to ensure that NOAA trust resources are adequately protected from adverse effects and have issued the following recommendations to provide more effective protection for our trust resources and improve regulatory efficiencies. We offer the following EFH conservation recommendations pursuant to Section 305(b)(4)(A) of the MSA to minimize the adverse effects of the listed NWPs on EFH and NOAA trust resources under the purview of the FWCA in addition to the changes already proposed in the Special Public Notice.

<u>Commonwealth of Pennsylvania</u>

NWP 3 – Maintenance
For the proposed condition 1, the tidegate should not only be existing, but also serviceable to ensure that established tidal vegetation behind an abandoned tidal gate is not disturbed by this action.

NWP 7 – Outfall structures and associated intake structures
We recommend rewording to clarify what type of design is sufficient to avoid/minimize impacts to fish related to impingement/entrainment. Condition 2 should read as follows: "The intake structure will be located and constructed to minimize impingement and entrainment of aquatic species. This would include positioning intake screens perpendicular to the predominant

direction of flow and/or designs that result in stream velocities over, around or past the intake structure that exceed the velocities through the intake structure." This is similar to the language used in other districts for this NWP. We recommend that this be required in areas of the Commonwealth of Pennsylvania under jurisdiction of the Baltimore and Philadelphia districts to protect diadromous species (e.g., American eel). This should, at the very least, be applicable to areas under the jurisdiction of the Philadelphia District (i.e., lower Delaware River) due to the presence of anadromous fish (e.g., *Alosa* spp.).

NWP 12 – Oil or Natural Gas Pipeline Activities

We recommend that the following conditions be added to minimize impacts to streams and their riparian buffers, following an evaluation by the Corps to determine whether each condition would be "enforceable" under their jurisdiction:

- "Where a pipeline is constructed parallel to a stream corridor, a buffer shall be maintained between the utility and the waterway to avoid or minimize potential future impacts to waters of the United States. These disturbances would include such issues as leaks or failures, future stream channel meandering, stream bank instability and failure, and right-of-way maintenance. Measures designed to satisfy this condition must be described in any PCN to the District Engineer. This is the language used by NAP in NJ and DE.
- "Pipelines installed below the plane of ordinary high water of any stream or waterway shall be constructed in/under dry conditions, using stream diversions other than earthen cofferdams, unless construction in/under dry conditions is demonstrated to the satisfaction of the District Engineer to be impracticable."

For actions within the Philadelphia District Area of Regulatory Responsibility, we recommend any additional RCs used in NJ and DE be included here to ensure consistency across that District.

NWP 28 – Modifications to Existing Marinas
Because existing marinas established prior to 1968 were not required to obtain a standard permit, we recommend that this NWP not be allowed to modify existing marinas established before this time.

NWP 35 – Maintenance Dredging of Existing Basins
We recommend the following regional condition requiring the following information be retained: "existing depths for the project site and nearby channel, and a survey of submerged aquatic vegetation in the vicinity of the dredge site, and plans indicating the dimensions (width and depth) and the approximate date of the most recent authorized dredging, and identifying the location of the upland disposal site(s)."

We also recommend that this NWP be restricted to only those locations that were previously permitted to be dredged under the standard permit process to ensure that "historical" maintenance dredging is not permitted under this activity.

NWP 48 Shellfish aquaculture
Ensure that the regional conditions for this action are consistent with those required in other

states under the jurisdiction of the Philadelphia District (e.g., Delaware, New Jersey).

NWP 54 – Living Shorelines

We recommend that the following conditions be added to the NWP regional conditions for areas in the Commonwealth of Pennsylvania under the jurisdiction of the Philadelphia District:

- This activity authorizes the placement of sandy fill material, including the placement of sandy fill material landward of the sills provided the fill is for erosion control and/or wetland enhancement (and not solely recreational activities). The maximum fill area within waters of the United States that can be authorized under this NWP is one (1) acre. For the purpose of this NWP, a sill is defined as a low, detached structure constructed near shore and parallel to the shoreline for the purpose of building up an existing beach by trapping and retaining sand in the littoral zone. Because a sill acts like a natural bar, it is most effective when constructed at or near the mean low water line and low enough to allow wave overtopping.
- Areas colonized by submerged aquatic vegetation (SAV) shall be avoided. If SAV is present, the design should avoid this sensitive habitat by designing low–profile stone sills to be installed at or above the MLWL in areas where SAV is directly adjacent to the shoreline and grading of uplands to achieve desired slopes, where applicable.
- The grain size of the source material used for fill must be quality beach sand that is the same size or larger than that of the native beach material and suitable for the proposed project. Excess silt/clay fraction and grain sizes slightly smaller than the former native sands will perform poorly. In most cases, sand material with no more than 10% passing a #100 sieve will be appropriate. All material will be obtained from either an upland source, a borrow pit, or dredge material approved by the Corps.
- Sills will be designed with at least one 5-foot window/gap per property and per 100 linear feet of sill unless waived by the District Engineer. If windows/gaps are lined with stone/sill material, the height of such material should not extend above mean low water.
- The sill height should be a maximum of +1 foot above mean high water and should be placed at a distance no greater than 30 feet from mean low water to the landward side of the sill unless waived by the District Engineer.
- The total amount of vegetated wetlands which may be filled, graded, or excavated, in square feet, should not exceed the length of the activity along the shoreline in linear feet (e.g., 500 square feet of impacts to emergent wetland vegetation for a project stabilizing 500 linear feet of shoreline) unless the District Engineer waives this criterion by making a written determination concluding that the project will result in minimal adverse effects.

NWP C – Electric Utility Line and Telecommunication Activities

We recommend that the same conditions described in NWP 12 above be included here and that these conditions remain consistent across the Philadelphia District Area of Regulatory Responsibility.

NWP D – Utility Line Activities for Water and Other Substances

We recommend that the same conditions described in NWP 12 above be included here and that these conditions remain consistent across the Philadelphia District Area of Regulatory Responsibility.

RGC 2: Aquatic Life Movement
To ensure that activities permitted under the NWPs do not adversely affect aquatic life movement, we recommend the following requirements be added, similar to what is proposed in Maryland. Furthermore, this should be applicable throughout the Baltimore and Philadelphia Districts of Regulatory Responsibility in Pennsylvania (i.e., not in the Pittsburgh District), due to the occurrence of diadromous fish species (e.g., American eel, alosines) in the vast majority of these waters. However, due to the broad spatial occurrence of American eels (i.e., tidal areas to headwater streams), we only request that a PCN be submitted to us when this occurs in waters with anadromous fish species We will provide a list of these waters to you prior to the issuance of the NWPs.

"For culverted road crossings of perennial and intermittent streams culverts must meet the below depression criteria or a Pre-Construction Notification (PCN) is required to be submitted to the District Engineer for review and coordination with the National Marine Fisheries Service in anadromous fish use areas. Extensions of existing culverts that are not depressed below the stream bottom do not require a PCN.

a. Culverts measuring greater than 36 inches in diameter must be depressed 12 inches below the stream bottom; or
b. Culverts measuring 36 inches or less in diameter must be depressed 6 inches below the stream bottom."

RGC 32 – Pre-Construction Notification
Condition 2, which stipulated PCN when projects were located within 50' of SAV has been restricted to only apply to certain activities. We recommend that the scope of this condition not be limited to certain activities to ensure that this important habitat is not adversely affected.

<u>State of Maryland</u>

NWP 3 – Maintenance
We recommend including "serviceable" in addition to "existing" tide gates under condition 1a to ensure that only the maintenance of previously (i.e., immediately prior to the event which resulted in the structure requiring emergency maintenance) operational structures be allowed.

NWP 27 – Aquatic Habitat Restoration, Establishment, and Enhancement Activities
We recommend that applicants proposing to impact over 10,000 square feet of aquatic estuarine habitat be required to survey for *Zannichellia palustris* (horned pondweed) due to the wide variety of projects permitted under NWP 27 and because there is a paucity of data on the spatial distribution of this species (i.e., VIMS does not survey during the *Zannichellia* growing period). Formally, this was required for all NWP 27 activities, but was removed from the proposed draft. Upon further consideration and discussion with your staff, we recommend that this condition be reinstated, but with a spatial threshold for impacts for the survey requirement. This is necessary to achieve adequate protection for *Zannichellia*, which is considered a special aquatic site under the CWA and an HAPC for summer flounder, and to avoid requiring that additional conditions be prerequisite for smaller projects with environmental effects that are likely no more than minimal due to their size and the described goals of activities permitted under this NWP (i.e., restoration).

NWP 48 – Commercial Shellfish Aquaculture Activities
To facilitate permitting of several aquaculture projects in Maryland, we recommend that you remove the restriction on shellfish aquaculture in anadromous fish spawning habitat and, in its place, require that a PCN be coordinated with us for projects proposed in these areas (i.e., those designated as spawning habitat in the Maryland Coastal Atlas (see: https://dnr.maryland.gov/ccs/coastalatlas/Pages/default.aspx).

To address concerns regarding the inter-annual variation in the spatial distribution of SAV, we recommend that the following condition be added "No aquaculture activity shall occur within beds of submerged aquatic vegetation (SAV) or saltmarsh, nor shall such vegetation be damaged or removed. Should an area become colonized by SAV or saltmarsh after an authorized aquaculture activity is installed, the activity shall be allowed to remain; however, no expansion of the aquaculture operation into newly colonized areas is authorized by this NWP. Information on the location of SAV beds can be found at: http://mobjack.vims.edu/sav/savwabmap/" This requirement is similar to what is required by the Norfolk District and should increase consistency across the Chesapeake Bay.

NWP 54 – Living Shorelines
We recommend that several conditions be added to this newly reinstated NWP in Maryland in order to adequately protect our resources. We provided several of these conditions in our informal comments and your staff was unable to describe which of these would be likely to be incorporated or what the intended protections were for our resources. The regional conditions proposed for this NWP are currently minimal and they do not align with those conditions stipulated in the Norfolk District, which will lead to inconsistent use of this permit in the Chesapeake Bay. Furthermore, you have not responded to our recommendations for the Maryland State Programmatic General Permit - 6 (MDSPGP-6), which will also be used to permit living shoreline projects in Maryland. For these reasons we request that your staff meet with us to discuss the intended permitting pathways for living shoreline projects in Maryland prior to the issuance of the NWPs to discuss these issues and address our concerns for impacts to our trust resources.

At the very least, we recommend that the following conditions be added, due to a lack of specific protections for special aquatic sites (i.e., SAV, tidal wetlands) in the NWP as proposed:

- The total amount of vegetated wetlands which may be filled, graded, or excavated, in square feet, may not exceed the length of the activity along the shoreline in linear feet unless the District Engineer waives this criterion by making a written determination concluding that the project will result in minimal adverse effects." This will ensure that the proposed condition (f) in NWP 54 is appropriately satisfied.
- Areas mapped by the Virginia Institute of Marine Sciences (VIMS) to contain submerged aquatic vegetation (SAV) in the last five years of surveys (see: https://mobjack.vims.edu/sav/savwabmap/) shall be avoided to the maximum extent practicable. This will include designing low-profile stone sills to be installed at or above the MLWL in areas where SAV is directly adjacent to the shoreline and grading of uplands to achieve desired slopes, where applicable.

- The grain size of the source material used for fill must be beach quality sand that is the same size or slightly larger than that of the native beach material and suitable for the proposed project. Excess silt/clay fraction and grain sizes smaller than the former native sands will perform poorly. In most cases, sand material with no more than 10% passing a #100 sieve is appropriate. All fill material will be obtained from either an upland source, a borrow pit, or dredge material approved by the Corps.

NWP A – Seaweed Mariculture Activities
We recommend that the following conditions be incorporated into the regional conditions for this newly proposed NWP:

- The new NWPs should follow suit with NWP48, which outright prohibits: (a) The cultivation of a nonindigenous species unless that species has been previously cultivated in the waterbody; and (b) The cultivation of an aquatic nuisance species as defined in the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990- under the NWP.
- For consistency with NWP 48, add the following condition: "No aquaculture activity shall occur within beds of submerged aquatic vegetation (SAV) or saltmarsh, nor shall such vegetation be damaged or removed. Should an area become colonized by SAV or saltmarsh after an authorized aquaculture activity is installed, the activity shall be allowed to remain; however, no expansion of the aquaculture operation into newly colonized areas is authorized by this NWP. Information on the location of SAV beds can be found at: http://mobjack.vims.edu/sav/savwabmap/
- For the PCN, modify the PCN information requirements to include:
    - A description of the quantity and dimensions of all proposed structure(s), including: culture gear (lines, cages pens, etc.), anchors, and site markers;
    - A map showing the project location(s), including the longitude and latitude of site boundaries;
    - A schematic or drawing showing how the gear will be deployed on the site (A formally engineered schematic is not required);
    - The name(s), including sub-species if applicable, and quantities of the species that will be cultivated during the period this NWP is in effect; and,
    - General water depths, bottom characteristics, and benthic species present (including submerged aquatic vegetation) in the project area(s) (a detailed survey is not required).

NWP B – Finfish Mariculture Activities
We recommend that the following conditions be incorporated into the regional conditions for this newly proposed NWP:

- The new NWPs should follow suit with NWP48, which outright prohibits: (a) The cultivation of a nonindigenous species unless that species has been previously cultivated in the waterbody; and (b) The cultivation of an aquatic nuisance species as defined in the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990- under the NWP.
- For consistency with NWP 48, add the following condition: "No aquaculture activity shall occur within beds of submerged aquatic vegetation (SAV) or saltmarsh, nor shall such vegetation be damaged or removed. Should an area become colonized by SAV or saltmarsh after an authorized aquaculture activity is installed, the activity shall be allowed to remain; however, no expansion of the aquaculture operation into newly

colonized areas is authorized by this NWP. Information on the location of SAV beds can be found at: http://mobjack.vims.edu/sav/savwabmap/"

- For the PCN, modify the PCN information requirements to include:
    - A description of the quantity and dimensions of all proposed structure(s), including: culture gear (lines, cages pens, etc.), anchors, and site markers;
    - A map showing the project location(s), including the longitude and latitude of site boundaries;
    - A schematic or drawing showing how the gear will be deployed on the site (A formally engineered schematic is not required);
    - The name(s), including sub-species if applicable, and quantities of the species that will be cultivated during the period this NWP is in effect; and,
    - General water depths, bottom characteristics, and benthic species present (including submerged aquatic vegetation) in the project area(s) (a detailed survey is not required).

RGC 2: Aquatic Life Movement

- We recommend that the following NWPs should be included in this condition: 22, 23, 25, and 37.
- We recommend that the countersinking requirements should remain applicable to all Maryland waters. Removal of this requirement would likely have an adverse impact on resources protected under the FWCA (e.g., American eel).
- In order to minimize impacts to fish passage, we recommend that the following language be retained in condition #3: "Culverts placed in streams must be installed to maintain low flow conditions as stated above. A low flow channel must be maintained through any discharges placed for armoring across the channel so as to not impede flow in the waterway and/or not to block or impede the movements of anadromous, estuarine, and resident fish."

<u>District of Columbia</u>

NWP 3 – Maintenance

We recommend including "serviceable" in addition to "existing" tide gates under condition 1a to ensure that only the maintenance of previously (i.e., immediately prior to the event which resulted in the structure requiring emergency maintenance) operational structures be allowed.

NWP 7 – Outfall structures and associated intake structures

We recommend rewording to clarify what type of design is sufficient to avoid/minimize impacts to fish related to impingement/entrainment. Point 2 should read as follows: "The intake structure will be located and constructed to minimize impingement and entrainment of aquatic species. This would include positioning intake screens perpendicular to the predominant direction of flow and/or designs that result in stream velocities over, around or past the intake structure that exceed the velocities through the intake structure." This is similar to the language used in other districts for this NWP.

NWP 12 – Oil or Natural Gas Pipeline

We recommend that the following conditions be added to minimize impacts to streams and their

riparian buffers, following an evaluation by the Corps to determine whether each condition would be "enforceable" under their jurisdiction:

- "Where a pipeline is constructed parallel to a stream corridor, a buffer shall be maintained between the utility and the waterway to avoid or minimize potential future impacts to waters of the United States. These disturbances would include such issues as leaks or failures, future stream channel meandering, stream bank instability and failure, and right-of-way maintenance. Measures designed to satisfy this condition must be described in any PCN to the District Engineer. This is the language used by NAP in NJ and DE.
- "Pipelines installed below the plane of ordinary high water of any stream or waterway shall be constructed in/under dry conditions, using stream diversions other than earthen cofferdams, unless construction in/under dry conditions is demonstrated to the satisfaction of the District Engineer to be impracticable."

We also recommend the following

- To ensure that stream utility crossings do not become barriers for fish migration, we recommend reinstating the requirements for sinking pipelines below streambed and restoring natural contours.
- A PCN should be provided to us when the following is proposed:
    - An open-cut pipeline affects a tidal tributary stream or non-tidal stream
    - The pipeline does not make a direct or perpendicular crossing
    - An open-cut pipeline is constructed in WOTUS that runs parallel to a stream and is within 100 feet of mean high water/ OHWM.

NWP 13 – Bank stabilization

We recommend retaining the requirement that projects should use natural stabilization techniques to the extent practicable. There is very little natural shoreline in DC and it should be restored, when possible.

NWP 35 – Maintenance Dredging of Existing Basins

We recommend that this NWP be restricted to only those locations that were previously permitted to be dredged under the standard permit process to ensure that "historical" maintenance dredging is not permitted under this activity.

NWP 54 – Living Shorelines

We recommend that the following conditions be added, due to a lack of specific protections for special aquatic sites (e.g., SAV, tidal wetlands) in the NWP as proposed:

- "The total amount of vegetated wetlands which may be filled, graded, or excavated, in square feet, may not exceed the length of the activity along the shoreline in linear feet unless the District Engineer waives this criterion by making a written determination concluding that the project will result in minimal adverse effects." This will ensure that the proposed condition (f) in NWP 54 is appropriately satisfied.
- "Areas mapped by the Virginia Institute of Marine Sciences (VIMS) to contain submerged aquatic vegetation (SAV) in the last five years of surveys (see: https://mobjack.vims.edu/sav/savwabmap/) shall be avoided to the maximum extent practicable. This will include designing low-profile stone sills to be installed at or above the MLW in areas where SAV is located directly adjacent to the shoreline and grading of

uplands to achieve desired slopes, where applicable."

NWP C – Electric Utility Line and Telecommunication Activities
We recommend that the same conditions described in NWP 12 above be included in the regional conditions for this action.

NWP D – Utility Line Activities for Water and Other Substances
We recommend that the same conditions described in NWP 12 above be included in the regional conditions for this action.

RGC 2 – Aquatic Life Movement

- We recommend that this RGC also be applicable to the following NWPs: 2, 5, 7, 11,15,17, 31, 37, 43, 52.
- We recommend that the countersinking requirements should remain applicable to all perennial streams in the District of Columbia. Removal of this requirement would likely have an adverse impact on resources protected under the FWCA (e.g., American eel).
- In order to minimize impacts to fish passage, we recommend that the following language be retained: "Culverts placed in streams must be installed to maintain low flow conditions as stated above. A low flow channel must be maintained through any discharges placed for armoring across the channel so as to not impede flow in the waterway and/or not to block or impede the movements of anadromous, estuarine, and resident fish."

RGC 32 – PCN Requirements

- The following NWPs should be added to the SAV PCN requirement: 4, 15, 25, 33, 36, 39, 42, 43
- With regards to requirement number 4, we recommend that culvert countersinking requirements be applicable to all perennial and intermittent streams, similar to our comments on RGC 2. However, the Corps should only provide us with a PCN in anadromous fish use areas where this cannot be achieved. Furthermore, the list of NWPs for which this condition applies should be removed from this point to avoid confusion from applicants. The list provided in RGC #2 should be adequate.

Your Response to our EFH CRs

Section 305(b)(4)(B) of the MSA requires you to provide us with a detailed written response to our EFH conservation recommendations, including a description of measures you have adopted to avoid, minimize or mitigate the impact of the project on EFH. In the case of a response that is inconsistent with these conservation recommendations, Section 305(b)(4)(B) of the MSA also indicates that you must explain your reasons for not following the recommendations. Included in such reasoning would be the scientific justification for any disagreements with us over the anticipated effects of the proposed action and the measures needed to avoid, minimize, mitigate, or offset such effects pursuant to 50 CFR 600.920(k). Once a response has been provided to us and the regional conditions are finalized, we will work with you to complete and programmatic consultation which will include a General Concurrence for NWPs that do not require addition coordination, more details on procedures for NWPs that do require individual coordination, and

reporting procedures so our agencies can document the consultation efficiencies achieved through coordination on the regional conditions.

Conclusion

Thank you for the opportunity to review and comment on the Baltimore District's regional conditions regarding impacts to EFH and other NOAA trust resources. Should you have any questions regarding our comments, please contact Mr. Jonathan Watson (phone: 410-295-3152 or email: jonathan.watson@noaa.gov) in our Annapolis field office.

Sincerely,

Louis A. Chiarella
Assistant Regional Administrator
for Habitat Conservation

cc: NAB-B. Bachur, N. Voelker
NAP - B. Bellacima
NAD - J. Haggerty
FWS - R. Li
EPA - M. Fitzgerald
MAFMC – C. Moore
NEFMC – T. Nies
ASMFC –L. Havel
MDNR - G. Golden
DDOE - J. Dietzen

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John F. Quinn, J.D., Ph.D., *Chairman* | Thomas A. Nies, *Executive Director*

November 18, 2020

Dr. Lyndie Hice-Dunton
Executive Director
Responsible Offshore Science Alliance
Via email

Dear Dr. Hice-Dunton:

Thank you for giving us the opportunity to review the Interim Fisheries Resources Research, Survey, and Monitoring Guidelines for wind energy areas (WEAs). The guidelines are an excellent step towards developing effective monitoring programs that will document the changes in the marine environment that result from WEAs, and we appreciate the substantial effort required to develop them over a relatively short time period. Specific line by line comments on the text are included on the enclosed spreadsheet.

We believe, however, that well-designed guidelines will be most effective if they are an element of a holistic monitoring plan, and suggest that additional steps are necessary to assure that monitoring is cost effective and capable of informing decisions that impact fisheries and marine ecosystems. Specifically, while monitoring guidelines are helpful and necessary, we think it is also important to have a process leading to agreement on:

- A conceptual framework for how wind farms affect ecosystems,
- How these effects translate into impacts,
- Measures and standards to judge the magnitude of the impacts,
- A sampling design to efficiently assess impacts relative to standards, and test hypotheses,
- Priority setting and budgeting (since there will not be enough resources to do it all, certainly not all at once),
- Data management including user-friendly information products to assist decision making, and
- Performance review.

Ideally, a holistically designed portfolio of monitoring projects will result in a program that is greater than the sum of its parts. A thoughtful strategic planning process will help to ensure that individually planned, funded, and implemented projects provide the information needed by decision makers. Such an approach will also help to reconcile the priorities of different stakeholders and better allocate limited resources to fulfill monitoring needs. Furthermore, a strategic approach, combined with ROSA's monitoring guidelines, will help standardize data and methods across different projects so that temporal and spatial comparisons can be made efficiently (i.e., without spending more than necessary).

Ongoing efforts including the Synthesis of the Science initiative have involved European experts. This international collaboration will help us to learn from their successes and challenges as we design environmental monitoring programs for the Northeast United States. It will be

important to consider not only specific findings about effects and how they might apply, but also whether their planning processes might provide a useful template for our work. For example, the Belgian North Sea monitoring program, WinMon.BE, is hypothesis-driven and focused on regional-scale insights. Other non-wind-related planning and prioritization processes could be considered as examples of effective approaches as well. For example, GLOBEC's conceptual framework with testable hypotheses was designed by an academic scientific steering committee, followed by a peer review of the framework, a series of budget priority discussions to decide on the priority elements of the plan that should be funded first, how much they should cost, then a competitive grants program according to the budget, then workshops to jointly review data, and finally a review of program performance. Dr. Mike Sissenwine was involved in this program and would be happy to discuss its relevance with you.

Moving towards a holistic monitoring program will be challenging, but we are encouraged that ROSA brings together a broad range of experts from diverse organizations, and thus can serve as a venue for strategic regional planning. We look forward to working with our colleagues to advance mutual interest in producing sound science on wind farms and their impacts on fisheries.

Sincerely,

Thomas A. Nies

Thomas A. Nies
Executive Director

Last name	First name	Affiliation	Email	Page #	Line #	Comment
Bachman	Michelle	NEMFC	mbachman@nefmc.org	1	24	Of the six listed items, #2 seems most important. Should the primary purpose of the guidelines be to "guide the design and implementation of monitoring to maximize the value of data in terms of informing BOEM and other agencies' needs to understand how wind farms affect marine resources, and how to minimize undesirable impacts." This is a more fleshed-out way of saying "generate meaningful results".
Bachman	Michelle	NEMFC	mbachman@nefmc.org	1	chart	Would be helpful to make the IRMA flowchart much larger
Bachman	Michelle	NEMFC	mbachman@nefmc.org	2	4	These 7 items are a reasonable strategy for designing a monitoring program, but they are pretty obvious. Hopefully, the remainder of this document provides some specifics that help with the design of monitoring for wind farms. It seems like a piece that is missing here is prioritizing – maybe that is embedded in #2 'concise' and #3 'focus'. We won't be able to do everything that we might wish, and we may struggle to fund enough sampling to have the statistical power to detect changes.
Bachman	Michelle	NEMFC	mbachman@nefmc.org	2	18	With sampling design, suggest including a reference to power analysis (this is included on p 5 but seems important here too).
Bachman	Michelle	NEMFC	mbachman@nefmc.org	2	23	Does this really mean project duration as in the whole timeframe over which power is being generated, and decommissioning? That would be great – but seems to go well beyond the duration of the sampling programs envisioned to date. If the intent is very long-term sampling, suggest calling this out more explicitly.
Bachman	Michelle	NEMFC	mbachman@nefmc.org	2	26	Maybe 'inherent to' or 'at the site' vs. 'unique to' the site? Also, seems you are trying to get at studies that can be done within the lease without the need for external control areas. An obvious example here would be an assessment of benthic habitat conditions.
Bachman	Michelle	NEMFC	mbachman@nefmc.org	2	30	Maybe 'Project-specific but local, or sub-regional? Also, locations outside project = control areas. Struggling a bit with site-specific vs. project-specific separation – it seems that most site specific studies would benefit from a comparison to locations outside the site.
Bachman	Michelle	NEMFC	mbachman@nefmc.org	2	44	Could move this up to the beginning of the document.
Bachman	Michelle	NEMFC	mbachman@nefmc.org	3	11	Should post-construction time frame be specified? Would also be helpful to establish a pre-construction time frame.
Bachman	Michelle	NEMFC	mbachman@nefmc.org	3	21	Suggest rewording to 'fisheries use and establish baseline conditions'
Bachman	Michelle	NEMFC	mbachman@nefmc.org	3	23	What does standardized methods mean? Is it about technology, sampling design, or something else? Why standardize? Is this for comparison between sites? If so, what type of comparisons are useful? Will comparisons be valuable if differences physical conditions and depth affect performance of sampling equipment? Is it more important to design monitoring for comparison between areas or over time within a single area? Standardization may be different for these two type of comparisons.
Bachman	Michelle	NEMFC	mbachman@nefmc.org	4	1	The draft Guidelines talk about a monitoring program to address needs to answer questions about impacts, but how does this list relate to the priority questions to be addressed? Also (and this may relate to BOEM's separation of fishery vs. benthic guidance), why is habitat mapping outside this framework, but measurement of oceanographic variables (which also define species' habitats) within this framework? Consider a more holistic approach to measuring habitat characteristics and evaluating habitat usage.
Bachman	Michelle	NEMFC	mbachman@nefmc.org	4	19	So is it statistical or biological significance we are looking for? Monitoring should be designed to detect what's deemed as biologically significant with a specified probability of type 1 and type 2 errors. That is monitoring shoud be designed to collect data on measure of impact for comparisons to standards (i.e., acceptable amounts of impact)?
Bachman	Michelle	NEMFC	mbachman@nefmc.org	5	20	Is two years really adequate for pre-construction baselines? If BOEM requires at least two years but more is better, suggest saying so in this document. Similar comment for post-construction – what is the minimum requirement vs. what is preferred?
Bachman	Michelle	NEMFC	mbachman@nefmc.org	5	23	Stratification by habitat type would require decent habitat maps going into the study.
Bachman	Michelle	NEMFC	mbachman@nefmc.org	6	11	This is a good diagram to illustrate temporal and spatial comparisons.
Bachman	Michelle	NEMFC	mbachman@nefmc.org	6	14	Sample size determination. Is there anything unique about sample size determination for wind farm monitoring, or is adequate to say that statistical design of sampling will follow well known sampling design methodologies? This section isn't really about sample size. It seems to be about deciding what size effect should be detectable by the monitoring program (e.g., for indicators or measures, what is the performance standard).
Bachman	Michelle	NEMFC	mbachman@nefmc.org	6	18	What does it mean to say that sample size should be sufficient to enable replication?
Bachman	Michelle	NEMFC	mbachman@nefmc.org	6	24	What does "If there is high uncertainty about the effect on a species/group, then a smaller effect size should be used" mean?
Bachman	Michelle	NEMFC	mbachman@nefmc.org	7	1	This list of considerations for determining the effect size to be detected "sounds good", but is it detailed enough? For example, why might the effect size I want to detect be different between planktivores and piscivores? For this list to be useful, there needs to be examples that illustrate why the considerations might lead to differences in detection threshold for effects.
Bachman	Michelle	NEMFC	mbachman@nefmc.org	8	10	Should include or should consider/could include?

Bachman	Michelle	NEMFC	mbachman@nefmc.org	12	23	Data Maintenance and Sharing. This is one of the most important aspects of monitoring programs to assure the maximum value of the data. It requires a rigorously designed inter-comparability standards. ROSA shouldn't re-invent the wheel. There are standards that have been developed and applied beginning a couple of decades ago with the advent of US and global commitment to Ocean and Earth Observing systems at local to global scales.
Bachman	Michelle	NEMFC	mbachman@nefmc.org	12	28	Has ROSA discussed who might host data sets?
Bachman	Michelle	NEMFC	mbachman@nefmc.org	12	33	Has ROSA considered creating a warehouse for survey reports?
Bachman	Michelle	NEMFC	mbachman@nefmc.org	13	15	If a wind energy company uses a foreign vessel or foreign research organization to run its monitoring program, this section should at least mention the requirement for prior approval of foreign scientific research. See Presidential Proclamation here: https://www.whitehouse.gov/presidential-actions/proclamation-revision-united-states-marine-scientific-research-policy/. Note that the Department of State has a key role.
Bachman	Michelle	NEMFC	mbachman@nefmc.org	14	3	It seems important to integrate these two types of plans.