



## Fishermen's Advisory Board Response to Orsted Submissions

March 25, 2021

### Summary

The Fishermen's Advisory Board (FAB) received a number of documents from Orsted via CRMC staff in February and early March. This letter is a response to those documents, itemized below. An additional response is pending to Orsted's letter of March 11, 2021 Re: South Fork Wind, LLC's Comprehensive Mitigation Proposal.

Overall, the FAB's assessment is that Orsted's current offer of compensatory mitigation and current plan for non-compensatory mitigation do not meet the enforceable policies under the Ocean SAMP. Orsted has consistently taken an approach of imposing their desired mitigation on fisheries user groups, while picking and choosing which groups and which significant adverse impacts can even be considered. None of this is supported by either the Ocean SAMP or the Coastal Zone Management Act (CZMA). They have refused to engage meaningfully with the FAB and have even refused to attend necessary mitigation negotiations under the Ocean SAMP. Instead, they have filed a battery of documents replete with errors, misstatements, and mischaracterizations of the factual record. Since they have not made a sincere attempt to identify and resolve the adverse impacts of offshore wind development, it is not surprising that their current proposal for mitigation is insufficient.

### Overview of this Document

This document was prepared in conjunction with the RI Fishermen's Advisory Board members by Marisa Desautel, Esq., and Thomas Sproul, Ph.D., to provide feedback to RI CRMC staff regarding these recently received submissions from Orsted during mitigation:

1. The Woods Hole Update dated 12-15-2020 ("WHU"),
2. Orsted Responses to FAB Questions dated 02-18-2021 ("RESPONSES"),
3. SFW Letter Re FAB Mitigation Counterproposal dated 02-25-2021 ("LETTER"), and
4. SFW Memo Re Stakeholder Comments on 1x1 Spacing dated 03-09-2021 ("MEMO").

Detailed responses are included for each document in turn below. Prior to addressing the details of each document, there are a number of points that have and continue to come up repeatedly that the FAB hereby addresses.

1. Orsted's emphasis on mitigation being "data driven" or "based on scientific evidence" is merely a negotiating tactic to assign zero value to harms that are difficult to quantify.
2. Orsted has oversold the expertise of Woods Hole and the guidance they've provided in an attempt to bolster Orsted's own positions.

3. Orsted has made inconsistent statements about the scope of work contracted with Woods Hole; the true scope of that work must be disclosed.
4. Orsted has misrepresented both the quality of the landings estimates provided by NOAA, and the quality of landings estimates provided by the FAB.
5. Orsted has misrepresented the language of the Ocean SAMP in an attempt to exclude whole classes of adverse impacts to fisheries user groups from mitigation.
6. Orsted has misrepresented the statements of fisheries representatives with respect to the desirability of the 1 x 1 grid.
7. Orsted is mistaken in asserting that Federal studies and findings pertaining to other wind projects cannot be considered; the differences in harms incurred by fisheries user groups across wind projects are mostly differences in degree, not differences in kind.
8. Orsted has not submitted a Fisheries Monitoring Plan that meets the requirements of the Ocean SAMP's enforceable policies.

1. Orsted's emphasis on mitigation being "data driven" or "based on scientific evidence" is merely a negotiating tactic to assign zero value to harms that are difficult to quantify.

The FAB objects to Orsted's premise that they are only required to mitigate based on their data or scientific evidence. It is quite clear this is merely a strategy to lower any compensatory mitigation amount by arguing that anything without hard numbers cannot be considered, or can be considered only to the extent that Orsted decides.

For a company that cares only about data and facts, the provided descriptions of that data have been incredibly sloppy: for example, even after the Woods Hole experts conceded there was no VMS data included in their analysis, the writer(s) of Orsted's RESPONSES in February doubled down on the incorrect VMS assertion (RESPONSES page 9, item 6).

The FAB also points out that the strategy of requiring everything to be supported by primary data is being deployed by Orsted uniquely in this negotiation. The FAB challenges Orsted to provide the mutually agreed data frameworks that support their settlements with cities and towns.

A further example comes from the history of our gear claims negotiations failing. The FAB provided estimates of economic losses to Orsted based on annual landings of commercial fishing vessels. After repeated inadequate counter offers, Woods Hole recommended and Orsted agreed to consult NOAA to obtain data. When NOAA came back with annual per vessel landings estimates that were *higher* than the FAB estimates for lobster, Orsted did not insist on

the most accurate data – they instead tried to agree at the FAB’s original proposal. Similarly, when Orsted proposed extremely short turnaround times for gear replacement, FAB representatives contacted suppliers and collected data on turnaround times. Overwhelmingly, they came back longer than the times proposed by Orsted and in many cases longer than the times proposed by the FAB. Confronted with evidence that their low-ball offer attempts had failed, Orsted refused to budge and abandoned all efforts to negotiate on gear claims. Despite Orsted’s contention that “the FAB refused to reach agreement,” it was Orsted who made that decision. Thus, it is clear that Orsted’s entire data-driven focus only exists when it financially benefits them.

## 2. Orsted has oversold the expertise of Woods Hole and the guidance they’ve provided in an attempt to bolster Orsted’s own positions.

The FAB objects to Orsted’s attempts to oversell the expertise of Woods Hole and to oversell the extent to which that expertise has bearing on the quality of the information and estimates provided. For example, the 90 years of experience of Woods Hole is claimed (RESPONSES page 2, item 3.a) in support of the decision to exclude charter and recreational fishing from the initial mitigation offer, but clearly the entire institutional experience of Woods Hole was not distilled into the Woods Hole Report.

In addition, there are times when a plausible explanation for omitting direct primary-data driven estimates (like for recreational or charter fishing) would be that these estimates were outside the scope of work or too difficult given the limited funding available, but instead Orsted claims Woods Hole “made all decisions regarding what impacts to consider and how to quantify them based on the available research and their decades of experience” (RESPONSES page 3, item 5). Also, this particular explanation was offered in reference to transit costs from re-routing, which were then allocated estimated funding in the Woods Hole Update. What happened to the decades of experience and careful evaluation done by Woods Hole experts that caused this determination to be reversed inside of three months? The FAB thinks the most likely explanation is that many classes of significant adverse impacts to fisheries users were simply not considered, either through direct influence from Orsted about the scope of work, or through carelessness on the part of Woods Hole.

This explanation also applies to the questions posed by the FAB in relation to the unique and sensitive nature of Cox’s Ledge. Specifically, Orsted indicates in its RESPONSES that “Woods Hole considered the location of the Project, including the alternative cable routes.” (RESPONSES page 2, item 3b). If Woods Hole considered the unique and sensitive value of the project area, discussion of that consideration would be included in the materials submitted by Woods Hole. Instead, the record is currently devoid of any attention paid by Woods Hole to the unique value of Cox’s Ledge.

It is also quite clear that the expertise of the Woods Hole experts does not extend to legal expertise on the matter of what harms to fisheries user groups might need to be mitigated. For

example, the explanation for navigation safety risks being excluded did not mention decision-making by Woods Hole (RESPONSES page 3, item 4), only an assertion by Orsted that this class of harms does not need to be made whole under the Ocean SAMP. Orsted must disclose exactly which classes of harms they instructed Woods Hole not to consider, and they must also disclose which classes were directly evaluated by Woods Hole and discarded based on their expertise.

Finally, the most critical remaining matters of disagreement between the FAB and Orsted regarding mitigation are concerning the effects on fishing activity during the operations phase of the project and the potential for losses to recreational and charter fishing. Both of these areas are completely outside the expertise of the Woods Hole experts who wrote the report. With respect to the operations phase, they simply assumed the scenarios. In all of the documents submitted by Woods Hole and Orsted, not once is mentioned any interview with an actual fisherman about what might take place during operations. The claims of zero or minimal impacts are supported only by the words “we assume” in both the initial Woods Hole Report (top of page 21) and also in the Woods Hole Update (top of page 3).

Yet another oversight is evident with respect to recreational and charter fishing. Not having spoken with any recreational or charter fishermen, Orsted and Woods Hole were apparently completely unaware of the need for drifting during sportfishing for highly migratory species and Atlantic cod, and how this would be rendered unsafe by the presence of turbines. The FAB again issues its concern that Orsted has not submitted Necessary Data and Information (NDI) as required by the Ocean SAMP, which “must include interviews with fishermen.” This oversight has now given rise to a critical disagreement in which Orsted’s only recourse is to misrepresent the expertise of Woods Hole in order to support their argument.

In addition, while Woods Hole reversed course with respect to evaluating losses to the charter industry, they have consistently asserted that there are zero harms to recreational anglers. This defies even basic economic logic: the FAB’s economist knows that when anglers visit Cox’s they have chosen to do so over another location, meaning that it offers more value than a second-choice location that they might be displaced to. Coupled with the need for seaworthy vessels to visit Cox’s, it is clear that recreational anglers pay substantial amounts in order to fish the area. While the FAB agrees that assessing the exact amount is difficult, it is abundantly clear that losses are not zero if they are displaced. Since the Woods Hole experts are trained economists, the logical conclusion is that they simply didn’t have the resources or scope of work to allow evaluation of impacts on recreational anglers (or the charter industry, until it was raised during negotiations and subsequently included in the Woods Hole Update).

### [3. Orsted has made inconsistent statements about the scope of work contracted with Woods Hole; the true scope of that work must be disclosed.](#)

As described above, Orsted has claimed certain reasonably foreseeable adverse impacts are outside the scope of the enforceable policies in the Ocean SAMP, but have not offered an explanation of how Woods Hole came to that determination in their own evaluation. The only

explanation that has been offered is that Orsted asked Woods Hole to consider “economic impacts to commercial fishing.” Since it is likely that Orsted directly influenced the scope of work conducted by Woods Hole for their own financial benefit, the FAB again insists on reviewing the agreed scope of work between Orsted and Woods Hole.

For every case in which Orsted indicates Woods Hole has evaluated a cause of loss to fisheries user groups and assessed it to be zero, the FAB insists that Woods Hole must release the scope of that analysis and its findings in writing. Those causes of loss include:

1. Charter fishing: what analysis caused it to be excluded and then later included in mitigation? Orsted’s explanation thus far is transparently false. Charter fishing economic impacts are clearly not the shoreside economic impacts from commercial fishing that would be estimated by IMPLAN, and yet they claim those shoreside numbers were set aside for charter fishing: “South Fork’s Mitigation Proposal initially incorporated potential impacts to the charter and recreational fishing communities through its proposed Coastal Community Fund” (RESPONSES page 2, item 3.a).
2. Recreational fishing.
3. Navigation safety.
4. Vessel transit costs from re-routing: what analysis caused it to be excluded and then later included in mitigation?
5. Space conflicts and gear conflicts.
6. Cumulative effects of offshore wind development. By cumulative effects the FAB means those harms from the full buildout of the WEA that exceed the harms from the individual developments. These harms include cumulative effects on insurance, navigation safety, fisheries science, fisheries management and quota, and more.

4. Orsted has misrepresented both the quality of the landings estimates provided by NOAA, and the quality of landings estimates provided by the FAB.

It was revealed during mitigation discussions that the analysis of Vessel Trip Reports (VTRs) to estimate landings over space was done entirely by NOAA who then provided the post-modeling estimates to Woods Hole. It was further revealed that there was no VMS modeling used, despite the fact that this was initially stated in the initial Woods Hole report. Furthermore, the data analysis provided by NOAA is based on non-peer-reviewed “grey literature” published by NOAA analysts (DePiper, 2014; Benjamin et al., 2018). The only estimation is done in the DePiper (2014) research brief; Benjamin et al. (2018) simply describe extending those modeling results in a 500m x 500m raster across the ocean. The resulting estimates have been filtered through that model without regard for model quality. The model includes no allowance for whether bottom features would influence where fishing might occur relative to the single reported LAT/LON pair on the VTR (even if Cox’s Ledge is nearby), nor does it address the apparent poor ability of the model to fit some fisheries: less than 0.5% of the data used to fit the model were for lobster.

Orsted states, “Woods Hole’s analysis relies on NOAA data, which is the best in the world, and aligns almost perfectly with NOAA’s October 2020 report on offshore wind values in the Northeast” (LETTER, page 2). This statement is misleading because while NOAA has access to the best data in the world, the data reported do not represent the use of all that data. NOAA has access to detailed spatial data for vessels using both VMS and AIS data, but none of the information in those data sets is included here. Further, since there has been no disclosure of what was actually provided, it is not clear whether Woods Hole simply obtained a rough draft of the data outputs that eventually were shared on the NOAA Fisheries “Fishing Footprints” website in October, 2020, or if they obtained some independently generated data set.

The implied characterization that the VTR data are the best available is only true because there is no other systematic data available – higher precision methods have not yet been mapped across the ocean. Orsted has gone on to celebrate the quality of these data and to use that quality as a means to impeach testimony from the FAB members, who draw on cumulative experience consisting of hundreds of thousands of hours at sea. It is important to recognize that the NOAA landings estimates are not objectively of a high quality. The FAB reiterates: the estimates are based on the model of a single NOAA researcher, and that model is not peer-reviewed, nor has the use of that model for this purpose been peer-reviewed. The peer review issue is fatal to Orsted’s mitigation plans. The foundation of any expert opinion is whether the basis for the opinion has been tested and approved by other experts in the field. In this case, the standard relied on by Woods Hole is unreliable.

The data used to validate the model are confidential and have not been shared, meaning that the process of outside validation of the code and/or results is permanently blocked by NOAA. The model also contains a number of statistical shortcomings which directly apply to this lease area and to Cox’s Ledge.

First, the model is based on observer data and as a result contains essentially no information about lobster landings. In fact, exploring DePiper’s original paper indicates that so little lobster data was included that the model was unable to statistically differentiate lobster VTRs from other gear types that fish in a completely different manner. Second, the model presumes that landings are spread out radially from the point reported on the VTR and that all directions are equally likely at each distance. This means that the model does not account for bathymetric features (such as Cox’s Ledge) in assessing whether certain areas nearby to a VTR point may be represented by more intensive fishing activity. The FAB’s chief concern is that these model shortcomings may lead to landings being incorrectly attributed to areas of the ocean outside the wind area, thus understating the basis for mitigation.

Orsted goes on to state that “Woods Hole also performed a sensitivity analysis on the landings values from the wind lease area by examining NOAA data for a 5 km buffer surrounding the South Fork wind lease area. This analysis confirmed that the commercial landings values within the buffer are roughly equivalent to those within the wind lease area” (LETTER, page 2). The FAB received these data only in the last two weeks. There is not enough information disclosed to determine comparisons exactly, but the FAB does concede that the buffer data are not

grossly misaligned with the previous analysis in terms of landings value per unit area. The two values being close does not confirm validity of the model, however, as there may still be problems of excessive “smoothing” of landings that fails to recognize the unique nature of Cox’s Ledge.

**The FAB believes that the NOAA estimates reported by Woods Hole contain errors that understate the value of annual landings.** The FAB members have raised concerns of data errors in the NOAA data provided to Woods Hole that have not been addressed. In particular, the “All Other” category of landings for the SFW lease is given as 180,000 pounds annually at a price of \$0.101 per pound (RESPONSES page 8, item 4). The FAB members immediately identified this value as too low, and according to annual landings prices published by NMFS, the value is actually impossibly low, because there are no species included with a low enough price per pound. Orsted’s response was that this is explained by reporting of live weight (including shells) versus landed weight for surf clams and ocean quahogs. Ocean quahogs are reported separately as zero pounds/dollars by Woods Hole, so that leaves surf clams. Even after accounting for the live weight conversion factor, surf clams have an average price of \$0.172 per pound over 2008-2018, and the lowest value observed was \$0.159 in 2010. This means live weight versus landed weight is not the explanation. The FAB reasserts its claim that the most likely explanation for the impossible prices is that the landings estimates contain errors understating the true values.

**Orsted has also misrepresented the quality of the landings estimates supplied by the FAB.** Faced with no access to the raw VTR data used by NOAA and provided to Woods Hole, the FAB used what resources it had available to come up with rigorous estimates of landings values. These estimates include estimates of lobster and Jonah Crab landings indexed by Loran lines overlapping the lease area, and VMS-based estimates of fishing frequency overlapping the lease area and area immediately surrounding. The FAB members have also drawn on their expertise, gained from hundreds of thousands of hours at sea, to quantify how the Woods Hole annual landings estimates might break down into actual trip values. The FAB continues to assert that the NOAA/ Woods Hole estimates are problematic. For the highest-valued species in and around Cox’s (scallop and lobster), the NOAA/ Woods Hole estimates simply add up to too few trips per year at a reasonable value of landings per trip.

**Finally, Orsted has been inconsistent with respect to their attitude towards data quality.** While they have characterized NOAA’s VTR estimates based on grey literature as “the best in the world” they have treated with disregard our estimates on the value of recreational and charter fishing in the area. Those estimates are also based on non-peer-reviewed Federal reports from NOAA and BOEM, both of whom undertake fundamentally the same process as NOAA did with the VTRs: they start with imprecise primary data and perform statistical aggregation on top of it to come up with estimates. The FAB argues that it cannot be had both ways.

5. Orsted has misrepresented the language of the Ocean SAMP in an attempt to exclude whole classes of adverse impacts to fisheries user groups from mitigation.

Orsted has repeatedly asserted that the Ocean SAMP precludes consideration for mitigation of any classes of harms to fisheries user groups that they do not wish to discuss. These classes of harms include navigation safety risks (RESPONSES page 3, item 4), transit costs due to re-routing (RESPONSES page 4, item 5; though they later reversed course on this), space conflicts and gear conflicts (RESPONSES page 5, item 10), impacts on fisheries scientific research and impacts on fisheries management and quota (RESPONSES page 6, item 11), fisheries management impacts of wind development (RESPONSES page 6, item 12) and cumulative impacts of offshore wind development (RESPONSES page 7, item 13).

However, the Ocean SAMP's enforceable policies (11.10.1.G) define mitigation simply:

“...mitigation is defined as a process to make whole those fisheries user groups, including related shore-side seafood processing facilities, that are adversely affected by offshore development proposals or projects.”

Nowhere in this definition is it stated that fisheries user groups cannot be made whole with respect to the causes of loss listed above. In fact, nowhere in the enforceable policies are these classes of impacts excluded. Orsted's claim here is, to quote their own correspondence, “not credible as a matter of fact or logic.”

By its RESPONSES document, Orsted attempts to define CRMC jurisdiction. This attempt has been repeated by Orsted representatives throughout the FAB's review process and must be rejected. The enforceable policies of the Ocean SAMP include the requirement that a project's “significant adverse impact” must be avoided and/or mitigated. §1160.1.3. The definition of “significant adverse impact” is not limited in the manner demanded by Orsted. It must be that the developer understands that its project will have significant adverse impact and contesting CRMC jurisdiction is its ploy to disregard the state's enforceable policies.

Orsted's attempts to exclude classes of coastal effects are also inconsistent with the CZMA. 15 CFR §930.11(g) states:

“The term ‘effect on any coastal use or resource’ means any reasonably foreseeable effect on any coastal use or resource resulting from a Federal agency activity or federal license or permit activity... Effects include both direct effects which result from the activity and occur at the same time and place as the activity, and indirect (cumulative and secondary) effects which result from the activity and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects are effects resulting from the incremental impact of the federal action when added to other past, present, and reasonably foreseeable actions, regardless of what person(s) undertake(s) such actions.”



The above language makes plain that reasonably foreseeable navigation safety impacts, transit cost impacts, and cumulative effects and regulatory impacts are all contemplated as coastal effects under CZMA.

With specific respect to cumulative impacts, Orsted picks and chooses when and how it will address them, depending on each element of its project and in which document. For example, its FMP indicates that “Our monitoring will be executed with an emphasis on detecting changes in relative abundance, rather than attempting to assess the ecological response to a single impact associated with the construction of an offshore wind farm.” FMP, p. 12. This statement appears to be an attempt to address cumulative impacts. Changes monitored as relative abundance is an holistic measure and captures impacts from all activity. In other words, Orsted proposes a cumulative impact assessment for its FMP because it suits them.

#### 6. Orsted has misrepresented the statements of fisheries representatives with respect to the desirability of the 1 x 1 grid.

The FAB objects to Orsted’s interpretation of the 1 x 1 nm grid as absolving them of all harms to commercial and recreational fishing during operations. No reasonable party has ever thought this to be the case. At the time when these statements were made, the fishermen were arguing both for the grid and for transit lanes. The developers colluding to present a 1 x 1 grid without transit lanes as if it solved all of the fishing industry’s problems involved a deceptive misrepresentation of the information shared by fisheries user groups.

More troubling is why Orsted bothered to submit so many quotes that directly contradict their own claims. No reasonable reader of these quotes would conclude that all harms would be completely mitigated by moving to the 1 x 1 grid. Instead, fishermen have simply been fighting to minimize those harms according to a compromise that they thought was in reach. It has been made abundantly clear that the 1 nm spacing is a compromise and that harms to fisheries user groups will not be fully mitigated until the turbines are removed, unless other necessary mitigation also takes place.

#### 7. Orsted is mistaken in asserting that Federal studies and findings pertaining to other wind projects cannot be considered; the differences in harms incurred by fisheries user groups across wind projects are mostly differences in degree, not differences in kind.

In its RESPONSES document, Orsted states repeatedly that the CRMC must “evaluate the SFW Project under only its enforceable policies and not under or in reference to the SEIS of a wholly separate project of another developer.” However, it is unclear how the questions posed by the FAB are not covered by the Ocean SAMP’s enforceable policies, as discussed above.

There are two other important misstatements made by Orsted on this topic. First, that no Federal studies or evaluations of other wind projects can be used to inform about similar considerations for SFW, and second, that the FAB settlement with Vineyard Wind and the

discussion components thereof are in no way relevant to SFW. Ultimately, both assertions are incorrect for the same reason: differences between distinct offshore wind projects in the MA/RI WEA are largely differences in degree and not differences in kind.

While it is true that CRMC must evaluate the SFW project under only its enforceable policies, it is not true that there may be no reference to information obtained through careful analysis of other projects when that information is directly relevant to evaluation of the current project. Furthermore, Orsted's position that Vineyard Wind not be considered conflicts with Orsted's own repeated references to documents and meetings surrounding the Vineyard Wind project in recent submissions (e.g., MEMO).

At the time our initial comments were written, the VW SEIS was the most recent, most relevant and best available Federal evaluation of the many risks associated with offshore wind development. None of our references to that SEIS were to items specific to Vineyard Wind – all of them refer to features that are reasonably expected to apply to all offshore wind development in the MA/RI WEA. On its face, this claim by Orsted is a disingenuous attempt to disqualify information that Orsted finds unfavorable when trying to minimize mitigation to Rhode Island fisheries user groups that are harmed by offshore wind development.

The FAB also disagrees with Orsted's claim that the South Fork and Vineyard Wind projects are not comparable for purposes of establishing a mitigation framework. Orsted stated "The FAB premised its Counterproposal entirely on the Vineyard Wind Farm settlement numbers and continues to rely on the Vineyard Wind settlement in discussions with SFW. SFW consistently has maintained that such an approach is untenable. The Vineyard Wind and South Fork projects are entirely separate and distinguishable" (LETTER, page 1). However, this statement stands in direct opposition to Orsted's own initial mitigation proposal, which was comprised only of commercial landings and shoreside impacts. If both projects defy comparison, how can mitigation be based only on commercial landings and a shoreside multiplier? Orsted's proposal is a *de facto* admission that they consider the projects to be directly directly comparable through the NOAA landings estimates, except with respect to the dollar amount involved. In other words, the harms caused by the distinct projects differ primarily in degree, not in kind.

To claim that SFW and Vineyard Wind are not comparable based on project size and location is misleading. While it is true that the projects are found in different locations and are of different scale, the component factors that are relevant to mitigation are virtually identical (differing only in magnitude) and are common to all wind energy development in MA/RI wind lease areas. Even as the FAB rejects the narrow view that each project's impacts can be reduced to a multiplier on commercial landings, the other factors differ only in degree but not in kind. Concerns for recreational and charter are not materially different, they are just exacerbated by the intensity of recreational and charter fishing in the area. The environmental habitat concerns are the same, just made worse by the sensitive and critical habitat on Cox's Ledge.

The navigation safety concerns are also the same, it is only up for debate what severity was included in Vineyard Wind versus SFW. On this point specifically, the Vineyard Wind settlement

considered closer than 1 nm spacing on one dimension, but the total number of turbines did not vary and there were still transit lanes being considered at that point. In addition, Vineyard Wind contemplated only two substations for all 84 turbines, while SFW has one substation for only 15. The substations are enormous reflective surfaces that are likely to have outside impacts on radar. These impacts are not even evaluated in the Navigation Safety Risk Assessment (SFW COP Appendix X).

Ultimately all New England offshore wind projects will be part of an enormous contiguous field of turbines in the most likely outcome of full development of the wind area, so project scale matters little except with respect to that lease's share of the total harm. Since the projects differ primarily in the degree of impacts on various fisheries user groups, it is clear that there is information to be gained both from the Vineyard Wind mitigation process and from BOEM's evaluation of the Vineyard Wind project, including cumulative impacts scenarios.

Finally, current negotiating positions of both Orsted and the FAB with respect to SFW mitigation are *hypothetical* values. They are what each side would like to have as an outcome, but not what they will accept. In contrast, the VW settlement represents an agreed price that is not hypothetical. There is a long tradition in economics of preferring observed willingness-to-pay or willingness-to-accept measures over hypothetical ones (see, e.g., Loomis et al., *Land Economics*, 1996, among many) because of "hypothetical bias." As a simple example, the FAB considers the value of a house to be the actual sale price, not the seller's listing price or the buyer's first offer. The same logic holds here. The VW settlement thus represents the only available non-hypothetical data, so it should be considered. The FAB can further consider the VW settlement in Massachusetts as another data point, though this is clearly not an independent data point.

Nonetheless, just as home appraisers can utilize comps that don't exactly match the number of bedrooms and bathrooms by making a formulaic adjustment, so too can a reasonable party grasp the similarities across offshore wind projects and adjust accordingly.

8. Orsted has not submitted a Fisheries Monitoring Plan that meets the requirements of the Ocean SAMP's enforceable policies.

Orsted's Fisheries Monitoring Plan ("FMP"), which Orsted certifies as meeting "the requirement of biological assessment under the OSAMP" (RESPONSES, Question D.10), is wildly deficient. FMP Section 1.1 "Monitoring Plan Development" states that the FMP was developed in accordance with recommendations made by BOEM's "Guidelines for Providing Information on Fisheries for Renewable Energy Development on the Atlantic Outer Continental Shelf" (BOEM, 2013; BOEM, 2019) and by state agencies (RICRMC, 2018; NYSEDA, 2017; MADMF, 2018). However, the most recent BOEM Guidance document (May 27, 2020) supersedes any previous versions: "This guidance document cancels and supersedes the previous guidance entitled, "Guidelines for Providing Information on Fisheries Social and Economic Conditions for Renewable Energy Development on the Atlantic Outer Continental Shelf Pursuant to 30 CFR Part 585," dated October 20, 2015, and will remain in effect until cancelled." p. 1. The two

BOEM guidance documents cited by Orsted in its FMP (the 2013 and 2019 versions) are not cited in the 2020 document. It is unclear why the Plan cites these documents, as there was a 2020 version in effect prior to the FMP's submittal.

The FMP indicates that the survey protocols have been designed to address requirements and guidelines outlined in the Federal Register (30 CFR 585.626), BOEM fishery guidelines, and RICRMC policies (11.10.9 C). The Ocean SAMP states that the Site Assessment Plan must include a very detailed assessment of commercially and recreationally targeted species. However, the FMP does not meet this standard.

The FMP includes the following two statements that are red flags:

“However, it is acknowledged that the monitoring tools proposed herein may not sample for all of the species present within SFWF, particularly some of the smaller pelagic fauna (e.g., Atlantic herring, squid, and butterfish) that are too small to be retained in the gillnet gear, and are unlikely to be captured in substantial quantities by the beam trawls or fish pots.” FMP, p. 12.

“The proposed survey designs in this Plan are not exhaustive but will form a basis for fisheries monitoring in the SFWF site. In particular, it is noted that additional fisheries monitoring will be performed along the route of the South Fork Export Cable (SFEC). Those studies are currently being Planned in collaboration with local academic researchers and Subject Matter Experts. However, the details and methodologies associated with that monitoring effort are not included in this Plan.” FMP, p. 12.

The FAB is concerned that the plan to address these issues has never been shared. The FAB is also concerned that any non-binding regulatory review will be ignored as suggestions, similar to the advice from both NOAA and Massachusetts DMF regarding the need for monitoring pelagic species (FMP, pp.157-160, pp.222-225). Given that the current FMP is deficient, the FAB fully anticipates that these issues will never be adequately addressed. Any outstanding terms for fisheries monitoring must be disclosed.

The FMP also states that “the submarine power cables (inter-array and export cables) will emit electric and magnetic fields (EMF) while the wind farm is operational. These impacts will persist over a relatively long temporal scale while the wind farm is operational, but the EMF decays very quickly with distance from the cable and is anticipated to have a negligible impact on fish species (Snyder et al., 2019). Therefore, EMF from the project will not affect the Reference Areas.” FMP, p. 15. This conclusion is not accurate; negligible impact is not the same as having no affect.

**This concludes the summary points identified in the Overview. Below are responses to specific misstatements in each document, in turn.**

For clarity, all quoted text by Orsted and related parties is presented in Times font. All text containing FAB responses and questions is presented in Calibri font, as above.

### Comments Regarding: Woods Hole Update (WHU)

1. “This assessment is based on the most likely pile driving scenario for the South Fork Wind project: 11 m monopiles, each installed within 24 hours, using a 4,000 kJ hammer, and 10 dB of noise attenuation.” – WHU, bottom of page 1.

This assessment is not consistent with the statement that “In the COP Volume I, Table 3.1-8 indicates the duration of foundation installation may be 2-4 days per foundation” (RESPONSES page 11, item 2). Which schedule is correct and why is Woods Hole using different information than Orsted?

2. “We assume conservatively that 10% of the lobster and scallop populations within the WLA are adversely affected by pile driving noise during construction time only, and thus lost to fishing. This is based on the “mortality and potential mortal injury” 24-hour exposure threshold of 219 dB for “fish without swim bladders,” the closest approximation to lobster/scallops (Popper *et al.* 2014; Denes *et al.* (JASCO) 2018, p. F-39). This level of exposure will extend no more than 120 m from tower locations, a radius that covers about 1% of the WLA footprint. To be conservative, we increase the estimate of the effect by a factor of ten, to 10%.” – WHU, bottom of page 1, top of page 2.

This is not conservative as it misses one of the primary concerns of the FAB. SFW COP Appendix J1 (2020-02-05) page G-54 gives modeled noise impacts for difficult pile driving *after including* 10 dB of noise attenuation. The mortality threshold for eggs and larvae of 210 dB has a radius of approximately 710 meters from the pile. This radius represents a kill circle with an area of 0.46 nm<sup>2</sup> *per platform*, of 7.39 nm<sup>2</sup> for all 16 platforms. This means the Woods Hole Update is omitting the potential for pile driving to kill year-classes of eggs and larvae covering over 45% of the SFW lease area.

3. “To estimate the value associated with this effect, we obtained data from NOAA on average annual landings from a region enclosed by a 5 km buffer around the South Fork WLA. (The value of landings reported by NOAA for this buffer area is similar, in per-unit-area terms, to that of the WLA itself.)” – WHU, middle of page 2.

The 5 km buffer is inadequate for this purpose because Appendix J1 of the COP (p.G-54) indicates that the 186 dB Temporary Threshold Shift (TTS) effect can extend between 9 – 11 km from the pile, even after accounting for 10 dB of noise attenuation.

4. “We assume no net adverse impact on charter fishing during the operations phase of the project.” – WHU, top of page 3.

What information or research is this assumption based on? The FAB is concerned that Woods Hole will so freely conjecture outside their area of expertise.

5. “The South Fork WLA accounts for about 6.75% of the MA/RI wind energy area modeled by the BOEM study; so we estimate the 2010 exposed value as approximately \$70,246. We allow for 3% annual growth in this industry and apply a CPI inflator to estimate \$112,341 (2019\$) in RI charter boat revenue exposed to the South Fork Wind area.” – WHU, top of page 3.

In 2018, Dr. Sproul estimated the size of the RI charter fishing fleet by hand-counting businesses and estimating their revenues. He estimated \$19.99 million gross revenues in 2016. The FAB believes this estimate to be both more precise and more recent than BOEM’s. It was also referenced by CRMC in their federal consistency concurrence for Vineyard Wind. As stated previously, the recreational importance of Cox’s Ledge is better represented by the commercial intensity, representing an 8.32% share of MA/RI WEA landings, rather than a raw average based only on area. Applying these figures to the Woods Hole estimates and backing out their average annual inflator of 5.36% (3% growth and the remainder inflation), the FAB proposes revised estimates of \$129,700 per year in 2019 dollars. More importantly, given that construction is due to start in 2023 with settlements to be paid at that time, the appropriate figure is \$159,800. Applying shoreside impacts with a 0.6 multiplier yields annual exposure figures of \$207,500 and \$255,700, in 2019 and 2023 dollars, respectively.

6. “The net effect of this adjustment is a \$221,335 (2019\$) increase in RI exposed value.” – WHU, middle of page 3.

This figure assumes impacts last only a single year from construction and decommissioning, it assumes that decommissioning occurs as planned, and it assumes no extension of the lease at the end of the current term. All of these things are subject to risk that they do not go as planned, causing further suffering to charter fishing. The Woods Hole estimate also assumes an artificially high discount rate to lower the value of future losses. Perhaps most importantly, the Woods Hole estimate includes an assumption that all losses are zero during operations, despite no apparent expertise and not a single interview with charter fishermen. It is the FAB’s expert opinion that the total harms to the RI charter industry are expected to be 15 – 20x the annual exposure values. Including shoreside impacts, this implies a net present value of \$3.8 – \$5.1 million (2023 dollars) over the life of the lease.

## Comments Regarding: Orsted Responses to FAB Questions (RESPONSES)

The FAB questions initially appeared in five (5) sections:

- A. Questions Regarding the Scope of the Woods Hole Analysis
- B. Questions Regarding the Content of the Woods Hole Analysis
- C. Mitigation-Specific Questions Regarding the SFWF COP
- D. Questions Regarding the SFWF Fisheries Monitoring Plan
- E. Questions Regarding the Mitigation Proposal

For brevity, the FAB includes follow-up only for selected questions here, but reserve the right to make further comments on these and other questions at a future time.

Original FAB questions are presented in Times font, Orsted response in **Times** bold font beneath, and new FAB responses in Calibri font beneath the Orsted response.

### Part A. Questions Regarding the Scope of the Woods Hole Analysis

#### Question A.1

What was the contracted scope of the Woods Hole analysis?

**South Fork asked the Woods Hole Oceanographic Institution (“Woods Hole”) to assess any economic impacts to commercial fisheries from South Fork’s proposed offshore wind farm, including the export cable corridor (the “Project” or “SFW Project”). Woods Hole also provided an assessment of any economic impacts to Rhode Island charter fishing.**

This response indicates that the analysis was restricted by Orsted to include only commercial fishing. It is unclear whether “economic impacts” was a further restriction imposed by Orsted, given the many claims below arguing to restrict the scope of impacts eligible to be considered. No such restriction exists in the Ocean SAMP. Furthermore, the FAB notes that Orsted initially attempted to include charter fishing as shoreside impacts without any such indication from Woods Hole. Then, once the issue was raised, the Woods Hole Update estimated charter fishing to represent an additional 75% of the exposure of commercial landings on an annual basis.

#### Question A.2

Was Woods Hole instructed to consider, include or otherwise evaluate information from the SFWF Construction and Operations Plan (COP) and its appendices?

**Woods Hole considered, included, and evaluated information contained in the COP. The COP is listed in the References section of the Woods Hole report entitled “Economic Impact of South Fork Wind on Rhode Island Commercial Fisheries written by Di Jin,**

**Ph.D., and Hauke Kite-Powell, Ph.D., and dated September 28, 2020, (the “Woods Hole Report”).**

The COP certainly indicates activity of recreational and charter vessels. This was not included in the initial Woods Hole Report. This response also doesn't answer the question – it says they considered information contained in the COP but not whether or not they were instructed to do so. It is also not clear what the structure of this review was. For example, the Woods Hole Update gives a conflicting timeline for pile-driving (24 hours) compared to your response below in item C.2. (2-4 days).

### Question A.3

The location and unique characteristics of Cox's Ledge cannot be overstated – it is the most ecologically important area in the Ocean SAMP, and its proximity to Point Judith, RI means it is critically important for recreational and charter fishing in addition to commercial harvesters. Cox's Ledge is also home to very sensitive habitat.

- a) Who made the determination that evaluation of charter and recreational fishing value would be excluded from the Woods Hole analysis, and on what basis?

**Woods Hole made all decisions regarding what data to rely on for economic value calculations based on the available research and their decades of experience. Woods Hole has conducted ocean research for 90 years. The authors of the Woods Hole Report together have over six decades of experience in resource and ocean economics and have co-authored more than 100 peer-reviewed publications. Federal VTR data does not include party/charter fishing revenue values or private fishing data. South Fork's Mitigation Proposal initially incorporated potential impacts to the charter and recreational fishing communities through its proposed Coastal Community Fund. Based on feedback from the FAB and CRMC, SFW revised its mitigation proposal to provide direct financial mitigation to the Rhode Island charter fishing industry. Please also see the December 15, 2020 Update to “Economic Impact of South Fork Wind to Rhode Island Commercial Fisheries” authored by Di Jin and Hauke Kite-Powell of Woods Hole (the “Woods Hole Update”).**

It is hard to believe Orsted is claiming that all 90 years of ocean research experience by the entire Woods Hole Oceanographic Institute was brought to bear on this report. The FAB recognizes the experience of the authors, but is concerned about cases where the authors make impactful assumptions outside their expertise.

In what sense does Federal VTR data not including party/charter revenues have any bearing on whether the Woods Hole experts should have known to evaluate it or been able to do so? The FAB believes that this was simply an oversight, but the FAB recognizes the attempt to correct it in the Woods Hole Update.



The statement about initial incorporation of charter and recreational impacts is patently false. Charter and recreational were proposed to be funded through the Coastal Community Fund, whose funding amount exactly matched the shoreside impacts estimate for commercial landings. It has since become clear that charter was not explicitly considered until later (and recreational still has not been considered). The new charter evaluation was disclosed in the Woods Hole Update on December 15, 2020, so why in February 2021 is Orsted offering denials of observable facts?

b) Why is the unique and sensitive value of Cox's Ledge not considered by Woods Hole?

**This question makes an incorrect assumption that Cox's Ledge was not considered by Woods Hole. Woods Hole considered the location of the Project, including the alternative cable routes.**

This question was plainly asking whether the uniqueness of Cox's Ledge was considered, rather than whether Cox's Ledge was considered at all. The FAB restates the question: why is the unique value and sensitive habitat of Cox's not considered? The NOAA model used is an off-the-shelf model and in no way assesses unique features of Cox's. For example, the NOAA model of spreading VTR landings over the ocean is non-directional, but this ignores the very real possibility that VTR coordinates near Cox's likely involve landings more concentrated in the direction towards Cox's rather than in the opposite direction. The sensitive habitat of Cox's is critical because of included spawning grounds supporting populations outside of the lease area, thus creating the potential for broader geographical impacts on fisheries from wind development.

#### Question A.4

Navigation safety risks are indicated as having a major adverse impact on fishing in the BOEM Vineyard Wind Supplement to the Draft EIS (SEIS). Who made the determination that navigation safety risks would be excluded from the Woods Hole analysis, and on what basis?

**No portion of the SFW Project is located within Rhode Island territorial waters. Rather, portions of the SFW Project fall within Rhode Island's designated Geographic Location Description for purposes of the Coastal Zone Management Act, 16 U.S.C. §§ 1451- 1466, ("CZMA"), allowing CRMC to conduct a federal consistency review of the proposed SFW Project under the enforceable policies of Rhode Island's federally approved coastal management program found in the Ocean Special Area Management Plan ("OSAMP" or "Ocean SAMP"). See generally 650 R.I. Code R. 20-05-11.10. CRMC must evaluate the SFW Project under only its enforceable policies and not under or in reference to the Supplement to the Draft Environmental Impact Statement ("SEIS") of a wholly separate project of another developer. Navigational safety risks are not within CRMC's enforceable policies.**

As discussed above, this is not a settled legal question. The Ocean SAMP states that harms to commercial and recreational fisheries user groups must be evaluated and mitigated. Expected

losses of life, property and income arising from navigation safety risks are reasonably foreseeable harms to those user groups. Since there is no actual answer to the question here, the FAB concludes that Orsted excluded navigation safety in their definition of “economic impacts to commercial fishing” to be evaluated by Woods Hole.

#### Question A.5

Additional transit costs for re-routing are indicated as a moderate adverse impact in the SEIS. Who made the determination that additional transit costs imposed on the fishing industry from re-routing would be excluded from the Woods Hole analysis, and on what basis?

**No portion of the SFW Project is located within Rhode Island territorial waters. Rather, portions of the SFW Project fall within Rhode Island’s designated Geographic Location Description for purposes of the CZMA, allowing CRMC to conduct a federal consistency review of the proposed SFW Project under the enforceable policies of Rhode Island’s federally approved coastal management program found in the OSAMP. *See generally* 650 R.I. Code R. 20-05-11.10. CRMC must evaluate the SFW Project under only its enforceable policies and not under or in reference to the SEIS of a wholly separate project of another developer.**

**SFW notes that Woods Hole made all decisions regarding what impacts to consider and how to quantify them based on the available research and their decades of experience. SFW notes further that, based on feedback from the FAB and CRMC, SFW incorporated into its mitigation proposal an additional adjustment to account for potential vessel rerouting during construction and decommissioning.**

The FAB has refuted above both the characterization that transit costs as a class of harms are excluded from consideration and the characterization that Federal analysis of the Vineyard Wind project cannot even be considered.

However, this response is different from the previous ones, because it implies that Woods Hole decided not to address transit costs. Since later this was reversed by SFW, what is the explanation? The FAB sees only four possible explanations, and none of them are favorable to how Orsted has conducted itself during mitigation proceedings:

1. Orsted’s position that transit costs are not allowable as a class of harms was initially imposed by them, but then invalidated; or
2. Woods Hole initially determined these costs to be zero, and then later discovered new information; or
3. Woods Hole and/or Orsted overlooked the existence of these costs and was/were first made aware of them by the FAB; or
4. Orsted was aware of these costs and their need to be mitigated but allocated zero mitigation effort as a negotiating tactic in order to later appear they were giving ground.

### Question A.7

Who made the determination that underwater noise effects from construction would be only transient effects on populations of species of interest in the SFWF area, and on what basis? This determination seems to directly contradict mortality effects reported in Appendix J1 of the COP and the SEIS.

**The Woods Hole Report and Woods Hole Update made no such determination. They explicitly account for mortality effects for non-mobile species in the immediate vicinity of pile driving, where noise level modeling suggests that mortal injury thresholds may be reached. Woods Hole made all decisions regarding what impacts to consider and how to quantify them based on the available research, their decades of experience, and the information contained in the COP. Please also see the Mitigation Actions Memorandum submitted to CRMC on December 15, 2020 (“Mitigation Actions Memo”), regarding pile-driving noise attenuation and sound verification.**

**As stated above, CRMC must evaluate the SFW Project under only its enforceable policies and not under or in reference to the SEIS of a wholly separate project of another developer.**

The initial Woods Hole Report contained no estimation of mortality from pile-driving, and that omission generated this question. Only the Woods Hole Update addressed mortality and it did so in an unsatisfactory manner, only considering scallops and lobsters.

Page G-54 of COP Appendix J1 (2020-02-05) gives the “difficult pile-driving” scenario after accounting for 10 dB of sound attenuation. This page indicates a kill radius of approximately 710 meters (average across scenarios) for all eggs and larvae and also all finfish with swim bladders not used for hearing. Apparently, the Woods Hole “decades of experience” do not extend to recognizing that a large number of commercially and recreationally important species on Cox’s Ledge have swim bladders. These species include Atlantic cod, black sea bass, haddock, hakes/whiting, herring, monkfish, pollock, scup, tautog and bluefin/yellowfin tuna. If these animals do not vacate the area due to soft-start policies for pile-driving, and it is not known that they will, then there will be significant mortality. The 710 meter radius corresponds to approximately 0.46 nm<sup>2</sup> per foundation, or approximately 45% of the total lease area. This represents an enormous kill zone for adults of these species with swim bladders, as well as for year-classes of eggs and larvae for all species spawning on Cox’s Ledge.

Finally, at the time these questions were submitted, the Draft SEIS for Vineyard Wind was the latest BOEM environmental impact assessment with respect to offshore wind. None of the items that the FAB referenced from the Draft VW SEIS were specific to Vineyard Wind, they are obvious attributes of offshore wind development that reasonably apply to all projects. As the FAB has stated repeatedly above, the differences between VW and SFW harms that need to be made whole are differences in degree, not differences in kind. Referencing available Federal information does not constitute evaluation outside of the enforceable policies.

#### Question A.8

Who made the determination that adverse impacts on landings would be confined to the lease area, and on what basis? Appendix J1 of the COP indicates large radiuses of noise impacts that can extend well beyond the lease boundaries. See also the question below about space conflicts detailed in the SEIS.

**The Woods Hole Report and Woods Hole Update made no such determination. They explicitly include stock effects in an area outside the wind lease area, where noise modeling suggests that mobile species may temporarily leave the area. Woods Hole made all decisions regarding what impacts to consider and how to quantify them based on the available research, their decades of experience, and the information contained in the COP. Please also see the Mitigation Actions Memo regarding pile-driving noise attenuation and sound verification. Further, research has found only temporary behavioral disturbances resulting from noise. As distance from the noise source increases, the intensity of the noise decreases.**

**As stated above, CRMC must evaluate the SFW Project under only its enforceable policies and not under or in reference to the SEIS of a wholly separate project of another developer.**

See responses above to Questions A.5 and A.7. This is yet another case of an apparent oversight that was later corrected. The FAB insists that CRMC require disclosure of the scope of Woods Hole's engagement, so it can be determined whether Orsted influenced what was to be evaluated. Orsted must also provide the documentation of which potential impacts were considered by Woods Hole and selected to be omitted from their report.

#### Question A.9

Who determined the parameters and assumptions corresponding to Scenarios 1 and 2, and on what basis? Was anyone with fishing experience consulted? If so, who was consulted, and what are their qualifications?

**Woods Hole developed the assumptions and parameters corresponding to Scenarios 1 and 2 based on the available research, their decades of experience, and information provided by SFW regarding construction methods and timetable.**

The items omitted here are informative – there was no discussion with fishermen (not even Orsted's fisheries liaisons). The scenario development really calls into question how valid the expertise of Woods Hole really is outside their core competencies. At the very least, the Woods Hole experts are not experts with respect to how fishing might continue within a wind area during the operations period of the project. The FAB reiterates that this is the exact area where the FAB is best suited to advise CRMC.

#### Question A.10

The SEIS indicates moderate to major adverse impacts due to space conflicts, including temporary or permanent reduction of fishing activities, increased gear conflicts between recreational and commercial fishing, and increased conflict and competition due to relocation of fishing activity outside wind development areas. Who determined that these considerations would be excluded from the Woods Hole analysis, and on what basis?

**No portion of the SFW Project is located within Rhode Island territorial waters. Rather, portions of the SFW Project fall within Rhode Island’s designated Geographic Location Description for purposes of the CZMA, allowing CRMC to conduct a federal consistency review of the proposed SFW Project under the enforceable policies of Rhode Island’s federally approved coastal management program found in the OSAMP. *See generally* 650 R.I. Code R. 20-05-11.10. CRMC must evaluate the SFW Project under only its enforceable policies and not under or in reference to the SEIS of a wholly separate project of another developer.**

As discussed above, this is not a response to the question. The FAB insists that CRMC require disclosure of whether Orsted or Woods Hole determined, and on what basis, that space and gear conflicts be excluded from “economic impacts to commercial fishing.” The FAB notes that space and gear conflicts also apply to recreational and charter fishing, but do not emphasize that here as the incomplete consideration of those user groups has already been repeatedly identified.

#### Question A.11

The SEIS indicates major adverse impacts on scientific research and surveys, consistent with public statements by NOAA representatives that “fisheries independent” research vessels would not be entering the WEA once it was built out. The SEIS indicates a likely result of these limitations is lower commercial quotas corresponding to lower fishing revenues. Who determined that these considerations would be excluded from the Woods Hole analysis, and on what basis?

**No portion of the SFW Project is located within Rhode Island territorial waters. Rather, portions of the SFW Project fall within Rhode Island’s designated Geographic Location Description for purposes of the CZMA, allowing CRMC to conduct a federal consistency review of the proposed SFW Project under the enforceable policies of Rhode Island’s federally approved coastal management program found in the OSAMP. *See generally* 650 R.I. Code R. 20-05-11.10. CRMC must evaluate the SFW Project under only its enforceable policies and not under or in reference to the SEIS of a wholly separate project of another developer.**

This is not an answer to the question, though it is implied by the disclosed restriction on Woods Hole above if not seen as an “economic impact.” See previous responses regarding the validity of this argument that has been repeatedly copy-pasted throughout these responses.

### Question A.12

The FAB is concerned that future policies restricting fishermen are bound to occur throughout the construction and operation process. These economic harms were not considered when estimating the overall economic impact on fishermen. Why?

**This is a speculative question. The U.S. Coast Guard has sole authority to control vessel traffic on the Outer Continental Shelf, and neither SFW nor CRMC has authority to do so. The U.S. Coast Guard's authority is limited to establishing limited access areas with a maximum radius of 500 meters from a center point or the outer edges of a structure. Any controls considered by the U.S. Coast Guard in the future would require a Federal rulemaking with opportunity for public comment.**

**Further, no portion of the SFW Project is located within Rhode Island territorial waters. Rather, portions of the SFW Project fall within Rhode Island's designated Geographic Location Description for purposes of the CZMA, allowing CRMC to conduct a federal consistency review of the proposed SFW Project under the enforceable policies of Rhode Island's federally approved coastal management program found in the OSAMP. See generally 650 R.I. Code R. 20-05-11.10. CRMC must evaluate the SFW Project under only its enforceable policies.**

This is not an answer to the question, though some response is provided by the disclosure above that Woods Hole was instructed only to consider "economic impacts," indicating it is possible that Orsted determined this was outside Woods Hole's scope.

The FAB objects to the characterization of this question as speculative. Orsted's own filings for incidental harassment authorizations (IHA) with NOAA suggest there will be incidental take of marine mammals. The FAB has consistently stated that NOAA does not regulate fish, rather they regulate fishermen. The reasonably foreseeable effect of incidental take is harsher regulation of the fishing industry, as has occurred consistently in the past. Critically, this increased regulation does not need to be a response to incidental take caused by fishing – see for example the case of whale fatalities in Canada affecting quota in the United States.

Further, even if the question were speculative that does not make it invalid. All of these questions are about reasonably foreseeable harms to fisheries stakeholders that need to be mitigated in order for them to be made whole, as described in the Ocean SAMP enforceable policies. Reasonably foreseeable effects are also laid out clearly in the CZMA (15 CFR 930.11g).

### Question A.13

BOEM's SEIS exists because of the importance of cumulative impacts that could result from the incremental impact of this project when combined with past, present, or reasonably foreseeable

activities, including other future offshore wind activities. Who determined that these considerations would be excluded from the Woods Hole analysis, and on what basis?

**No portion of the SFW Project is located within Rhode Island territorial waters. Rather, portions of the SFW Project fall within Rhode Island’s designated Geographic Location Description for purposes of the CZMA, allowing CRMC to conduct a federal consistency review of the proposed SFW Project under the enforceable policies of Rhode Island’s federally approved coastal management program found in the OSAMP. See generally 650 R.I. Code R. 20-05-11.10. CRMC must evaluate the SFW Project under only its enforceable policies and not under or in reference to the SEIS of a wholly separate project of another developer.**

**Further, any cumulative impacts of wind lease areas are being addressed at the federal level by BOEM and in connection with the Environmental Impact Statements for offshore wind projects.**

This is stated above, but the argument bears repeating. The Ocean SAMP clearly states “mitigation is defined as a process to make whole those fisheries user groups... that are adversely affected by offshore development proposals or projects.” Cumulative impacts are a category of harms that need to be made whole. The FAB defines cumulative impacts as those reasonably foreseeable impacts that arise as a result of cumulative wind development of the MA/RI WEA, in excess of the impacts of individual developments in isolation. For example, a single small project like SFW would have virtually no impact on NMFS scientific surveys, but the accumulation of all wind projects will have a dramatic effect that will likely decrease overall industry quotas.

This effect is reasonably foreseeable, as indicated by BOEM in the SEIS for Vineyard Wind. Critically, the FAB is not asking Orsted to mitigate the total cumulative impacts of all wind projects – the FAB is asking only that they mitigate with respect to a pro-rata share. That is, if there are 975 platforms anticipated then this project is responsible for a  $16/975 = 1.64\%$  share of the total cumulative impacts (in excess of individual project impacts already identified). the FAB also objects to the claim that these cumulative impacts are “being addressed at the federal level” – they have been identified at the federal level but the FAB is unaware of any sense in which the impacts are being addressed.

## Part B. Questions Regarding the Content of the Woods Hole Analysis

### Question B.1

The characterization of the IMPLAN multiplier as including downstream impacts is incorrect. Indirect impacts are impacts on suppliers to the fishing industry, and induced impacts are economy- wide impacts from expenditures of labor income and proprietor profits. Will this be corrected? What method will be used to estimate downstream impacts?

**This question is premised on inaccurate assumptions. The IMPLAN model is a widely accepted, peer-reviewed model that allows comparison between analyses. It incorporates data from over 500 industry sectors, including seafood processors and other sectors subject to the downstream impacts of the commercial fishing industry, with data updated annually. Please also see the Woods Hole Update.**

Wrong. IMPLAN does not include downstream impacts. See the definition of indirect and induced effects on this page: <https://blog.implan.com/understanding-implan-effects>. Furthermore, the author of this response is apparently unaware that this point was conceded by the Woods Hole experts during mitigation discussions and was also conceded in the Woods Hole Update. As with many responses here, the FAB is concerned about Orsted's willingness to double down on obviously false statements.

### Question B.2

IMPLAN was the only software used to determine economic impact. Other economic impact software should be used to compare the different results because different multipliers arise from different input- output models (e.g., RIMS II). Why was IMPLAN the only software used?

**The IMPLAN model is a widely accepted, peer-reviewed model that allows easy comparison between analyses. It incorporates data from over 500 industry sectors, including seafood processors and other sectors subject to the downstream impacts of the commercial fishing industry, with data updated annually. In light of this, the IMPLAN model provides a sufficient basis to assess indirect and induced economic impacts.**

That doesn't mean it is the only such model. The FAB is unaware of peer-reviewed research indicating that the IMPLAN estimates are probably better than those provided by other available models.

### Question B.3

Will the data used in the Woods Hole analysis be disclosed for audit by the FAB?

**The Woods Hole Report contains and explains all the data relied upon. Woods Hole received this data directly from NOAA fisheries for the SFW Project area. Further, on October 15, 2020, NOAA Fisheries released a report entitled Socioeconomic Impacts of Atlantic Offshore Wind Development, which summarized previous fishing activity within each offshore wind lease or project area, including the SFW Project, and reported annualized landings and revenue by species, gear type, and fishery management plan. This publicly available data aligns with the data contained in the Woods Hole Report.**

The FAB was unaware at the time of this question that Woods Hole was simply reporting on data analysis already conducted by NOAA by summarizing NOAA's post-modeled data. Nonetheless, the FAB believes these data should be disclosed and references RODA's public



comment letter regarding the SFWF DEIS, in regards to inequity of research and data access afforded to fisheries stakeholders.

#### Question B.4

The FAB is concerned that the “All Others” category (WH Table A1, p.26) is reported with a landings value of approximately \$0.101 per pound for a large number of pounds, and thus may contain errors. An average necessarily includes values above and below the average, and there are only three species with annual average prices below this value reported for RI in any year from 2008-2018 by NMFS: Little Skate, Menhaden and Sea Mussel. Menhaden is individually reported in the same Table, and Little Skate and Sea Mussel do not appear in the complete species list (WH Table A4, pp. 32-33). Please provide information sufficient to determine the correct landings value for All Others.

**The data from NOAA does not contain an error. Ocean quahog and surf clams landings were both reported by NMFS in the underlying data set as pounds of live weight (including shells), while all other species were reported as landed weight. This does not affect dollar values reported. The Woods Hole Report provided the NMFS landed weight conversion factors on page 11.**

The concerns identified in this question have not been answered. Data from NMFS Fisheries landings over 2008-2018 suggest that after accounting for live weight vs. meat weight conversion for surf clams, the RI/MA annual average price per pound of those clams was a minimum of \$0.159/lb. in 2010 and average of \$0.172/lb. over the time period. The fact remains that the average price reported for All Others remains **impossibly low** according to the publicly available NMFS value and landings data available to the FAB.

In addition, on review of the Woods Hole Update, the average price per pound reported for All Others was \$0.668 over 2008-2018. The data provided in the Woods Hole Update also gives no evidence of prices below \$0.101 as would be required for there to be no error.

If the FAB assumes that the correct price per pound is disclosed in the Woods Hole Update, the correction to the landings value is as follows. All Others annual value is given as \$18,855, which would increase to \$124,928 at a price of \$0.668/lb. The baseline NOAA landings value for RI (before adjustments for lobster/Jonah Crab) is \$117,844 and \$75,348 for MA, meaning that 61.0% of landings are attributed to RI. **The resulting adjustment to estimated commercial landings for RI is an additional \$64,684 annually.**

#### Question B.5

The Woods Hole description of the data analysis is unclear because of the statement, “VMS information has been integrated into the current version of the VTR data” (WH, p.8). The VTR models cited are DePiper (2014) and Benjamin et al. (2018), both of which are “raster” models in

which the landings value matched to a single LAT/LON pair reported in a VTR is smoothed over space according to a statistical model of how nearby to that point the fishing activity tends to occur (based on observer data). In contrast, the standard VMS-based modeling will match VTR landings with VMS trips, and allocate the landings over the vessel track based on speed, as is described on p.8 of the Woods Hole analysis. The VMS-based approach can be smoothed over space as well, but that is not stated here. If not smoothed, the VMS-based approach is highly sensitive to the exact location of boundary lines, such as those of the OCS-A 0517 lease area. Please provide information sufficient to determine the actual analysis procedure that took place.

**NOAA, not Woods Hole, performed the data analysis described in this question. NOAA compared the VTR and VMS data to develop a standardized approach for modeling the data for use across offshore wind lease areas that distributes landings along the vessel track.**

Orsted indicated in their response to Question A.6 that “the NOAA report [the Fisheries Footprints data release] applied an identical methodology to that used by Woods Hole.” Both Woods Hole’s citations of NOAA modeling and the citations from the NOAA webpage agree, and both refer to the VTR-only model of DePiper (2014). The citation of Benjamin et al. (2018) is a derivative work explaining how that model was translated to a raster in order to extend the modeling results over space. It has become abundantly clear that NOAA did not analyze VMS and the Woods Hole experts admitted to this fact during mitigation discussions. These inaccurate statements should be retracted from the written record. The FAB is concerned both with Orsted’s inability to understand the analysis (especially given their argument for scientific evidence as a guiding principle), and with Orsted’s willingness to repeatedly deny observable facts during this mitigation process.

#### Question B.10

What exactly is the “general framework” used from the reports by BOEM (2017a and 2017b), as referenced on p.6 of the Woods Hole analysis? Also, these references include an assessment of exposure of recreational fishing to offshore wind development. Why was no such exposure evaluated?

**BOEM’s general framework is ascertainable in the reports cited in the Woods Hole Report, full citations for which are included in the References section at pages 23 – 24.**

**Notwithstanding the foregoing, the general framework used in the Woods Hole analysis was to determine the proposed project area, obtain VTR data from NOAA for that area, and calculate the total gross revenues potentially lost as a result of the proposed project. Please also see the Woods Hole Update for Woods Hole’s assessment of potential impacts to the Rhode Island charter fishing industry.**

There is no answer here. Impacts to recreational anglers remain unconsidered and unevaluated by Orsted. An impact that is not considered or evaluated cannot be expected to be mitigated either. Refusal to consider recreational anglers or mitigate the harms they face is one reason

why the SFW project fails to meet the enforceable policies of the Ocean SAMP. The FAB urges CRMC to prohibit the project in accordance with the enforceable policies.

#### Part D: Questions Regarding the SFWF Fisheries Monitoring Plan

##### Question D.3

Will a final power analysis for the Fisheries Monitoring Plan be released before the conclusion of the mitigation process?

**Appendices B and D of the FMP contain the final power analyses for the beam trawl and lobster ventless trap surveys. As outlined in the FMP, SFW plans to conduct power analyses after the first year of sampling for the gillnet and fish pot surveys.**

The statistical standards applied to the trawl survey in Appendix B fall far below the standards applied to the ventless trap survey in Appendix D. In particular, the trawl survey as designed allows substantial probability of finding no effect, even when it is there. The potential for release of this bad science to be used as future “evidence” against fisheries user groups is another harm that must be mitigated. In a marginal case where mitigation efficacy is uncertain, the FAB urges CRMC to consider this defect as the deciding factor.

##### Question D.8

How will the Fisheries Monitoring Plan determine total and cumulative impact of the wind turbines on species diversity and ecosystems in the wind lease areas?

**No portion of the SFW Project is located within Rhode Island territorial waters. Rather, portions of the SFW Project fall within Rhode Island’s designated Geographic Location Description for purposes of the CZMA, allowing CRMC to conduct a federal consistency review of the proposed SFW Project under the enforceable policies of Rhode Island’s federally approved coastal management program found in the OSAMP. *See generally* 650 R.I. Code R. 20-05-11.10. CRMC must evaluate the SFW Project under only its enforceable policies. Cumulative impact analysis is not within CRMC’s enforceable policies.**

**Further, any cumulative impacts of wind lease areas are being addressed at the federal level by BOEM and in connection with the Environmental Impact Statements for offshore wind projects.**

This copy-pasted argument is incorrect as discussed above. Further, extent to which cumulative impacts “are being addressed at the federal level” quite clearly does not include mitigation of significant harms to fisheries user groups.

Question D.9

Are there any plans in place in the event that the wind lease areas cause population declines that put a species at risk of becoming classified as vulnerable or worse?

**No portion of the SFW Project is located within Rhode Island territorial waters. Rather, portions of the SFW Project fall within Rhode Island's designated Geographic Location Description for purposes of the CZMA, allowing CRMC to conduct a federal consistency review of the proposed SFW Project under the enforceable policies of Rhode Island's federally approved coastal management program found in the OSAMP. See generally 650 R.I. Code R. 20-05-11.10. CRMC must evaluate the SFW Project under only its enforceable policies. Consideration of population-level impacts is not within CRMC's enforceable policies.**

**Further, any population-level impacts of wind lease areas are being addressed at the federal level by BOEM and in connection with the Environmental Impact Statements for offshore wind projects.**

See response above to Question D.8.

Question D.10

Will a commercial fisheries Biological Assessment monitoring plan summary be submitted, as required by Rhode Island enforceable policies in the Ocean SAMP?

**The FMP meets the requirement of a biological assessment under the OSAMP.**

See discussion in our cover letter above. This is not the case.

Part E: Questions Regarding the Mitigation Proposal

Question E.1

The funding structure described in the proposal appears to treat recreational and charter fishing as shoreside impacts. What was the basis for this decision?

**Recreational and charter fishing are not treated as shoreside impacts. SFW recognizes the importance of these fishing communities. Because Federal VTR data does not include party/charter fishing revenue values or private fishing data, SFW initially included these fishing communities within the benefits of the Coastal Community Fund. Based on feedback from the FAB and CRMC, SFW revised its mitigation proposal to provide direct financial mitigation to the Rhode Island charter fishing industry. Please also see the Woods Hole Update.**

See discussion above for Question A.3.a. The FAB reiterates our concern that Orsted continues to deny observable facts.

### Question E.3

Orsted has indicated in the past to the FAB that any issues with information deficiencies in the COP would need to be resolved during mitigation. What is Orsted's plan for addressing these unresolved issues in the mitigation proposal?

**SFW has evaluated the alleged information deficiencies raised by the FAB and does not find that there are deficiencies in the COP. The COP will not be revised.**

**SFW has provided CRMC with supplemental information as requested under its authority to conduct a CZMA consistency review.**

The FAB remains concerned about the lack of fisheries mortality modeling in the COP. As mentioned above, Appendix J1 indicates kill zones are possible from pile-driving covering 45% of the lease area, affecting eggs and larvae of all species as TII as important species with swim bladders. The navigation safety risk assessment (Appendix X) also does not address radar impacts of the substation. The FAB does not believe these concerns, or those raised in our previous submissions have been addressed.

### Question E.6

Cox's Ledge is a unique, sensitive and critical habitat, identified in the COP as Essential Fish Habitat for 37 species. There is no demonstration by Orsted that turbines will not cause serious damage to Cox's Ledge habitat and the resources that exist there. Will such information be forthcoming before conclusion of the mitigation process?

**SFW has sited the turbines to avoid damage to the habitat on Cox's Ledge. SFW refers the FAB to its COP, FMP and other documentation submitted to CRMC for its consistency review.**

It is the collective opinion of the FAB members that the micro-siting of the turbines is not sufficient to avoid sensitive habitat. Despite the claims advanced by Orsted, essentially the entire area is high quality habitat for one species or another. There is the added consideration that the exact character of the bottom varies over time due to shifting sands. The FAB has requested further review of this claim from RI DEM and the FAB will follow up with that information.

### Question E.7

Why isn't Orsted offering anything other than money? There appears to be no consideration of ongoing monitoring of impacts to habitat, efforts for habitat restoration during the operations

period and following decommissioning, or mitigation of impacts on pelagic fisheries, both commercial rod & reel and recreational?

**SFW disagrees with the premise of this question. SFW has invested heavily in Project modifications to avoid or mitigation impacts to commercial and recreational fisheries, including but not limited to modifications to the turbine layout, increased cable burial depth, and efforts to avoid or minimize gear conflicts. In addition, the FMP includes an extensive benthic habitat monitoring plan and acoustic telemetry plan.**

**Notwithstanding these extensive Project modifications, many of which began in response to input from the FAB and the wider commercial fishing community, SFW recognizes that the SFW Project may cause temporary impacts to fisheries requiring mitigation pursuant to the Ocean SAMP. SFW engaged Woods Hole to quantify these potential impacts. Based on the assessment contained in the Woods Hole Report, SFW developed a comprehensive Mitigation Proposal. SFW has also proposed the Rhode Island Navigational Enhancement and Training Program, which would enable commercial fishermen and for-hire vessels to acquire certain approved navigation equipment through a grant system and would provide training and experiential learning opportunities to those navigating within the Orsted/Eversource Joint Venture Wind Lease Areas in the Massachusetts/Rhode Island Wind Energy Area.**

The FAB has evaluated non-compensatory mitigation initiated thus far by SFW and found it lacking. There are myriad unaddressed issues, due in part to Orsted's refusal to consider whole class of harms to fisheries user groups, or to engage with those user groups to determine what harms need to be mitigated. The "Navigational Enhancement and Training Program" is a top-down policy that exemplifies Orsted's failure to engage – it is the expert opinion of the FAB that anyone who might benefit from this training is so ill equipped to operate radar that they do not belong operating a fishing vessel anyway. It is quite clear that this Program only exists as window dressing to give the illusion of mitigation without actually attempting to solve the real-world problems arising from offshore wind development.

#### Question E.11

From October 2019 until 2022, BOEM is conducting a study in the Orsted lease areas in Cox's Ledge.<sup>1</sup> As a result of this study, it is clear that cod study is important in this area, as it's the southern-most range of spawning for cod. Spawning dynamics in this area are poorly understood. BOEM's study is meant to serve as a "baseline study" to address any future effects of offshore wind; cod spawning stocks are sensitive/vulnerable to disturbance since they form in large, dense areas over multiple weeks in predictable locations. If disturbed, it is very unlikely they will come back and spawn that season. Why were these impacts not considered in the mitigation proposal?

**Underwater noise generated from pile driving of monopile foundations is identified in the SFW COP as an impact producing factor (IPF) having negligible to moderate impacts on finfish and essential fish habitat (Table 4.7-1, COP Section 4.7). The timeframe within which pile driving will occur (May – December, COP Table ES-1) does not greatly overlap with the known cod spawning season on Cox's Ledge (primarily December – March;**

**Kovach et al., 2010; Loehrke, JL, 2014; Langan et al., 2020; Dean et al., 2020; Cadrin et al., 2020), largely mitigating and minimizing impacts to spawning cod stocks.**

This question was not confined to impacts of pile-driving. The FAB is concerned that the many geophysical survey passes using boomers and sparkers have already interfered with cod spawning. Can Orsted show that no boomers or sparkers were used on Cox's Ledge during cod spawning season?

In addition, the FAB continues to object to the definitions of impact severity used in the COP. Based on how major impacts are defined in the COP, they could only be revealed to apply in cases like nuclear weapons testing or paving over Cox's Ledge. The FAB objects to this definition as the FAB has done previously. Further, the range of negligible to moderate is so wide as to be completely uninformative. This is like saying that the range is somewhere short of nuclear weapons testing, and it is simply not informative in a practical sense.

#### Question E.12

The Ocean SAMP states that the "Council shall protect sensitive habitat areas where they have been identified through the Site Assessment Plan or Construction and Operation Plan review processes for Offshore Developments as described in section 160.5.3 (i)." §1160.1.10. In the webinar cited above, BOEM states that "[o]bviously Cox Ledge is a known feature in Southern New England. It is important habitat for many commercial and recreational fish..." Why has Orsted not identified any sensitive habitat areas on Cox's Ledge?

**This question is based on an incorrect assumption. SFW has sited the turbines to avoid damage to the habitat on Cox's Ledge. SFW refers the FAB to its COP and other documentation submitted to CRMC for its consistency review. Appendix N2 of the COP mapped, delineated, and identified the habitats within the Project area.**

See response above to Question E.6. It is the collective opinion of the FAB members that the micro-siting of the turbines is not sufficient to avoid sensitive habitat.

#### Question E.13

The Ocean SAMP states that "Offshore Developments shall not have a significant adverse impact on the natural resources or existing human uses of the Rhode Island coastal zone, as described in the Ocean SAMP. In making the evaluation of the effect on human uses, the Council will determine, for example, if there is an overall net benefit to the Rhode Island marine economic sector from the development of the project or if there is an overall net loss." The mitigation proposal does not discuss this requirement; what is Orsted's position on it?

**The quoted language falls within the "Overall Regulatory Standards" section of the OSAMP by which the Council must review SFW's consistency certification. The assessment of overall net benefit to the Rhode Island marine economic sector lies solely with the Council after its review of the complete Project submission. SFW states that the**

**COP, FMP, Mitigation Proposal and all additional documentation or data submitted to CRMC in support of the Project demonstrate that development of the SFW Project will create an overall net benefit to the Rhode Island marine economic sector.**

The FAB disputes the claim of an overall net benefit without any formal cost-benefit analysis. Further, since these comments have shown Orsted's opposition to a fair accounting of the many downsides of offshore wind development for commercial and recreational fisheries user groups, the FAB opposes any such claim until those harms are properly considered, evaluated and mitigated.



## Comments Regarding: SFW Letter Re FAB Mitigation Proposal (LETTER)

1. “For example, the SFW project will contain no more than 15 wind turbine generators, compared to Vineyard Wind’s 84 turbines.” – LETTER, page 1

SFW contains 1 substation per 16 platforms whereas Vineyard Wind was only planned to contain 2 substations out of the 84 platforms. To the extent that these create increased radar impacts, construction complexity, offshore support vessel traffic, etc., it seems that SFW is more hazardous on a per platform basis. In addition, radar impacts of the planned substation are not evaluated in COP Appendix X: SFWF Navigational Risk Assessment.

2. “Further, SFW modified its proposed project to adopt a uniform grid layout for wind turbine foundations of 1 x 1 nautical mile (NM). SFW made this substantial modification after listening to feedback from the commercial fishing industry including the FAB, federal and state agencies, and other stakeholders.” – LETTER, page 1.

This statement is misleading. The 1 x 1 grid layout was a joint proposal of the developers that was apparently led by Vineyard Wind with Orsted signing on. In addition, the claim that this proposal is based on fishing industry feedback is misleading since it was repeatedly stated that the 1 x 1 grid needs to include transit lanes for navigation safety. The proposal was advanced in suspicious circumstances that were further complicated when Orsted hired away Ed LeBlanc while he oversaw the USCG evaluation of that proposal in the MARIPARS.

3. “At the time of Vineyard Wind’s mitigation negotiations with CRMC and the FAB, Vineyard Wind had not committed to a 1x1 NM grid layout.” – LETTER, page 1.

Vineyard Wind had not committed to the 1 x 1 grid, but the Vineyard Wind settlement was pre-MARIPARS, in which the fishermen expected that they would get transit lanes through the project areas. The 1 x 1 grid is not some grand concession, the fishing industry was advocating for 1 x 1 with transit lanes. The removal of transit lanes dramatically increases harms to the fishing industry, so it goes both ways.

4. “FAB members, commercial fishing interest groups, and CRMC staff all have stated repeatedly that adopting the 1x1 NM grid would facilitate commercial fishing within the turbines and mitigate substantially any potentially adverse impacts.” – LETTER, page 1.

No, they did not. They argued for this position as a compromise because they thought it was an achievable compromise and it would limit the harms to fisheries user groups. See Town Dock letter from 2018 as evidence that 1 x 1 does not replace mitigation (<https://www.savingseafood.org/wp-content/uploads/2019/08/Town-Dock-letter-to-CRMC.pdf>). Substantially or not is a separate question. The FAB has advised CRMC staff that the FAB expects losses of 50-80% during operations with the 1 x 1 grid, as opposed to 100% loss.

5. “Simply put, the South Fork and Vineyard Wind projects are not comparable for purposes of establishing a mitigation framework.” – LETTER, page 1.

The projects are comparable across many avenues, and the differences are *differences in degree, not differences in kind*. Both are offshore wind developments that will be constructed, operated and (hopefully) decommissioned in materially the same fashion. Many of the risks will translate once accounting for the intensity of fishing displacement by each wind area. One of the biggest reasons why VW is not comparable is because of the recreational importance of Cox's, but this is again a matter of degree. Furthermore, as mentioned above, Orsted's own mitigation proposal reduces the projects to maximum comparability by assessing mitigation only as commercial landings displaced plus shoreside impacts. Also, see below regarding Orsted's repeated references to Vineyard Wind proceedings with respect to 1 x 1 spacing.

6. "The FAB appears to accept the federal NOAA Vessel Trip Report (VTR) data and spatial distribution for the Vineyard Wind project but reject it with respect to the South Fork project." – LETTER, page 2.

This is untrue. The FAB simply used the VTR data as the only readily available data for comparison because spatial fisheries data are scarce.

7. "Instead, the FAB's proposed annual landings value for the South Fork wind lease area nearly doubles the reported annual NOAA value. The FAB has provided no credible evidence to support this increase." – LETTER, page 2.

The FAB disputes the claim that our evidence is not credible. Dr. Sproul has identified numerous shortcomings of the data and methods used by Woods Hole. The FAB members have testified that individual boats fishing in the area have greater annual landings than what is proposed in the Woods Hole Report. The FAB estimates are detailed in writing, including estimates of lobster landings tied to specific Loran coordinates and estimates of unbalanced VMS activity not captured by the low-resolution VTR model used by NOAA.

8. "SFW, on the other hand, retained independent experts from the renowned Woods Hole Oceanographic Institution (Woods Hole) to perform a detailed analysis of potential economic impacts from the South Fork project. Woods Hole's analysis relies on NOAA data, which is the best in the world, and aligns almost perfectly with NOAA's October 2020 report on offshore wind values in the Northeast." – LETTER, page 2.

As was disclosed during mitigation discussions, Woods Hole did almost none of their own analysis. They took post-modeled data from NOAA and fed it through the IMPLAN software, and were apparently unaware that they were omitting the processors as downstream shoreside impacts until it was raised by Dr. Sproul during mitigation discussions. In addition, the NOAA data being "best in the world" does not mean the objective quality is good. See our previous response above about the limitations of the NOAA data used in this setting.

9. "Woods Hole also performed a sensitivity analysis on the landings values from the wind lease area by examining NOAA data for a 5 km buffer surrounding the South Fork wind lease area. This analysis confirmed that the commercial landings values within the buffer are roughly equivalent to those within the wind lease area." – LETTER, page 2.

The FAB received the data from the Woods Hole Update buffer analysis only recently. At a first pass, these data appear similar in value per unit area to the initial study. However, these data contain a remarkable difference in the price per pound assigned to “All Others” landings. See above notes about our concerns.

10. “SFW is not aware of any scientific basis to support the FAB’s inflated values.” – LETTER, page 2.

This requires a very narrow interpretation of the phrase “scientific basis”. See elsewhere for our comments about Orsted’s strategy of insisting on a “scientific basis” or “evidence-based standard” inconsistently and only as a negotiating tactic.

11. “As SFW has explained previously, the proposed value includes, among other things, purchases of durable goods like boats. Using this value as a baseline therefore incorporates the speculation that the South Fork project will cause recreational boaters in Rhode Island, for example, to change their boat purchase as a result of the wind turbine installation. There is no evidence to support this assertion.” – LETTER, page 2.

Cox’s Ledge is known for sportfishing and Atlantic cod. Anglers content to fish black sea bass can do so much closer to shore but cod needs to be caught offshore. Thus, anglers not hiring charters require seaworthy vessels in order to fish for Atlantic cod on Cox’s Ledge. It is clear that any such angler will need to upgrade their vessel purchase if they desire to fish independently offshore. It stands to reason that if Cox’s Ledge is lost to Atlantic cod due to colonization by blue mussels and black sea bass (see comments elsewhere and immediately below), then some recreational anglers will forego the bigger boat. The FAB members have offered hours of expert testimony to CRMC staff. The FAB exists to provide this expertise and it is disingenuous to characterize FAB testimony as no evidence.

Further, it is obvious that there will be a marginal effect that will include at least some boat purchases. For example, it has been estimated for the Deepwater Horizon oil spill that omission of durable goods purchases from travel cost estimates leads to underestimating the lost consumer surplus (value) for recreational anglers (English et al., *American Journal of Agricultural Economics*, 2019).

12. “To the contrary, studies have found that offshore structures such as wind turbines can serve as a destination for charter and recreational fishing and can offer an enhanced ‘reef effect.’” – LETTER, page 2.

Other than the effect of turbines on drift fishing, the ‘reef effect’ is one of the biggest worries for FAB members. They fear that colonization by blue mussels and black sea bass will displace high-valued species like scallops and Atlantic cod. Further, abundance of black sea bass on Cox’s Ledge will be essentially valueless because of its availability to be caught nearer to shore.

13. “The Woods Hole Update contains an assessment of impacts to the Rhode Island charter fishing industry that more accurately values potential impacts based on the average annual gross revenue from for-hire (charter) fishing boats based in Rhode Island. The Woods Hole Update takes a conservative approach by setting aside any potential benefits to the industry from the South Fork project.” – LETTER, page 2.

The FAB members do not anticipate any benefits to recreational or charter fishing arising from this project. Notably absent from this discussion is how Woods Hole came to the economic reasoning that there could be no loss at all to recreational fishing. Any displacement necessarily indicates a loss because fishermen choose the highest-valued location to fish on a given trip. If there were no loss from displacement, then the FAB members would never observe fishing in that location in the first place. See for example Carson, Hanemann and Wegge (*Marine Resource Economics*, 2009) for a detailed exposition on how losses accrue due to fishing area closures.

14. “Finally, the FAB has offered no evidence to support its proposed impact percentages for each project phase. The FAB has suggested a 250 percent loss during construction. In other words, the FAB claims that the commercial fishing industry will lose 2.5 times the total annual value generated by commercial landings within the wind lease area. This assumption is not credible as a matter of fact or logic.” – LETTER, page 2.

The FAB members have provided evidence and will reiterate it here. The FAB members expect losses during construction to extend substantially outside the lease area due to the effects of pile driving, seafloor disturbance and vessel traffic. As mentioned elsewhere, the underwater noise modeling in the COP indicates temporary threshold shift effects up to 9 – 11 km from each pile. The FAB also expects the construction schedule to experience unplanned delays, as occurred with the last installation executed by Deepwater, the Block Island Wind Farm. Further, the FAB expects that there may be multi-year impacts depending on the loss of year classes for fish and squid that spawn in the area. Finally, our estimate includes losses due to fishing vessels already abandoning the area because of Orsted’s geophysical surveys and resulting gear losses to fishermen. These losses are evident in the decline in landings and values from the lease area during 2017 and 2018 that were provided in the Woods Hole Report. Not counting 2020 for COVID, the FAB expects these losses to apply all the way until construction begins in 2023.

15. “Nor is the FAB’s assertion of 80 percent loss to both commercial and recreational fisheries for the next twenty-five years.” – LETTER, page 2.

The FAB members provided testimony regarding this point as well. The FAB members estimate 50-80% losses to commercial, charter and recreational fishing during the operations period. Commercial losses for fixed gear will be driven by the 1 x 1 grid, removing approximately half of the area available to set up. Further losses are anticipated due to difficulty setting up gear between turbines and inability to fish during peak season due to safety issues from visibility and uncertainty about whether gear can be retrieved. Commercial losses for mobile gear include anticipation of navigation safety issues and increased conflicts with fixed gear. Mobile gear fishermen have also indicated they expect to encounter additional “hangs” on the bottom due

to boulder movement, cables becoming unburied, etc. associated with wind development. For scallops especially, there is the added concern that the 'reef effect' will displace scallops with low value blue mussels. Recreational and charter fishermen anticipate losses due to the 'reef effect' displacing desirable sportfishing species including Atlantic cod, and they anticipate losses due to the impossibility of drift fishing inside a turbine array.

16. "The FAB has made repeated prior statements that adoption of the 1 x 1 NM grid layout would permit them to continue fishing in the wind lease areas with minor modifications to prior practices." – LETTER, page 2.

This statement is taking editorial liberties with the record. The FAB members have not stated that they could continue to fish with minor modifications. They indicated repeatedly that they needed the 1 x 1 spacing in order to continue fishing, and they argued for the 1 x 1 grid in order to avoid a complete loss of the area. They also indicated that they needed transit lanes for navigation safety, a fact that Orsted and other developers have continually ignored.

17. "SFW fully expects commercial and recreational fishing to continue during operations." – LETTER, page 3.

Based on what evidence, research or expertise? As the FAB members have noted in the past, Orsted has failed to interview members of the fishing industry, a required element of Necessary Data and Information (NDI) in the Ocean SAMP. Given the 1 x 1 spacing, the FAB also expects commercial and recreational fishing to continue, but at substantially reduced capacity and facing some risk of a total loss.

18. All quotes found in LETTER are later found in MEMO and addressed below, except:

<sup>3</sup> *Id.* at 57 ('CRMC staff find that offshore wind farms should be developed in a grid pattern with east-west orientation of rows and 1 nm spacing between all turbines and turbine rows . . . in order to avoid significant adverse impacts to Rhode Island commercial fishing operations and be consistent [with] the CRMC's enforceable policies.');

*See also* CRMC letter to BOEM dated July 9, 2020 on Vineyard Wind DEIS." – LETTER, bottom of page 3 [previously in this list of footnotes, *Id.* refers to Fisheries Advisory Meeting, Tr. at 90:16-19 (Sept. 9, 2019)].

This quote is actually from page 57 of the CRMC Federal Consistency concurrence for Vineyard Wind of Feb. 28, 2019. It is clear from the remainder of the document that CRMC staff does not consider the 1 nm spacing alone to be sufficient to avoid significant adverse impacts.

## Comments Regarding: SFW Memo Re: 1x1 Spacing (MEMO)

As stated above, nowhere have the FAB members or representatives of the fishing industry indicated that all harms would be completely mitigated by moving to the 1 x 1 grid. Instead, they have simply been fighting to minimize those harms according to a compromise that they thought was in reach. The FAB addresses each quote in turn, but it is quite clear from this perspective that Orsted is taking substantial editorial liberties here to misrepresent the statements of fishermen. Within these quotes, the statements of RI regulators have repeatedly emphasized that the 1 nm spacing is a compromise that would allow continued commercial fishing for “most vessels.” The FAB members disagree with this assessment: they believe that the spacing may allow as much as half of the commercial capacity to remain, but also envision the potential for displacement of substantially more than half of this capacity (the FAB members have advised CRMC that they expect a loss in the range of 50-80%). Finally, there is no mention of impacts on drift sportfishing for recreational and charter vessels which are not abundant in the Vineyard Wind lease but are regular users of Cox’s Ledge and SFW lease area.

Quotes below are highlighted portions only from MEMO, using the A-F numbering scheme therein. Highlighted quotes presented in `Courier` font for clarity.

### A. Deepwater Wind Farm Presentation Transcript, August 27, 2018:

Mr. Mataronas: I’d like to go back to the turbine spacing and just stress the importance of the one nautical mile. I mean, it’s out in the ocean, and everything we do is by the nautical mile out there.

There is nothing here stating that harms are fully mitigated by the one nautical mile spacing.

### B. Rhode Island Marine Fisheries Council Meeting Summary, October 1, 2018:

Deepwater/Vineyard Wind offshore wind development: Motion made by *J. Grant* to recommend to the DEM Director and CRMC that all wind power leases off southern New England be required to have turbines aligned in an east-west pattern, with a spacing between turbines of one nautical mile to minimize negative impacts on historical fishing actions, and further require that structures be removed upon termination of the lease to restore fishing access to the entire lease area; 2<sup>nd</sup> by *A. Dangelo*. The motion passed 6-0. A second motion was made by *A. Dangelo* to recommend that the meeting minutes from the August 30, 2018 special Council meeting (when the windfarm presentations were heard) be submitted to Deepwater and Vineyard Wind; 2<sup>nd</sup> by *M. Rice*. The motion passed 6-0.

As discussed above, the turbine spacing was requested to minimize impacts on fishing. It is also obvious from the quoted text that the impacts are not zero, hence the focus on removing the structures upon termination of the lease to restore fishing access.

C. Letter from CRMC to Bureau of Ocean Energy Management and Vineyard Wind, LLC, February 28, 2019:

Highlight 1: Vineyard Wind's consistency certification is for a proposed 800 megawatt ("MW") offshore wind farm located within the northern portion of Bureau of Ocean Energy Management ("BOEM") Lease Area OCS-A 0501. The CRMC finds that the proposed activity complies with the enforceable... [SIC - next page and rest of highlight missing]

Highlight 2: [SIC - first page and start of highlight missing] ...majority of Rhode Island-based commercial fishing operations would be able to continue harvesting activities with some exceptions and adjustments to fishing gear and methods, and coexist with the offshore wind energy industry. Nevertheless, the alternative east-west layout with 1 nm spacing between all turbines will require Rhode Island commercial fishermen to modify their gear and operations in order that fixed and mobile gear operations can continue to safely harvest fishery resources in an effective and cooperative manner. A combination of Alternatives D1 and D2 as presented in the BOEM Draft Environmental Impact Statement ("DEIS") dated December 2018 would largely achieve the CRMC's proposed alternative layout supported by Rhode Island commercial fishermen. See BOEM DEIS at 2-11.

Highlight 3: The CRMC proposed alternative layout of east-west orientation with minimum 1 nm spacing between turbines is a compromise by Rhode Island-based commercial fishermen that will require modification to their gear and operations, but would allow continued fishing for most commercial fishing operations within the Vineyard Wind lease area and result in both the commercial fishing and offshore wind energy industries to coexist.

Highlight 4: Vineyard Wind acknowledged at the November 18, 2018 CRMC Fishermen's Advisory Board meeting that they erred in not addressing the needs of Rhode Island-based commercial fishermen earlier in the project design process, essentially a declaration against interest, and they have since committed to an east-west orientation with 1 nm spacing between each turbine row for all their future wind farm projects.

Again, there is nothing here stating that harms are fully mitigated by the one nautical mile spacing. What is stated is that it's a compromise, and that CRMC has differed with

the opinion of the FAB as to whether the majority of commercial fishing capacity will remain.

**D. Fishermen's Advisory Board Meeting Transcript, September 9, 2019:**

Highlight 1: MR. DELLINGER: Fishermen have been saying for years, I mean, at least these fishermen, one nautical mile east-west and north-south squared. And you know as a fisherman, it's just for safety to get home. You know, when you are inside one of one of [SIC] these turbine arrays, and there's going to be multiple ones, in bad visibility you can't rely on your radar. Even though you know where the turbine is, you don't know where the other vessels are. It's a big problem. And like Greg said, and Rodney... [SIC - next page and rest of highlight missing]

Highlight 2: MR. EAGLES: You're only listening to half the story. At the meetings every one of these guys, like Katie said, every single meeting we attended we all said we need one nautical mile east-west and north-south, and you eliminated the north-south entirely and just took up the east-west. Maybe you think that would satisfy us. It's not. We need the one nautical mile, like Brian said, the checkerboard square thing. That's what we said... [SIC - next page and rest of highlight missing]

Again, there is nothing here stating that harms are fully mitigated by the one nautical mile spacing.

The second highlighted quote is also taken suspiciously out of context. According to the official minutes, "Mr. Eagles reminded Orsted that the fishing industry was asking for no less than one mile apart between turbines and that a minimum of a four-mile width transit lane should be established." When reviewing the transcript, it is clear that this about the only quote of Mr. Eagles in which he is not also referencing the need for 4 nm transit lanes.

**E. Fishermen's Advisory Board Meeting Transcript, September 30, 2019:**

MS. ALMEIDA: I apologize if I'm repeating. I walked into here at the beginning of this conversation. To Brian's point of coexistence, since we first started being reach out to from all the wind companies, each of them has said we are not going to make this a nonfishing zone, and that's wonderful. That's great. We want to continue to be able to fish in this. In order to be able to fish in this, you're going to have to listen the industry guys and what it's going to take for them to be able to continue to fish in this. If that's one nautical mile between turbines, and to me - and perhaps I'm naive with this, but when I come to the microphone and I say one nautical mile between turbines, I mean one nautical mile between turbines, not only east-west but north-south. I thought that was obvious. Apparently, it wasn't.



But if you guys aren't going to be listening to the industry and what it takes to allow these guys to go there and fish safely and successfully, they're not going to be able to go there and fish. It's not going to be the point of we just choose not to. It's just they're not able to.

Again, there is nothing here stating that harms are fully mitigated by the one nautical mile spacing. What has been said is that the spacing is needed to allow continued fishing, but not that that spacing solves all problems for fishing in a wind array.

**F. Letter from CRMC to Office of Renewable Energy Resources, Bureau of Ocean Energy Management, July 9, 2020:**

The Alternative D2 configuration in a uniform grid of 1 x 1 nautical mile spacing between all turbine foundations (including the OSS platforms) in an East-West, North-South orientation is entirely consistent with the MARIPARS recommendation and the offshore wind industry's November 1, 2019 collaborative proposal for wind farm layout in the southern New England offshore renewable energy lease areas. The RICRMC believes it is imperative that BOEM condition all COP approvals accordingly so that there is regulatory certainty for the offshore wind industry and stakeholders with assurance that there will be a predictable and uniform wind farm pattern that accommodates and facilitates safe navigation, commercial and recreational fishing activities, and USCG search and rescue operations. In addition, we are mindful of federal law that governs development activities on the outer continental shelf (OCS) that requires "the right to navigation and fishing therein shall not be affected." See 43 U.S. Code § 1332. We expect BOEM to conduct its NEPA review of the Vineyard Wind project, and all other southern New England wind farm projects on the OCS, in accordance with this federal law.

There is nothing here stating that harms are fully mitigated by the one nautical mile spacing. The mention of the U.S. Code as a reminder to BOEM of their responsibilities to protect fishing and navigation is not a statement endorsing the 1 x 1 grid as being a complete solution to the problems posed by placing wind turbines in open ocean.