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April 21, 2023

TO: Elizabeth A. Klein,
Director
Bureau of Ocean Energy Management
1849 C Street, NW
Washington, D.C. 20240

RE: Proposed Sale Notice for Commercial Leasing for Wind Power Development on the Outer Continental Shelf in the Gulf of Mexico, BOEM 2023-0021, 88 FR 11939, February 24, 2023

The Southern Shrimp Alliance is pleased to submit the following comments, recommendations, and requests regarding this Proposed Sale Notice (PSN) in the Gulf of Mexico ("Gulf"). SSA's membership is comprised of many small, family-owned businesses in the shrimp fisheries and associated shoreside enterprises operating in numerous coastal communities throughout the Gulf of Mexico and in all eight warm-water shrimp-producing states from Texas to North Carolina.

SSA remains extremely grateful for the opportunity to participate in BOEM's offshore wind (OSW) energy development process so fully, and for our inputs to be considered so seriously as reflected in BOEM's identification of the two Wind Energy Areas (WEAs) and subsequent identification of these three proposed Lease Areas which substantially deconflict such development with our fishery.

We have been particularly pleased with the positive response to and outcomes from the request we made very early on in this process for BOEM and NOAA to collaborate in applying the same spatial suitability modeling used by NOAA's National Centers for Coastal Ocean Science (NCCOS) for their Aquaculture Opportunity Areas initiative in the Gulf to the offshore

wind energy development process in the Gulf.[1] We note with appreciation BOEM's reference to that in this PSN document.

This science-based state-of-the-art spatial modeling approach represents a tremendous advancement for understanding, objectively evaluating, and ultimately deconflicting the complex matrix of marine resources and ocean users that must be considered and addressed in BOEM's offshore wind energy development process. We again congratulate BOEM and NOAA for this extremely productive and farsighted collaboration.

The shrimp fishery remains the most valuable fishery in the Gulf of Mexico and is at the core of the economies of many coastal communities throughout the Gulf. We call BOEM's attention to the fact that shrimp vessels federally permitted to operate in federal waters – on the Outer Continental Shelf (OCS) – not only hail from ports throughout the Gulf coast - these vessels fish throughout the Gulf irrespective of what ports they hail from. Consequently, shrimp fishing vessels from all 5 Gulf States are potentially affected by OSW development and operations in these 3 lease areas and any future lease areas to be identified. Indeed, fishermen and fishing communities in every Gulf state have a direct interest in this PSN, not just in Louisiana and Texas.

The following comments first address the specific "*Questions for Stakeholders"* set forth in Section IV of this PSN and are followed by comments addressing some additional matters addressed in the PSN.

IV. Questions for Stakeholders

a. Number, size, orientation, and location of the proposed Lease Areas:

> *"BOEM is requesting comment on the number of leases that should be offered within the Lease Areas, the size and orientation of the Lease Areas, and any portions of the Lease Areas that should be prioritized for inclusion or exclusion from this lease sale or future lease sales."*

SSA appreciates BOEM's stated objective and ongoing efforts to deconflict the siting of OSW facilities with the Gulf shrimp industry. Working so constructively with BOEM and NOAA to achieve this objective has been a very rewarding experience for our organization and members. This deconfliction to date substantially reflects the inclusion of areas with moderate-to-high shrimp fishing effort in the Constraints Submodel of the aforementioned spatial suitability modeling collaboratively developed and applied by BOEM and NOAA NCCOS to this process.

As set forth in BOEM's report, "*A WIND ENERGY AREA SITING ANALYSIS FOR THE GULF OF*

[1] https://www.shrimpalliance.com/wp-content/uploads/2021/10/SSA-letter-to-NOAA-Admin-Spinrad-GOM-offshore-wind-f-9-28-21.pdf

MEXICO CALL AREA",[2] areas included in that Constraints Submodel, such as areas with moderate-to-high shrimp fishing effort, were assigned a suitability score of zero. (see Figure 1)

As extraordinary as BOEM's efforts have been to fully deconflict OSW facility siting with the shrimp industry by avoiding any potential siting of OSW facilities in areas with moderate-to-high shrimp fishing effort, SSA notes there do remain some areas of moderate-to-high shrimp fishing effort within some of the OCS lease blocks that were included in the 3 proposed Lease Areas - notwithstanding those areas of moderate-to-high shrimp fishing effort having been assigned a suitability score of zero.

Therefore, in the spirit of more fully achieving the goal to deconflict OSW facility siting with those areas with moderate-to-high shrimp fishing effort, SSA **requests** BOEM's consideration of the following modifications to each of the proposed Lease Areas. We believe these modifications are consistent with the Constraints Submodel which we reiterate, assigned an OSW facility siting suitability score of zero to areas of moderate-to-high shrimp fishing effort.

Lease Area OCS-G 37334
(*See Figures 2 and 3*)

SSA **requests** BOEM's consideration and implementation of either one of the two following options to modify this proposed Lease Area.

Option 1: Remove the following three OCS lease blocks from this Lease Area: 6862, 6863, 6912. These OCS lease blocks each contain significant quantities of moderate-to-high shrimp fishing effort. This Option 1 would achieve the objective to more fully deconflict OSW facility siting with the shrimp industry.

Option 2: Shift the entire proposed Lease Area in a southward direction by one OCS lease block, and remove OCS lease block 6912, so that the northernmost row of OCS lease blocks in this proposed lease area would be: 6913 and 6914. This Option 2 would have the effect of removing those 3 OCS lease blocks 6862, 6863 and 6912 that contain areas with significant moderate-to-high shrimp fishing effort from this proposed Lease Area and would achieve the objective to more fully deconflict OSW facility siting with the shrimp industry. This Option 2 would also have the effect of maintaining nearly the same size of this proposed Lease Area with the net loss of only one OCS lease block (7.1%) from the total proposed Lease Area of 14 OCS lease blocks.

Lease Area OCS-G 37335
(*See Figures 4 and 5*)

SSA **requests** BOEM's consideration and implementation of the following modification to this proposed Lease Area.

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[2] https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/GOM-WEA-Modeling-Report-Combined.pdf

Remove the following two OCS lease blocks from the proposed Lease Area: 6079, 6080. These OCS lease blocks each contain significant quantities of moderate-to-high shrimp fishing effort. This would achieve the objective to more fully deconflict OSW facility siting with the shrimp industry. This would also have the effect of limiting the reduction in the size of the proposed Lease Area with the net loss of only two OCS lease blocks (11.1%) from the total proposed Lease Area of 18 OCS lease blocks.

Lease Area OCS-G 37336
(*See Figures 4 and 6*)

SSA **requests** BOEM's consideration and implementation of either one of the three following options to modify this proposed Lease Area.

Option 1:

Remove the following four OCS lease blocks from this Lease Area altogether: 6329, 6330, 6331, 6332. These OCS lease blocks each contain significant quantities of moderate-to-high shrimp fishing effort. This Option 1 would achieve the objective to more fully deconflict OSW facility siting with the shrimp industry and would retain 13 of the lease blocks which is more than 75% of the total proposed lease area of 17 lease blocks.

Option 2:

Shift the entire proposed Lease Area in a southward direction by one OCS lease block so that the northernmost row of OCS lease blocks in this proposed lease area would be: 6379, 6380, 6381 and 6382. This Option 2 would have the effect of removing those 4 OCS lease blocks (6329, 6330, 6331, 6332) that contain areas with significant moderate-to-high shrimp fishing effort from this proposed Lease Area and would achieve the objective to more fully deconflict OSW facility siting with the shrimp industry. This Option 2 would also have the effect of maintaining the same size of the proposed Lease Area in terms of the number of OCS lease blocks and acreage.

Option 3 – Preferred:

Do not offer this lease area OCS-G 37336 in the Final Sale Notice. This Preferred Option 3 would be consistent with the PSN stating that "*BOEM is proposing to offer one lease per region*".

SSA further notes the following statement in the PSN:

> *"BOEM is aware of potential conflicts with USCG lightering operations in portions of the Texas Coast Region Leases. Due to USCG's concerns about lightering areas in the southern portion of the Galveston WEA (Option I), BOEM will continue to work with USCG to identify, quantify, and mitigate potential impacts and risks to lightering operations within the traditional lightering use areas within Galveston leases when*

considering any plans submitted for BOEM's consideration and approval after lease issuance."

This suggests that our proposed Option 2 above may not be optimal in the context of those lightering operations but instead that this Preferred Option 3 would be optimal. This Preferred Option 3 would address the concerns of the USCG about impacts and risks to lightering activities in the southern portion of the Galveston WEA in which this lease area OCS-G 37336 is located and directly mitigate (avoid) those impacts and risks. At the same time, this Preferred Option 3 would advance the objective to more fully deconflict OSW facility siting with the shrimp industry by eliminating those 4 lease blocks that contain areas with significant moderate-to-high shrimp fishing effort from leasing and future OSW development.

b. Considerations for the delineation of a Lease Area:

As stated in the PSN:

*"These delineation considerations may include comparable commercial viability and size; prevailing wind direction and minimal wake effects; maximized energy generating potential; mooring system anchor footprints and extents**; possible setbacks at Lease Area boundaries**; distance to shore, port infrastructure and electrical grid interconnections; and fair return to the Federal Government pursuant to OCSLA through competition for commercially viable Lease Areas. BOEM welcomes additional comments regarding other considerations for how best to delineate Lease Areas."*

The 3 proposed lease areas are all in close proximity to areas of high shrimp fishing activity and to some of the most active shrimp fishing ports in the Gulf. Therefore, for reasons of safety and shrimp fishery production, SSA **requests** BOEM's consideration of applying a 1nm-2nm setback on lease area boundaries that are in closest proximity to high shrimp fishing activity immediately outside of the lease area boundaries. Depending on if and how BOEM accepts the requests SSA has made to modify the 3 lease areas in the previous section - which we note would likely significantly reduce the need for these setbacks in some cases - SSA requests consideration for such setbacks to apply to –

1) the lease blocks along the western, northern, and eastern boundaries of lease area OCS-G 37334.
2) the lease blocks along the northern, eastern, and southern boundaries of lease area OCS-G 37335.
3) the lease blocks along the western, northern, and eastern boundaries of lease area OCS-G 37336.

c. Transit corridors:

> *"BOEM welcomes comments on the potential need for defined transit corridors within the proposed Lease Areas and the degree to which such corridors might meet potential users' needs."*

d. Existing uses that may be affected by the development of the proposed Lease Areas:

> *"If transit corridors are warranted, what placement and orientation (length, width, etc.) would facilitate the continuance of existing uses? BOEM asks commenters to submit technical and scientific data in support of their comments."*

With respect to both PSN subsections c. and d. above, SSA notes that there are approximately 220 federally permitted shrimp fishing vessels hailing from ports in close proximity[3] to the proposed Galveston and Lake Charles lease areas (70 of such vessels in western LA and 150 in northeastern TX). This represents a significant portion of the entire federally permitted Gulf shrimp fleet. In addition, shrimp fishing vessels hailing from ports well outside of the immediate vicinity of these proposed lease areas may at times land their shrimp at shrimp processing facilities in these ports that are in close proximity to these proposed lease areas.

The transiting of these shrimp vessels to and from their fishing grounds and to these ports is likely to be impacted by OSW facilities located within these proposed lease areas, especially considering these proposed lease areas are largely surrounded by major, very busy shipping lanes and lightering areas which shrimp vessels avoid.

With that in mind, SSA notes that shrimp fishing vessels 65 feet or longer must have an operating Automatic Identification System (AIS) on board while operating in U.S. navigable waters. SSA **requests** that BOEM review the NOAA and U.S. Coast Guard AIS data such as is set forth in BOEM's report, "*A WIND ENERGY AREA SITING ANALYSIS FOR THE GULF OF MEXICO CALL AREA*", [4] along with any other available shrimp vessel location tracking data to determine the extent to which such transiting by federally permitted shrimp vessels will be impacted.

Based on the analysis of that data, SSA further **requests** BOEM in consultation with USCG and NOAA to determine if transit corridors are warranted for both fishing operational and safety reasons and should be included in the Final Sale Notice (FSN) for these proposed lease areas and if so, as stated in the PSN, "*what placement and orientation (length, width, etc.) would facilitate the continuance of"* shrimp vessel transiting through these areas.

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[3] ports considered to be in close proximity to the proposed lease areas for this purpose range from Vermilion Bay in Louisiana to the east and south/west to Sargent in Texas.

[4] https://www.boem.gov/sites/default/files/documents/renewable-energy/state-activities/GOM-WEA-Modeling-Report-Combined.pdf

e. Benefits to underserved communities:

SSA continues to assert that BOEM must apply to the Gulf shrimp fishery President Biden's policies regarding Equity and Environmental Justice as set forth in his various Executive Orders. Historically, the Gulf shrimp industry has in many ways been forced to bear a disproportionate burden of meeting this Nation's energy needs through the development and operation of the offshore oil and gas industry in the Gulf. If such Equity and Environmental Justice policies are not applied in this context, those extant burdens are likely to be compounded by the future disproportionate cumulative impacts on the Gulf shrimp industry of achieving this Nation's renewable energy development goals including offshore wind and green hydrogen, as well as this Nation's offshore aquaculture development goals.

SSA has specifically cited and addressed the relevance of President Biden's Equity and Environmental Justice policies to the Gulf shrimp industry in several of its comments submitted to BOEM to date including in greater detail in its comments regarding BOEM's draft Environmental Assessment (EA).[5] SSA **requests** that these comments be included in the record of decision for this action.

On a relevant note, SSA also addressed the relevance of these Equity and Environmental Justice policies to the cumulative impacts of various federal actions including offshore wind energy development on the Gulf shrimp industry in some further detail in its July 21, 2022, comments in response to NOAA's Notice of Intent to prepare and Programmatic Environmental Impact Statement for offshore aquaculture development in the Gulf. BOEM may also find these comments of relevant interest on this topic and so SSA **requests** that these comments be included in the record of decision for this action.[6]

To be clear, these policies and their relevance to the Gulf shrimp industry must be fully considered and addressed as part of BOEM's process – including in its EA, its fishery mitigation strategy, and in this PSN in the context of the number, size, orientation, location, and delineation of the proposed Lease Areas lease areas as well as in the context of compensation for fishery impacts through the proposed bidding credit system. Stated otherwise, these cumulative disproportionate impacts on the Gulf shrimp industry must be mitigated – first by being avoided and minimized – and then, through the provision of compensation to shrimp fishermen and the associated upstream and downstream enterprises for any impacts sustained.

f. Bidding credits:

As set forth in the PSN under this section,

> *"BOEM is proposing to grant bidding credits to bidders that commit to:*

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[5] See: https://www.regulations.gov/comment/BOEM-2021-0092-0004

[6] See: https://www.regulations.gov/comment/NOAA-NMFS-2022-0044-0064

"(2) establishing and contributing to a fisheries compensatory mitigation fund or contributing to an existing fund to mitigate potential negative impacts to commercial and for-hire recreational fisheries caused by OCS offshore wind development in the GOM, as described in sections IV(f)(iii) and IV(f)(iv) below."

And further…

"These bidding credits are intended to:

(3) minimize potential economic effects on commercial fisheries impacted by potential offshore wind development, as cooperation with commercial fisheries impacted by OCS operations will enable development of the Lease Area to advance."

SSA certainly appreciates BOEM's recognition of the need to provide a mechanism to compensate fishermen for the adverse impacts of OSW development on our industry. However, SSA has long recognized that, unlike for oil and gas development, BOEM lacks specific statutory authority under the current Outer Continental Shelf Lands Act (OCSLA) to create or operate such a mechanism with respect to impacts associated with OSW development. Consequently, SSA continues to work with Members of Congress to establish such specific statutory authority within the OCSLA and **requests** BOEM to provide such Members of Congress with technical assistance in developing the necessary legislation to provide BOEM with this needed mandate.

Nevertheless, SSA appreciates that BOEM's proposed bidding credits system "*to mitigate potential impacts to commercial and for-hire recreational fisheries*" may provide an innovative approach that should be seriously considered. SSA cautions, however, that unlike establishing through federal legislation an OCSLA statutory mandate for the OSW industry to compensate fishermen for such impacts, the proposed bidding credits mechanism only provides a financial incentive for the OSW industry to provide such compensation voluntarily. There is no guaranty that OSW developers will utilize the bidding credits mechanism for this PSN or any future PSN to provide such compensation, and that reality represents a significant shortfall of this mechanism as compared to the OCSLA statutory mandate approach.

In any case, it occurs to SSA that in order to mitigate such potential impacts by providing compensation to such fishermen through any mechanism, one needs to first have in place a sustained program to identify and quantify such impacts from day-one and throughout the life of OSW leases.

To that point, SSA notes that the PSN further states the following:

"While the fund's first priority is to compensate for gear loss or damage and income loss, funds that have been determined to be excess based on an actuarial accounting may be used to:

a. Promote participation of fishers and fishing communities in the project development process;

b. Promote research into the coexistence of multiple ocean industries*; and*

*c. Offset the cost of gear upgrades and transitions for operating within a wind farm." (*emphasis added*)*

SSA welcomes BOEM's proposal to utilize some bidding credit funding to "*Promote research into the coexistence of multiple ocean industries"* as providing the pathway to address our concern for the essential need to identify and quantify the impacts of OSW development on fisheries including the shrimp fishing industry as a necessary first step to providing such compensation to the commercial fishing industry. As the PSN contemplates, these impacts are to both at-sea fishing operations and associated shoreside enterprises such as shrimp processors.

For example, SSA **recommends** that in order to identify and quantify the impacts of OSW development on the shrimp fishing industry, there will need to be a continuous commitment of resources - first to create a baseline of knowledge at the very start of this process - and then throughout the life of OSW leases - to precisely monitor and quantify any impacts on the status of valuable fish stocks such as shrimp on which the shrimp fishery not only depends but is held strictly accountable for pursuant to the Magnuson-Stevens Act (MSA). Similarly, such monitoring is necessary on other marine species including protected species and those sensitive marine habitats the status of which the shrimp fishery is otherwise held strictly accountable for at great cost pursuant to the MSA, Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA).

It is not sufficiently clear to us at this time through what authority or mechanism BOEM or the Bureau of Safety and Environmental Enforcement (BSEE) will hold OSW developers accountable for any adverse impacts of OSW development and operations on valuable fish stocks such as shrimp, or on those other marine species including protected species, or sensitive marine habitats, once such facilities are in place and operating and those impacts are identified years from now. Will BOEM or BSEE take the adaptive management response needed to mitigate such adverse impacts on living marine resources in a manner that is comparable to the adaptive, 'real time' responses taken by our fishery management regime with respect to fishery impacts on such resources? For example, given the enormous political and financial investments made by the federal government in OSW development to date, is it realistic to anticipate that BOEM or BSEE would require OSW developers to remove or otherwise cease or sufficiently modify the design, engineering, or operations of their OSW facilities if they are found to have significant adverse impacts on such marine species and habitats over time? We would hope so – but we do not believe the shrimp industry should count on that.

Instead, we must be both realistic and prudent by anticipating that the conservation burden for such impacts of OSW development will be, as is so often the case, borne by the shrimp fishery and other fisheries through costly additional regulations promulgated through the intensive U.S.

fishery conservation and management regime. This regime is designed to generate dynamic management responses to the dynamics of marine resources and fisheries that is informed by a sustained regime of scientific surveys and other monitoring mechanisms that, we note, includes monitoring the location and intensity of shrimp fishing effort for many purposes. Therefore, SSA **requests** that such surveys and monitoring be covered by BOEM's proposal to utilize bidding credit funding to "*Promote research into the coexistence of multiple ocean industries".*

To that point, we wish to generally associate ourselves with the concepts outlined in the NOAA Fisheries presentation[7] to the recent April 11, 2023, Intergovernmental Renewable Energy Task Force meeting and **request** that BOEM fully explore and develop those concepts for needed monitoring and surveys in collaboration with NOAA Fisheries.

Furthermore, SSA **recommends** that in order to identify, quantify and ultimately mitigate the impacts of OSW development on the shrimp fishery, there will need to be a continuous commitment of resources to precisely monitor all economic impacts on shrimp industry businesses associated with those marine resource impacts above as well as other direct, indirect, and cumulative impacts.

Such other direct economic impacts must include, *inter alia*, those associated with gear and vessel damage or loss, reductions in catch and processing caused by loss of access to fishing grounds, displacement from essential waterfront and shoreside facilities by OSW activities, increased fishing operational costs caused by displacements from fishing grounds, and the potential need to purchase new radar or radar upgrades. Further, as set forth in the following section, there are a wide range of indirect and cumulative economic impacts that must be addressed as well.

Therefore, SSA **requests** that the sustained identification and quantification of each direct, indirect, and cumulative economic impact on commercial fisheries be covered by BOEM's proposal to utilize bidding credit funding to "*Promote research into the coexistence of multiple ocean industries"* - first to create a baseline of information and then to be monitored throughout the life of OSW leases.

v. General Questions Regarding Fisheries Compensatory Mitigation Fund Credit

1. **Should BOEM restrict or expand the eligible compensation criteria?**

As articulated above, SSA **requests** that the eligible compensation criteria be expanded beyond that which is stated in the PSN as compensation to commercial fishermen for "*gear loss or damage*", and for "*lost fishing income in GOM lease areas*".

First, as discussed above, baseline and sustained scientific surveys and monitoring of marine resources and economic impacts on the commercial fisheries must be made eligible for funding

[7] https://drive.google.com/file/d/1O88mlddSeSa8fz66zJxmhmhhRnnYU4l0/view

under the bidding credits system to, as contemplated in the PSN, "*Promote research into the coexistence of multiple ocean industries".*

Second, there are many more impacts of OSW development that have real economic consequences for the shrimp industry for which compensation should be provided through the proposed bidding credits system. Not only does the scope of impacts to fishing operations eligible for compensation need to be expanded well beyond that stated in the PSN, so does the scope of sectors of the shrimp industry eligible for compensation need to be expanded.

Currently, the PSN would make "*commercial fisheries*" eligible for compensation and defines the term "*commercial fisheries*" as *"commercial and processor businesses engaged in the act of catching and marketing fish and shellfish for sale from the GOM".* Consistent with the requirements of NEPA, SSA **requests** BOEM to expand that definition to include the full scope of upstream and downstream businesses that are at the core of the shrimp industry and that would incur direct, indirect, and cumulative adverse economic impacts from OSW development and operations.

Many of these impacts have been presented and discussed in greater detail in comments previously submitted by SSA to BOEM including the following among others:

- Offshore Wind Energy Fisheries Mitigation Guidance, BOEM-2021-0083-0001, (https://www.shrimpalliance.com/wp-content/uploads/2022/01/SSA-comments-BOEM-Fisheries-Mitigation-Guidance-1-7-22.pdf)
- Draft Fisheries Mitigation Strategy, BOEM-2022-0033, (https://www.regulations.gov/comment/BOEM-2022-0033-0028)

For example, the following is an excerpt from SSA's comments on BOEM's draft Fisheries Mitigation Strategy detailing the broad scope of potential if not anticipated impacts on the Gulf shrimp industry:

> *"….SSA asserts that the impacts of offshore wind energy development in the Gulf and nationwide must be evaluated and mitigated according to the four impact categories of: 1) Direct site-specific, 2) Direct cumulative, 3) Indirect site-specific and 4) Indirect cumulative. These impacts must be specifically addressed in this section of the Guidance document, and they include - but are likely not limited to - the following:*

- *Financial losses measured in terms of the value of total shrimp catch as well as loss of catch efficiency (Catch Per Unit Effort (CPUE)) caused by any displacement, temporary or permanent, from traditional fishing grounds resulting from any pre-construction, construction, operation and servicing and repair of any offshore energy production facility, including inter-turbine array electric cables, as well as any such permanent or temporary displacement resulting from dredging and installation of energy transmission lines to shoreside facilities. It is noted that any reductions in CPUE will result in net vessel revenue loss.*

- *Financial losses measured in terms of the value of total shrimp catch, the loss of catch efficiency (CPUE) and associated net revenue loss, or the loss or damage to shrimp fishing gear, equipment or vessels resulting from any debris on the seafloor generated by any offshore wind energy activities including debris from the damage or destruction of any offshore wind energy facility, cable, transmission line or any other associated equipment caused by severe weather or maritime accident. As noted in previous SSA comments, it does not appear that current wind turbine engineering and technology is sufficient to withstand the wind speeds or wave heights generated by Category 5 hurricanes which frequent the Gulf including the Call Area.*

- *Financial losses measured in terms of the value of total shrimp catch and/or the loss of catch efficiency (CPUE) and associated net revenue loss, associated with any costs of gear modification, gear design, or any other changes in fishing practices necessary to adapt to a more restricted fishing environment caused by, for example, the location, size, and configuration of offshore wind energy facilities.*

- *Financial losses resulting from the shrimp fishery being displaced and compressed into increasingly smaller areas in competition with each other which will, by definition, result in reductions in CPUE and, thus, a loss of net vessel revenues.*

- *Financial losses of upstream and downstream shoreside businesses resulting from the losses in the total value and volume of shrimp catch and/or reductions in shrimp fishing CPUE.*

- *Financial losses of shrimp fishing vessels as well as upstream and downstream shoreside businesses resulting from the displacement from and loss of access to waterfront space and facilities caused by competition from the offshore wind energy development industry.*

In addition to these impacts, there may be impacts on the shrimp industry that result from the adverse impacts offshore wind energy development may have on sensitive species and ecological habitats the health of which the shrimp industry is otherwise held accountable for through various regulatory restrictions imposed on its operations pursuant to the ESA and MSA. Any sensitive species population that is depleted and any sensitive ecological habitat that is damaged by offshore wind energy development – either on a site-specific (direct) or cumulative basis – may lead to the imposition of additional costly regulatory restrictions on the shrimp fishery. The offshore wind energy industry must be held accountable for those costs to the shrimp industry as well.

Further, there are other potential impacts on the shrimp industry that that are less understood in the Gulf at this stage of the process, but which have emerged from the experiences of other U.S. fisheries with offshore wind energy development in other regions of the U.S. As just one example, depending on the size, location, and configuration (e.g., spacing, layout, transit corridors) of any given wind turbine and cable array, fishermen may be forced to navigate longer distances to fishing grounds and back to port and thereby incur higher fuel costs and perhaps

greater threats to their safety. The offshore wind energy industry must also be held accountable for these additional costs to the shrimp industry."

The following is another important excerpt from SSA's comments on BOEM's draft Fisheries Mitigation Strategy further elaborating on just two of many examples of the adverse impacts offshore wind energy development may have on populations of sensitive species the health of which the shrimp industry is otherwise held accountable for through various regulatory restrictions imposed on its operations pursuant to the ESA and MSA.

> *"….SSA continues to be concerned that the science underlying BOEM's evaluations to date regarding the potential impacts of Electromagnetic Fields (EMFs) on the migratory behavior of species of sea turtles listed as endangered or threatened under the Endangered Species Act (ESA) is insufficient. Given that these impacts may be irreversible, such as the interruption of essential migrations to nesting beaches throughout the Gulf, SSA strongly encourages BOEM's investment in additional scientific research into this matter. Because these are species for which the Gulf shrimp industry is held strictly accountable under the ESA, any such impacts that reduce their health or status will in turn pose a threat to the Gulf shrimp fishery in the form of additional costly regulatory requirements on the fishery - or even the loss of its authorization to operate at all. Such impacts must be addressed by BOEM in this fishery mitigation strategy.*
>
> *Likewise, the Gulf shrimp industry is held strictly accountable for the status of other species such as red snapper pursuant to the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Specifically, the shrimp fishery is strictly regulated in a manner to reduce the mortality of juvenile red snapper in large areas of the Gulf identified as juvenile red snapper nursery habitat. To the extent that any cable or facility (e.g., turbine, substation) siting or installation activities adversely impact that habitat or otherwise causes increased juvenile red snapper mortality, the status of the stock may be reduced and, in turn, the shrimp fishery may be subject to additional costly regulations including time-area closures. Such costs must be address by BOEM's mitigation strategy."*

SSA **requests** that that BOEM consider the impacts presented in these previously submitted SSA comments and further **requests** that these previously submitted comments be incorporated into the record of decision for this action.

Further, SSA **requests** that BOEM consider the economic impacts including losses of revenue and increased costs identified in the "*Nine Atlantic Coast States Final Scoping Document: Framework for Establishing a Regional Fisheries Compensation Fund Administrator for Potential Impacts to the Fishing Community from Offshore Wind Energy Development Revised and Released on 13 April 2023*".[8] SSA **requests** that this Scoping Document be incorporated into the record of decision for this action.

[8] https://offshorewindpower.org/wp-content/uploads/2023/04/RFA_RevisedScopingDoc_FINAL.pdf

And finally, SSA **requests** that BOEM consider the economic impacts identified in the NOAA Technical Memorandum 291 co-authored by BOEM personnel: "*Fisheries and Offshore Wind Interactions: Synthesis of Science".* [9] SSA **requests** that this Technical Memorandum be incorporated into the record of decision for this action.

Additional Questions Regarding Fisheries Compensatory Mitigation Fund Credit

The PSN further asks the following additional questions:

> 2. What types of fiduciary governance structures or requirements should be in place for a fund to qualify?
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> 3. What types of fund management provisions should BOEM require to ensure the fund's continued actuarial solvency?
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> 4. What information should the fisheries compensatory mitigation fund be required to publish for the public to evaluate whether the fund is meeting its objective and whether the funds are being appropriately used?
>
> 5. Should qualifying mitigation funds be segregated to cover specific leases or should funds be pooled as proposed to cover fisheries impacts derived from future offshore wind leasing and projects in the Gulf of Mexico?
>
> 6. Should BOEM require investment limitations or other internal controls for the fund?
>
> 7. Should BOEM prescribe limits or caps on the fund's administrative expenses?

These questions fall outside the scope of SSA's current expertise or experience and so we are unable to provide meaningful answers or comments at this time. In any case, if such a fund is established or an existing fund is utilized, SSA **requests** that the shrimp industry, and specifically SSA, be provided with the opportunity to fully engage in all aspects of a fund's development and operations.

SSA notes that there are existing funds that may have the potential to serve the purpose envisioned by BOEM in this PSN such as the Gulf Environmental Benefit Fund (GEBF) [10] or other funds administered by the National Fish & Wildlife Foundation, and by other entities pursuant to the RESTORE Act[11].

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[9] https://repository.library.noaa.gov/view/noaa/49151?utm_source=Saving+Seafood+Alerts&utm_campaign=e09386584c-EMAIL_CAMPAIGN_2023_04_10_04_28&utm_medium=email&utm_term=0_-e09386584c-%5BLIST_EMAIL_ID%5D

[10] https://www.nfwf.org/gulf-environmental-benefit-fund

[11] https://www.restorethegulf.gov/history/about-restore-act

In addition, SSA again **requests** BOEM to consider the compensation fund framework established by the Nine Atlantic Coast States referenced above as a potential template for a regional fund for the Gulf of Mexico region.

In any case, if such a fund is established or an existing fund is utilized, SSA again **requests** that the shrimp industry, and specifically SSA, be provided with the opportunity to fully engage in all aspects of a fund's development and operations.

Safety of Life At Sea – RADAR

The PSN includes the following regarding adverse impacts of OSW turbines on radar under the section entitled "*Potential Future Restrictions to Mitigate Potential Conflicts with Department of Defense Activities:".*

> *i. Air Surveillance and Radar:*
>
> *The Military Aviation and Installation Assurance Siting Clearinghouse conducted a DoD assessment of the Call area. That assessment concluded that the North American Aerospace Defense Command (NORAD) mission may be affected by the development of the Lease Area(s). Considering both the expected height of offshore turbines and future cumulative wind turbine effects, adverse impacts can be mitigated through the use of Radar Adverse-impact Management (RAM) [2] and overlapping radar coverage. For projects where RAM mitigation is acceptable, BOEM anticipates including the following stipulations in any sale notification and project approval conditions:*

SSA has raised serious concerns regarding the potential adverse impacts of turbines on maritime radar utilized by the fishing industry including the shrimp industry in its previous comments submitted to BOEM. In particular, our comments on BOEMs draft Fishery Mitigation Strategy sets forth a significant amount of information regarding our concerns to which we have seen no clear response to date.[12] Much of that information and concern is based on the 2022 BOEM-sponsored "*Consensus Study Report Wind Turbine Generator Impacts To Marine Vessel Radar*" issued by the National Academy of Sciences, Engineering, and Medicine.[13] SSA **requests** that these comments and the referenced 2022 NAS Report be included in the record of decision on this action.

There follows an excerpt from those August 8, 2022, SSA Comments referencing that Report:

> *"The findings, conclusions and recommendations set forth in this Report have incredibly profound implications for the entire U.S. maritime economy and the safety of life at sea - not just in the Gulf - but nationwide, and not just for the Gulf shrimp fishery – but for all*

[12] https://www.regulations.gov/comment/BOEM-2022-0033-0028

[13] https://nap.nationalacademies.org/catalog/26430/wind-turbine-generator-impacts-to-marine-vessel-radar

maritime activities in U.S. waters. The implications are so profound that BOEM must reconsider the pace of its development of offshore wind energy in the U.S. so as to provide time for these profound implications to be definitively understood and resolved.

As we understood it, in its July 18, 2022, public meeting to discuss the draft Guidance document, BOEM confirmed that in order to address the concerns identified in the NAS study, radar systems currently widely used in U.S. fishing fleets, including in the Gulf shrimp fishery, would need to be upgraded to solid state Doppler technology – and that even the current Doppler technology itself will require further enhancements to be effective in addressing those NAS concerns. Still further, as we understood it, BOEM indicated that it is not entirely clear that the market for such upgraded Doppler technology will be sufficient to cause as-yet-to-be-identified technology companies to invest in developing such enhancements and making them available to the U.S. fishing industry and other vessel operators. Finally, BOEM has suggested in that meeting and in this Guidance document that if those enhancements were made, then there may be an opportunity for lessees to pay for those upgrades as a form of compensation (mitigation) to the fishing industry.

Again, given the profound implications of this situation - not just for fishery mitigation - but for U.S. navigational safety broadly, this must be addressed by BOEM, the U.S. Coast Guard, and all other relevant partner agencies immediately."

Radar is, of course, an essential tool and technology for protecting the safety of life at sea. Both BOEM and NOAA have clear statutory and regulatory mandates for ensuring maritime safety. The Gulf of Mexico is a very busy place for commercial vessel traffic, military activities, and fisheries – both commercial and recreational – and is subject to frequent weather scenarios that make radar essential for safe navigation. The construction of large, fixed turbine arrays (maritime hazards) – and the additional vessel traffic associated with OSW development – only serve to compound these threats to maritime safety.

Do the concerns expressed by DOD in the PSN document also relate to maritime navigation systems including those used by the shrimp and other commercial fisheries? Does the use of Radar Adverse-impact Management (RAM) also apply with respect to maritime navigation systems including those used by the shrimp and other commercial fisheries? These issues of interference with maritime radar must be clarified once and for all and, if necessary, fully mitigated.

SSA **requests** BOEM to provide to the shrimp industry as soon as possible a definitive analysis of the documented and potential adverse impacts on maritime radar such as is used by the Gulf shrimp fishing fleet and how it intends to address those impacts.

As always, SSA greatly appreciates the opportunity to provide these comments, requests, and recommendations to BOEM, and for BOEM's serious consideration thereof. SSA looks forward to continuing to work with BOEM and with NOAA in constructive ways to achieve our mutual goals.

Sincerely,

John Williams,
Executive Director

cc: Dr. James Kendall, Gulf of Mexico Regional Director, BOEM
Nicole LeBoeuf, Assistant Administrator, National Ocean Service, NOAA
James Morris, National Centers for Coastal Ocean Science, NOS, NOAA
Janet Coit, Assistant Administrator for Fisheries, NOAA
Clay Porch, Director, SE Fisheries Science Center, NOAA
Andy Strelcheck, Regional Administrator, SE Regional Office, NOAA

Figure 1:

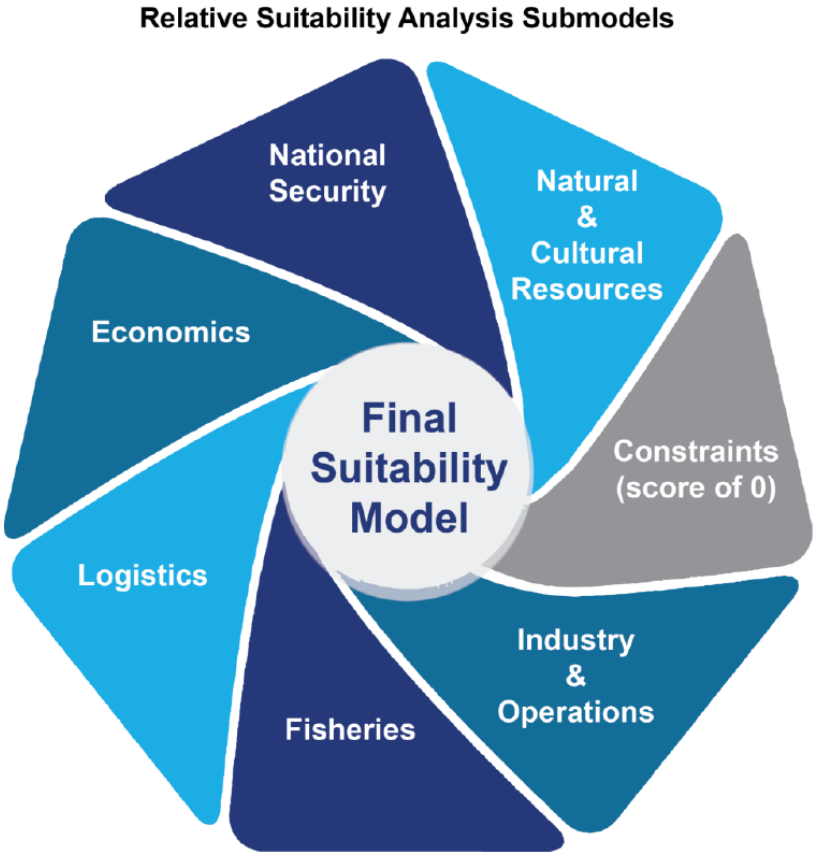


Figure 2.4. Overview of suitability model design and the submodel components. The constraints submodel includes all data layers with a score of 0; these data layers were removed before the remaining submodel scores were calculated.

Figure 2:

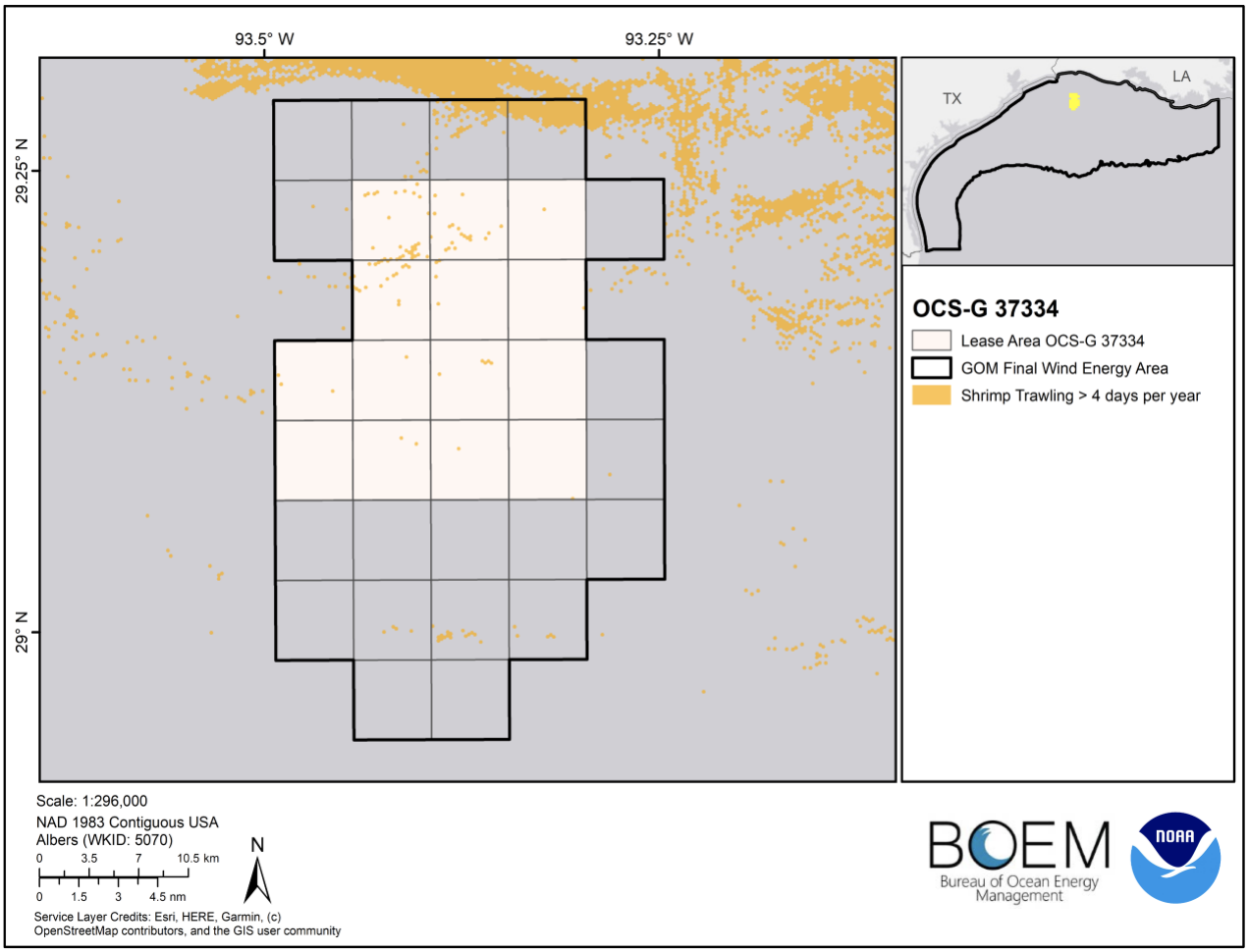
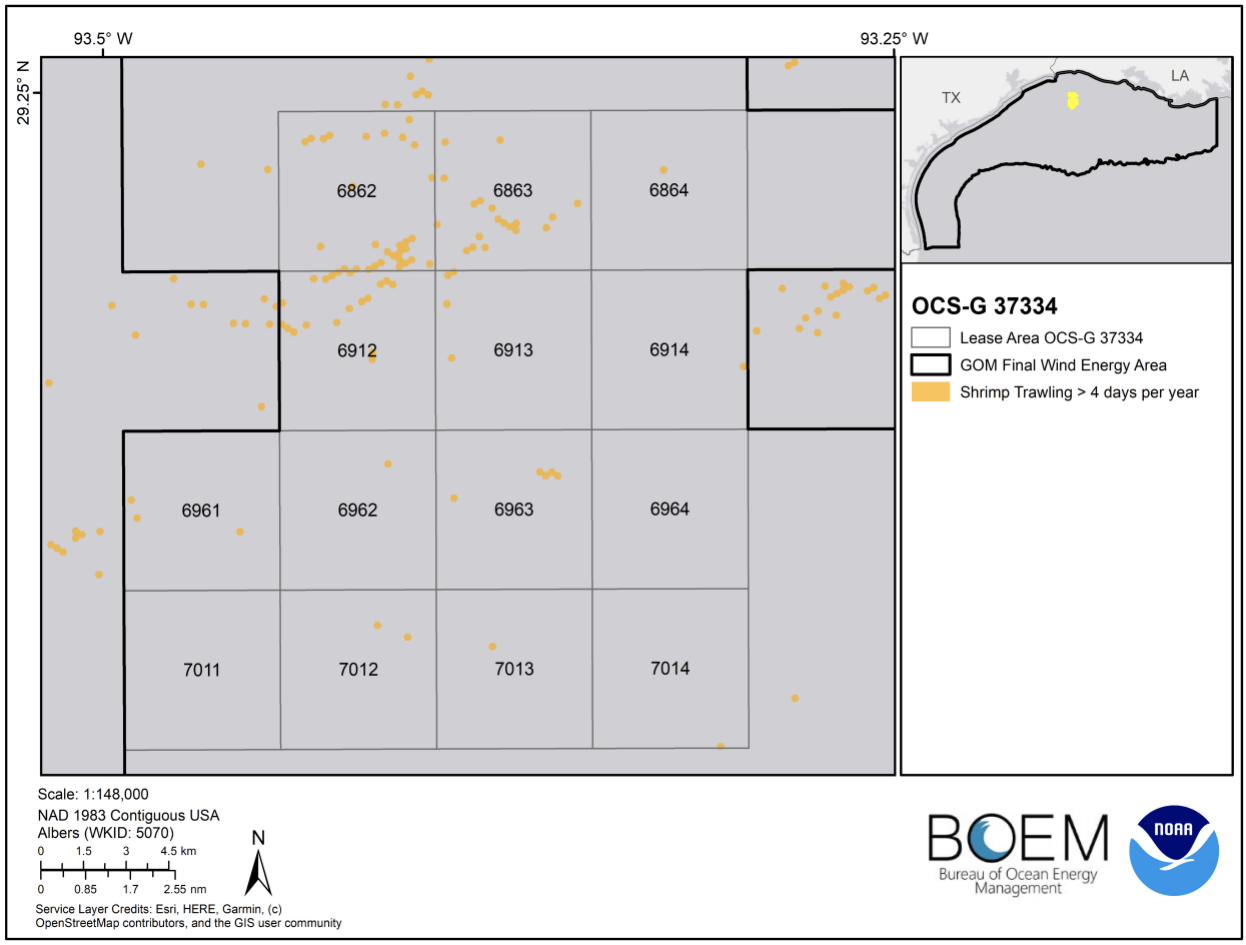

93.5° W
93.25° W
29.25° N
29° N
TX
LA
OCS-G 37334
Lease Area OCS-G 37334
GOM Final Wind Energy Area
Shrimp Trawling > 4 days per year
Scale: 1:296,000
NAD 1983 Contiguous USA
Albers (WKID: 5070)
0 3.5 7 10.5 km
0 1.5 3 4.5 nm
N
Service Layer Credits: Esri, HERE, Garmin, (c)
OpenStreetMap contributors, and the GIS user community
BOEM
Bureau of Ocean Energy Management
NOAA

Figure 3:


93.5° W
93.25° W
29.25° N
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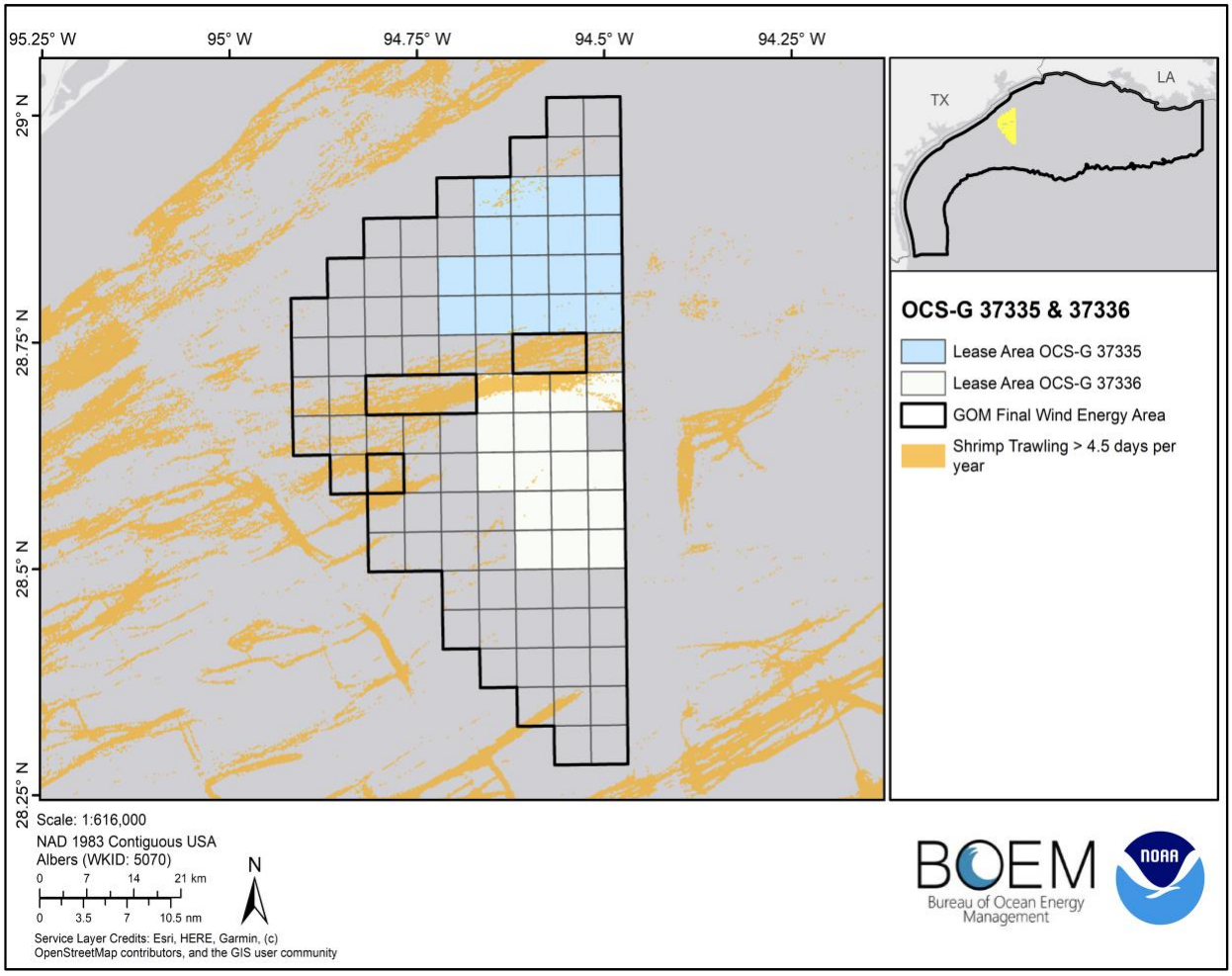
7013
7014
TX
LA
OCS-G 37334
Lease Area OCS-G 37334
GOM Final Wind Energy Area
Shrimp Trawling > 4 days per year
Scale: 1:148,000
NAD 1983 Contiguous USA
Albers (WKID: 5070)
0 1.5 3 4.5 km
0 0.85 1.7 2.55 nm
N
Service Layer Credits: Esri, HERE, Garmin, (c)
OpenStreetMap contributors, and the GIS user community
BOEM
Bureau of Ocean Energy Management
NOAA

Figure 4:


95.25° W
95° W
94.75° W
94.5° W
94.25° W
29° N
28.75° N
28.5° N
28.25° N
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LA
OCS-G 37335 & 37336
Lease Area OCS-G 37335
Lease Area OCS-G 37336
GOM Final Wind Energy Area
Shrimp Trawling > 4.5 days per year
Scale: 1:616,000
NAD 1983 Contiguous USA
Albers (WKID: 5070)
0 7 14 21 km
0 3.5 7 10.5 nm
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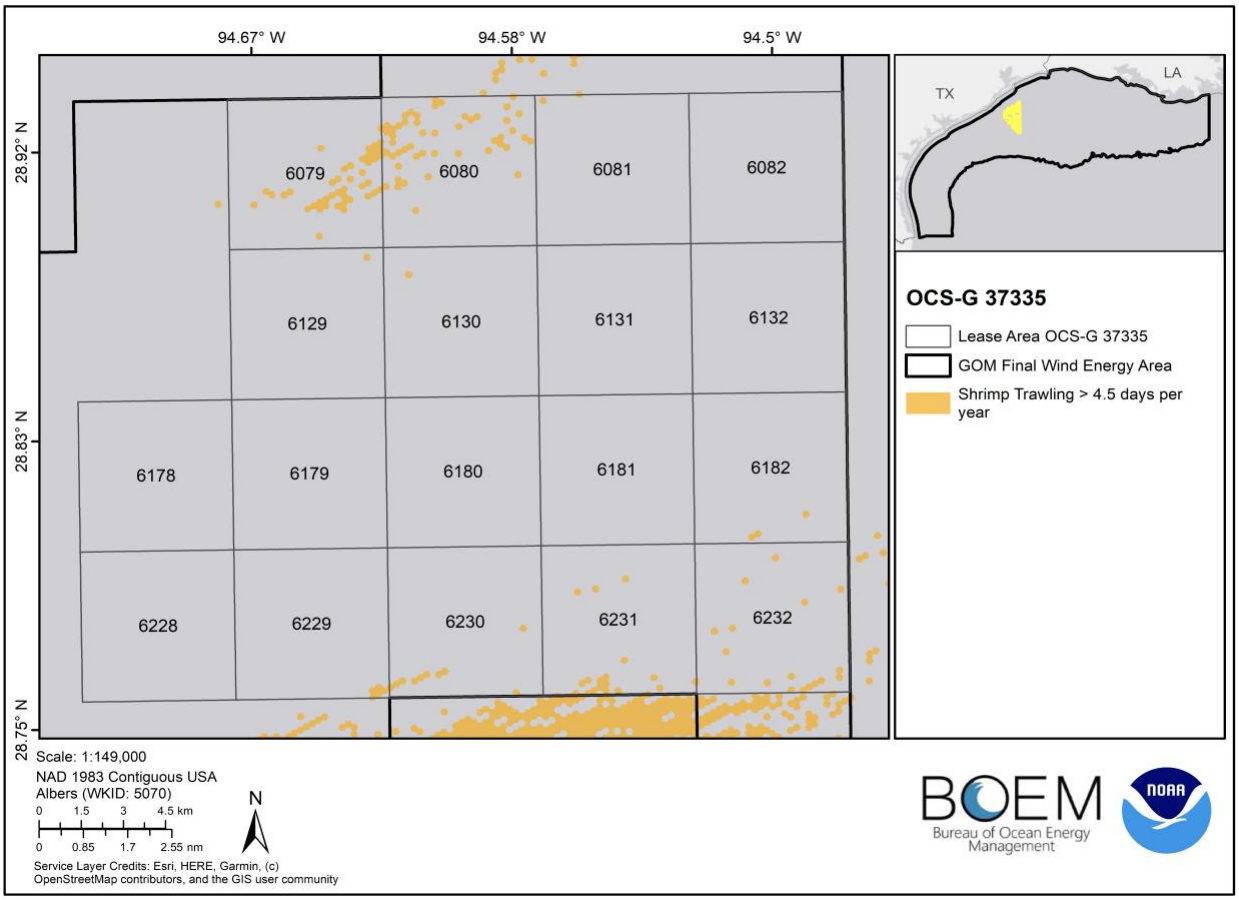
Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community
BOEM
Bureau of Ocean Energy Management
NOAA

Figure 5: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94.58° W
94.5° W
28.92° N
28.83° N
28.75° N
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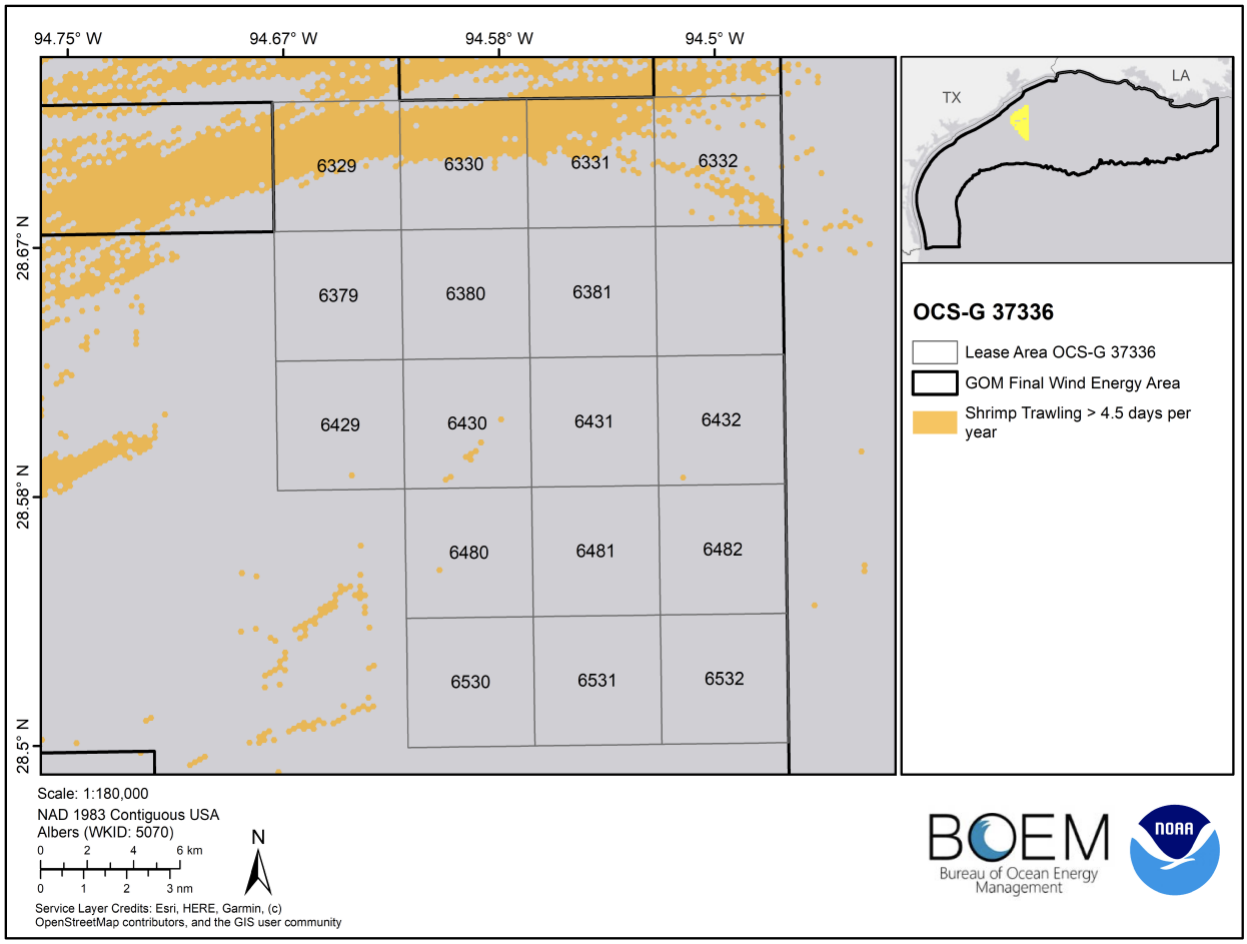
6228
6229
6230
6231
6232
TX
LA
OCS-G 37335
Lease Area OCS-G 37335
GOM Final Wind Energy Area
Shrimp Trawling > 4.5 days per year
Scale: 1:149,000
NAD 1983 Contiguous USA
Albers (WKID: 5070)
0 1.5 3 4.5 km
0 0.85 1.7 2.55 nm
N
Service Layer Credits: Esri, HERE, Garmin, (c)
OpenStreetMap contributors, and the GIS user community
BOEM
Bureau of Ocean Energy Management
NOAA

Figure 6:


94.75° W
94.67° W
94.58° W
94.5° W
28.67° N
28.58° N
28.5° N
6329
6330
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6332
6379
6380
6381
6429
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6431
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6481
6482
6530
6531
6532
TX
LA
OCS-G 37336
Lease Area OCS-G 37336
GOM Final Wind Energy Area
Shrimp Trawling > 4.5 days per year
Scale: 1:180,000
NAD 1983 Contiguous USA
Albers (WKID: 5070)
0 2 4 6 km
0 1 2 3 nm
N
Service Layer Credits: Esri, HERE, Garmin, (c)
OpenStreetMap contributors, and the GIS user community
BOEM
Bureau of Ocean Energy Management
NOAA