

**OFFSHORE WIND, RECREATIONAL AND COMMERCIAL FISHERMAN  
MITIGATION MEASURES DEVELOPMENT**

**OSTERVILLE WORKSHOP REPORT**

To: Brian Hooker, BOEM

From: Peggy Farrell, Ecology and Environment

Date: December 4<sup>th</sup>, 2012 (4:00 P.M. - 8:00 P.M.)

Location: Osterville Village Library  
Osterville, MA

RE: Development of Mitigation Measures to  
Reduce Conflicts between Wind Industries  
and Fishermen – Osterville Massachusetts  
Stakeholder Workshop



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**ATTENDEES**

<b>Name</b>	<b>Agency</b>
Jim Kendall	New Bedford Seafood Consulting
Verna Kendall	Fishing Industry
Bruce Carlisle	MA Coastal Zone Management Program
Beth Casoni	MA Lobstermen's Association
Pat Hughes	Provincetown Center for Coastal Studies
Justin Kirkpatrick	NOAA
David Pierce	MA Division of Marine Fisheries
Eric Brazer	Cape Cod Commercial Hook Fishermen's Association
David Dow	Sierra Club
Chris McGuire	The Nature Conservancy
Stuart Tolley	Cape Cod Commercial Hook Fishermen's Association
Brian Hooker	Bureau of Ocean Energy Management
Peggy Farrell	Ecology and Environment, Inc.
David Trimm	Ecology and Environment, Inc.
William Daughdrill	Ecology and Environment, Inc.
Sarah Bowman	Ecology and Environment, Inc.
Jennifer Harris	Ecology and Environment, Inc.
Stephanie Moura	SeaPlan

**OVERVIEW**

The Bureau of Ocean Energy Management (BOEM) is developing best management practices (BMPs) and mitigation measures for reducing use conflicts within portions of the U.S. Atlantic Outer Continental

Shelf (OCS) that may be used by the wind energy industry and fishermen. The purpose of the regional stakeholder workshops is to engage fishermen and wind energy developers (plus interested agency representatives) in dialogue that would result in development of BMPs and mitigation measures that would be beneficial to both parties and relevant for inclusion in BOEM NEPA analyses. The outreach workshops do not discuss any specific wind energy development projects, but rather describe general types of practices or studies that could be implemented as mitigation for wind energy development. As projects are proposed, there will also be opportunities for site-specific mitigation measures. This document constitutes the Outreach Report from the Osterville stakeholder workshop.

## MEETING SUMMARY

This workshop was scheduled for late-November early-December in order to attract a higher attendance by fishermen because it is not a peak fishing period throughout the southern New England region. This workshop occurred one day before the New Bedford, MA stakeholder workshop due to their proximity.

Workshop attendees signed-in at the welcome table. Attendees were directed to tables so that different industries and agencies were represented at each table for the breakout sessions. Several visual displays were placed around the room for attendees to browse.



The meeting started at 4:00 pm when Stephanie Moura, the meeting facilitator, welcomed attendees to the meeting. She asked each participant to introduce themselves and state the industry or agency they represent. She then briefly discussed the format for the meeting so that attendees had an understanding of the agenda and meeting rules. This was followed by an introduction of Brian Hooker, BOEM Biologist, who opened the meeting with a PowerPoint presentation that included:

- Different stages of offshore wind facility development.
- Purpose of the workshops.
- Vessel Trip Report and Vessel Monitoring System data for the New England Wind Energy Areas.
- Known fishing and wind energy questions and concerns.
- Current Best Management Practices required by BOEM.
- A description of BOEM's Environmental Studies Program.
- Various opportunities for input.

The majority of the meeting was spent in discussion during two breakout sessions. Breakout Session #1 began directly after the presentation. Each of the discussion tables represented a distinct breakout group. Groups worked on identifying issues of concern from their perspective, utilizing the list of issues identified from the previous two workshops as a guideline. A 15-minute break was held at 6:00 pm.



Breakout Session #2 followed the break and focused on formulating mitigation measures that could be employed during offshore wind energy development to reduce impacts. Utilizing the handout as a guide, each group identified potential management strategies that would alleviate some of their concerns. At 7:30 pm, Ms. Moura asked each table facilitator to identify the key points that were discussed in each group and, after the final report out, requested feedback and comments from the participants on the workshop format and content (listed further below). The meeting adjourned at 8:00 pm.

## IDENTIFICATION OF CONCERNS

Table 1 lists issues and concerns regarding offshore wind development identified at the Osterville Workshop.

**Table 1: Osterville Meeting Issues and Concerns**

<b>Exclusion Zones and Access</b>	<ul style="list-style-type: none"> <li>• Potential to exacerbate user conflicts among different commercial and recreational fishing sectors if certain gear/vessel types are allowed access to wind farms and others are not.</li> <li>• What if the wind farm becomes an attractant for all kinds of users such as commercial fishing of all gear types, recreational fishing, sightseeing trips, etc.? There might be too many vessels trying to utilize the area which might push other users out.</li> <li>• How long does construction of a wind farm take? If the construction period is prolonged, closed areas will affect fishing operations and locations.</li> <li>• Will fixed gear and/or dragging be allowed within wind farms?</li> <li>• Who monitors and enforces the exclusion zones? LNG industry has a black boat that constantly circles and enforces closed areas.</li> <li>• If mandatory cable burial depth is only 1 m deep, developer may want to close areas to fishing because this shallow depth could lead to exposure of cables.</li> </ul>
<b>Regulations</b>	<ul style="list-style-type: none"> <li>• How can BOEM's WEA siting process be better integrated and coordinated with the Fishery Councils' management process beyond what's already currently done such as interagency EFH consultation? How does it fit within the development of Fishery Management Plans? Will removing exploitable biomass by limiting access to wind farms be considered when setting the fishery Total Allowable Catch?</li> <li>• Who is responsible for analyzing the cumulative impacts of all wind farms along the entire Atlantic offshore grid? Is it helpful to have something like the AWC serve as a backbone to minimize connections to shore?</li> </ul>
<b>Communication</b>	<ul style="list-style-type: none"> <li>• Who pays for the Boatracs communication?</li> </ul>
<b>Siting Process</b>	<ul style="list-style-type: none"> <li>• What is known about the effects in general of concentrated inter-array cabling vs. existing linear telecom cables?</li> <li>• The Vessel Traffic Report doesn't show all the vessel traffic. Once a fisherman is finished fishing, maps need to show the routes they take home.</li> </ul>

Safety	<ul style="list-style-type: none"> <li>• Will each turbine have a unique identifier for accurate response/reporting, such as if fishing gear gets hung up, etc.?</li> <li>• How will construction debris from wind farms be managed and cleaned up, and how will debris fields be designated? How can impacts to fishing gear be minimized?</li> <li>• Is there cell phone service within a wind farm?</li> <li>• How often are nautical maps updated?</li> </ul>
EMF	<ul style="list-style-type: none"> <li>• Fishermen would like access to the “cliff notes” for ongoing studies about EMF impacts – don’t have time to read full scientific reports but want to stay informed.</li> <li>• Are lobsters and sea turtles sensitive to EMF? Need a study.</li> <li>• How will turbines and wind farms change larval flow and currents?</li> </ul>
Maintenance	<ul style="list-style-type: none"> <li>• Beyond routine maintenance of turbines and cables, what would trigger an extraordinary inspection? Super storm? Earthquake?</li> <li>• When and how will cables be inspected? Can fishermen help in the inspection process if it saves time and shortens temporary closures?</li> <li>• How and when will cables be reburied if they become exposed?</li> <li>• How will fishermen be immediately notified of an exposed cable?</li> </ul>
Marine Wildlife	<ul style="list-style-type: none"> <li>• What is the actual footprint for each turbine, and what are the underwater measurements of each foundation? Hopefully this will become lobster habitat.</li> <li>• What are the effects of seismic studies and other acoustical impacts to marine mammals?</li> <li>• Do European studies show that the fish come back to the area after construction?</li> </ul>
Liability	<ul style="list-style-type: none"> <li>• Will fishing vessel insurance premiums increase due to additional hazards from wind farms?</li> <li>• How will insurers assign fault in the event of a “negative interaction” between fish and wind? What happens now with existing telecom cables?</li> <li>• Can BOEM impose fines for a developer not complying with a BMP?</li> <li>• The MA Fishermen’s Partnership has a database with all the rod and reel leaseholders and fishermen that are insured. This could be a route of communication.</li> </ul>

## BEST MANAGEMENT PRACTICES AND MITIGATION MEASURES

Table 2 contains potential BMPs suggested at the meeting in Osterville.

**Table 2: Osterville Meeting Best Management Practices and Mitigation Measures**

Project Design , Navigation, and Access	
Studies and Analysis	<ul style="list-style-type: none"> <li>• Study current Vessel Monitoring System data to see existing vessel traffic patterns and plan wind farms accordingly (like walkways that don’t get used because they make no sense, the well-worn tracks show where people really go to get from point to point).</li> <li>• Also conduct another vessel traffic study several years after a wind farm is established to see how vessels are really traveling through and around the turbines.</li> <li>• BOEM should consult with radar industry to ground-truth assumptions about how turbines will affect radar operability.</li> <li>• Require developers to utilize fishermen when conducting surveys, cable maintenance, and other operations; for example, fixed gear fishermen work with Division of Marine Fisheries on surveys. Fishermen are out there anyway.</li> <li>• Encourage developers to conduct a “Fishermen’s Exchange” – take US fishermen to</li> </ul>

	<p>Ireland or other countries for in-person information exchange with fishermen and developers that are working well together and already have plans in place.</p> <ul style="list-style-type: none"> <li>Utilize the academic community and their funding to assist in surveys and research, many of which already have good relationships with the fishing industry such as SMAST out of New Bedford.</li> </ul>
Spacing of Turbines	<ul style="list-style-type: none"> <li>Require larger spacing between turbines with increasing water depth.</li> <li>Require developers to prove they worked with the fishing industry when siting where turbines will be placed. They might be spaced closer together in one part of a wind farm, and then farther apart in another area in order to allow fishing practices to continue in specific areas (such as where scalloping grounds are important).</li> </ul>
Construction	<ul style="list-style-type: none"> <li>Require developers to use a rotating and shifting construction process, so that closed areas would change in size and location as the farm is built.</li> <li>As wind farm is built, allow fishing as much as possible. For example, draggers might not be able to safely operate in closed areas during construction, but lobster pots could safely maneuver and might have a separate smaller closed area.</li> </ul>
Navigational Safety	<ul style="list-style-type: none"> <li>Developer needs to clearly differentiate between what lanes are appropriate for transiting vessels vs. areas for those actively fishing. This might include separate travel plans for foggy conditions or night travel.</li> <li>Require a designated “alley way” with suggested traffic routes through the wind farm. Most wind farms won’t have turbines aligned in perfectly straight lines, so fishermen shouldn’t rely on line of sight for navigation.</li> <li>Require effective marking of turbines and foundations.</li> <li>All turbines should be downloaded on to fishermen’s plotters and updated regularly. This is especially important for travel at night or in foggy conditions.</li> <li>Consider use of RACON (i.e., a repeating signal transmitter with a unique identifier). Some part of an array should have RACON.</li> </ul>
Cabling	<ul style="list-style-type: none"> <li>Require developers to have a plan for inspection, maintenance, and reburial of cables especially after a storm event, including temporary closure zones. Involve fishermen in the process whenever possible.</li> <li>Require a minimum cable burial depth of at least 6 feet below mud line.</li> <li>Develop a technology such as a sensor to ping or issue a warning when cables are uncovered or exposed.</li> </ul>
<b>Safety, Liability, and Insurance during Operations</b>	
Safety Procedures	<ul style="list-style-type: none"> <li>Require a plan for how a developer will deal with construction debris left behind, or require a no-debris-left-behind BMP in order to approve the lease.</li> <li>Require a cell tower within the wind farm, such as on the helipad.</li> </ul>
Gear	<ul style="list-style-type: none"> <li>Require developer to demonstrate their knowledge of all the different gear types in the WEA. For each gear type, explain any unique areas in the site that are important to that gear, any navigational safety issues, or obstacles that make that gear susceptible to snagging. Detail how each gear type will be allowed to operate within the wind farm. For example, allow dragging in the wind farm but require turns outside of its boundaries.</li> </ul>
<b>Natural Resources</b>	
Impacts to Fisheries	<ul style="list-style-type: none"> <li>Require a “no net loss” principle/policy for fishery habitat in the WEA siting/development process; for example, trade a WEA for a previously closed fishing area.</li> </ul>
<b>Stakeholder Engagement</b>	
Communication	<ul style="list-style-type: none"> <li>Concise and often communication to accommodate fishermen’s limited time. Utilize fishing newsletters, they are read.</li> <li>Engage known fishery leaders as key nodes of communication, these respected</li> </ul>

	<p>fishermen have greater penetration into fishing communities.</p> <ul style="list-style-type: none"> <li>• Require an ongoing outreach plan after siting is complete so the developer can provide updates and answer questions. Require regular in-person visits to fisheries association meetings.</li> <li>• Fishery Management Councils should create a separate sub-committee made up of fishermen whose sole charge is to act as a liaison with wind developers.</li> <li>• VMS is one way to communicate and reach vessels in real-time, but it should be used sparingly.</li> <li>• Require a developer to outline a social media plan in order to disseminate updates throughout the process on siting, construction, closed areas, maintenance, gear hazards, request for help on research, etc. Different methods include group texts to cell phones, smart phone app, and a Facebook and Twitter account dedicated to a single wind development project that provide real-time updates.</li> <li>• Require the developer to prove their due diligence in outreach to the fishermen and research of the fisheries that would be affected by their wind farm. List all fishery-related associations, meetings, councils, newsletters, names of key fishery leaders, and all gear types for the area. Detail all the meetings and outreach conducted so far, and identify specific people and associations on each side as the designated points of contact moving forward.</li> <li>• Develop a long-term committee comprised of key fishermen that meets with developers on a regular basis to discuss issues.</li> <li>• Utilize the best local means of communication; for example, in MA it is helpful to use settlement offices, and channels 13, 16, and 22 would be good to use. Need to include both electronic and non-technical means of communication so as to include as many as possible.</li> </ul>
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## SUGGESTIONS FOR FUTURE WORKSHOPS

Suggestions from previous workshops were taken into account for the Osterville meeting. Some participants at previous workshops felt that the breakout sessions blended together and the purpose of each session wasn't clear. Participants were again provided with a list of examples for discussion during each breakout session, but for the Osterville workshop each table facilitator took a moment at the beginning of each breakout session to explain its purpose so that the distinction between the two was clear. Facilitators also devoted special attention in leading the groups during the second breakout session in trying to formulate usable, concrete mitigation measures. And similar to previous workshops, attendees were appreciative of the refreshments provided during the break because the meeting occurred over dinnertime.



One participant would like to see more fishermen attending these workshops, and that better outreach into the fishing community is needed. Another participant would like to see the informational displays around the room contain data that are more local to the area the workshop is being held in (such as each gear type), and specific to the offshore WEAs being discussed at each workshop. It was also suggested that the WEAs should be displayed as outlines instead of blocked-out areas so that

data underneath can be clearly viewed. As discussion progressed at this workshop, it became evident that developer's responses to BOEM's future BMPs would need to be project specific. Fishermen need access to fishing grounds, and wind developers need the ability to build a facility that is cost-effective and successful. Fishing and wind will need to work together throughout development of each wind farm on a localized basis to make sure the right people are involved. What works in Massachusetts might not work in Virginia for fishermen or developers.