

Rhode Island Ocean Special Area Management Plan: Fisheries Mitigation Options – A Review

URI COASTAL RESOURCES CENTER/ RHODE ISLAND SEA GRANT
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Executive Summary

The Rhode Island Ocean Special Area Management Plan (Ocean SAMP) states that the Rhode Island Coastal Resources Management Council (CRMC) will promote and enhance existing uses in the area while also ensuring that negative impacts from future development are avoided and, if they are unavoidable, are minimized. Furthermore, the Ocean SAMP recognizes that the development of offshore renewable energy may affect commercial or recreational fishermen through: loss of access to fishing grounds; decreased catchability of fish species during construction and operation; loss of gear; or vessel collisions with devices. In addition, effects to commercially and recreationally targeted fish and invertebrate species that may also affect fishing activity include: changes in species abundance and distribution; disturbance to fish from noise or EMF; burial or disturbance of eggs and larvae during construction; and aggregation effects around a renewable energy device. While in some cases these effects will be negligible, in instances where the effects are greater, mitigation to the affected fishing community may be necessary.

While the impacts of offshore development projects should strive to minimize adverse impacts to other ocean users, in instances of unavoidable impacts, utilization of a mitigation plan may help offset those impacts. The University of Rhode Island Coastal Resources Center and Rhode Island Sea Grant has developed this report to provide guidance to CRMC, commercial and recreational fishing interests, and offshore renewable energy developers when determining an appropriate suite of mitigation options. This report includes a review of mitigation options that have been used internationally in offshore renewable energy projects, as well as domestically and internationally with offshore oil and gas developments. The findings of this review were presented to a group of Rhode Island fishermen and shared with members of the Ocean SAMP Fishermen's Advisory Board to determine whether these strategies could be applied to respond to specific issues facing offshore wind development in Rhode Island.

Overall, the feeling among various members of the fishing community in Rhode Island was that anticipating specific mitigation options that may be needed and/or appropriate is very challenging before the project has begun and the impacts of the project have been fully realized. As a result, there was an overarching emphasis placed on the need for any mitigation package to be sufficiently flexible to ensure that any unforeseen impacts would be mitigated. To fulfill this goal, it was suggested that a portion of the lease fees paid to the state be apportioned to a fund that would support any adversely impacted fishermen. This fund could then be used to support various mitigation options. However, as the lease fees collected from any project in state waters are deposited into the state's General Fund, a statutory change will be required to allow for the establishment of such a fund. In addition, there was a general discussion that it would be most beneficial for each user group or fishing sector to determine the mitigation options that would be best for their group through a process of facilitated negotiations with the developer.

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I. Introduction

Offshore renewable energy is likely to have some effect, whether negligible or significant, if development occurs in an area used by commercial or recreational fishermen (MMS, 2007). These effects may be direct, such as temporary or permanent exclusion of some fishing activity, or indirect, including impacts to targeted fish species resulting from development activities. Some of the potential effects to fishing activity caused by offshore renewable energy development (ORED) include: loss of access to fishing grounds; decreased catchability of fish species during construction and operation; loss of gear; and collisions with devices. Effects to commercially and recreationally targeted fish and invertebrate species that may also affect fishing activity include: changes in species abundance and distribution; disturbance to fish from noise or EMF; burial or disturbance of eggs and larvae during construction; and aggregation effects around a renewable energy device. Through the Ocean SAMP, the Rhode Island Coastal Resources Management Council (CRMC) is committed to both promote and enhance existing uses while ensuring that negative impacts from future development are avoided and, if they are unavoidable, are minimized.

This report provides a brief outline of mitigation options that have been considered and used to offset the impacts of offshore development on the commercial and recreational fishing industry, both in the United States and elsewhere, in order to inform potential mitigation strategies in the waters off the coast of Rhode Island.

The Rhode Island's Ocean Special Area Management Plan (Ocean SAMP) has already outlined a number of policies (Section 1160.1 #5-9 and Section 1160.7 #6) related to impacts on fishing from offshore development, and defines mitigation which will serve as the basis for any future mitigation negotiations. The underlined portions of the policies listed below (Section 1160.1 #5-9) are of particularly relevant to this report.

Section 1150.7 #3

“The Council may require the applicant to fund a program to mitigate the potential impacts of a proposed Offshore Development to natural resources and existing human uses. The mitigation program may be used to support restoration projects, additional monitoring, preservation, or research activities on the impacted resource or site.”

Section 1160.1 #5-9:

“5. Any Large-Scale Offshore Development, as defined in section 1160.1.1, shall require a meeting between the Fisherman’s Advisory Board (FAB), the applicant, and the Council staff to discuss potential fishery-related impacts, such as, but not limited to, project location, construction schedules, alternative locations, project minimization and identification of high fishing activity or habitat edges. For any state permit process for a Large-Scale Offshore Development this meeting shall occur prior to submission of the state permit application. The Council cannot require a pre-application meeting for federal permit applications, but the Council

strongly encourages applicants for any Large-Scale Offshore Development, as defined in Section 1160.1.1, in federal waters to meet with the FAB and the Council staff prior to the submission of a federal application, lease, license, or authorization. However, for federal permit applicants, a meeting with the FAB shall be necessary data and information required for federal consistency reviews for purposes of starting the CZMA 6-month review period for federal license or permit activities under 15 C.F.R. part 930, subpart D, and OCS Plans under 15 C.F.R. part 930, subpart E, pursuant to 15 C.F.R. § 930.58(a)(2). Any necessary data and information shall be provided before the 6-month CZMA review period begins for a proposed project.

6. The Council shall prohibit any other uses or activities that would result in significant long-term negative impacts to Rhode Island's commercial or recreational fisheries. Long-term impacts are defined as those that affect more than one or two seasons.

7. The Council shall require that the potential adverse impacts of Offshore Developments and other uses on commercial or recreational fisheries be evaluated, considered, and mitigated as described in section 1160.1.9.

8. For the purposes of Fisheries Policies and Standards as summarized in Chapter 5, Commercial and Recreational Fisheries, sections 560.1-560.2, mitigation is defined as a process to make whole those fisheries user groups that are adversely affected by proposals to be undertaken, or undertaken projects, in the Ocean SAMP area. Mitigation measures shall be consistent with the purposes of duly adopted fisheries management plans, programs, strategies and regulations of the agencies and regulatory bodies with jurisdiction over fisheries in the Ocean SAMP area, including but not limited to those set forth above in 1150.4.2. Mitigation shall not be designed or implemented in a manner that substantially diminishes the effectiveness of duly adopted fisheries management programs. Mitigation measures may include, but are not limited to, compensation, effort reduction, habitat preservation, restoration and construction, marketing, and infrastructure improvements. Where there are potential impacts associated with proposed projects, the need for mitigation shall be presumed. Negotiation of mitigation agreements shall be a necessary condition of any approval or permit of a project by the Council. Mitigation shall be negotiated between the Council staff, the FAB, the project developer, and approved by the Council. The reasonable costs associated with the negotiation, which may include data collection and analysis, technical and financial analysis, and legal costs, shall be borne by the applicant. The applicant shall establish and maintain either an escrow account to cover said costs of this negotiation or such other mechanism as set forth in the permit or approval condition pertaining to mitigation. This policy shall apply to all Large-Scale Offshore Developments, underwater cables, and other projects as determined by the Council.

9. The Council recognizes that moraine edges, as illustrated in Figures 11.3 and 11.4, are important to commercial and recreational fishermen. In addition to these mapped areas, the FAB may identify other edge areas that are important to fisheries within a proposed project location. The Council shall consider the potential adverse impacts of future activities or projects on these areas to Rhode Island's commercial and recreational fisheries. Where it is determined that there is a significant adverse impact, the Council will modify or deny activities that would impact these areas. In addition, the Council will require assent holders for Offshore Developments to employ micro-siting techniques in order to minimize the potential impacts of such projects on these edge areas."

Section 1160.7 Pre-Construction Standard #6:

"6. For all Large-Scale Offshore Developments, underwater cables, and other development projects as determined by the Council, the assent holder shall designate and fund a third-party fisheries liaison. The fisheries liaison must be knowledgeable about fisheries and shall facilitate direct communication between commercial and recreational fishermen and the project developer. Commercial and recreational fishermen shall have regular contact and direct access to the fisheries liaison throughout all stages of an offshore development (pre-construction; construction; operation; and decommissioning)."

As specified in the Ocean SAMP, CRMC is committed to promoting and enhancing existing uses while ensuring that negative and mitigated impacts from future activities are avoided, and if unavoidable are minimized. In instances of unavoidable impacts, CRMC will consider requiring mitigation based on project specific conditions and impacts. Keeping these policies in mind, Sections 2.0-6.0 discuss mitigation techniques used both domestically and internationally for recreational and commercial fisheries. Section 7.0 describes feedback received on what mitigation techniques may be most applicable to local fisheries as a result of discussions with Rhode Island fishermen.

II. Mitigation Options: Offshore Renewable, Domestic

As offshore wind farms have not yet been developed in the United States, many of the mitigation options for offshore renewable energy are described only in theoretical terms for the U.S. The *Alternative Energy Programmatic Environmental Impact Statement* (MMS, 2007) describes possible mitigation measures to be used with ORED within the United States. Recommendations made by the report include: avoiding locating energy facilities and cables near known sensitive fish habitats and within areas of high fishing activity; requiring lessees to review planned activities with affected fishing organizations and port authorities to prevent unreasonable fishing gear conflicts; conducting noise generating activities during closed fishing periods or seasons; using lights or radar reflectors to increase the ability of vessels to see turbines; using best practices that reduce the likelihood of accidents and fuel spills; burying cables to avoid space use conflict with fishery industries (MMS, 2007).

Massachusetts Ocean Partnership

The Massachusetts Ocean Partnership (MOP) analyzed various potentially viable mitigation strategies that balanced the needs of stakeholder groups and their associated interests. In order to assess what mitigation strategies were most appropriate, the MOP report highlights some key considerations for successful mitigation, such as having an impact assessment conducted by a trusted party. The report underscored the importance of understanding that available use data may be insufficient to represent baseline data, that the scope of economic impact may need to be widened from a simple analysis of value per unit area to one that accounts for the area of impact over a period of time to reach a more amenable mitigation package, and that a multiplier effect may be required for those shore-side commerce activities more significant for recreational fishing (Industrial Economics Incorporated and The Massachusetts Ocean Partnership, 2009). Additionally, there is a need to determine both short and long-term impacts in order to come up with a mitigation package that will work over the life of a given project (Industrial Economics Incorporated and The Massachusetts Ocean Partnership, 2009). It is also important to consider that offshore renewable energy projects may have beneficial impacts including habitat creation and reef effects (Industrial Economics Incorporated and The Massachusetts Ocean Partnership, 2009).

The MOP report concluded that monetary compensation should be provided to fishermen for lost use of ocean resources during the construction phase, but determining how to provide long-term compensation for unanticipated impacts may be more challenging (Industrial Economics Incorporated and The Massachusetts Ocean Partnership, 2009). While fishing interests generally prefer a long-term insurance policy or lifetime payments rather than a single, up-front payment, it is in the developer's best interest to determine a finalized up-front mitigation cost in order to determine if the project is financially desirable. As a result there is a great need for communication and trust building between the developers and fishing industry to work through the process of negotiating mitigation and compensation packages (Industrial Economics Incorporated and The Massachusetts Ocean Partnership, 2009).

Cape Wind Energy Project

The Cape Wind Energy Project Final EIS (Cape Wind FEIS) listed a number of mitigation strategies that would be employed once development of this project begins. A developer will be required to provide \$4.22 million in annual payments over the life of the project that will be used for marine habitat preservation, natural resource preservation, and coastal recreation enhancement. The State of Massachusetts will develop a Marine Fisheries Resources and Habitat Program, administered through the Division of Marine Fisheries, as part of their mitigation program that will include eelgrass monitoring, research on fish stocks, a five-year study into the socioeconomic impacts of the Cape Wind project on fishermen and fisheries in the area, and a quahog management plan. The state will also develop a Grants Program, to be administered through the Office of Coastal Zone Management, to provide grants for various projects, including research into fishing and fisheries as well as other topics (MMS, 2009).

The Cape Wind FEIS states that the developer will work with commercial and recreational fishing interests to ensure impacts to these interests will be minimized, and that fishermen will be notified well in advance of the time and location of construction activities. Other mitigation measures to be taken during the construction phase of development to minimize potential impacts to fishing and fisheries include using a jet plow to bury the submarine cables to a minimum depth of 6 feet, inspecting cable burial depth periodically to ensure adequate coverage so as to avoid potential snagging or other conflicts, avoiding most in-water construction at certain times of year to protect sensitive life stages of winter flounder and other fish species, and working with the Shellfish Constable for the Town of Yarmouth to minimize impacts to shellfish areas from submarine cable installation (MMS, 2009).

Cape Wind and the Martha's Vineyard/Dukes County Fishermen's Association agreed to work together as part of a settlement agreement after a federal lawsuit of the fishermen's association against Cape Wind was dropped in 2012. Cape Wind will work together with the fishermen to establish the Martha's Vineyard Permit Bank, to enable the purchase of commercial fishing permits for local fishermen. They will also work together to promote "Vineyard wild-caught seafood". Cape Wind also agreed to work with the fishing group to ensure Horseshoe Shoal, the area where the Cape Wind project will be built, will remain open to fishing activities (Cape Wind 2012).

III. Mitigation Options: Offshore Renewable, International

Numerous offshore renewable energy projects have been developed internationally resulting in the potential for space-use conflicts between the commercial and recreational fishing industry and wind developer as previously identified (MMS, 2007). The purpose of this section is to provide a framework for the types of mitigation options that have been identified and explored as well as providing examples of mitigation options actively being used and some critical components that have helped to facilitate working relationships between the two industries and promote coexistence of the two industries.

Mitigation Options Framework – COWRIE

In the UK, the Collaborative Offshore Wind Research Into the Environment (COWRIE) in conjunction with various fishermen organizations brought together a pool of stakeholders in order to develop a comprehensive set of mitigation options to offset any possible adverse impacts to the fishing industry with a prime objective to help fishermen continue fishing. The resultant report detailed 26 possible mitigation options divided into four distinct categories that were then evaluated on their relative merit and feasibility by those stakeholders. Below are the options identified by COWRIE and, where applicable, examples of the option enacted by wind farm developers are provided.

Category 1: Preconstruction & Design

The first category includes any preconstruction options aimed at reducing negative impacts through early and constructive consultation. Options in this category include working with fishermen to determine sites that will have fewer consequences for commercial fisheries and working towards an agreement with fishermen regarding cable routing (Blyth-Skyrme, 2010). When possible it is advised to consider siting wind farms in areas already closed to fishing or in areas with low fishing value (Blyth-Skyrme, 2010). Through discussion with the stakeholder group, it was determined that opening a dialog and initiating early communication was critical to ensuring that fishermen can provide insight and guidance as well as participate in the planning and revision process (Blyth-Skyrme, 2010).

Examples of the mitigation options that fall within this category can be seen in cases involving Hong Kong Offshore Wind, the North Hoyle Wind Farm (UK), Barrow Offshore Wind Farm (UK), the Horns Rev Offshore Wind Farm (Denmark), and the Princess Amalia Wind Park (the Netherlands) (Hong Kong Offshore Wind Limited, 2009, National Wind Power Ltd, 2002, Eneco, 2012, Danish Energy Agency, 2007, ELSAMPROJEKT A/S, 2000, RSK ENSR, 2008, RSK ENSR, 2005). Hong Kong Offshore Wind has gone through a site selection process in conjunction with the local fishing industry in order to avoid highly productive fishing grounds which resulted in the siting of the wind farm in low quality fishing grounds and a loss of less than 16 square kilometers of sea area. A total exclusion zone was placed around the wind farm, but it is anticipated that a net gain in fisheries will result as the turbine bases are expected to lead to natural stock enhancements (Hong Kong Offshore Wind Limited, 2009). The developers of the North Hoyle Wind Farm in the UK also worked with the fishing industry to determine an appropriate location to minimize potential effects to the commercial fishing industry (National Wind Power Ltd, 2002). Similarly, the Princess Amalia Wind Park in the Netherlands was established in an area that was already closed to fishing activities in order to prevent adverse impacts to the fishing industry (Eneco, 2012). Developers of the Horns Rev Offshore Wind Farm in Denmark agreed to bury cables one meter into the seabed in order to protect the cables from damage by fishing gear and anchors in order to allow continued fishing in and around the wind farm (Danish Energy Agency, 2007, ELSAMPROJEKT A/S, 2000). The Barrow Offshore Wind Farm used a fisheries liaison to determine safe operating practices within the site in order to minimize conflict between the wind farm operators and fishermen and which helped to eliminate the need for an exclusion zone around the wind farm during its operation (RSK ENSR, 2008, RSK ENSR, 2005). Lastly, travel corridors will be established for the Kentish Flats Extension wind farm in the UK in order to minimize potential collisions by fishing vessels traveling through the wind farm, and all cables will be buried to allow continued fishing throughout the wind farm (Vattenfall, 2011).

Category 2: Stock Enhancements

The second category includes the enhancement of stocks of targeted species and/or habitats including various options for direct and indirect stock enhancements (Blyth-

Skyrme, 2010). While there was interest in some of these options, potential concerns also arose, which highlighted the various necessary considerations and associated challenges to this approach (Blyth-Skyrme, 2009b). The following consideration should be noted if there is interest in these types of options: benefits to fishermen may be slow to reach them; these types of options may provide limited employment opportunities; and it may be difficult to ensure that benefits are felt by local fishermen (Blyth-Skyrme, 2010, Blyth-Skyrme, 2009a, Blyth-Skyrme, 2009b). Additionally, an active research or monitoring program would be required to ensure the efficacy of such an option which may prove to be expensive and laborious (Blyth-Skyrme, 2010).

Category 3: Supporting Existing Fishing Activities

The third category includes options that support existing fishing activities such as enhancing access to fisheries, reducing the costs associated with industry practices, local fisheries promotions to improve profits of landings, increasing product prices and enhancing the marketability of fish products. Other options may include (Blyth-Skyrme, 2010):

- 1) Fishermen could be provided with updated fishing gear and equipment that may be more compatible with fishing within or in the vicinity of a wind farm. This may include smaller trawl gear that would be more manageable within the wind farm, but providing new gear may result in increased effort within the fisheries.
- 2) Assistance with certification of fisheries in programs such as with the Marine Stewardship Council could be provided. This would help fishermen to maintain and develop markets, but not all fisheries would be able to be certified .
- 3) A quota leasing program could be developed for fishermen who are being displaced.
- 4) A fuel purchase subsidy program could be established if fishermen become displaced and need to travel farther distances to fishing grounds. This would benefit all fishermen, and may benefit trawlers, who use the most fuel and are most likely to be the most significantly displaced. However, it may be difficult to determine which fishermen are eligible for fuel subsidies.
- 5) A local biodiesel production facility could be built to provide fuel for fishermen. This could result in cheaper fuel, but it may also result in more expensive fuel. Staff would be required to run the facility, and switching to biodiesel could cause engine reliability issues.
- 6) An engine replacement program to provide new, energy-efficient engines could be established. This would allow fishermen to reduce costs and operate more safely, and addresses the issue of increased fuel costs from increased steaming time if fishermen are avoiding traveling through a wind farm. This may result in increased effort or capacity, and not all fishermen may want to replace their engines.
- 7) Financial support for maintenance or annual refit costs may benefit both fishermen and local dockside business. This could increase vessel safety, minimize costs of unscheduled maintenance, and support dockside industries, but may result in perverse subsidy of most benefiting those fishermen who do not sufficiently maintain their vessels.

- 8) Provisioning vessels and fishermen with updated safety equipment such as radar, GPS, life rafts, EPIRBs, flotation suits, etc. could address some of the safety concerns about operating around wind farms, but again would not benefit those fishermen who maintain their safety equipment regularly.
- 9) Assistance could be provided for insurance costs should they increase as a result of fishing within the wind farm.
- 10) Port facilities could be improved in combination with port developments associated with wind farm development. This provides indirect rather than direct benefits to fishermen.

Category 4: Non-fisheries Opportunities

The last category is related to the development of new or non-fisheries opportunities, such as switching to new or alternative fisheries or other income generating activities. Options discussed include (Blyth-Skyrme, 2010):

- 1) Fishermen could be provided with training for new fisheries opportunities or training to maximize product quality to improve the market value of fish. This could be combined with purchasing new gear if fishermen are switching to different fisheries.
- 2) Assistance could be provided for the development of long-line aquaculture inside of the wind farms. This could employ fishermen in another industry. However, the wind farms may not be a suitable location for aquaculture; this may exclude other fisheries from operating within the wind farms, and may cause a navigation hazard for vessels transiting through the wind farm.
- 3) Assistance could be provided to help fishermen adapt to take advantage of tourism, recreation or other income generating roles. Fishermen could use their vessels to provide support services or surveying for the wind industry, or they could engage in tourism activities, using their vessels for sightseeing, recreational angling trips, or recreational diving. This may require a costly refit of vessels to be suitable for other uses. While there may be some opportunity for tourism to view a wind farm up close, the novelty of the wind farm may wear off for the public, and this may not be a long-term source of tourism revenue. Wind farms may also be too far offshore to be attractive to tourists as a destination for sightseeing or recreational fishing or diving. Additionally, as fishermen leave the fishing industry to pursue alternative livelihoods in tourism or industry support services, this may drive the number of fishermen required to maintain shoreside support services below a critical mass.

Examples of this type of option can be seen in the Kentish Flats Extension project in the UK. A few fishermen that operated drift netting and shellfish dredging operations were to be displaced from their fishing grounds once construction on the wind farm begins, as their fishing operations and gear are not compatible with the wind farm. As a result, the wind farm developers, aided by the fisheries liaison, are working to come up with a practical alternative, which may include long-line aquaculture operations (Vattenfall, 2011). In the Thanet Offshore Wind Farm in the UK, local fishermen and fishing vessels were employed to run surveys and guard ship duties during the construction and wind

farm operation phases resulting in supplemental income to the local fishing community (Vattenfall, 2011). Vessels from the charter boat industry were employed during the exploration and survey stages of the project in order to help in the development of the required EIA (Royal Haskoning, 2005; Kent Charter Fishing, 2008). Additionally, best practices in the UK dictate that when a guard vessel is required in any stage of the offshore wind development project, fishing vessels should be used if they are available, suitable, and competitively priced (UK BERR, 2008). Standards for fishing vessels acting as guard vessels have been established by the National Federation of Fishermen's Organizations (NFFO) and must be adhered to, therefore, any recruitment of fishing vessels to fulfill this duty are required to go through the NFFO to ensure that those standards are met (UK BERR, 2008).

Fisheries Liaison

A critical element to effective communication between the fishing industry and the offshore wind sector that was used in many of the cases reviewed and which is required of any offshore development project in the Ocean SAMP area was the appointment of a Fisheries Liaison. The British Wind Energy Association (BWEA) in conjunction with fisheries groups throughout the UK issued formal recommendations that a fisheries liaison be used for all offshore wind development projects in order to promote the coexistence of the two industries. The BWEA created general guidelines to be used when working with a fisheries liaison, which are based on best practices used by the offshore oil and gas and cable industries (The British Wind Association, 2004). On a fundamental level, the fisheries liaison performs the critical duty of facilitating an open dialogue and communication between developers and the fishing industry by establishing contact with the fishing industry and providing background information on the proposed projects, conducting an environmental survey, and managing contact between the two industries. The fisheries liaison may be responsible for disseminating information on the status of the project and the construction timeline to the fisheries industry. The liaison may also monitor fishing activities in the wind farm area, promote work methods that will minimize impacts to the fishing industry, and receive and deal with claims associated with lost or damaged gear attributable to the wind farm. Most projects in Europe have benefited from a Fisheries Liaison, including the liaison appointed for the Thanet Wind Farm, who helped to minimize impacts and to serve as a point of contact for daily operations including disseminating and publishing notices on construction activities to fishermen (Royal Haskonig, 2005).

Direct Compensation

In some instances, direct compensation to adversely affected fishermen is necessary and warranted, particularly in instances of demonstrable economic losses. Some direct compensation packages include lump sum payments to affected fishermen, while other compensation packages are given to a fishermen's organization and the funds are spent on projects or programs that help the collective body of fishermen. Examples of compensation packages include the Horns Rev Offshore Wind Farm, in which a method

for determining the amount of compensation is listed below, and the Scroby Sands Wind Farm in the UK, where fishermen were paid disruption compensation during the course of the construction phase (Pendlebury, 2011).

In their report, “The Future of Offshore Wind”, the Danish Energy Agency has determined that in such cases where compensation is deemed appropriate, the amount of compensation should be calculated according to official catch figures for the most important species in the area in question for the last 10 years (Lund, 2012) and coupled with an assessment of the types of fishery importance for the area. Loss is then calculated on the basis of a 500-meter protection line around the wind farm and the relative importance of the area in question (Lund, 2012). In Denmark, each of the wind turbines has a 500-meter exclusionary zone in which fishing is prohibited, and fishermen have thus experienced a direct loss of fishing grounds. In the case of the Horns Rev Offshore Wind Farm, this method led to a negotiated compensation package of DKK 3 million (USD \$534,408) that was awarded to Eisam A/S and the Danish Fishermen’s Association (Danish Energy Agency, 2007, Lund, 2012).

IV. Mitigation Options: Offshore Oil and Gas, International

While ORED projects remain relatively new, offshore oil and gas projects have been operating for several decades throughout the world. Interactions between the oil and gas industry and fishing industry are similar to those between the fishing and offshore wind industries. As a result the mitigation options that have been used in the offshore oil and gas industry may be roughly analogous to those proposed or in use in the offshore renewable industry. Examples of some of the mitigation options that have been used as a result of international oil and gas development projects will be described in the following section. These options would fall within the preconstruction and design category, supporting existing fishing activities category, use of a liaison, and direct compensation categories.

Preconstruction & Project Design/Supporting Existing Fishing Activities

Exxon Mobil has been working internationally with the fishing industry to come up with viable mitigation options when the two industries overlap. In Norway, Exxon Mobil’s projects have led to funding of a study on the effects of seismic surveying on sand eel populations and another research program to study the effects of pipelines on the snow crab and lobster fisheries. They have also engaged in consultation with the fishing industry on project design resulting in backfilling and dredging of pipelines in order to allow continued fishing operations around Exxon’s oil operations (Esso Norge, 2004). In the UK and the North Sea, the Fisheries and Offshore Oil Consultative Group (FOOCG) was established to deal with damaged gear and lost resources and to administer mitigations to reduce potential impacts of continued oil and gas production activities. Existing mitigation measures include a mandatory 28-day notice for seismic activities,

and quarterly meetings between the UK oil and gas trade association (UKOOA), the National Federation of Fishermen's Organizations (NFFO), and the Scottish Fishing Federation to discuss conflicts (Continental Shelf Associates, Inc. 2002). Additionally, the UKOOA developed a seabed information system (SeaFish) that is installed in a fishing vessel's navigation system and includes maps of all offshore platforms, safety zones and oil-related obstructions. To supplement SeaFish, the FishSafe system was developed to send a warning alarm to warn fishers when they are approaching an obstruction. UKOOA has installed 300 SeaFish and FishSafe systems in commercial fishing vessels as a safety equipment mitigation practice (Continental Shelf Associates, Inc. 2002). In Nova Scotia and Newfoundland seismic surveys are planned in a leapfrog pattern that allows fishing gear to be moved into areas following completion of surveying while avoiding areas of fixed gear use; additionally an onboard fisheries observer is present on seismic vessels to help notify fishing vessels of the seismic activity (Continental Shelf Associates, Inc. 2002). A toll free number was also created for fishermen to obtain information on future offshore operations (Continental Shelf Associates, Inc. 2002).

Fisheries Liaison

The oil and gas industry has also benefited from the use of a fisheries liaison in order to help projects run smoothly. Along the coast of eastern Canada, at least one fisheries liaison has functioned as a link between the two industries, providing critical information in both directions, developing plans to avoid conflict and impacts to the fishing industry, and handling gear loss and damage claims which also include lost or deteriorated catch and damage to boats. Typical mitigation plans developed by this liaison have included avoidance of active fixed gear areas, avoiding sensitive fishing areas during sensitive times, using a fisheries observer or fisheries liaison officer onboard the seismic surveying vessels, sending out notices to fishing industry, plotting of fishing locations on survey ship GPS in order to avoid those areas, a gear compensation plan, and monitoring the progress of the relevant fisheries during the survey (Canning and Pitt Associates, 2004).

Direct Compensation & Lost/Damaged Gear Compensation

In addition to the mitigation options discussed above, some projects carried out by Exxon Mobil have required the provision of direct compensation to members of the fishing industry. In Malaysia, seismic operations displaced some fishermen, resulting in lost income to fishing communities. In order to compensate those fishermen, a baseline survey of the fish stocks was conducted and compensation was provided to each fisherman based on the number of tags or traps they operated and which were displaced (Esso Norge AS, 2004). Another example of direct compensation from Exxon Mobil occurred in Canada around the Hibernia Oil development project. Exxon conducted socio-economic studies of the potential impacts on the fisheries industry through interviews of stakeholder groups, and the study found that three quarters of participants were amenable to oil and fisheries coexistence (Esso Norge AS, 2004). As a result, Exxon developed a code of practice in concert with fisheries, Hibernia owners, and

regulatory agencies to address compensation and other issues. A “loss of access” compensation program was developed for actual income lost, and additional incentive bonuses were provided to fishermen who made an effort to continue fishing in waters away from the construction site. Additionally, a gear-loss and damage compensation and claims program was established in order to quickly provide reimbursement when appropriate (Esso Norge AS, 2004). The stakeholders in this instance benefited from the use of *ONE OCEAN*, an inter-industry organization that worked as a liaison between the two industries (Esso Norge AS, 2004). In the UK, a fishermen’s compensation fund paid for by the UKOOA provides compensation for lost or damaged gear and loss of fishing time, or vessel damage that is not attributed to a particular operator (Continental Shelf Associates, 2002). A fisheries liaison officer (FLO) is required for all oil and gas development projects, and a fishing liaison skipper (FLS) is required aboard all seismic vessels (Continental Shelf Associates, 2002). Additionally, in Nova Scotia/Newfoundland seismic surveys operations, individual operator (attributable) compensation funds and CAPP compensation fund are available for repair and or replacement of damaged or lost gear and lost revenues (Continental Shelf Associates, 2002).

V. Mitigation Options: Other Offshore Development Projects, Domestic

Domestically, the commercial and recreational fishing industry has also been impacted by offshore oil and gas, telecommunications, and governmental projects resulting in the use of various mitigation options. This section will highlight six case studies involving the Oregon Fishermen’s Cable Committee, the Northeast Gateway and Neptune LNG terminal projects, a proposed gas terminal in Maine, a canceled OCS lease sale, offshore oil and gas funds operated by the County of Santa Barbara, and the Gulf of Mexico’s oil and gas operations.

Case Study 1- Oregon Fishermen’s Cable Committee

The first case involves the Oregon Fishermen’s Cable Committee that was established in response to the laying of fiber optic cables off the coast of Oregon. In the mid-1990s, AT&T’s Trans-Pacific 5 project laid two fiber optic cables through prime fishing grounds off the Oregon Coast (Kroft, 1999). AT&T ultimately closed the area to fishing, fearing that fishermen using the area would snag their gear on newly laid cables and in an attempt to retrieve their gear fishermen would damage the cables (Industrial Economics Incorporated and The Massachusetts Ocean Partnership, 2009). As a result when another fiber optic cable project by WCI/Alaska Northstar was proposed, local fishing interests came together as the Oregon Fishermen’s Cable Committee in order to come up with a resolution that would help fishermen continue using their traditional fishing grounds (Oregon Fishermen’s Cable Committee, 2012, Kroft, 1999). The Oregon Fishermen’s Cable Committee worked with WCI, in order to create the WCI Cable Agreement, which allowed fishermen who had snagged their gear to simply sacrifice the gear in exchange for gear replacement compensation (Oregon Fishermen’s Cable Committee, 2012). This

agreement, amenable to local fishing interests, has served as the foundation for seven other fiber optic cable projects and has allowed continued commercial fishing in and around the cable projects (Oregon Fishermen's Cable Committee, 2012).

Case Study 2- Neptune LNG and Northeast Gateway Terminals

The second case focuses on the Neptune LNG and Northeast Gateway Terminals in the waters off Massachusetts and developed by Excelerate Energy LLC and Suez Energy North America. Individual fisheries user groups negotiated with each developer in order to come up with a compensation package that worked for each group. A total of \$12.6 million from the two projects was distributed to the Gloucester Community Preservation Fund in order to buy fishing permits from fishermen wanting to leave the industry and to then lease those permits to local fishermen in order to keep a stock of fishing permits based in Gloucester, MA (Moser, 2007). An additional \$3.4 million was distributed to the Massachusetts Lobstermen's Association, who have simply distributed the funds among local affected fishermen (Moser, 2007). Additional funds of \$20.55 million were distributed for capital improvement projects in the Boston Harbor, a passive acoustic buoy system to detect and monitor whales, to map and study the activities and habitats of the sea floor, and to the Gloucester Marine Heritage Center, The Peabody Essex Museum, and the Essex National Heritage Center (Moser, 2007). One of the developers has said they have spent an additional \$5.5 million on various project costs (Anderson, 2008). Initially, the amount of compensation was determined through a systematic process by the developer, but the amount of compensation that was offered was viewed as an underestimate of the value of losses to the fishing industry and the \$47 million was negotiated by the fishermen (Laidler, 2006).

Case Study 3- Downeast LNG

An LNG import terminal, Downeast LNG, has been proposed in Robbinston, ME with construction anticipated to start in late 2012 or early 2013. It was found that no significant impact on the commercial fisheries industry was expected; however, the terminal operator is required to reimburse fishermen for any lost or damaged gear that occurs as a result of the terminal and its operation (Downeast LNG, 2008). Despite no anticipated adverse impacts, the developer has nonetheless commissioned a study by Woods Hole Oceanographic Institute (WHOI) to study the potential impact to the lobster fishery and the developer is working with WHOI on a Fishermen Communication, Coordination, and Compensation Plan (Downeast LNG, 2008).

Case Study 4- Proposed Lease Sale in North Aleutians Basin

In the North Aleutians Basin in US federal waters, a proposed OCS lease sale (which was ultimately cancelled in March 2010) generated a mitigation plan to offset the impacts to fisheries. First, the lessee was required to provide fair and rapid compensation to commercial, subsistence, and sport fishermen for impacts not covered under the Oil Spill

Liability Trust Fund and the Fishermen's Compensation Fund. Second, coordination with the fishing industry was required in order to minimize conflicts related to exploration, construction, and operation activities. Third, a ballast water treatment program was required to remove or eliminate non-indigenous species. Fourth, fishermen precluded or displaced from their fishing grounds, unable to fish during a season, with lost or damaged gear, experiencing decreased harvest levels, or experiencing lost fishing opportunities because of the listing of an endangered species as a result of OCS activities, or because of an actual decline in fisheries, were to be adequately compensated for their losses. Additionally, the project developers would have been required to recruit and hire local residents, contractors, and business, as well as create training programs to prepare locals for positions in the oil and gas industry (AEB, 2009a, AEB, 2009b, AEB, 2006a, AEB, 2006b). While not specifically targeted towards fishermen, the Aleutians East Borough administration found that the use of a local hire and training program for oil and gas industry related activities could help diversify and improve the local economy that is reliant on the commercial fishery industry, and which is struggling due to reduced catch prices (AEB, 2009).

Case Study 5- California Oil and Gas

Offshore oil and gas projects have been in operation off the coast of California since the 1980s and as a result the oil and gas developers have been required to provide funding to offset the impacts of those offshore oil and gas activities. In addition to the funding, some basic mitigation practices have been used including a consolidation concept that was designed to reduce the number of coastal and onshore oil facilities (Continental Shelf Associates, 2002). Vessel traffic corridors were also established for oil and gas vessels in which they are required to remain while traveling to and from shore through a voluntary agreement between fisheries and oil industry (Continental Shelf Associates, 2002). As there have been multiple different oil and gas development projects and operators, three funds operated by the County of Santa Barbara have been established to distribute those funds. The two compensatory mitigation funds operated by the county are the Fisheries Enhancement Fund (FEF) and the Coastal Resources Enhancement Fund (CREF) (CSB, 2012a, CSB, 2011). The county also manages funds for the Local Fishermen's Contingency Fund (LFCF) (CSB, 2012b).

The Fisheries Enhancement Fund was established to benefit commercial fisheries only, funded through an initial fee dictated at the start of the development project and through annual fees collected over the life of the oil/gas project. Project fees are reassessed every 5 years to ensure that the fees are adequate (CSB, 1987). Some phases of an oil and gas development project that are more intrusive, such as the construction phase, will demand higher fees (CSB, 1987). The fees are initially determined based on historical catch data for the blocks that are located in the project area and through interviews with local fishermen (CSB, 1987). Since its inception, the FEF has funded 24 programs or projects totaling \$750,493 mitigating impacts of oil and gas development (CSB, 2012a). Projects designed by or developed within the local commercial fishing or processors industry are given priority (CSB, 2012a).

Projects considered for funding include: pier and harbor improvements; research and development with direct application to commercial fishing and fish marketability; enhancement of commercial fish resources; contribution to a Commercial Fishermen's Liability Insurance Pool; and fishermen communication and education programs. Projects that have been funded include: the CA Sea Grant newsletter; a new Harbor Ice Machine; startup costs for a Fishermen's Market; promotions for existing markets; fish stocking feasibility studies; a live fish holding tank feasibility study; installment of a new fish hoist; grappling, hook, and gear replacement and repair; a seafood safety program; weather broadcasting system for mariners; fishwalk interpretive panels about commercial fisheries; safety equipment reimbursement; storage area repairs and improvements; fish stock research; inventory of infrastructure; a Chinook Salmon rearing project; and an Abalone habitat study (CSB, 1987). The FEF is administered by a county staff person dedicated to the fund's administration and whose salary is paid for from the funds. Any additional costs related to FEF administration are also paid for from the fund. In addition to the fund administrator, a technical review panel comprised of the administrator, a local fishermen's representative, and an oil and gas industry representative submits project recommendation to the Board of Supervisors who determine what projects will be funded (CSB, 1987). The FEF is designated as a special revenue fund in the county treasury (CSB, 2012a, CSB, 1987).

The Coastal Resources Enhancement Fund was established to benefit affected coastal resource users and is funded through the same mechanism established by the FEF discussed above (CSB, 2010a, CSB, 1987). The CREF has awarded a total of 277 grants since its inception totaling \$20.4 million in order to mitigate the impacts from offshore oil and gas development to coastal aesthetics, coastal recreation, coastal tourism, and environmentally sensitive coastal resources (CSB, 2011). Approximately 48% of their funding is spent on the acquisition of coastal properties or conservation easements, 37% on improving coastal parks and coastal related facilities, 11% on planning and research activities, 3% on education projects (CSB, 2011). Their 2012 projects include a bypass road, beach access, and a coast plan. Project or grant awards are made based on predetermined guidelines (CSB, 2011) and must address the impacts identified in the environmental impact report and mitigate those impacts to the maximum extent possible (CSB, 2010a).

Lastly, the Local Fishermen's Contingency Fund serves as a loan program to facilitate the funding of timely repairs or replacement of damaged or lost fishing gear while claims to the Federal Fishermen's Contingency Fund, a federal program set up to compensate losses from oil and gas development which may take up to seven months to process and distribute reimbursement, are processed (CSB, 2012b). The maximum allowable claim that the LFCF will pay out is \$5,000/claim. Based on the idea that the fund could receive up to 40 claims per year at \$5,000/claim, the fund is required to hold a minimum of \$200,000 a year plus \$50,000 for administration (CSB, 1988). As a result oil and gas operators must replenish the fund at the start of every fiscal year to ensure adequate funds are available. Any applicant to the fund must prove that they are an active commercial fishermen, have made all reasonable efforts to identify locate and collect reimbursement from the company responsible for the damages, that the damage/loss was not caused by

negligence or fault of the commercial fishermen making the claim, and that the damage/loss is not compensable by their insurance (CSB, 1988). The LFCF is administered by an independent insurance adjuster and the oil/fisheries liaison office (CSB, 2012b, CSB, 1988).

Case Study 6- Fishing and Oil industries in the Gulf of Mexico

According to the report *Interaction between Fishing and Oil industries in the Gulf of Mexico*, some commercial and recreational fishing has been improved by reef effects caused by oil and gas platforms (Stanley and Wilson, 1990), whereas other industries such as bottom trawlers have been displaced. As a result, a suite of mitigation practices has been employed depending on the project specific circumstances. In instances where seismic operations occur, notices to fishermen are posted 2 weeks beforehand and specify duration of survey, vessel name and call sign (Continental Shelf Associates, 2002). In cases of exploration activities, the fisheries monitor must be onsite during drilling to warn fishermen of the location of rig anchors (Continental Shelf Associates, 2002).

Additionally, rig anchor practices including conducting a side scan sonar survey to locate and remove seafloor debris and smooth anchor scars have been used to reduce potential seafloor hazards and ensure site clearance (Continental Shelf Associates, 2002). In some instances, trawlers are provided with state-of-the-art differential GPS systems that help them avoid locations of shell mounds if they remain after abandonment (Continental Shelf Associates, 2002). Trawlers may also receive net locators to reduce chances of snagging (Continental Shelf Associates, 2002). Additional mitigation recommendations for the Gulf of Mexico included the production of a guidebook with methods of both industries to facilitate greater understanding between both parties, to improve general understanding and knowledge of available funds to a broader group of fishermen, mandating the appointment of a fisheries liaison committee, and the regulation of geophysical surveys and requirement of survey notification 3-9 weeks prior to survey (Continental Shelf Associates, 2002).

VI. Alternative Employment Options

In some cases, offshore energy development projects have provided employment alternatives for fishermen who wish to exit the fishery or supplement their income. In some cases, preferential hiring practices are put in place to provide work to displaced fishermen, or provide an alternative water-dependent livelihood. Alternative livelihoods may also allow fishermen to alter their fishing vessels for use in other industries.

For example, some Gulf of Mexico fishermen have transitioned to work on oil and gas rigs. As oil and gas operations began in the Gulf, many fishermen would augment fishing income with work on oil and gas operations during slow or off-season (Austin et al., 2002). Furthermore, new work opportunities became available for fishermen who applied their knowledge and skills of the fishing industry with knowledge of oil and gas operations in order to develop machine shops, service companies, and transportation

business (Austin et al., 2002). As such, fishermen became the first locals to enter the oil and gas industry as entrepreneurs as they modified their vessels to serve oil and gas rigs and platforms (Austin et al., 2002). In times when wages from the oil and gas industry were reduced, mariners would turn to crawfishing as a way to supplement their income (Austin et al., 2002). In general, fishermen were flexible and fluid between the two professions and would transition back and forth depending on the cycles of boom and bust generally attributable to both the oil and gas and fishing industry (Austin et al., 2002).

Compensatory Mitigation

Compensatory mitigation is another method of indirect fisheries mitigation that could be considered for ORED. Compensatory mitigation strategies are usually considered in the context of wetland mitigation, but could also be considered as an alternative for other types of fish habitat. Compensatory mitigation can be loosely defined as restoration, creation, enhancement, and/or preservation of wetland resources and includes on- or off-site and in- or out-of-kind options. It should be noted that according to Johnson et al. (2008), compensatory mitigation is generally considered after a thorough review of alternative noninvasive options has been conducted, and after those options are exhausted any remaining impacts are considered unavoidable. Compensatory mitigation may be provided in various forms including: project-specific options which compensate for resource impacts resulting from a specific action or permit; mitigation banking, or the creation/restoration/enhancement of a wetland, to compensate for future impacts to wetlands or other aquatic resources; in-lieu fee mitigation, or money that is paid to a natural resource management agency by the developer or agency to meet their requirements of compensatory mitigation. In-lieu fees that are collected are used to fund the implementation of wetland or aquatic resource conservation projects (Johnson et al., 2008).

Mechanism for Compensation

The mechanism by which the amount of compensation will be determined and the way by which compensation will be distributed should be considered. The MOP report analyzed a few methods of determining economic impacts and the associated compensatory mitigation packages (Industrial Economics Incorporated and The Massachusetts Ocean Partnership, 2009). These methods included using historical precedent, gross revenue, net income, and social welfare. Of those methods, MOP determined that each method has associated advantages and drawbacks. They concluded that using historical precedent may provide ad hoc results, gross revenues may be overly simplistic, net income requires highly detailed information to provide credible compensation packages, and a social welfare assessment requires time, a high quality survey design, and an objective survey team (Industrial Economics Incorporated and The Massachusetts Ocean Partnership, 2009). Thus, all interested parties should consider the method of determining the amount of a compensation package and understand that the method of determining compensation may be unique to each fishing user group. COWRIE also noted that because data on

fisheries values are lacking at a fine scale, the determination of appropriate compensation or mitigation packages may be difficult (Blyth-Skyrme, 2010).

In many of the case studies and examples provided above, different mechanisms for distributing compensation were discussed. COWRIE noted that it is critical for mechanisms to be established that allow any impacted fishermen to actually benefit from mitigation funds and understand that in some instances compensation may better serve individuals as opposed to communities of fishermen (Blyth-Skyrme, 2010). Instances discussed above include funneling compensation through a fishermen's association that is then disseminated to various affected fishermen, or the collection of user fees by a county agency that are then used to fund projects to benefit the fishing community at large. In Massachusetts, the Secretary of Energy and Environmental Affairs will assess an ocean development mitigation fee that will go to the ocean resources and waterways trust fund (Industrial Economics Incorporated and The Massachusetts Ocean Partnership, 2009).

In the case of Rhode Island, if compensation were to be administered through a state agency, a legislative framework would need to be established before mitigation funds are dispersed to ensure they are not deposited into the State's general operating funds. Furthermore, rules and procedures would need to be defined and agreed upon prior to the commencement of any negotiation process.

VII. Feedback from Rhode Island fishermen

A meeting was held March 21, 2012 to discuss mitigation options with Rhode Island fishermen, including members of the Fishermen's Advisory Board (FAB) and other industry leaders. Some considerations were highlighted related to the mitigation options described in Sections I through VI and their relevance to Rhode Island. That feedback is summarized below. Additional feedback was also received during the 30-day public comment period held on this draft report. A list of comments received is provided in Appendix I.

Overall, various fishermen expressed that anticipating appropriate mitigation options may be challenging before a project has begun because the scale or magnitude of impacts from the project may not be fully realized. As a result, there was an overarching emphasis placed on the need for any mitigation package to be sufficiently flexible. Furthermore, because ORED projects may produce varied impacts to different fishing sectors, distinct mitigation packages may need to be negotiated for each fishing sector. For example mitigation options for state or federally licensed commercial fishermen may be different than those using charter or party boats. There was a general discussion that it would be most beneficial for each fishing user group or sector to determine the mitigation options that would be best for their own group and go through a process of facilitated negotiations with the developer. In cases of an impasse during the negotiations, it was mentioned that binding arbitration may be a possible means of resolving the conflict.

Before entering into negotiations regarding mitigation, some fishermen have requested that a detailed scope of work be provided to them that includes what type of activity will

be allowed, under what conditions, and during what phase of construction. It should be noted however, that during certain phases of construction, flexibility in the schedule will be necessary. Some FAB members also sought clarification regarding who has the authority to change fishing restrictions once a mitigation package has been settled on and what the process will be for renegotiating mitigation should restrictions be changed.

The FAB felt that the fishing industry would benefit from the appointment of a fisheries liaison early in the process who would be dedicated to working with each fishing sector to determine what mitigation options were the best fit for each group. However, the Ocean SAMP policies (1160.7 #6) only require that a liaison be appointed after a Construction and Operation Plan has been approved, and therefore, the developer would have to consent to funding a liaison earlier than they are technically required. The FAB also discussed a shared interest in the liaison maintaining a website that provides daily updates on construction statuses and project timelines to help the fishing industry keep abreast of any activities that may impact them.

One mitigation strategy suggested involves annual payments listed in the license agreement between the developer and CRMC. The amount of payment would be reached through negotiations between the developer and the affected fishing group and would be based on the number of turbines licensed and the duration of the licensing period. A desired part of this payment scheme is a payment guarantee requiring the developer to make agreed upon payments regardless of project status and based upon the number of turbines that are listed. In this strategy each fishing user group would be paid in proportion to the negative effects that are suffered by each group. Some fishing associations (see attached comments in Appendix I) do not support mitigation funds being under the full control of State of Rhode Island or mitigation payments provided directly to individuals. However, it should be noted that fishing user groups that have a less formal organization or structure that may be difficult to compensate directly may benefit from the aid of state oversight of mitigation funds.

Alternatively, there was also discussion of depositing a portion of the lease fees collected by the state into a secure non-state account that could then be used to support specific mitigation efforts. However, it is important to note that under current regulations, the lease fees collected from any ORED projects in state waters currently enter Rhode Island's General Fund. Therefore, in order to establish a secure account, outside of any state agency control, new legislation would be necessary.

There was a general discussion regarding the use of fishing vessels for non-fishing related activities. One member of the for-hire recreational sector mentioned that it may be possible to use the existing party and charter vessels for tourism during the construction and operation phase. Currently though it is difficult to anticipate what level of public interest in such tours would be and whether or not this is a viable mitigation option. Related to the idea of hiring fishermen during the construction phase, some members of the FAB cautioned that compelling the developer to hire fishing vessels for construction related activities may lead to inefficiencies that may slow down or delay the construction process.

The fishermen were generally concerned that when examining a project's potential impact that fishing grounds that experience secondary fishing pressure from fishermen displaced from the affected areas should also be examined. Specifically, members from the for-hire and recreation sector also felt that construction and operation for the Block Island Wind project may displace for-hire and recreational anglers along the south coast to the Pinnacle and west to Black Point, Lewis Point, Southwest Point and west to the state water boundary at Southwest Ledge. This may result in increased fishing efforts in areas to the southwest of the island. As a result, one suggestion provided was extending the Rhode Island State waters out from its current location to the Southwest Ledge buoy. This would extend $\frac{1}{2}$ mile from the presently located state waters boundary to the SW Ledge buoy located at $41^{\circ}06' 23.00''$ N, $71^{\circ}40' 23''$ W and would allow vessels without a federal permit to be able to fish in these waters (refer to map provided in Appendix I). CRMC does not have the jurisdiction to make this change or to require the relevant federal agency (National Oceanic and Atmospheric Administration) to make such a change. Such a change would require federal legislation and therefore may not be feasible prior to development.

Other suggested mitigation options for recreational fishermen included capital improvement projects such as the construction of a walkway platform on the east and/or west walls of the Point Judith harbor of refuge. This type of capital improvement would provide additional access for sport fishermen. Capital improvements were mentioned as one type of mitigation strategy that could be employed to mitigate a fishing sector like the recreational fishing sector that may be difficult to compensate directly. Capital improvements have been used as mitigation for other types of ORED projects off the coast of Santa Barbara, CA and in the Boston Harbor (see case studies 2 and 5 in the section V). Similarly, the construction of artificial reefs as part of the turbine structure was suggested as a possible mitigation option as this could potentially attract fish to the project area and benefit recreational fishermen.

Some members of the FAB suggested funds deposited in a secure non-state account that paid for by the developer and/or by collected lease fees could be used to support better research and data collection. The data collection could potentially serve as additional data to help augment state and/or federal data sets or monitor long-term impacts of ORED not captured during the required monitoring periods. However, there was not a consensus on this strategy, as some FAB members including the Rhode Island Lobstermen's Association have stated that they do not support the use of mitigation funding for research and data collection on the impacts of ORED projects, and feel this responsibility should lay entirely with the developer (see Appendix I).

In order to provide meaningful estimates of the impacts of ORED projects on the various fisheries, the FAB agreed that any survey and sampling protocols used should be rooted in the peer-reviewed process. Members of the FAB expressed concern about the use of the National Marine Fisheries Service's VTR (Vessel Trip Reporting) or VMS (Vessel Monitoring System) data as a means to determine mitigation values, as the data may not accurately reflect fishing activity (e.g. inaccurate and incomplete reporting from

fishermen; data resolution not fine enough for the purposes of determining accurate mitigation; fishermen may not fill out a new log book entry when crossing into a new reporting area) and would thus provide a poor basis for determining mitigation values. In addition, selecting an appropriate number of years from the data sets may be difficult as catch by year, area, and season varies greatly depending on stock conditions. It was suggested that state licensed fisheries (that are not required to report VTR or VMS data) should work together to figure out how to spatially characterize their fishing activity, perhaps using quantitative methods or qualitative mapping consistent with the Ocean SAMP methodology. Members of the FAB also requested that they be included in selecting the scientists that will design the survey and sampling protocols, and that a more diverse panel of scientists are able to comment on any survey protocol. The FAB also articulated the desire to be given adequate time to evaluate and provide feedback on proposed sampling and survey methodology. Per the requirements in the Ocean SAMP, the FAB was allowed to provide input into the sampling and survey protocols, and the protocols have been adjusted to accommodate the FAB's concerns.

VIII. Next Steps

Through the drafting of this report, a substantial amount of feedback was received on issues to consider related to ORED in Rhode Island. While the purpose of this document was not to outline a specific mitigation plan, it serves as a starting point in future mitigation discussions. Based on the review conducted and feedback received our recommendations for moving forward are:

- 1) A fisheries liaison should be in place before application for a lease to work with fishermen. We recommend that BOEM consider hiring a fisherman to interface with the fishing industry over the long term, rather than on a project-specific basis.
- 2) A portion of the lease funds collected should be placed into a secure non-state account for mitigation and fishery research. This account can also be used to address long-term impacts that may not occur or be observed during the required monitoring period.
- 3) Pre-construction monitoring of fishing activity should take place to obtain high resolution baseline data of fishery patterns before development begins.
- 4) Managers and fishermen participating in undocumented fisheries (state-licensed vessels and fisheries, and any fisheries that do not require VTR or VMS) should work together to figure out how to spatially characterize their fishing activity.

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Appendix I- Feedback Received During the Public Comment Period

	First	Last	Affiliation/ Town	Title	Page	Comment	Response
1	Richard	Hittinger	RISAA	Vice President	25	One other question is whether you gave any consideration to including some of the potential mitigation ideas that we discussed at the FAB meeting into this report? I know we had a discussion about ideas like construction of artificial reefs as part of the turbine construction, improving fisheries data collection, etc.	<p>Text has been added to this report to reflect these suggested mitigation options in section 7 Feedback from Rhode Island Fishermen that states: "Some members of the FAB have suggested funding in a secure nonstate account that is paid by the developer and/or by collected lease fees could be used to support better research and data collection. The data collection could potentially serve as additional data to help augment state and/or federal data sets. Funding this data collection could also monitor long-term impacts of the wind farm that may not be captured during the required monitoring periods." As well as: "Another specific mitigation option suggested by the FAB included the construction of artificial reefs as part of the turbine structures, which would be paid for by the developer and installed at the time of turbine construction."</p>

2	Najih	Lazar	Wakefield, RI		<p>The report is based largely on experiences and case studies from outside of NE and focused mainly on monetary compensation to commercial fishing industry. The report lacks considerations for mitigation plans to replace the fish resources lost as a result of the project. Any lost biomass as a result, must be considered and provided with a mitigation plan to reverse and/or replace. There is no mention of the term "ecological consideration" in the report, perhaps the use the word "Habitat" implies ecology?? I need to point you to the fact that a loss of an ecological nich in the this environment may have longterm impact on fishing as biomass and growth will be impacted. Ecological and habitat impact have a direct impacts on fishing.</p>	<p>Because an in depth discussion of potential impacts resulting from offshore renewable energy development projects was provided in the Ocean SAMP chapter 8 sections 850.7 and 850.8 it was not included in this report. Rather, the purpose of this report was to serve as a overview of mitigation options that have been used elsewhere to facilitate future discussions on mitigation related to projects developed in the Ocean SAMP area. Further, this report may not necessarily include all possible mitigation options that may be used; however it does provide a starting point for future discussion.</p>
3	Najih	Lazar	Wakefield, RI		<p>The report focused entirely on negative impacts on commercial fishermen only. What about other public users of the potential wind farm area, such as sport fishermen and spear divers?</p>	<p>An in depth discussion of potential impacts and benefits to recreational fishermen can be found in the Ocean SAMP chapter 8 section 850.8. The scope of this report was to serve as a summary of potential mitigation options in order to facilitate future discussions on mitigation for projects in the Ocean SAMP area.</p>

4	Najih	Lazar	Wakefield, RI		<p>I suggest you re-consider the impact to fishing into three large categories and provide the</p> <p>1) Commercial fishermen, divided into two sub-categories: a)State vessels b)Federal vessels</p> <p>2) Hire fishermen, divided into a)Charter boats b)Party boats</p> <p>3)Recreational (sport) fishermen a)with a boat b)from shore (no boat)</p> <p>The mitigation of any impact to fishing will effect at different proportions all these categories.</p>	<p>Because an in depth discussion of potential impacts resulting from offshore renewable energy development projects was provided in the Ocean SAMP chapter 8 sections 850.7 and 850.8 it was not included in this report. Text has been added to section 7 Feedback from Rhode Island Fishermen that highlights the need for mitigation packages to be considered based on the specific impacts to each fishing user group and states: "Offshore renewable energy projects in the Ocean SAMP area may produce varied impacts to different fishing sectors, therefore distinct mitigation packages may need to be negotiated. For example mitigation options for state or federally licensed commercial fishermen may be different than those using charter or party boats."</p>
5	Najih	Lazar	Wakefield, RI		<p>I understand that it is difficult to compensate an entire population of all sport fishermen but one can consider a capital improvement project for the recreational fishermen such as building a walkway platform on either the west or the east wall in the harbor of refuge (or even both). Sport fishermen will have easy access to fishing from these two walls.</p>	<p>The following text has been added to section 7 Feedback from Rhode Island Fishermen: "Other suggested mitigation options for recreational fishermen include capital improvement projects such as the construction of a walkway platform on the east and/or west walls of the Point Judith harbor of refuge. This type of capital improvement would provide additional access for sport fishermen and is representative of a possible mitigation option for a fishing sector that may be difficult to compensate more directly. Capital improvements have been used as mitigation for other types of offshore</p>

						development projects off the coast of Santa Barbara, CA and in the Boston Harbor (see case studies 2 and 5 in the section titled, Mitigation Options: Other Offshore Development Projects, Domestic, above)."
6	Najih	Lazar	Wakefield, RI			<p>Finally I suggest adding a sentence at the end of your first statement where you state the SAMP goals and the role of the CRMC to reflect on the obligation for mitigation in the absence of plausible solution of negative impacts.</p> <p>As specified in the Ocean SAMP and stated in the executive summary of this report, CRMC is committed to promoting and enhancing existing uses while ensuring that negative and mitigated impacts from future activities are avoided, and if unavoidable are minimized. In instances of unavoidable impacts, CRMC will consider requiring mitigation based on project specific conditions and impacts. Specifically, this report echoes the text in the Ocean SAMP (Section 1160.1 #8) that states, "Where there are potential impacts associated with proposed projects, the need for mitigation shall be presumed. Negotiation of mitigation agreements shall be a necessary condition of any approval or permit of a project by the Council. Mitigation shall be negotiated between the Council staff, the FAB, the project developer, and approved by the Council."</p>

7	Najih	Lazar	Wakefield, RI		Define a fishing season in your report???	In developing the Ocean SAMP and this report, a fishing season was not formally defined as the definition may vary among user groups and sectors. The term was used instead as a means to explain how the long-term impacts of an offshore development project would be defined temporally.
8	Najih	Lazar	Wakefield, RI		Lastly, I would suggest considering the SAMP area as a Marine Protected Area that the wind farm project will take on and provide the funds to establish and monitor throughout the oversight of DEM or CRMC and with the scientific expertise of URI. This project will provide added resources to all users (commercial and recreational).	This report was not intended to determine whether project areas should be made into marine protected area, nor does CRMC have the jurisdiction to establish marine protected areas. Additionally, CRMC does not expect human uses including fishing to be entirely excluded from a project area, as stated in the Ocean SAMP Policy #1150.5 "The Council shall work together with the U.S Coast Guard, the U.S Navy, the U.S Army Corps of Engineers, NOAA, fishermen's organizations, marine pilots, recreational boating organizations, and other marine safety organizations to promote safe navigation, fishing, and recreational boating activity around and through offshore structures and developments, and along cable routes, during the construction, operation, and decommissioning phases of such projects. The Council will promote and support the education of all mariners regarding safe navigation around offshore structures and developments and along cable routes."

9	Lanny	Dellinger	RLA	President	2/29 bottom of page:	<p>"This fund could then be used to support research into the impacts of development."</p> <p><u>Comment: Mitigation funds should not be used to evaluate impacts of wind power only to compensate fishermen for negative consequence of the wind power project.</u></p> <p><u>The responsibility for paying for current and future impact analysis and research should dearly rest with the developer, both now and in the future. If the affected industries want to use some of the mitigation funding to evaluate wind power impacts, they should be able to do so at their sole discretion.</u></p>	<p>This statement reflects the possibility that mitigation funding could support research into long-term impacts that may not necessarily be realized or captured during the required monitoring period. The amended text now states: "This data collection could monitor long-term impacts of the wind farm that may not be captured during the required monitoring periods." Recognizing that the RLA may not support the use of mitigation funds for this purpose, the complete set of RLA comments have been added as an appendix to the report for future reference.</p>

10	Lanny Dellinger	RILA	President	5 of 29.	<p>"The Council shall prohibit any other uses or activities that would result in significant long-term negative impacts to Rhode Island's commercial or recreational fisheries. Long-term impacts are defined as those that affect more than one or two seasons". <u>Comment: RILA completely supports this CRMC policy. This is an extremely important point to constantly remember in all of the discussions involving wind power impacts on the affected industries. The impact of wind power will be both short term and long-term so any mitigation program should be structured in a similar manner. Since CRMC has adopted this as a fundamental strategy to protect the environment in RI, we propose that any mitigation program be required for as long as there is a wind power industry existing in RI.</u> The reason for this logic is that impacts will clearly go on beyond two years, therefore mitigation should go on beyond two years. As a follow up point, my organization supports the concept of requiring the wind power company to pay a substantial mitigation payment to each of the industry groups prior to construction, with annual payments to each of the affected user groups based on the number of wind towers licensed in State and Federal waters. For example: If CRMC agrees to permit five wind towers for a five year period with renewal period of five years, then CRMC, State of RI, etc. should require</p>	Text regarding this suggested mitigation strategy has been added to section 7 Feedback from Rhode Island Fishermen and states: "One mitigation strategy suggested involves annual payments listed in the license agreement between the developer and CRMC. The amount of payment would be reached through negotiations between the developer and the affected fishing group and would be based on the number of turbines licensed and the duration of the licensing period. A desired part of this payment scheme is a payment guarantee requiring the developer to make agreed upon payments regardless of project status and based upon the number of towers that are listed." Ocean SAMP Policy #1160.7#2 already requires a performance bond to be provided on a project.

						<p><u>guaranteed mitigation funding for the affected industry groups for the full five year period, regardless of status of the project. Mitigation payments should be made to the fishing industry regardless of the level of activity on the specific sites, and based solely on number of towers licensed. In addition, all wind power companies should be required to post a performance bond that provides adequate mitigation funding for the full licensing period and provides the State with adequate funding to remove the structure in the event of bankruptcy. One only needs to look at the difficulty that the town of Portsmouth, RI is having operating their wind tower because of a company bankruptcy, to see the logic for this position.</u></p>	
11	Lanny	Dellinger	RILA	President	5 of 29.	<p>"Mitigation shall be negotiated between the Council staff, the FAB, the project developer, and approved by the Council ". Comment: RILA supports this process provided that all parties have to agree with the final and resulting mitigation strategy.</p>	<p>The mitigation process is outlined in the Ocean SAMP policy 1160.1 #8 cannot be altered by this report; however the comments provided by the Rhode Island Lobstermen's Association have been added as an appendix to the report for future reference. Section 7 Feedback from Rhode Island Fishermen does state the following: "There was a general discussion that it would be most beneficial for each fishing user group or sector to determine the mitigation options that would be best for their own group and go through a process of</p>

						facilitated negotiations with the developer. In cases of an impasse resulting from the negotiations, it was mentioned that binding arbitration is a possible means of resolving the conflict."
12	Lanny	Dellinger	RILA	President	7 of 29.	<p>"The Cape Wind Energy Project Final EIS (Cape Wind FES) listed a number of mitigation strategies that would be employed once development of this project begins. A developer will be required to provide \$4.22 million in annual payments over the life of the project that will be used for marine habitat preservation, natural resource preservation, and coastal recreation enhancement. The State of Massachusetts will develop a Marine Fisheries Resources and Habitat Program, administered through the Division of Marine Fisheries, as part of their mitigation program that will include eelgrass monitoring, research on fish stocks, a five-year study into the socioeconomic impacts of the Cape Wind project on fishermen and fisheries in the area, and a quahog management plan."</p> <p>Comment: <u>This is not a mitigation strategy but rather research which should be funded by the project developer. With one exception noted in point 4, mitigation funds should not be used to evaluate</u></p> <p>This text was taken from the Massachusetts and the Cape Wind FES section on mitigation and monitoring. However, the following has been noted in the Section 7 Feedback from Rhode Island Fishermen: "other members of the FAB including the Rhode Island Lobstermen's Association have stated that they do not support the use of mitigation funding for research and data collection into the effects of offshore wind energy development projects, and feel this responsibility should lay entirely with the developer and remain unrelated to mitigation."</p>

						<u>impacts of wind power projects, only to compensate fishermen for negative consequence of the wind power project.</u>	
13	Lanny	Dellinger	RILA	President	13 of 29	<p>. "In some instances, direct compensation to adversely affected fishermen is necessary and warranted, in instances of demonstrable economic losses. Some direct compensation packages include lump sum payments to affected fishermen, while other compensation packages are given to a fishermen's organization and the funds are spent on projects or programs that help the collective body of fishermen." <u>Comment: RILA strongly supports the concept in bold above.</u> <u>Mitigation funding should be paid directly to affected industry groups in direct proportion to the extent of negative impact suffered by each user group. RILA does not support any proposal where the mitigation funding is retained by the State of RI in a restricted or directed State account, subject to State control. RILA will support mitigation alternatives that are structured</u></p>	<p>This position has been emphasized in Section 7 Feedback from Rhode Island Fishermen by adding: "In this strategy each fishing user group would be paid in proportion to the negative effects that are suffered by each group. Some fishing associations (see attached comments in Appendix I) do not support mitigation funds being under the full control of State of Rhode Island or mitigation payments provided directly to individuals. However, it should be noted that fishing user groups that have a less formal organization or structure that may be difficult to compensate directly may benefit from the aid of a state oversight of mitigation funds."</p>

					<p><u>to benefit the entire Area 2 lobster industry rather than programs that benefit specific individuals. Mitigation funding should be spent at the sole discretion of the affected user group, and on projects of its choosing. As noted above, if an affected user group decides to use it to fund research on the impact of wind power projects, then that should be done at the industry's sole discretion. This research would be in addition to the research that the developer is required to perform and fund separately from mitigation paid to affected industries.</u></p>	
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14	Lanny	Dellinger	RILA	President	15/29	<p>"The oil and gas industry has also benefited from the use of a fisheries liaison in order to help projects run smoothly. Along the coast of eastern Canada, at least one fisheries liaison has functioned as a link between the two industries, providing critical information in both directions, developing plans to avoid conflict and impacts to the fishing industry, and handling gear loss and damage claims which also include lost or deteriorated catch and damage to boats. Typical mitigation plans developed by this liaison have included avoidance of active fixed gear areas, avoiding sensitive fishing areas during sensitive times, using a fisheries observer or fisheries liaison officer onboard the seismic surveying vessels, sending out notices to fishing industry, plotting of fishing locations on survey ship GPS in order to avoid those areas, a gear compensation plan, and monitoring the progress of the relevant fisheries during the survey (Canning and Pitt Associates, 2004)."</p> <p>Comment: RILA strongly supports this concept, as the affected industry groups cannot possibly keep up with all of the developments, research, and actions on a project of this scale. Funding for this should be provided by the project developer directly to the fishery organizations, and they should be allowed to hire whom they choose, rather than a government organization hiring the person. The liaison</p>	<p>The Ocean SAMP policy 1160.7 #6, which sets forth the requirements of a fisheries liaison states: "For all Large-Scale Offshore Developments, underwater cables, and other development projects as determined by the Council, the assent holder shall designate and fund a third-party fisheries liaison. The fisheries liaison must be knowledgeable about fisheries and shall facilitate direct communication between commercial and recreational fishermen and the project developer. Commercial and recreational fishermen shall have regular contact with and direct access to the fisheries liaison throughout all stages of an offshore development (pre-construction; construction; operation; and decommissioning)." While this report cannot alter or revise any of the Ocean SAMP policies, the comments provided by the Rhode Island Lobstermen's Association have been added as an appendix to the report for future reference.</p>
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					should not be a government employee or an employee of the developer or University of RI. The basis for this suggestion is that the liaison needs to be entirely separated from any organization that are principals in this proposal either as advocate, regulator, or researchers, in order to maintain the confidence of the industry. If an industry group is allowed to hire the liaison as we propose, the organization should also be allowed to charge funding to the account for indirect costs associated with the liaison staff.	
15	Lanny	Dellinger	RILA	President	16/29:	"The first case involves the Oregon Fishermen's Cable Committee that was established in response to the laying of fiber optic cables off the coast of Oregon. In the mid-1990s, AT&T's Trans-Pacific 5 project laid two fiber optic cables through prime fishing grounds off the Oregon Coast (Kroft, 1999). AT&T ultimately closed the area to fishing, fearing that fishermen using the area would snag their gear on newly laid cables and in an attempt

to retrieve their gear fishermen would damage the cables (Industrial Economics Incorporated and The Massachusetts Ocean Partnership, 2009). As a result when another fiber optic cable project by WCI/Alaska Northstar was proposed, local fishing interests came together as the Oregon Fishermen's Cable Committee in order to come up with a resolution that would help fishermen continue using their traditional fishing grounds (Oregon Fishermen's Cable Committee, 2012, Kroft, 1999). The Oregon Fishermen's Cable Committee worked with WCI, in order to create the WCI Cable Agreement, which allowed fishermen who had snagged their gear to simply sacrifice the gear in exchange for gear replacement compensation (Oregon Fishermen's Cable Committee, 2012). This agreement, amenable to local fishing interests, has served as the foundation for seven other fiber optic cable projects and has allowed continued commercial fishing in and around the cable projects (Oregon Fishermen's Cable Committee, 2012).

15 cont.				<p>Comment: A few generic comments on the concepts noted above follow. Prior to any discussions concerning the amount of mitigation funding to be paid to the RI industry, the industry needs to receive a written report that explicitly states which types of fishing activity will be allowed and/or prohibited, under what conditions, and in what timeframes. If a particular user group is going to be prohibited from using a specific area during a particular phase of the construction project, then we need to know that prior to entering into the discussions on mitigation payment values. We will also need to know who has the authority to change the restrictions in an area, after a mitigation settlement is reached, and specifically what process would be followed to change the restrictions. If the rules for an area can be changed after a negotiated settlement, then the mitigation settlement should be reopened to compensate fishermen for the new restrictions.</p>	<p>The text in Section 7 Feedback from Rhode Island Fishermen has been amended to reflect this suggestion and states, "Before entering into negotiations regarding mitigation, members of the FAB have requested that a detailed scope of work be provided to them that includes what type of activity will be allowed, under what conditions, and during what phase of construction. It should be noted however, that during certain phases of construction, flexibility in the schedule will be necessary. Some FAB members also sought clarification regarding who has the authority to change fishing restrictions once a mitigation package has been settled on and what the process will be for renegotiating mitigation should restrictions be changed." Ocean SAMP policies 1160.1.6, 1150.4.5 and 1150.4.6 do already contain specific information regarding the promotion of safe navigation and the allowance of fishing activities around and through offshore structures and developments and therefore should be referred to in the future.</p>
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16	Lanny	Dellinger	RILA	President	16/29	<p>"The second case focuses on the Neptune LNG and Northeast Gateway Terminals in the waters off Massachusetts and developed by Excelerate Energy LLC and Suez Energy North America. Individual fisheries user groups negotiated with each developer in order to come up with compensation package that worked for each group. A total of \$12.6 million from the two projects was distributed to the Gloucester Community Preservation Fund in order to buy fishing permits from fishermen wanting to leave the industry and to then lease those permits to local fishermen in order to keep a stock of fishing permits based in Gloucester, MA (Moser, 2007). An additional \$3.4 million was distributed to the Massachusetts Lobstermen's Association, who has simply distributed the funds among local affected fishermen (Moser, 2007). Additional funds of \$20.55 million were distributed for capital improvement projects in the Boston Harbor, a passive acoustic buoy system to detect and monitor whales, to map and study the activities and habitats of the sea floor, and to the Gloucester Marine Heritage Center, The Peabody Essex Museum, and the Essex National Heritage Center (Moser, 2007). One of the developers has said they have spent an additional \$5.5 million on various project costs (Anderson, 2008). Initially, the amount of compensation was determined through a systematic process by the</p>	<p>Section 7 Feedback from Rhode Island Fishermen now states: "One mitigation strategy suggested involves annual payments listed in the license agreement between the developer and CRMC. The amount of payment would be reached through negotiations between the developer and the affected fishing group and would be based on the number of turbines licensed and the duration of the licensing period. A desired part of this payment scheme is a payment guarantee requiring the developer to make agreed upon payments regardless of project status and based upon the number of towers that are listed." The comments provided by the Rhode Island Lobstermen's Association have been added as an appendix to the report for future reference.</p>
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				<p>developer, but the amount of compensation that was offered was viewed as an underestimate of the value of losses to the fishing industry and the \$47 million was negotiated by the fishermen (Laidler, 2006). Comment: RILA generally supports the concepts above, provided they result in direct payments to the affected industry groups. We note that the impact area was very limited for the Mass. project, and in excess of \$47 million was paid by the developer. Although the current RI wind power project is somewhat limited in scope, it will expand greatly if the same template is used for adjacent federal waters. Mitigation payments should be directly related to the number of wind towers constructed and licensed, and industry payments should continue for as long as the license is renewed by the developer, as the impact will continue indefinitely. If the size of the proposed development cannot be calculated based on number of wind turbines (i.e. underwater mining, etc.), mitigation will be based on the size of the area leased.</p>	
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17	Lanny Dellinger	RILA	President	Case 5 18/ 29	<p>"The Fisheries Enhancement Fund was established to benefit commercial fisheries only and is funded through an initial fee dictated at the start of the development project and through annual fees collected over the life of the oil/gas project. Project fees are reassessed every 5 years to ensure that the fees are adequate (CSB, 1987). Some phases of an oil and gas development project that are more intrusive, such as the construction phase, will demand higher fees (CSB, 1987). The fees are initially determined based on historical catch data for the blocks that are located in the project area and through interviews with local fishermen (CSB, 1987)." Comment: As noted in point two, RILA supports the concept of the developer paying a substantial up front mitigation fee to each user group, with annual payments based on the number of towers licensed. However, we have major objections to using NMFSVTR or VMSinformation to determine the mitigation fees. Both of these two sources of data lack the resolution needed to determine mitigation fees in specific areas and are only generally used to characterize fisheries activity at a resolution of hundreds of square miles. Not only is the resolution of the data poor, but fishermen rarely fill out a new log book page when they cross into a new reporting area, thus complicating any interpretations of the data. We would also question which years of data might be</p>	<p>The following text has been added to Section 7, Feedback from Rhode Island Fishermen: "Members of the FAB expressed concern about the use of NMFSVTR or VMSdata as a means to determine mitigation values, as the data may not accurately reflect fishing activity (e.g. inaccurate and incomplete reporting is from fishermen; data resolution is not fine enough for the purposes of determining accurate mitigation; fishermen may not fill out a new log book entry when crossing into a new reporting areas) and would thus provide a poor basis for determining mitigation values. In addition, selecting an appropriate number of years from the data sets may be difficult as catch by year, area, and season varies greatly depending on stock conditions. It was suggested that state licensed fisheries (that are not required to report VTR or VMSdata) should work together to figure out how to spatially characterize their fishing activity, perhaps using quantitative methods or qualitative mapping consistent with the Ocean SAMP methodology."</p>

						selected for this type of analysis since catch by year, area, and season varies greatly depending on stock conditions.	
18	Lanny	Dellinger	RILA	President	22/29:	<p>"In cases where compensation funds will be administered through a governmental agency, a legislative framework needs to be established in order to handle those funds so that they do not enter the general operating funds. Rules for negotiating the mitigation or compensation packages will need to be established in order to streamline the process. If each user group will be responsible for negotiating their own compensation package, then there should be some framework for how to handle those negotiations." Comment: RILA does not support the State retaining any portion of the mitigation funding (see comment 5) given the poor financial condition of the State in general. We have no objections to the State agencies working with the industry groups to define a specific mitigation process and strategy but the fishery organizations should be fully vetted in defining that process, and the process should be detailed in writing prior to negotiating the mitigation values.</p>	<p>These points have been added to Section 7 Feedback from Rhode Island Fishermen as follows: "Some fishing associations (see attached comments in Appendix I) do not support mitigation funds being under the full control of State of Rhode Island or mitigation payments provided directly to individuals." and lastly, "Before entering into negotiations regarding mitigation, members of the FAB have requested that a detailed scope of work be provided to them that includes what type of activity will be allowed, under what conditions, and during what phase of construction. It should be noted however, that during certain phases of construction, flexibility in the schedule will be necessary. "In addition, the full set of comments provided by the Rhode Island Lobstermen's Association have been added as an appendix to the report for future reference.</p>
19	Lanny	Dellinger	RILA	President	23/29:	<p>"To fulfill this goal, the FAB was in favor of a portion of the lease fees being apportioned to a fund that would support any adversely impacted fishermen. However, as the lease fees collected from any projects in state waters enter the</p>	<p>The word "fund" has been amended to "secure non-state account".</p>

						state's General Fund, a statutory change will be required to allow for the establishment of such a fund. "Comment: We object to this proposal if it involves the use of any restricted state accounts, and the rational for this position is noted in a number of comments list above.	
20	Lanny	Dellinger	RILA	President	24/29	"A portion of the lease funds collected should be placed into a designated restricted fund for mitigation and fishery research. This fund can also be used to address long-term impacts that may not occur or be observed until many years after development has taken place. "Comment: Same as above.	The word "fund" has been amended to "secure non-state account".
22	Lanny	Dellinger	RILA	President	24/29	<p>Recommendations for moving forward: "A fisheries liaison should be in place before application for a lease to work with fishermen. We recommend that BOEM hire a fisherman to interface with the fishing industry over the long term, rather than on a project-specific basis"Comment: RILA supports the concept with the qualification noted above.</p> <p>"A portion of the lease funds collected should be placed into a designated restricted fund for mitigation and fishery research. This fund can also be used to address long-term impacts that may not occur or be observed until many years after development has taken place. "Comment: RILA objects to this proposal for the reasons noted in various points listed above.</p>	<p>The Ocean SAMP policy 1160.7 #6 regarding a fisheries liaison is already established and can be found in the introduction of the report. The word "restricted fund" has been amended to "secure non-state account". This funding could support research into long-term impacts that may not necessarily be realized or captured during the required monitoring period. In addition, the full set of comments provided by the Rhode Island Lobstermen's Association have been added as an appendix to the report for future reference.</p>

22 cont.			24/29	<p>"Pre-construction monitoring of fishing activity should take place to obtain high resolution baseline data of fishery patterns before development begins." Comment: How will this information be used and in what timeline? Conceptually this is an appealing idea but it is totally impractical to do this on a shot term basis. Fishing patterns change weekly, monthly, and yearly. The fact that one observes fishing activity in a particular area in one year has no correlation with fishing activity or fish population abundance in subsequent years. This recommendation also seems to suggest that it is possible to monitor fishing activity in a particular area, and then develop some form of abundance estimate based on these observations. We know of no peer reviewed studies that support this methodology specific to the habitat found in the RI wind power area.</p> <p>There are also numerous complications with the concept. For instance, how will CRMC, URI, or anyone design a monitoring system that evaluates the concentration of fish and/or fishing effort in areas that are not fishable? What sampling (harvest) methodology would you select that harvests all species in a representative manner? How do you design a sampling program that samples, and gets representative samples of migratory fish? How do you factor changes in seasonal and yearly abundance and fishing effort trends</p>	<p>The focus of this report is to provide a review of potential mitigation strategies and therefore does not address monitoring methods. However, the Ocean SAMP policies in Section 1160.9 describes how the Joint Agency Working Group, which is comprised of those state and federal agencies (including NMFS) that have a regulatory responsibility related to the proposed project, will coordinate on monitoring requirements.</p>
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				<p>into abundance estimates? What impact will climate change have on the estimates?</p> <p>Our basic objection is that we know of no way to translate the monitoring observations into abundance estimates, so why collect them at all? If CRMC plans to implement this concept, then we suggest that CRMC involve scientific experts from the stock assessment branch of NMFS at Woods Hole, Mass. in a planning meeting, then define the methodology and subsequently send it out for independent peer review prior to initiating the study. NMFS has a core group of independent experts (QE review process in Miami, Fla.) who routinely perform this function.</p>	
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					24/29	<p>State fisheries managers and fishermen participating in undocumented fisheries (state-licensed vessels and fisheries, and any fisheries that do not require VTR or VMS) should work together to figure out how to spatially characterize their fishing activity. Comment: Refer to comment above in regards federal VTR usage.</p>	<p>The following text has been added to Section 7, Feedback from Rhode Island Fishermen: "It was suggested that state licensed fisheries (that are not required to report VTR or VMS data) should work together to figure out how to spatially characterize their fishing activity, perhaps using quantitative methods or qualitative mapping consistent with the Ocean SAMP methodology." The comments provided by the Rhode Island Lobstermen's Association have been added as an appendix to the report for future reference.</p>
23	Ken	Court	Jackie Sea Charters			<p>I propose that the Rhode Island State waters be extended from its present location three miles southwest of Block Island out to the Southwest Ledge buoy. This extended distance is approximately one half mile from the presently located EEZ to the SW Ledge buoy located at 41° 06' 23.00" N Latitude and 71° 04° 23" W Longitude.</p> <p>For-Hire and recreational anglers will be displaced during construction and operation of wind turbines along the Block Island southeast coast, along the south coast out to the Pinnacle and west to Black Point, Lewis Point, Southwest Point and west to the EEZ at Southwest Ledge. Loss</p>	<p>Section 7, Feedback from Rhode Island Fishermen, has been amended to reflect the details of this comment and now states: "construction and operation for the Block Island Wind project may displace for-hire and recreational anglers along the south coast to the Pinnacle and west to Black Point, Lewis Point, Southwest Point and west to the state water boundary at Southwest Ledge. This may result in increased fishing efforts on areas to the southwest of the island. As a result, they requested that the Rhode Island State waters be extended out 3 miles from its current location to the southwest of Block Island to the Southwest Ledge buoy. This would</p>

						of these productive Sportfishing grounds along the East and South Shores will place additional fishing capacity on areas to the southwest of the Island. By extending state waters west to the Southwest Ledge buoy and North to a point tangent to the EEZ will allow anglers and enforcement a visual reference point to stay east and north of the Southwest Ledge Buoy to remain in Rhode Island jurisdictional waters.	extend ½ mile from the presently located state waters boundary to the SW Ledge buoy located at 41 06' 23.00" N Latitude and 71 40' 23" W Longitude and would allow vessels without a federal permit to be able to fish in these waters. However, CRMC does not have the jurisdiction to make this change or to require NMFS to make such a change. Such a change would require federal legislation and therefore such an option may not be feasible."
24	Richard	Hittinger	RISAA	Vice President	2	Text: "Effects to commercially and recreationally targeted fish and invertebrate species that may have secondary effects on fishing activity include: changes in species abundance and distribution; disturbance to fish from noise or EMF; burial or disturbance of eggs and larvae during construction; and aggregation effects around a renewable energy device." Comment: change the word secondary in bold in the sentence above, to say direct.	The word secondary has been removed but was not replaced with direct as the potential effects listed include both direct and secondary effects. For example, we would consider burial or disturbance of eggs and larvae during construction to be a direct effect to fish, resulting in a secondary effect on fishing.
25	Richard	Hittinger	RISAA	Vice President	2	Text: "While the impacts of offshore development projects should strive to minimize adverse impacts to other ocean users, in instances of unavoidable impacts, a mitigation plan may be utilized to help offset those impacts." Comment: change text to, "While the impacts of offshore development projects should strive to minimize adverse impacts to other ocean users, in instances of unavoidable impacts,	The text has been changed.

						utilization of a mitigation plan may help offset those impacts."	
26	Richard	Hittinger	RISAA	Vice President	3	Text: "In addition, there was a general discussion that it would be most beneficial for each user group or fishing sector to determine the mitigation options that would be best for their group through a process of facilitated negotiations with the developer." Comment: insert the word "to" as indicated in bold above.	The text has been changed.
27	Richard	Hittinger	RISAA	Vice President	4	Text: "Effects to commercially and recreationally targeted fish and invertebrate species that may have secondary effects on fishing activity include: changes in species abundance and distribution; disturbance to fish from noise or EMF; burial or disturbance of eggs and larvae during construction; and aggregation effects around a renewable energy device." Comment: change the word secondary in bold in the sentence above, to say direct.	The word secondary has been removed but was not replaced with direct as the potential effects listed include both direct and secondary effects.

28	Richard	Hittinger	RISAA	Vice President	5	<p>The Council cannot require a pre-application meeting for federal permit applications, but the Council strongly encourages applicants for any Large-Scale Offshore Development, as defined in Section 1160.1.1, in federal waters to meet with the FAB and the Council staff prior to the submission of a federal application, lease, license, or authorization. However, for federal permit applicants, a meeting with the FAB shall be necessary ?? data and information required for federal consistency reviews for purposes of starting the CZMA 6-month review period for federal license or permit activities under 15 C.F.R part 930, subpart D, and OCSPlans under 15 C.F.R part 930, subpart E, pursuant to 15 C.F.R. § 930.58(a)(2).</p>	<p>The phrase "necessary data and information" is used by NOAA to explicitly indicate information required during a federal consistency review. This phrase was used in the policies of the Ocean SAMP so that it would be clear to developers what information would be required. As stated in Section 1160.5 #1 of the Ocean SAMP "For the purposes of this document, the phrase "necessary data and information" shall refer to the necessary data and information required for federal consistency reviews for purposes of starting the Coastal Zone Management Act (CZMA) 6-month review period for federal license or permit activities under 15 C.F.R. part 930, subpart D, and OCSPlans under 15 C.F.R part 930, subpart E, pursuant to 15 C.F.R. § 930.58(a)(2). Any necessary data and information shall be provided before the 6-month CZMA review period begins for a proposed project."</p>
29	Lanny	Dellinger	RILA	President		<p>A couple of general comments in regard to the proposal. The document is useful as a review but we will need to know far more specifics on the exact nature of the proposal, including construction timelines, transmission paths, and exact fishing restrictions prior to any discussions on a mitigation strategy for our industry. Our organization intends to represent the interests of not only the lobster industry, but also the other fixed gear fisheries i.e. conch, scup trap, sea bass trap, etc that</p>	<p>Section 7, Feedback from Rhode Island Fishermen, now state: "Before entering into negotiations regarding mitigation, members of the FAB have requested that a detailed scope of work be provided to them that includes what type of activity will be allowed, under what conditions, and during what phase of construction. It should be noted however, that during certain phases of construction, flexibility in the schedule will be necessary." The comments provided by the Rhode Island</p>

					<p>prosecute fisheries within the wind power impact area. The logic for this position is fairly simple in that most of the participants in these fisheries are lobstermen and use lobster vessels, and they will surely be impacted by the proposal.</p>	<p>Lobstermen's Association have been added as an appendix to the report for future reference.</p>
30	Lanny	Dellinger	RILA	President	<p>In prior discussions with your staff, we have urged a ventless lobster trap study of the area prior to any construction in the wind tower zone. We still maintain that position but would like to offer the comment that any such study should be done compressively and for a minimum of three years prior to any construction in the tower and transmission zones. We also need to know, in advance of such a study, how the data will be used to determine mitigation values and impacts. This point has been made by a number of state scientists who have reviewed this project. If CRMC and development company are unwilling to commit to such a process and long term monitoring program, then the data will be of limited use in defining mitigation impacts, and we should discuss other approaches.</p>	<p>Monitoring requirements are discussed in Section 1160.9 of the Ocean SAMP, however monitoring protocols and specifications are not within the scope of this report and therefore were not discussed. CRMC, URI, and RI fishermen are now working with BOEM on a ventless trap survey that could be used to collect baseline data prior to construction and the comments provided by the Rhode Island Lobstermen's Association have been added as an appendix to this report for future reference.</p>

31	Lanny	Dellinger	RILA	President	<p>As a final point, prior to any mitigation discussions with the power company, the industry will need to receive a written document that specifically outlines all of the details on the project including exact construction sites, construction timelines, types of construction that will take place in which specific timeline, specifics of restrictions on fishing gear linked with the construction schedule, the types of fishing and navigation restrictions that will be implemented when the construction phase of the project is ongoing and/or completed, etc. We will also need to know the specific rules that will govern any such mitigation discussion prior to entering the discussion. As pointed out in our comments, there have been examples of development projects where the developer and fishing industry have negotiated a settlement, only to find out that the restrictions in the area changed after the agreement has been reached. We will therefore need to see a clear written articulation of the process and rules that will govern that type of situation, specifically including details of how the mitigation process will be reopened.</p>	<p>Section 7, Feedback from Rhode Island Fishermen, has been amended to reflect this and now states: Before entering into negotiations regarding mitigation, members of the FAB have requested that a detailed scope of work be provided to them that includes what type of activity will be allowed, under what conditions, and during what phase of construction. It should be noted however, that during certain phases of construction, flexibility in the schedule will be necessary. Some FAB members also sought clarification regarding who has the authority to change fishing restrictions once a mitigation package has been settled on and what the process will be for renegotiating mitigation should restrictions be changed."</p>
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Rhode Island Lobstermen's Association

Grover Fugate, Executive Director CRMC

Steadman Government Center

4808 Tower Hill Road

Wakefield, RI, 02879-1900

Sunday, September 09, 2012

Dear Grover;

This letter outlines the preliminary position of the RI Lobstermen's Association in regards to the document "RI Ocean Special Area Management Plan- Fisheries Mitigation Options- a Review dated July 2012 ". We intentionally used the term preliminary, as some of our positions may change as our understanding of this document evolves, and we are also continuing our discussions of these issues within our organization. Our comments are attached and submitted prior to the comment deadline of September 11, 2012.

A couple of general comments in regard to the proposal. The document is useful as a review but we will need to know far more specifics on the exact nature of the proposal, including construction timelines, transmission paths, and exact fishing restrictions prior to any discussions on a mitigation strategy for our industry. Our organization intends to represent the interests of not only the lobster industry, but also the other fixed gear fisheries i.e. conch, scup trap, sea bass trap, etc that prosecute fisheries within the wind power impact area. The logic for this position is fairly simple in that most of the participants in these fisheries are lobstermen and use lobster vessels, and they will surely be impacted by the proposal.

In prior discussions with your staff, we have urged a ventless lobster trap study of the area prior to any construction in the wind tower zone. We still maintain that position but would like to offer the comment that any such study should be done compressively and for a minimum of three years prior to any construction in the tower and transmission zones. We also need to know, in advance of such a study, how the data will be used to determine mitigation values and impacts. This

point has been made by a number of state scientists who have reviewed this project. If CRMC and development company are unwilling to commit to such a process and long term monitoring program, then the data will be of limited use in defining mitigation impacts, and we should discuss other approaches.

As a final point, prior to any mitigation discussions with the power company, the industry will need to receive a written document that specifically outlines all of the details on the project including exact construction sites, construction timelines, types of construction that will take place in which specific timeline, specifics of restrictions on fishing gear linked with the construction schedule, the types of fishing and navigation restrictions that will be implemented when the construction phase of the project is ongoing and/or completed, etc. We will also need to know the specific rules that will govern any such mitigation discussion prior to entering the discussion. As pointed out in our comments, there have been examples of development projects where the developer and fishing industry have negotiated a settlement, only to find out that the restrictions in the area changed after the agreement has been reached. We will therefore need to see a clear written articulation of the process and rules that will govern that type of situation, specifically including details of how the mitigation process will be reopened.

Thank you for the opportunity to comment.

Lanny Dellinger,

President, RI Lobstermen's Association

Comment format: Page number in URI report, direct quote from report, and RILA comment underlined. Comments submitted Sunday, September 09, 2012

1. 2/29 bottom of page: "This fund could then be used to support research into the impacts of development." Comment: Mitigation funds should not be used to evaluate impacts of wind power only to compensate fishermen for negative consequence of the wind power project. The responsibility for paying for current and future impact analysis and research should clearly rest with the developer, both now and in the future. If the affected industries want to use some of the mitigation funding to evaluate wind power impacts, they should be able to do so at their sole discretion.
2. 5 of 29. "The Council shall prohibit any other uses or activities that would result in significant long-term negative impacts to Rhode Island's commercial or recreational fisheries. Long-term impacts are defined as those that affect more than one or two seasons". Comment: RILA completely supports this CRMC policy. This is an extremely important point to constantly remember in all of the discussions involving wind power impacts on the affected industries. The impact of wind power will be both short term and long-term so any mitigation program should be structured in a similar manner. Since CRMC has adopted this as a fundamental strategy to protect the environment in RI, we propose that any mitigation program be required for as long as there is a wind power industry existing in RI. The reason for this logic is that impacts will clearly go on beyond two years, therefore mitigation should go on beyond two years.

As a follow up point, my organization supports the concept of requiring the wind power company to pay a substantial mitigation payment to each of the industry groups prior to construction, with annual payments to each of the affected user groups based on the number of wind towers licensed in State and Federal waters. For example: If CRMC agrees to permit five wind towers for a five year period with renewal period of five years, then CRMC, State of RI, etc. should require guaranteed mitigation funding for the affected industry groups for the full five year period, regardless of status of the project. Mitigation payments should be made to the fishing industry regardless of the level of activity on the specific sites, and based solely on

number of towers licensed. In addition, all wind power companies should be required to post a performance bond that provides adequate mitigation funding for the full licensing period and provides the State with adequate funding to remove the structure in the event of bankruptcy. One only needs to look at the difficulty that the town of Portsmouth, RI is having operating their wind tower because of a company bankruptcy, to see the logic for this position.

3. 5 of 29. "Mitigation shall be negotiated between the Council staff, the FAB, the project developer, and approved by the Council ". Comment: RILA supports this process provided that all parties have to agree with the final and resulting mitigation strategy.
4. 7 of 29. "The Cape Wind Energy Project Final EIS(Cape Wind FES) listed a number of mitigation strategies that would be employed once development of this project begins. A developer will be required to provide \$4.22 million in annual payments over the life of the project that will be used for marine habitat preservation, natural resource preservation, and coastal recreation enhancement. The State of Massachusetts will develop a Marine Fisheries Resources and Habitat Program, administered through the Division of Marine Fisheries, as part of their mitigation program that will include eelgrass monitoring, research on fish stocks, a five-year study into the socioeconomic impacts of the Cape Wind project on fishermen and fisheries in the area, and a quahog management plan." Comment: This is not a mitigation strategy but rather research which should be funded by the project developer. With one exception noted in point 4, mitigation funds should not be used to evaluate impacts of wind power projects, only to compensate fishermen for negative consequence of the wind power project.
5. 13 of 29. "In some instances, direct compensation to adversely affected fishermen is necessary and warranted, in instances of demonstrable economic losses. Some direct compensation packages include lump sum payments to affected fishermen, while other compensation packages are given to a fishermen's organization and the funds are spent on projects or programs that help the collective body of fishermen." Comment: RILA strongly supports the concept in bold above. Mitigation funding should be paid directly to affected industry groups in direct proportion to the extent of negative impact suffered by each user group. RILA does not support any

proposal where the mitigation funding is retained by the State of RI in a restricted or directed State account, subject to State control. RILA will support mitigation alternatives that are structured to benefit the entire Area 2 lobster industry rather than programs that benefit specific individuals. Mitigation funding should be spent at the sole discretion of the affected user group, and on projects of its choosing. As noted above, if an affected user group decides to use it to fund research on the impact of wind power projects, then that should be done at the industry's sole discretion. This research would be in addition to the research that the developer is required to perform and fund separately from mitigation paid to affected industries.

6. 15/29 "The oil and gas industry has also benefited from the use of a fisheries liaison in order to help projects run smoothly. Along the coast of eastern Canada, at least one fisheries liaison has functioned as a link between the two industries, providing critical information in both directions, developing plans to avoid conflict and impacts to the fishing industry, and handling gear loss and damage claims which also include lost or deteriorated catch and damage to boats. Typical mitigation plans developed by this liaison have included avoidance of active fixed gear areas, avoiding sensitive fishing areas during sensitive times, using a fisheries observer or fisheries liaison officer onboard the seismic surveying vessels, sending out notices to fishing industry, plotting of fishing locations on survey ship GPS in order to avoid those areas, a gear compensation plan, and monitoring the progress of the relevant fisheries during the survey (Canning and Pitt Associates, 2004)." Comment: RILA strongly supports this concept, as the affected industry groups cannot possibly keep up with all of the developments, research, and actions on a project of this scale. Funding for this should be provided by the project developer directly to the fishery organizations, and they should be allowed to hire whom they choose, rather than a government organization hiring the person. The liaison should not be a government employee or an employee of the developer or University of RI. The basis for this suggestion is that the liaison needs to be entirely separated from any organization that are principals in this proposal either as advocate, regulator, or researchers, in order to maintain the confidence of the industry. If an industry group is allowed to hire the liaison as we propose, the organization should also be allowed to charge funding to the account for indirect costs associated with the liaison staff.

7. 16/29: "The first case involves the Oregon Fishermen's Cable Committee that was established in response to the laying of fiber optic cables off the coast of Oregon. In the mid-1990s, AT&T's Trans-Pacific 5 project laid two fiber optic cables through prime fishing grounds off the Oregon Coast (Kroft, 1999). AT&T ultimately closed the area to fishing, fearing that fishermen using the area would snag their gear on newly laid cables and in an attempt to retrieve their gear fishermen would damage the cables (Industrial Economics Incorporated and The Massachusetts Ocean Partnership, 2009). As a result when another fiber optic cable project by WCI/Alaska Northstar was proposed, local fishing interests came together as the Oregon Fishermen's Cable Committee in order to come up with a resolution that would help fishermen continue using their traditional fishing grounds (Oregon Fishermen's Cable Committee, 2012, Kroft, 1999). The Oregon Fishermen's Cable Committee worked with WCI, in order to create the WCI Cable Agreement, which allowed fishermen who had snagged their gear to simply sacrifice the gear in exchange for gear replacement compensation (Oregon Fishermen's Cable Committee, 2012). This agreement, amenable to local fishing interests, has served as the foundation for seven other fiber optic cable projects and has allowed continued commercial fishing in and around the cable projects (Oregon Fishermen's Cable Committee, 2012). Comment: A few generic comments on the concepts noted above follow. Prior to any discussions concerning the amount of mitigation funding to be paid to the RI industry, the industry needs to receive a written report that explicitly states which types of fishing activity will be allowed and/or prohibited, under what conditions, and in what timeframes. If a particular user group is going to be prohibited from using a specific area during a particular phase of the construction project, then we need to know that prior to entering into the discussions on mitigation payment values. We will also need to know who has the authority to change the restrictions in an area, after a mitigation settlement is reached, and specifically what process would be followed to change the restrictions. If the rules for an area can be changed after a negotiated settlement, then the mitigation settlement should be reopened to compensate fishermen for the new restrictions.

8. 16/29 "The second case focuses on the Neptune LNG and Northeast Gateway Terminals in the waters off Massachusetts and developed by Excelerate Energy LLC and Suez Energy North America. Individual fisheries user groups negotiated with each developer in order to come up with a compensation

package that worked for each group. A total of \$12.6 million from the two projects was distributed to the Gloucester Community Preservation Fund in order to buy fishing permits from fishermen wanting to leave the industry and to then lease those permits to local fishermen in order to keep a stock of fishing permits based in Gloucester, MA (Moser, 2007). An additional \$3.4 million was distributed to the Massachusetts Lobstermen's Association, who has simply distributed the funds among local affected fishermen (Moser, 2007). Additional funds of \$20.55 million were distributed for capital improvement projects in the Boston Harbor, a passive acoustic buoy system to detect and monitor whales, to map and study the activities and habitats of the sea floor, and to the Gloucester Marine Heritage Center, The Peabody Essex Museum, and the Essex National Heritage Center (Moser, 2007). One of the developers has said they have spent an additional \$5.5 million on various project costs (Anderson, 2008). Initially, the amount of compensation was determined through a systematic process by the developer, but the amount of compensation that was offered was viewed as an underestimate of the value of losses to the fishing industry and the \$47 million was negotiated by the fishermen (Laidler, 2006). Comment: RILA generally supports the concepts above, provided they result in direct payments to the affected industry groups. We note that the impact area was very limited for the Mass. project, and in excess of \$47 million was paid by the developer. Although the current RI wind power project is somewhat limited in scope, it will expand greatly if the same template is used for adjacent federal waters. Mitigation payments should be directly related to the number of wind towers constructed and licensed, and industry payments should continue for as long as the license is renewed by the developer, as the impact will continue indefinitely. If the size of the proposed development cannot be calculated based on number of wind turbines (i.e. underwater mining, etc), mitigation will be based on the size of the area leased.

9. Case 5 18/ 29 “ The Fisheries Enhancement Fund was established to benefit commercial fisheries only and is funded through an initial fee dictated at the start of the development project and through annual fees collected over the life of the oil/gas project. Project fees are reassessed every 5 years to ensure that the fees are adequate (CSB, 1987). Some phases of an oil and gas development project that are more intrusive, such as the construction phase, will demand higher fees (CSB, 1987). The fees are initially determined based on historical catch data for the blocks that are located in the project area and

through interviews with local fishermen (CSB, 1987). Comment: As noted in point two, RILA supports the concept of the developer paying a substantial up front mitigation fee to each user group, with annual payments based on the number of towers licensed. However, we have major objections to using NMFSVTR or VMS information to determine the mitigation fees. Both of these two sources of data lack the resolution needed to determine mitigation fees in specific areas and are only generally used to characterize fisheries activity at a resolution of hundreds of square miles. Not only is the resolution of the data poor, but fishermen rarely fill out a new log book page when they cross into a new reporting area, thus complicating any interpretations of the data. We would also question which years of data might be selected for this type of analysis since catch by year, area, and season varies greatly depending on stock conditions.

10. 22/29: "In cases where compensation funds will be administered through a governmental agency, a legislative framework needs to be established in order to handle those funds so that they do not enter the general operating funds. Rules for negotiating the mitigation or compensation packages will need to be established in order to streamline the process. If each user group will be responsible for negotiating their own compensation package, then there should be some framework for how to handle those negotiations." Comment: RILA does not support the State retaining any portion of the mitigation funding (see comment 5) given the poor financial condition of the State in general. We have no objections to the State agencies working with the industry groups to define a specific mitigation process and strategy but the fishery organizations should be fully vetted in defining that process, and the process should be detailed in writing prior to negotiating the mitigation values.
11. 23/29: "To fulfill this goal, the FAB was in favor of a portion of the lease fees being apportioned to a fund that would support any adversely impacted fishermen. However, as the lease fees collected from any projects in state waters enter the state's General Fund, a statutory change will be required to allow for the establishment of such a fund. Comment: We object to this proposal if it involves the use of any restricted state accounts, and the rational for this position is noted in a number of comments list above.
12. 24/29 "A portion of the lease funds collected should be placed into a designated restricted fund for mitigation and fishery research. This fund can

also be used to address long-term impacts that may not occur or be observed until many years after development has taken place. Comment: Same as above.

13. 24/29: “ A portion of the lease funds collected should be placed into a designated restricted fund for mitigation and fishery research. This fund can also be used to address long-term impacts that may not occur or be observed until many years after development has taken place. Comment: Same as above.

14. 24/29 Recommendations for moving forward:

24/29 “A fisheries liaison should be in place before application for a lease to work with fishermen. We recommend that BOEM hire a fisherman to interface with the fishing industry over the long term, rather than on a project-specific basis” Comment: RILA supports the concept with the qualification noted above.

24/29 “A portion of the lease funds collected should be placed into a designated restricted fund for mitigation and fishery research. This fund can also be used to address long-term impacts that may not occur or be observed until many years after development has taken place. Comment: RILA objects to this proposal for the reasons noted in various points listed above.

24/29 “Pre-construction monitoring of fishing activity should take place to obtain high resolution baseline data of fishery patterns before development begins.” Comment: How will this information be used and in what timeline? Conceptually this is an appealing idea but it is totally impractical to do this on a shot term basis. Fishing patterns change weekly, monthly, and yearly. The fact that one observes fishing activity in a particular area in one year has no correlation with fishing activity or fish population abundance in subsequent years.

This recommendation also seems to suggest that it is possible to monitor fishing activity in a particular area, and then develop some form of abundance estimate based on these observations. We know of no peer reviewed studies that support this methodology specific to the habitat found in the RI wind power area.

There are also numerous complications with the concept. For instance, how will CRMC, URI, or anyone design a monitoring system that evaluates the concentration of fish and/or fishing effort in areas that are not fishable? What sampling (harvest) methodology would you select that harvests all species in a representative manner? How do you design a sampling program that samples, and gets representative samples of migratory fish? How do you factor changes

in seasonal and yearly abundance and fishing effort trends into abundance estimates? What impact will climate change have on the estimates?
Our basic objection is that we know of no way to translate the monitoring observations into abundance estimates, so why collect them at all? If ORMC plans to implement this concept, then we suggest that ORMC involve scientific experts from the stock assessment branch of NMFS at Woods Hole, Mass. in a planning meeting, then define the methodology and subsequently send it out for independent peer review prior to initiating the study. NMFS has a core group of independent experts (QE review process in Miami, Fla.) who routinely perform this function.

24/29 State fisheries managers and fishermen participating in undocumented fisheries (state-licensed vessels and fisheries, and any fisheries that do not require VTR or VMS) should work together to figure out how to spatially characterize their fishing activity. Comment: Refer to comment above in regards federal VTR usage.

I propose that the Rhode Island State waters be extended from its present location three miles southwest of Block Island out to the Southwest Ledge buoy. This extended distance is approximately one half mile from the presently located EEZ to the SW Ledge buoy located at 41°06' 23.00" N Latitude and 71°40'23" W Longitude.

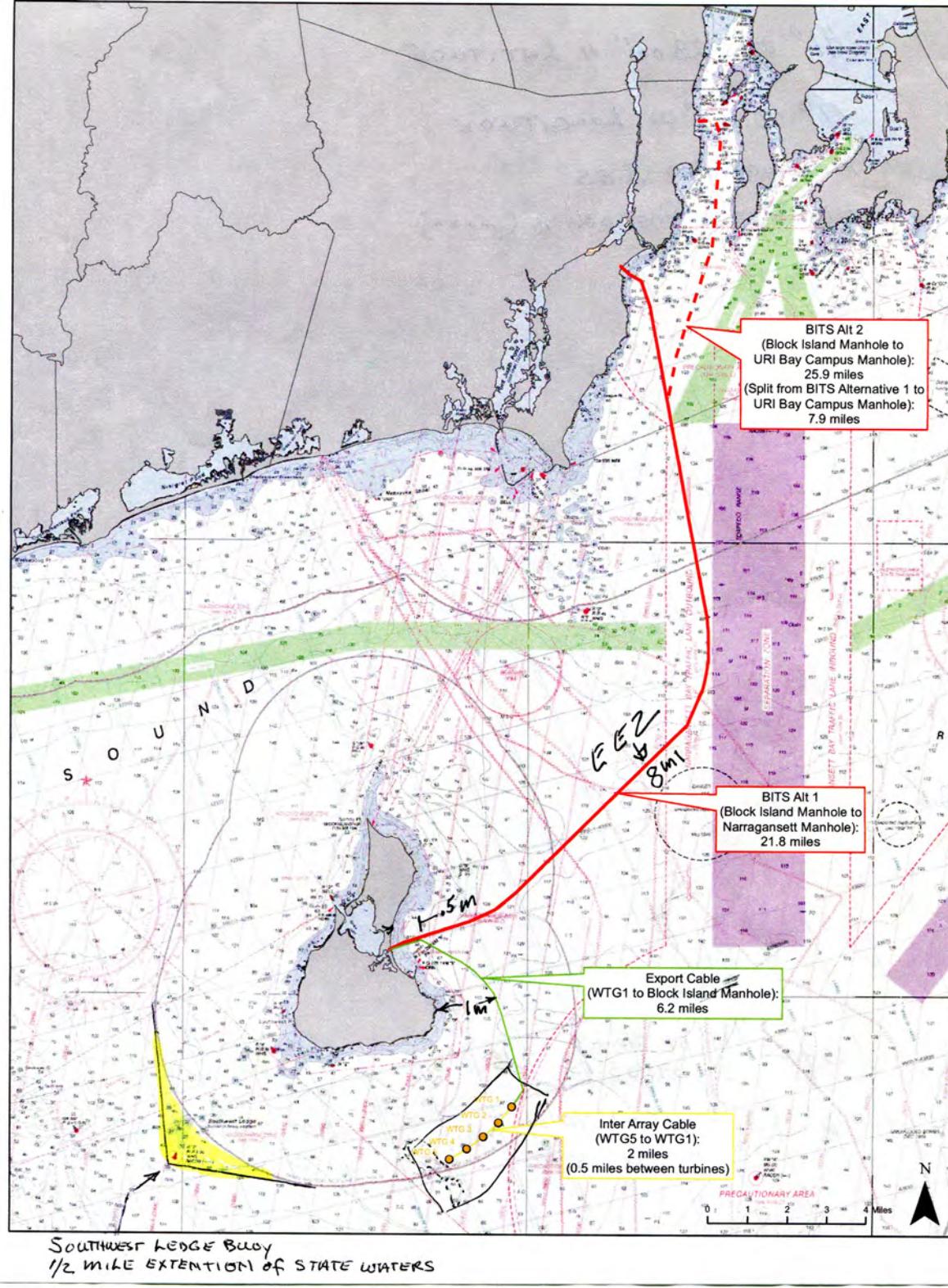
For-Hire and recreational anglers will be displaced during construction and operation of wind turbines along the Block Island southeast coast, along the south coast out to the Pinnacle and west to Black Point, Lewis Point, Southwest Point and west to the EEZ at Southwest Ledge. Loss of these productive Sportfishing grounds along the East and South Shores will place additional fishing capacity on areas to the southwest of the Island.

By extending state waters west to the Southwest Ledge buoy and North to a point tangent to the EEZ will allow anglers and enforcement a visual reference point to stay east and north of the Southwest Ledge Buoy to remain in Rhode Island jurisdictional waters.

Thank you,

Ken Court

Jackie Sea Charters



RI OSAMP: Fisheries Mitigation Options: A Review

#1

Name *	Najih Lazar
Email *	nlazar@uri.edu
Affiliation, Organization, or Town *	Wakefield RI

If you used the comment template, please submit it here.

Page # that corresponds to your comment, if applicable.

Comments on the Review:

Thank you for sending the draft report for comments. Here are my brief comments on this draft.

The report is based largely on experiences and case studies from outside of NE and focused mainly on monetary compensation to commercial fishing industry. The report lacks considerations for mitigation plans to replace the fish resources lost as a results of the project. Any lost biomass as a result, must be considered and provided with a mitigation plan to reverse and/or replace. There is no mention of the term "ecological consideration" in the report, perhaps the use the word "Habitat" implies ecology?? I need to point you to the fact that a loss of an ecological nich in the this environment may have longterm impact on fishing as biomass and growth will be impacted. Ecological and habitat impact have a direct impacts on fishing.

The report focused entirely on negative impacts on commercial fishermen only. What about other public users of the potential wind farm area, such as sport fishermen and spear divers?

I suggest you re-consider the impact to fishing into three large categories and provide the

1) Commercial fishermen, divided into two sub- categories:

- a)State vessels
- b)Federal vessels

2) For Hire fishermen, divided into

- a)Charter boats
- b)Party boats

3)Recreational (sport) fishermen

- a)with a boat
- b)from shore (no boat)

The mitigation of any impact to fishing will effect at different proportions all these categories.

I understand that it is difficult to compensate an entire population of all sport fishermen but one can consider a capital improvement project for the recreational fishermen such as building the a walkway plateform on either the west or the east wall in the harbor of refuge (or even both). Sport fishermen

will have easy access to fishing from these two walls.

Finally I suggest to add a sentence at the end of your first statement where you state the SAMP goals and the role of the CRMC to reflect on the obligation for mitigation in the absence of plausible solution of negative impacts.

Define a fishing season in your report ???

Lastly, I would suggest to consider the SAMP area as a Marine Protected Area that the wind farm project will take on and provide the funds to establish and monitor through the oversight of DEM or CRMC and with the scientific expertise of URI. This project will provide added resources to all users (commercial and recreational).

Thank you

Najih Lazar

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