

MARINE PLANNING COMMITTEE REPORT ON PROPOSED POLICY GUIDANCE FOR OFFSHORE DEVELOPMENT ACTIVITIES

Purpose

The purpose of this policy is to identify for the Pacific Fishery Management (Council), its advisory bodies, agencies, and ocean industry developers the range of issues associated with offshore development that are likely to affect Council fisheries, fishery resources, and coastal fishing communities; and to document the Council's expectations of action agencies and industry developers to address these issues.

Policy Objectives

The Council has responsibility, along with the National Marine Fisheries Service (NMFS), to manage marine commercial and recreational fisheries in a manner that

- Ensures a sustainable and safe domestic seafood supply and cultural benefits from fisheries, by achieving and maintaining, on a continuing basis, the optimum yield from each fishery,
- Protects ecosystem health and sustainability, including protection of essential fish habitat (EFH) and ecosystem services, and
- Provides long-term economic and social benefits of fisheries and fishing-dependent communities, including the ability to adapt to climate change and competing ocean uses.

The intent of this policy is to document the Council's expectations for analysis of impacts resulting from actions such as offshore wind (OSW) energy, aquaculture, and other offshore development that may affect habitat, fisheries, or coastal communities. While the Council is responsible for minimizing the negative effects of fishing activities on habitats, and fishery management plans (FMPs) must describe potential adverse effects of fishing activities and include minimization measures, this document is primarily focused on the potential effects of non-fishing activities on habitats and fisheries. Impacts from fishing activities are outside the scope of this policy document.

The Council's approach, similar to that of the National Environmental Policy Act (NEPA), is to first avoid impacts when practicable, then minimize impacts to the extent possible. For those impacts which cannot be avoided, appropriate mitigation measures must be implemented. When impacts are unavoidable and cannot be sufficiently mitigated by minimizing, rectifying, reducing, or eliminating the impact over time, compensatory mitigation should be considered. For social and economic impacts that are unavoidable, the Council may recommend that financial compensation should be considered. While the Council typically uses the NEPA structure to consider all potential effects of fishing actions on the environment, including social and economic effects, the interests of the Council and the scope of potential impacts can extend beyond the structure of NEPA. Council policies on offshore development activities are consistent with NEPA, and mitigation expectations are closely aligned with those of NEPA.¹ However, the Council's policy on analysis and mitigation of impacts extend beyond NEPA requirements in some cases.

¹ 40 CFR § 1508.1(s)

The Council's approach for addressing the potential effects of offshore development on fisheries and EFH include the following:

- Avoid negative impacts of non-fishing actions on fisheries and EFH whenever practicable
 - Prioritize development (of non-fishing activities) outside known fishing areas, which can mean siting development in waters deeper than the 1300 m depth contour (approximately 700 fathoms – the bottom trawl closure footprint area). Ensuring that offshore non-fishing activities occur outside of the most-used fishing areas will help minimize interaction with Council-managed fisheries as well as minimize potential impacts to important habitats. Highly Migratory Species (HMS), Pacific hake, and other fisheries may still be affected in areas deeper than 1300m; however, the bulk of Council-managed fisheries occur inshore of this depth contour.
 - Avoid disturbance to important habitats, including Essential Fish Habitat Conservation Areas (EFHCA), Habitat Areas of Particular Concern (HAPC) and habitats supporting structure-forming invertebrates such as deep-sea corals and sponges.
- If negative impacts cannot be avoided, agencies and project developers should implement mitigation measures to minimize impacts, such as (but not limited to) the following:
 - Buffer zones of sufficient size surrounding important physical and oceanographic habitat features (e.g., rocky reefs, banks, canyons, methane seeps, localized eddies etc.), fishing activity, transit lanes, etc.
 - Construction and operations timing windows to minimize impacts to spawning/rearing, migration, and important fishery seasons and locations.
 - Technologies and actions to minimize and mitigate impacts, including, burying cables, reducing noise, and minimizing pollutants.
 - Locate structures and cables to minimize overlap with important habitats and fisheries activities.
- Compensation: The Council's preference is for offshore non-fishing activities to avoid and prevent impacts to fisheries and fishing-dependent communities. However, when impacts are unavoidable, the Council may support establishment of an enduring compensation fund under local control. There are existing entities such as undersea telecommunication cable committees that may serve as models for such compensation funds.

This document provides guidance reflecting the Council's overall approach to analyzing, minimizing, mitigating, and compensating for the potential effects of offshore non-fishing activities on fisheries and habitat. Any proposed development or planning for offshore development should include a detailed examination of maps, data, and information for the action

(s) Mitigation means measures that avoid, minimize, or compensate for effects caused by a proposed action or alternatives as described in an environmental document or record of decision and that have a nexus to those effects. While NEPA requires consideration of mitigation, it does not mandate the form or adoption of any mitigation. Mitigation includes:

- (1) Avoiding the impact altogether by not taking a certain action or parts of an action.
- (2) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- (3) Rectifying the impact by repairing, rehabilitating, or restoring the affected environment.
- (4) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- (5) Compensating for the impact by replacing or providing substitute resources or environments.

area, including adjacent areas that may be affected by marine development activities. An analysis of the cumulative impacts of known or likely proposed developments should be undertaken, as required by NEPA. While this guidance provides a template and general expectations related to offshore development activities, it is incumbent upon agencies, developers, and consultants to incorporate local information, data, and outreach while considering siting as well as developing analyses of impacts and other related products.

Council authorities on non-fishing impacts

Essential Fish Habitat

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) EFH implementing regulations at 50 CFR §600.805 *et seq.*, address the effects of both fishing and non-fishing activities on EFH. Regarding effects from non-fishing activities, Federal regulations require FMP to describe and identify EFH, identify non-fishing activities that may adversely affect² EFH, develop conservation measures to minimize impacts, analyze how the cumulative impacts of non-fishing activities influence the function of EFH on an ecosystem or watershed scale, and consider identifying Habitat Areas of Particular Concern (HAPC) for species under its authority. EFH is defined at 50 CFR §600.10³.

The MSA further authorizes the Council to comment on any Federal or state agency activity that may affect the habitat, including EFH, of a fishery resource under its authority, and requires the Council to comment on any action or activity that is likely to substantially affect EFH of an anadromous fishery resource under its authority.

National Standards

The MSA includes ten National Standards (NS) that are principles that must be followed in any FMP to ensure sustainable and responsible fishery management. NMFS has developed regulatory guidance for the ten National Standards (50 CFR Part 600 Subpart D). We highlight three here that may be particularly relevant when considering the effects of offshore non-fishing activities on fishery resources:

- Optimum Yield (NS1): “Conservation and management measures shall prevent overfishing while achieving, on a continuing basis, the optimum yield (OY) from each fishery for the U.S. fishing industry.” OY is defined as “...a decisional mechanism for resolving the Magnuson-Stevens Act's conservation and management objectives, achieving an FMP's

² 50 CFR §600.810(a) defines Adverse Effect as follows, any impact that reduces quality and/or quantity of EFH. Adverse effects may include direct or indirect physical, chemical, or biological alterations of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quality and/or quantity of EFH. Adverse effects to EFH may result from actions occurring within EFH or outside of EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.”

³ Essential fish habitat means those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity. For the purpose of interpreting this definition of essential fish habitat: “waters” include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate; “substrate” includes sediment, hard bottom, structures underlying the waters, and associated biological communities; “necessary” means the habitat required to support a sustainable fishery and the managed species’ contribution to a healthy ecosystem; and “spawning, breeding, feeding, or growth to maturity” covers a species’ full life cycle.

objectives, and balancing the various interests that comprise the greatest overall benefits to the Nation.” (50 CFR § 600.310).

- Communities (NS8): “Conservation and management measures shall, consistent with the conservation requirements of the Magnuson-Stevens Act (including the prevention of overfishing and rebuilding of overfished stocks), take into account the importance of fishery resources to fishing communities by utilizing economic and social data that are based upon the best scientific information available in order to (1) Provide for the sustained participation of such communities; and (2) To the extent practicable, minimize adverse economic impacts on such communities.” (50 CFR § 600.310).
- Safety (NS10): “Conservation and management measures shall, to the extent practicable, promote the safety of human life at sea.” (50 CFR § 600.310).

Fisheries and sectors likely to be affected by offshore development activities

It is important to understand that while not all fisheries sectors will be directly affected by loss of access to fishing grounds due to infrastructure associated with offshore development, it is very likely that all sectors will be affected to varying degrees. Some sectors that operate shoreward of offshore development facilities may not be displaced but may be affected by transmission cables passing through State waters, compaction of fishing effort, and by changes in processing and freezer capacity, among other factors.

Pacific Coast Groundfish

The Pacific Coast Groundfish FMP includes over 100 species, including rockfish, flatfish, and Pacific hake. Groundfish effort occurs coastwide and mostly inside the 1300 m depth contour, although the hake fishery has a much broader spatial range than most other groundfish fisheries. The groundfish fishery is dependent on access to specific, highly productive areas for two reasons. First, many groundfish stocks exhibit some degree of site fidelity, meaning that the target fisheries have limited locations in which to find target stocks. Second, there are many areas where bottom trawling and/or all bottom contact fishing gear is prohibited, thus further limiting the areas open to groundfish fishing. Offshore development in areas that are currently open to groundfish fishing would substantially curtail the ability of groundfish participants to continue operating effectively.

Pacific Salmon

The Pacific salmon fishery also operates coastwide, with multiple sectors targeting different stocks in the spring through fall time frame. Chinook and coho are the main salmon species caught in Council-managed ocean salmon fisheries, although catch of pink salmon can also be significant in odd-numbered years, primarily off Washington and Oregon. The ocean fishery is dominated by troll gear in vessels typically less than 18 meters (or 58 feet) in length. Offshore development is likely to negatively affect salmon fisheries in places where fishing vessels are preempted from access to fishing grounds. Like most West Coast fishing gear, trolling for salmon requires vessels to move while the gear is deployed, which means that it may be unsafe for salmon vessels to operate near floating wind turbines or other offshore infrastructure.

There also remain questions about the potential impacts of electromagnetic fields (EMF) on Pacific Salmon stocks. Cables which will surely cross prime salmon grounds could have impacts on the fishery and the fish stocks themselves, if, for example, the EMF generated by industrial OSW farms confuses the fish and potentially keeps them from returning to the river of birth.

Highly migratory species

West Coast HMS vessels operate over a broad range of the Exclusive Economic Zone, using a variety of gears including hook-and-line, troll, deep-set buoy gear, drift gillnets, and purse seines. While some trolling may be possible within wind energy installations or other offshore development structures, it is not guaranteed. The other gears referenced above could not operate within OSW farms. In addition, there would be a de facto buffer zone around any offshore development infrastructure, based on the risk of gear drifting too close to a facility.

Coastal pelagic species

The coastal pelagic species (CPS) fishery operates coastwide, with effort generally commensurate with stock abundance. Purse seine fishing is dominant for all CPS stocks and is not feasible to be operated in or near offshore infrastructure such as OSW installations. Therefore, CPS fisheries would also be precluded from fishing in potentially productive areas and would be forced to shift effort to possibly less productive areas.

Other fisheries-related activities likely to be affected by offshore development

Scientific surveys and data collection

The Council's fishery conservation and management measures are based on a complex suite of scientific analyses, particularly fish stock assessments. The data needed for fish stock assessments is collected both from fishing vessels and from fisheries-independent surveys. Non-fishing activities that limit the access survey vessels have to historic survey locations, that affect the timing of surveys, or that otherwise interfere with the collection of data at sea, have the potential to significantly compromise the Council's science-based fisheries conservation and management programs. Fish stock assessments rely on consistent data collection practices over time. Loss of long-standing survey locations will increase scientific uncertainty in stock assessments, which could have a range of negative effects on fish stocks and fisheries: fish harvest levels may be set at levels too high to maintain long-term sustainable populations; alternately, increased scientific uncertainty could cause fish harvest levels to be reduced to buffer against that uncertainty; bycatch of non-target species could increase while surveys are recalibrated; and, carefully-balanced fishing season timing that affects when, where, and how much of our fish are caught, could be derailed to the detriment of natural resources and fishing communities. Loss of long-standing survey locations may create uncertainty in stock assessments and reduce the biomass available for harvest.

Impacts to fishing dependent businesses

As described above, MSA National Standard 8 addresses community impacts and requires that FMPs (and thus fishery management councils) "take into account the importance of fishery resources to fishing communities by utilizing economic and social data...in order to (a) provide for the sustained participation of such communities, and (b) to the extent practicable, minimize adverse economic impacts on such communities.

Additional concerns and research needs

There is concern that floating wind turbines could act as fish aggregating devices, which could keep the fish away from the fishery if they show site affinity to those turbine structures and fishery

participants are excluded from accessing those areas. This possibility should be further studied and considered as part of any pre-construction analysis.

Potential effects of EMF on fish and other marine species remain a concern and should be addressed in analysis of impacts related to any offshore development. Concerns include the potential of EMF to prevent movement of benthic-dwelling species dependent on movement for spawning or rearing, access to prey and habitat, and the potential avoidance effects by Pacific salmon in returning to spawning streams.

Potential effects from offshore development activities

Several components of offshore development could affect fishery resources, commercial or recreational fishing activities, or fishery-dependent communities. The presence of offshore development installations will likely displace fishing activities by constricting access to fishing grounds, and by negatively affecting vessel navigation and transit. Unburied seafloor cables and mooring lines in the water column are likely to preclude fishing activity due to risk of gear entanglement or vessel safety. Pre-development surveys and site assessment or characterization activities have the potential to interfere with fishing vessels transiting to or from port or may interrupt fishing activities or interact with fishing gear.

Displacement from fishing grounds: Offshore development infrastructure prevents access to current, historical, or potential fishing areas, possibly resulting in increased fishing costs, diminished fishing revenues, and adverse impacts to shore-based businesses and consumers dependent upon harvested seafood. Fishery participants could be compelled to fish in areas that are less productive, farther away, or riskier (both with respect to human life and fishing gear). Additionally, reduced options in available fishing locations could compromise the Council's effort to conserve and manage a diverse array of species by forcing participants to fish in areas with higher likelihood of encountering non-target species, possibly increasing bycatch of non-target species. Further displacement of fishing vessels may occur should shipping lanes be re-routed to avoid offshore development installations, or if United States Coast Guard (USCG) safety/security zones are placed around offshore installations.

Transit and navigation challenges: Some offshore development, notably OSW energy fields, can be over 100 square miles in spatial extent. Wind energy planning areas can be several hundred square miles. Depending on the siting and configuration, navigating safely through OSW fields may be extremely difficult, especially for larger vessels, during times of limited visibility, or in rough seas. In addition, the presence of large metal towers can reduce the utility of radar, magnifying the potential dangers of navigating through OSW installations. Transiting vessels could be forced to navigate around offshore development infrastructure, potentially creating hazardous navigation choke points, increasing fuel consumption, and increasing safety-risks in inclement weather.

Entanglement and gear loss: In some cases, it may be possible to fish within or near offshore development such as wind installations, more so for smaller hook-and-line vessels rather than fixed gear operations, trawlers or purse seine vessels. Anchor mooring cables, inter-array cables, and other structures can present entanglement hazards to fishing vessels. Regardless of the gear type,

the risk of gear entanglement would likely be substantially increased in or near offshore development sites.

Impacts to safety at sea: The Outer Continental Shelf Lands Act⁴ provides, in part, that any activity authorized shall be carried out in a way that provides for safety⁵. As noted above, impacts to a vessel's radar systems present safety concerns. OSW facilities present navigational hazards, which could affect rescue operations by the USCG vessels as well as aircraft. The USCG is developing a Port Access Route Study of U.S. West Coast to assess navigation into, out of, and between ports, as well as routes that may be affected by offshore development. Conclusions and recommendations from that study should be carefully considered in the context of offshore development and the secondary impacts to fisheries and fishing-dependent communities. We recommend that the Bureau of Ocean Energy Management (BOEM) work with the USCG to develop regulations and notification requirements (e.g., Notice to Mariners) and protocols for OSW developers deploying vessels and equipment at sea to ensure that fishing vessels and other vessels not related to OSW development are made aware of where and when those vessels and equipment are deployed. This should be done in collaboration with local fishing community members.

Shoreside Infrastructure Impacts. Ports and harbors have finite available space. Development of facilities (e.g., manufacturing, deployment, maintenance, storage) related to offshore development could potentially increase competition for critical port space and facilities, increasing seafood production costs and increasing prices to consumers.

With respect to impacts to shoreside infrastructure, take into account that the diminishment and relocation of such infrastructure may impact not only the fishing activities that occur in the areas of the offshore development but result in indirect impacts to fisheries that occur outside those areas (e.g., loss of groundfish processors that also process salmon or CPS, loss of ice houses that also serve near shore commercial fisheries, loss of facilities supporting the commercial sector that also support recreational activities, and reduction of fishing activities to levels below thresholds needed to justify the maintenance of port dredging activities).

Expectations for analysis and monitoring of impacts to fisheries

For any proposed offshore development project, the Council expects agencies, developers, and/or consultants to develop detailed analyses of impacts to fish resources, vessels, fishery participants, and coastal communities. This includes, but is not limited to:

- The duration, intensity, and magnitude of potential impacts to the fishery as well as potential impacts to habitat or other resources resulting from displacement of fishing activities;
- Potential impacts to both commercial and recreational fishing sectors, using landings data, angler trips, revenues, downstream economic losses to fishing communities, reduction in value of permits and vessels, and associated costs incurred by fishery participants;
- Potential impacts to consumers of seafood and recreational trips;
- Potential impacts from the presence of offshore facilities, interarray and transmission cables, construction activities, and site characterization and survey activities;

⁴ 43 USC §1331 et seq

⁵ 43 USC §1337(p)(4)

- Using logbooks, vessel monitoring, fish tickets, and other data to accurately characterize the fishery for at least 10 years prior to development;
- Describing impacts in terms of lost revenues, increased costs, changes in required effort, and risks to non-target stocks;
- Engage in direct discussion with fishery participants to better understand the data.

Cumulative Effects

The current Administration has ambitious plans to permit and develop OSW energy. Given the timelines shared by BOEM, and where the U.S. West Coast currently is in the process, it is likely that such offshore development activities will continue for many years. It is therefore extremely important for Federal and state agencies, as well as project developers and stakeholders, to identify and analyze the potential environmental and social and economic cumulative effects of multiple projects that are reasonably likely to occur. Given that OSW and other development are likely to take many years to come to fruition, cumulative analyses should be undertaken early in the process and consider a time horizon of potential impacts occurring over decades rather than years. Because full build-outs of wind energy areas (WEAs) are reasonably foreseeable, analyses of the cumulative effects of OSW installations should assess the potential cumulative effects on the physical, biological, social, and economic environment of fully filling each WEA with wind turbines.

Monitoring Plans

Agencies and developers should produce detailed monitoring plans that include baseline assessments, specific plans for long-term monitoring, and a description of how developers will work with National Oceanic and Atmospheric Administration fisheries science centers, management agencies, research institutions, and/or private consultants to develop monitoring plans. Developers should evaluate and report results over time so that the determination of impacts is credible and rigorous, and developers should report how they intend to use monitoring results to adjust their operations and infrastructure, as appropriate.

Outreach and engagement plan

Agencies and developers should provide a detailed engagement plan that includes multiple opportunities for information exchange with a variety of stakeholders, especially in the commercial and recreational fishing sectors. Engagement should begin early in the process and occur often throughout the process. Outreach should not be limited to large group or online meetings. In some cases, individual engagement is a highly effective way to gain important local knowledge. Outreach and engagement could entail verbal or written reporting directly to the Council and should also take into account environmental justice issues, including special engagement efforts with respect to affected groups and communities that sometimes do not have the resources and time that it takes to engage in governance processes.

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