

## CURRENT HABITAT ISSUES

The Habitat Committee (HC) will meet on Thursday, October 31, 2013, to discuss groundfish essential fish habitat, Columbia and Klamath River issues, the proposed aquaculture project off San Pedro, California, and other issues.

At the September Council meeting, the Council approved a letter to the Department of Energy (DOE) on the impacts of offshore wind projects. The final letter is attached (Agenda Item D.1.a, Attachment 1). The letter outlines topics for research related to offshore wind energy development, as called for in the DOE's Request for Information, with emphasis on ocean conditions and project specifications unique to the West Coast.

### **Council Action:**

**Consider comments and recommendations developed by the HC.**

### **Reference Materials:**

1. Agenda Item D.1.a, Attachment 1: Final letter to the Department of Energy.
2. Agenda Item D.1.b, Supplemental HC Report.

### **Agenda Order:**

- a. Agenda Item Overview
- b. Report of the Habitat Committee
- c. Reports and Comments of Advisory Bodies and Management Entities
- d. Public Comment
- e. **Council Action:** Consider Habitat Committee Recommendations

Jennifer Gilden  
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10/10/13



Pacific Fishery Management Council

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October 10, 2013

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RE: RFI DE-FOA-0000911: Researching the Environmental Effects of Offshore Wind at the First U.S. Facilities

Dear Mr. Hahn,

The Pacific Fishery Management Council (Council) has become aware of recent developments in the Government's wind energy program for the U.S. Outer Continental Shelf (OCS). Of particular interest to the Council are actions intended for the Pacific OCS. As you may know, the Council is one of eight Regional Fishery Management Councils established by the Magnuson-Stevens Fishery Conservation and Management Act of 1976 (MSA), and recommends management actions for Federal fisheries off Washington, Oregon, and California. The MSA includes provisions to identify, conserve, and enhance Essential Fish Habitat (EFH) for species regulated under a Council fishery management plan. The MSA defines EFH as "*those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity.*" Each Council is authorized under MSA to comment on any Federal or state activity that may affect the habitat, including EFH, of a fishery resource under its authority.

The Council was recently briefed by its Habitat Committee on the Department of Energy's (DOE) April 17, 2013, Request for Information (RFI): DE-FOA-0000911 - "Environmental Research and Observations at the First U.S. Offshore Wind Facilities." The Council appreciates DOE's efforts to reach out to the public and affected entities for input on their future research strategy. There is concern that initial research and research priorities have focused on East Coast environments where offshore wind projects have already been permitted, and may not necessarily meet the research needs of West Coast environments. According to the Bureau of Ocean Energy Management (BOEM), ideal wind speeds for generating wind energy off Oregon (and possibly California and Washington) are located off the continental shelf, farther and deeper than is needed for East Coast projects. Consequently, wind energy installations may have substantial subsurface structure in both the water column and on the seafloor (floating devices, more cabling, extensive mooring), and thus may introduce unforeseen impacts and related research needs not yet defined in the RFI. Surface structures are expected to be more massive than East Coast structures and will be subjected to the harsh conditions of the Pacific Ocean.

Given the anticipated risks associated with offshore development in the Pacific Ocean, it is necessary to consider West Coast conditions and facility design factors when developing a template for research and study of offshore facility construction, deployment, and operation.

Additionally, marine habitat protections differ across the U.S. and suggest a regional approach to establishing research priorities. For instance, MSA requires regional Councils to designate Habitat Areas of Particular Concern (HAPC) within their region. HAPCs are specific habitat types or areas within EFH that are of particular ecological importance in the fish life cycle or are especially sensitive, rare, or vulnerable. For the Pacific region, this includes all rocky reefs, estuaries, kelp forests, eelgrass beds, and seagrass beds, and unique geologic features such as deep water seamounts. EFH in the Pacific region is currently undergoing a periodic review process, as required under MSA, and may result in the designation of additional HAPCs.

The Council was unable to provide comments to DOE on the RFI prior to the May 30, 2013 deadline. However, in response to our request for an extension, Mr. Hahn offered to accept input at any time. The Council agrees with and supports the comments submitted by the state of Oregon (May 30, 2013) in response to the RFI, as well as the sample research questions provided by DOE in the RFI. In addition to those specific research topics and questions already provided, we offer the following for your consideration:

#### *Consultation with the Fishing Industry*

- It is imperative that wind energy developers consult with the local fishing industry before projects are sited, in order to avoid important fishing grounds and reduce other impacts to fishermen. For example, a project may block access to fishing grounds even if it is not sited in those fishing grounds. Such impacts could be avoided through advance discussion with fishery stakeholders.

#### *Underwater Acoustics*

- What acoustic variables (e.g., sound, pressure, vibration) should be measured to assess acoustic effects on fish? How can the *in-situ* COWRIE<sup>1</sup> studies of the UK be improved upon and designed for the Pacific Northwest to answer additional questions about fish responses to acoustics and EMF (e.g., attract vs. repel)?
- In addition to behavioral responses of fish to acoustic stressors, what are their physiological responses (e.g., injury, reproductive stress, feeding stress)? What potential consequences should be measured (i.e., displacement from spawning/fishing grounds, increased exposure to predation)?
- What are the migration/movement patterns of species likely to be affected by acoustics generated during construction and maintenance? How might knowledge of these patterns lead to the establishment of “in-water work periods” to minimize impacts?

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<sup>1</sup> COWRIE (Collaborative Offshore Wind Research into the Environment) is an independent body in the UK set up to carry out research into the impact of offshore wind farm development on the environment

### *Water Column Disturbance*

- Does project operation alter (by dampening or increasing) surface, midwater, or bottom currents? And at what distances from the source are these effects detectable? How would changes in current intensity affect demersal and bottom fish species? How would a response be measured?
- To what extent (duration, intensity) does construction affect water turbidity or other water quality characteristics, both in the estuary and in the ocean?
- How does increased turbidity affect fish behavior? Predation? Feeding?

### *Seafloor Disturbance*

- In addition to affecting benthic communities, to what extent, if any, is the structure of soft-bottom substrate altered (e.g., building or eroding sand waves, hills) by project-generated bottom currents?
- What are the recovery times for habitat and benthic organisms subjected to sustained or repetitive injury from anchor chains?
- What methodologies would be used to measure seafloor disturbance?
- What methods can be used to bury electrical cables in deepwater, soft-bottom habitat with minimal disturbance to the sea floor?
- For connecting to the land-based grid, are there methods proven successful at drilling under rocky seafloor, with limited or no impact to the rock habitat?
- What methods will be employed to assess impacts to rocky reef habitat, including associated fish and invertebrate communities?
- Are there alternate methods for setting cable that avoid impacting rocky reef altogether?

### *Fish Aggregation, Attraction, Biofouling*

- How would vertical and horizontal structural components (moorings, cables, towers, etc.), both in the water column and on the bottom, interact with or engage fish species or their prey (e.g., entanglement, collision, attraction)? What are the potential consequences of such interactions at both the species and population level (e.g., increased mortality, predation, geographic transference in population)?
- Are there alternative design/construction considerations that could minimize such interactions?
- Should biofouling of structures be allowed or prevented? How should this issue be assessed?
- Will biofouling increase the potential for equipment failure?
- What options would be considered for reducing biofouling on structural components?
- How do anti-biofouling agents, paint, etc., when applied to device components in port, affect estuarine water quality and habitats? How could impacts be prevented or minimized?

### *Electromagnetic Frequency EMF (new topic)*

- What EMF signatures (frequency and amplitude) from cables or other project components are emitted and possibly sensed by federally-managed fish species and their prey (particularly elasmobranchs, salmonids, and other electro-sensitive species (e.g., sturgeon) during construction? During operation? And at what spatial distances?


- How can EMF signals be dampened to minimize detection by and responses of fish species?
- In addition to behavioral responses of fish to EMF emissions, what are their physiological responses (e.g., injury, reproductive stress, feeding stress)? What are the broader consequences that should be measured (e.g., displacement from spawning/fishing grounds, increased exposure to predation)?

*Fishery Interactions/ Collision Potential (new topic)*

- Are there design and construction considerations (e.g., depth of cable burial, device array configuration, orientation) that could be compatible with commercial fishing, or that could minimize impacts to commercial fishing?

As described in the RFI, the focus of this initial research strategy is to measure the characteristics of the project that cause impacts. The Council has focused its comments primarily on environmental research topics, but concerns regarding human-use impacts are of equal significance in the development of this new industry, particularly for the fishing industry and West Coast fisheries in general. We look forward to working alongside DOE and BOEM to identify, avoid, and minimize these conflicts, and to achieve the long-term goal of responsible development of this new and promising industry.

Sincerely,



D. O. McIsaac, Ph.D.  
Executive Director

JDG:kam

Cc: Council Members  
Habitat Committee Members  
Groundfish Advisory Subpanel Members  
Groundfish Management Team Members  
Mr. Chuck Tracy  
Ms. Jennifer Gilden

## HABITAT COMMITTEE REPORT ON CURRENT HABITAT ISSUES

### **Update on Offshore Wind Energy Projects**

The Habitat Committee (HC) received an update on the proposed Oregon State University (OSU) offshore wind energy test site to be located in Federal waters six miles off Seal Rock, Oregon.

OSU convened a local fishing industry stakeholder group to assist in selecting a preferred site without input from the state of Oregon or other entities. The preferred site is located offshore of a nearshore rocky reef and is 2 x 3 miles wide. OSU proposes drilling beneath the reef to run the associated cables to land, with potential adverse effects on the reef environment. This high-profile research project sets a precedent for subsequent commercial development, with the message that it is acceptable to drill under rocky reefs.

The Bureau of Ocean Energy Management (BOEM) is currently reviewing this lease application.

The HC notes that the proposed project may adversely affect essential fish habitat. Also, the rocky reef is a habitat area of particular concern. The HC proposes to draft a comment letter on the project for the March briefing book.

#### *BOEM-Oregon Task Force on Ocean Energy*

As noted in previous HC reports, BOEM convened an Oregon task force at the request of Oregon's governor. Other states could request similar task forces.

The HC and the Council have discussed the merits of asking for Pacific Council representation on the BOEM-Oregon Task Force in terms of voicing fisheries-related concerns during planning discussions. Although National Marine Fisheries Service and Oregon Department of Fish and Wildlife are task force members, the task force does not represent fisheries issues well. Fisheries representatives have attended as observers, but not as members.

Potential Council membership on the BOEM-Oregon Task Force is complicated by the fact that only a member of the Council who is also a Federal, State, or Tribal representative may join. The task force member would officially be representing their own agency, but could raise Council concerns and report back to the Council on task force discussions, and take part in task force decision-making.

The Council may wish to consider whether to request membership on the Task Force; or, alternately, Council staff could attend as a non-member. BOEM meetings generally occur twice a year in Portland.

### **Klamath Basin Update**

This spring, the Council sent a letter to the Bureau of Reclamation (BOR) requesting additional Lower Klamath River fall flows for fall-run Chinook salmon, anticipating a record run and hoping to avoid another fish kill. There is good news to report.

The BOR began releasing augmentation flows from Lewiston Dam the morning of August 13, 2013. Westlands Water District and the San Luis and Delta Mendota Water Authority immediately filed a request for Preliminary Injunction with the Federal Eastern District Court, and on August 13, the Court issued a Temporary Restraining Order preventing the releases. Releases were reduced to the summer minimum later that day. Later, the Court vacated the restraining order, and augmentation flows were resumed the morning of August 25 and continued through September 21.

The 2013 augmentation flows appear to be successful in having avoided a fish kill. Building on this success, the HC will continue to track this issue and will prepare a similar letter for Council consideration next spring, if necessary.

### **Bonneville Power Administration/Northwest Power and Conservation Council Fish and Wildlife Program**

On August 7, the Council submitted a comment letter to the Northwest Power and Conservation Council on its revised Fish and Wildlife Program. A revised public draft of the Fish and Wildlife Program five-year plan will be released for comment on February 17, 2014, taking into consideration over 400 public comments, with a comment period through May 2014.

The HC proposes to prepare a follow-up letter on this plan for the March briefing book for possible approval at the April meeting. The letter would, among other things, note whether or not the Council's prior comments were incorporated in the revised draft.

### **San Pedro Aquaculture Project (KZO Sea Farms)**

KZO Sea Farms proposes to develop a 100-acre open ocean shellfish farm in Federal waters approximately 4.5 miles off Long Beach, California. This initial phase of development is intended to serve as a pilot for what was originally proposed to be a 10,000 acre project. This proposal highlights the need for Marine Spatial Planning and habitat impact analysis before new structures are established in offshore areas.

The HC recommends drafting a letter for the March briefing book to the California Coastal Commission regarding EFH and the necessity of habitat monitoring that can inform decisions on the KZO project, both for the current process and potential future expansion.

### **Update on Columbia River Biological Opinion Process**

A draft final Supplemental Federal Columbia River Power System (FCRPS) Biological Opinion (BiOp) was released by NOAA Fisheries September 9. The comment period has been completed and NOAA Fisheries is now finalizing the BiOp. The Federal Court has asked for submission of the revised BiOp by January 1 and is expected to schedule a review of the document early in 2014.

Comments from several of the state and tribal sovereigns regarding habitat provisions of the Draft Final BiOp have been shared with the HC. It is generally accepted that the BiOp contains a substantial assemblage of reasonable and prudent alternatives relative to estuary and tributary habitat. There is concern about the magnitude and time frame for survival and production benefits of these actions, the certainty of implementation, and the need for more emphasis on

lower Columbia populations impacted by FCRPS operations. Considerable controversy remains concerning the role spill should play in hydropower passage. Plaintiffs in the BiOp lawsuit advocate a more complete series of spill evaluations coupled with new FCRPS survival metrics, while NOAA Fisheries rejects the necessity for such actions. It seems likely this controversy will continue through Federal Court discussions next year. Disagreements continue over the related issue of timing and the proportion of juvenile fish to be artificially transported downstream.

The HC recommends that the letter the Council wrote to the Northwest Power and Conservation Council (NPCC) on August 7 be sent to NOAA Deputy Regional Administrator Barry Thom so it can be considered by NOAA Fisheries as the BiOp is being finalized.

The HC will continue to follow development of the supplemental Biological Opinion as it is finalized for submission to the Court in 2014 and subsequent review by the Court.

### **Summary**

In summary, the HC proposes the following items for Council consideration:

- Comment letter on OSU offshore wind energy test site (for March).
- Potential Council membership on the BOEM-Oregon Task Force; or, alternately, Council staff attendance as a non-member.
- A follow-up letter on the NPCC plan for the March briefing book for possible approval at the April meeting.
- A letter to the California Coastal Commission regarding EFH in regard to the KZO project (for March).
- Forwarding the Council's August 7 letter to the NPCC to NOAA Deputy Regional Administrator Barry Thom so it can be considered by NOAA Fisheries as the BiOp is being finalized.

PFMC  
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