

# Identification of Outer Continental Shelf Renewable Energy Space-Use Conflicts and Analysis of Potential Mitigation Measures<sup>1</sup>

## Project Summary

The ocean accommodates a wide variety of human uses that typically are separated by time of day, season, location, and zones that are set aside for specific users. Conflict can and does occur, however, when two or more groups seek to use the same space at the same time. The potential for conflict is well known and the management of ocean space and resources continues to be addressed by various state, regional, and federal organizations, including coastal zone management agencies, state task forces, and regional fisheries management councils. However, with new and emerging uses of the ocean such as aquaculture and offshore renewable energy comes the potential for new types of space-use conflicts in ocean waters.

The Bureau of Ocean Energy Management (BOEM) has examined ocean space-use conflicts and mitigation strategies in the context of its oil and gas development and sand and gravel dredging activities. However, with relatively new leasing authority for ocean renewable energy projects in federal waters, it lacks information about potential conflicts between existing uses of the ocean environment and this new activity and measures that policymakers could employ or encourage to avoid or mitigate such conflicts.

To address this need, we conducted a bi-coastal research project to 1) identify and enhance understanding of potential multiple-use conflicts that may occur in coastal and offshore waters due to offshore renewable energy development; and 2) recommend measures that BOEM can consider using to help avoid or mitigate conflicts. The project consisted of three interrelated components: 1) a literature review focused on spatial conflicts in the marine environment, tracking how stakeholders resolved, mitigated and addressed such conflicts; 2) development of a geospatial database that included available GIS data and new GIS data produced by the study team, and 3) ethnographic data collection, engaging individuals and small groups in guided discussions to characterize ocean space and place use, identify potential space-use conflicts, and identify strategies for avoiding or mitigating such conflict.

The project produced several products. A **literature review** identifies 31 avoidance and mitigation strategies, at least 12 of which BOEM has regulatory or statutory authority to implement itself, with others that may be useable under other authorities. A **GIS database** comprising human use layers included in the BOEM/NOAA Multipurpose Marine Cadastre, additional relevant datasets obtained from online geodatabase repositories and through direct outreach to Federal, regional, and State organizations, non-governmental organizations, and new data collected through interviews and meetings with marine resource user groups and digitized for inclusion in the database. A user-friendly Microsoft Access **inventory database** provides metadata on the data layers. Finally, a **BOEM Study Report** provides a synthesis of the information generated through the literature review and ethnographic research, with summary findings by study subregion (Northeast Atlantic, Mid-Atlantic, South Atlantic/Straits of Florida, Pacific Northwest, and Northern California) followed by a synthesis that highlights the Nature and Diversity of Coastal and OCS Uses, Potential Conflicts with Renewable Energy Development, and the Identification and Analysis of Potential Mitigation Strategies.

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The study concludes that while much can be learned from other contexts, the actual conflicts created by offshore renewable energy development and the most appropriate conflict management techniques depend on the biophysical and socioeconomic context. Moreover, the stakeholder engagement process (i.e., actions that occur well before any consideration of the need for avoidance or mitigation strategies) is important, and the establishment of an effective communication and process platform likely would reduce the need for mitigation while also facilitating timely resolution when mitigation does become necessary and appropriate.