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Department of Marine Sciences
Presents a Seminar by

Kevin D.E. Stokesbury
University of Massachusetts Dartmouth

Pre- and Post-Construction Assessments of Fisheries in an Offshore Wind Lease Area

The School for Marine Science and Technology (SMAST) collaborated with the fishing industry, regulatory agencies, and Vineyard Wind to develop a pre- and post-construction assessment of fisheries, associated ecological conditions, and socio-economic aspects of fisheries, in and around the Vineyard Wind offshore wind lease area, as designated by the US Bureau of Ocean Energy Management, on the US Outer Continental Shelf.

First, a series of workshops with fishermen and regulators to present a relatively expansive set of monitoring component options and to identify which elements are most important to local fisheries and which are most important to regulators were organized. Monitoring components included fishery assessments, fishery resources surveys, tagging, oceanographic monitoring and modeling, socio-economic analysis, and geostatistical integration of monitoring components. From these discussions a series of recommendations emerged. Seasonal fishery resource surveys were proposed examining the substrate and benthic macroinvertebrate, groundfish and planktonic communities. Results from these workshops were compiled into "Recommendations for planning pre- and post- construction assessments of fisheries in the Vineyard Wind offshore lese area" dated 24 March 2019 (available at https://www.vineyardwind.com/fisheries-science, and https://www.mafmc.org/northeast-offshore-wind).

The experimental design for the seasonal surveys followed the Before-After-Control-Impact (BACI) design and was set up to coordinate with ongoing large-scale surveys conducted by SMAST and other institutes such as VIMS, NOAA fisheries and state fisheries agencies. This structure would enable the development of large scale Before-After-Gradient (BAG) experimental frames works as well.

Two benthic macro-invertebrate surveys are underway, a drop camera optical survey and a ventless trap lobster/crab/black sea bass survey. A seasonal demersal trawl survey monitors the species abundance, population characteristics and community structure of marine fish and invertebrate communities including commercially important species such as squid, groundfish, summer flounder, whiting and black sea bass. Successful field seasons were completed for all these surveys in 2019 and 2020, despite the difficulted associated with the Covid-19 pandemic. All the documents are available to the public at https://www.vineyardwind.com/fisheries-science, and a data-sharing agreement is in place. These surveys are planned to continue until construction, sample during construction when possible, and ideally then sample for three years post-construction, with the possibility of additions years throughout the life of the windfarm. At the regional scale oceanographic modeling is examining windfarm and fisheries interactions. A 39-year simulation using a refined subdomain grid (up to ~1.0 m) finite-volume community ocean model (FVCOM) suggested that the Vineyard Windfarm field could considerably change the larval distribution in the southeast.

Host: Sandy Shumway   **Time & Date**: 11:00 am, Friday, February 11, 2022

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