The Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
100 Cambridge Street, Suite 900
Boston, MA 02114

Maura T. Healey
GOVERNOR

Kimberley Driscoll
LIEUTENANT
GOVERNOR

Rebecca L. Tepper
SECRETARY

Tel: (617) 626-1000
Fax: (617) 626-1081
http://www.mass.gov/eea

June 12, 2023

Zachary Jylkka
Bureau of Ocean Energy Management
Office of Renewable Energy Programs
45600 Woodland Road Mailstop: VAM-OREP
Sterling, VA 20166

Re: Docket No. BOEM–2023–0025: Commercial Leasing for Wind Power Development on the Gulf of Maine Outer Continental Shelf (OCS) – Call for Information and Nominations

Dear Mr. Jylkka:

The Massachusetts Executive Office of Energy and Environmental Affairs (EEA) respectfully submits the following comments to the Bureau of Ocean Energy Management (BOEM) in response to the Call for Information and Nominations (Call) for offshore wind in the Gulf of Maine. These comments as with our previous letter on the Request for Information reflect the knowledge that the Gulf of Maine is an important resource for a diverse array of existing maritime uses, habitats, and species and that a purposeful, stakeholder rich, and data-driven process is imperative to the sustainable siting of offshore wind in this already busy offshore space. The comments provided herein incorporate input received through conversations with the Massachusetts fishing industry and other stakeholders, as well as with subject matter experts from my agencies and offices. We look forward to continuing to provide valuable information and data to inform the BOEM planning process through the Task Force meetings, public engagement sessions, and collaborative efforts with our fellow Gulf of Maine states, stakeholders, and other federal agencies.

Reducing carbon emissions through the development of renewable energy is critical to combatting the global climate crisis. Offshore wind energy development is a significant component of renewable energy portfolios in the northeast including the Commonwealth. For these reasons,

Massachusetts strongly supports the Biden-Harris Administration's ambitious goals to achieve 30 gigawatts (GW) of offshore wind by 2030, 15 GW from floating offshore wind by 2035, reduced costs of floating offshore wind, and commercial leasing in the Gulf of Maine in the summer of 2024. These actions will set the nation on the pathway to achieve over 110 GW of offshore wind by 2050. The administration's goal to sustainably advance offshore wind to support decarbonization continues to be a shared priority with the Commonwealth. Massachusetts remains a national leader in offshore wind policy and market development as exhibited through our efforts on workforce development, supply chain advancement, funding for port infrastructure, and collaborative work with fellow New England states to address the challenges of regional transmission. Additionally, we recently filed with our public utility commission our fourth solicitation for offshore wind which requests bids for projects up to 3.6 GW and allows for the selection of projects that maximizes our current statutory authority for 5.6 GW in offshore wind procurements. This recent solicitation maintains the legislatively required schedule of offshore wind procurements to ensure timely delivery of offshore wind to Massachusetts ratepayers and support our goal to achieve net zero emissions by 2050. However, for Massachusetts to meet this legislative mandate, it is critical that BOEM hold an offshore wind auction for the Gulf of Maine in the summer of 2024. In order to achieve this critical milestone, we ask that BOEM continue to move purposefully and expeditiously through the planning process to identify lease areas in the Gulf of Maine, while continuing to consider the complex siting challenges.

To meet decarbonization targets, Massachusetts requires the deployment of an estimated 23 GW of energy from offshore wind by 2050.[1] It is anticipated that this offshore wind will be sourced from multiple offshore areas, including the existing Southern New England leases off Massachusetts and Rhode Island, the Gulf of Maine, and potentially from yet to be designated Wind Energy Areas (WEAs) between the Southern New England and the New York Bight lease areas. The availability of lease areas with sufficient capacity to accommodate the Commonwealth's identified offshore wind energy needs is critical to meeting our climate goals. Based on modeling for the Commonwealth's Clean Energy and Climate Plan and an understanding of current capacity in existing lease areas, Massachusetts will require at least 10 GW of offshore wind energy from the Gulf of Maine. This energy planning target for Massachusetts should be combined with offshore wind needs for Maine and New Hampshire. Maine has recently indicated a target of 3 GW of offshore wind for the Gulf of Maine. Using this value, BOEM's planning process for commercial leasing for the Gulf of Maine should seek to designate WEAs with adequate area to support at least 13 GW of offshore wind. These WEAs should be composed of multiple lease areas each capable of supporting an individual commercial-scale project that will foster industry growth and competition and maximize energy generation potential for the Gulf of Maine states.

Input from the Massachusetts fishing industry

In an effort to better understand Massachusetts fishing activity within the BOEM Call Area (see attached map), input was solicited from the following Massachusetts fishing industries: groundfish and monkfish, scallop, inshore and offshore lobster, and for-hire operations, representing a breadth of gear types from fixed trap gear to mobile trawls and dredges to longline and hook gear. Meetings, held in Boston, Chatham, Gloucester, and New Bedford, afforded opportunities for fishers from different ports to describe where they fish and how they transit to fishing grounds, as well as to discuss how well the available fishing data from the National Oceanographic and Atmospheric Administration (NOAA) represents current and recent past fishing activities. Feedback and recommendations from these meetings are included herein - in the responses to BOEM's specific requests for information

[1] MA Clean Energy and Climate Plan for 2050 (https://www.mass.gov/info-details/massachusetts-clean-energy-and-climate-plan-for-2050)

('Requested Information') described in the public notice as well as in additional comments, as referenced in the attached map.

BOEM Requested Information: NCCOS suitability modeling

In general, BOEM's WEA suitability analysis modeling should identify and avoid the following areas in the siting of offshore wind in the Gulf of Maine: 1) areas of high-density fishing activity and value across fishing sectors and state fishing fleets; 2) areas of dense concentrations of large whales, especially the North Atlantic right whale and other endangered whales;[2] 3) areas identified as priority for the nesting, staging, foraging, and migration of bird and bat species, particularly federal and state endangered and threatened species; and 4) benthic habitats important to vulnerable fish life stages such as spawning and nursery areas.

The Commonwealth has reviewed the list of data layers under consideration by BOEM that will be employed in a spatial suitability model for draft WEAs by the NOAA National Centers for Coastal Ocean Science (NCCOS). The list appears to be comprehensive and includes existing, pertinent, and publicly available information. That said, there are maritime uses and species within the Gulf of Maine for which reliable spatial data are not currently available or that require further development and analysis. There is work underway to begin filling known data gaps that should be incorporated into modeling efforts as it becomes available. For example, vessel tracking on lobster vessels will be required for all federal permit holders by the end of 2023 (Massachusetts has required it as of May 2023), additional aerial surveys by the New England Aquarium targeted at North Atlantic right whales have begun off the coast of Maine and will continue into January 2024, the mapping of large scale seafloor characteristics (known as seascapes[3]) out to 24 nautical miles (nm) has been completed, NOAA and its partners are mapping coral and sponge habitats in the eastern Gulf of Maine, and tracking and mapping of avian species across the Gulf of Maine is ongoing. BOEM should identify these developing data sources and seek to evaluate how the information may be incorporated into the planning process and future project-specific development.

With the incorporation of the most up to date and spatially relevant data, the suitability analysis that is under development in partnership with NCCOS has the potential to provide clear recommendations to inform draft WEAs. However, transparency on model inputs, rankings, and weighting is critical for broad understanding and acceptance of model outputs. BOEM should provide information to stakeholders relating to the suitability analysis including how the weights and ranking of data layers were determined and should provide an opportunity to review these model components prior to the release of the draft WEAs.

BOEM Requested Information: Additional data for NCCOS suitability modeling & transmission

Regarding BOEM's request for recommendations on data to inform modeling for areas between the Call Area and the coastline that may be suitable for transmission, BOEM should look to seafloor mapping products such as surficial sediment texture, hard bottom, boulder fields, depth to bedrock, seascapes, and slope to determine areas of higher probability for achieving the greatest amount of cover over buried cables. BOEM should also work with the National Marine Fisheries Service (NMFS) and state fisheries agencies to avoid important bottom habitats, such as those known to be important spawning areas; and with NOAA's coral mapping program to avoid areas known to be dense with corals, sponges, and sea pens. Finally, BOEM should continue to coordinate with states, federal agencies (e.g., NMFS, Stellwagen Bank National Marine Sanctuary), and other stakeholders to review and analyze data to incorporate into the planning and leasing for offshore wind.

[2] Blue, Fin, Humpback, North Atlantic right, Sei, and Sperm whales are all listed as endangered in Massachusetts.

[3] https://www.northeastoceancouncil.org/committees/ocean-and-coastal-ecosystem-health/hcom/

Offshore wind development in the Gulf of Maine represents an important opportunity to leverage new and existing data to improve knowledge of the seafloor and ecosystem. There are several types of seafloor characterizations that could assist in siting, constructing, and deconflicting offshore wind infrastructure with existing uses and resources, including multibeam bathymetry, sidescan sonar, subbottom acoustic profiling, and magnetometry. Products derived from bathymetry such as seascapes and slope would help determine the best locations for infrastructure such as anchors and cables that will be associated with floating offshore wind platforms. Sidescan imagery and backscatter intensity can provide an idea of the more detailed features of the seafloor to direct future activities toward softer sediments and flatter areas. Seafloor slope and hardness can also be used as indicators to identify areas that are likely to harbor corals. Subbottom acoustic profiles can identify the depth to bedrock or other sediment strata that would make construction activities more challenging. Depth to bedrock, the locations of boulders, and areas of steep slope are important to ensuring that future cables can be adequately buried and protected from fishing, research, and navigational activities. These seafloor mapping techniques can also identify hard bottom habitat areas and archaeological resources that should be avoided. While partnering with NOAA's Office of Coast Management on developing a seascapes map in the Gulf of Maine, the Northeast Regional Ocean Council (NROC; of which Massachusetts is a member) identified that the most limiting data feature is high resolution (8-meter or better) bathymetry. The NROC seascapes effort could only map to 24 nm from shore because of the severe limitations in data quality throughout the deeper portions of the Gulf of Maine. Seafloor characterization data collected in the course of wind farm development should be leveraged to further seafloor mapping efforts and support informed development of offshore wind arrays, inter-array cabling and export cable corridors.

BOEM Requested Information: Areas requiring further analysis

Through this Call for Information and Nominations, BOEM identified four specific Areas Requiring Further Analysis within the current Call Area: Lobster Management Area (LMA) 1, Platts Bank, Atlantic Large Whale Take Reduction Plan Restricted Areas (ALWTRPRAs), and Georges Bank (see attached map). In general, Massachusetts supports the exclusion of sensitive habitats that are known to support a variety of marine species and/or high-density fishing areas (including transit areas) from further consideration for offshore wind leasing.

The Commonwealth concurs with BOEM's proposal to define Georges Bank with a 140-meter (m) contour and supports excluding areas within a 10-kilometer (km) buffer of this boundary (see attached map) from offshore wind leasing in order to protect access to important fishing grounds and habitat for marine mammals and seabirds and to minimize disturbances to these uses and habitats associated with offshore wind development. Existing aerial and acoustic survey data as well as probability models identify areas adjacent to Georges Bank as highly important to whales and seabirds. Data suggest seasonal aggregations of North Atlantic right whale habitat along this southern boundary of the Call Area that extend beyond 10 km. BOEM, in consultation with the NMFS, state protected species experts, and others, should consider additional buffer distances beyond the proposed 10 km in the spatial analysis process (see attached map).

The Commonwealth also supports the exclusion of Platts Bank from further consideration for offshore wind leasing. Platts Bank has been identified as an important area by the Massachusetts lobster, multispecies groundfish, and for-hire fisheries. It is also a foraging area of regional importance to marine mammals and seabirds. However, while BOEM defines Platts Bank using the 100-m depth contour, the 140-m contour may more accurately define Platts Bank, both based on the slope of bathymetry and the intensity of groundfishing activity depicted in the NOAA Fishing Footprints data.

BOEM should consider the delineation of Platts Bank using the 140-m contour with known concentrations of fishing activity, as shown in the attached map.

The ALWTRPRAs are seasonal trap gear closures that overlap with areas of high North Atlantic right whale abundance. The goal of the closures is to reduce the risk of serious injury and mortality caused by entanglement in trap gear. These areas generally reflect a seasonal presence of North Atlantic right whales and represent important feeding and nursery habitats. Portions of the ALWTRPRAs overlap with areas that are important to the Massachusetts multispecies groundfish, monkfish, and lobster fisheries. Specifically, the Massachusetts ALWTRPRA overlaps with an identified area of high groundfish landings (lbs.)[4] on the western side of Wilkinson Basin[5] identified as "First Edge" by the Massachusetts groundfish industry (see attached map) while the southern area of the Great South Channel ALWTRPRA overlaps with areas that are important to seabirds, whales, and the fishing industry. Where the ALWTRPRAs overlap with areas of high-density fishing activity or high aggregations of marine mammals or seabirds, they should be further evaluated in the spatial analysis for offshore wind siting.

BOEM Requested Information: Recreational and Commercial fishery use of the Call Area

Massachusetts commercial and for-hire fishering industries conveyed a strong interest in protecting important fishing grounds on Platts Bank, the northern flank of Georges Bank (buffered by 10 km), the areas due east of the Western Gulf of Maine Closure Area, "First Edge" on the western side of and several other areas in Wilkinson Basin, the area of Great South Channel below the 41.75 latitude line (see Georges Bank buffer extension to 41.75 in the attached map), as well as offshore lobstering areas on Georges Bank and near the Hague Line. The Commonwealth recommends that BOEM evaluate these important fishing areas for potential exclusion from WEA consideration. Fishers also requested that BOEM consider the importance of the Redfish Exemption Area to the south and east of the Cashes Ledge Habitat Management Area when applying the site suitability model for siting the WEAs.

In addition, Massachusetts fishers showed interest in protecting access to valuable fishing areas by ensuring direct transit routes from Massachusetts ports (Gloucester, Boston, Scituate, Provincetown, Chatham, New Bedford) to these offshore fishing areas. BOEM should seek to implement the WEA site suitability analysis and placement of WEAs such that important transit routes are preserved to the maximum extent practicable. Alternatively, BOEM should consider the identification of WEAs which are spaced to allow for suitable transit and fishing activity.

Finally, many fishers, as well as fisheries agency staff, expressed concern that future offshore wind arrays, service platforms, and associated cables could prevent federal and state trawl surveys from accessing long-term survey stations that are necessary for stock assessments. BOEM should work closely with NMFS to ensure that impacts to these important stock assessment surveys by future offshore wind development and infrastructure are avoided and minimized.

BOEM Requested Information: Habitat and species requiring special attention

Numerous federal and state listed threatened and endangered species are present in the Gulf of Maine. Areas of important habitat for these and other species within the Call Area should be considered while siting of Gulf of Maine WEAs. As discussed above, BOEM and NCCOS should use the best available data, including small and developing data sets, on the location of sensitive habitat

[4] The Wilkinson Basin: Area of high groundfish landings (lbs.) depicted in the attached map is 40% of the Wilkinson Basin area yet is the source of almost 60% of the total groundfish landings in the basin from 2014-2020.

[5] Here, and elsewhere, the Commonwealth defines Wilkinson Basin by the 200 m bathymetric contour.

areas. Some sensitive habitats, including those within 20 nm of shore, Habitat Management Areas, and Georges Bank, are already excluded from offshore wind siting, with more areas under consideration for exclusion. BOEM should also explore the possibility of creating exclusion zones around islands that have been identified as important seabird nesting habitat, and around seafloor areas characterized as important coral habitat and/or essential fish habitat.

After leases are issued and as individual projects are developed, BOEM and relevant federal partners at NOAA, U.S. Fish and Wildlife Service (USFWS), and elsewhere will likely require mitigation and monitoring strategies in line with previous wind energy projects. Mitigation strategies to avoid and minimize harm to wildlife can include vessel speed restrictions, protected species observers, time of year restrictions, and adaptive turbine curtailment especially during migration, for example. To support future monitoring, to appropriately target specific mitigation measures, and to adapt and expand requirements as appropriate for the transition to floating platforms, baseline information on wildlife is important. In addition to baseline information, BOEM and future developers should support, help expand, and use available data to adaptively improve avoidance and minimization strategies for impacts from construction and operations. Beginning now and continuing through the leasing and development of the WEAs, BOEM, other federal partners and developers should evaluate how to establish systematic biological surveys to detect, map, and avoid important wildlife areas. For such surveys, BOEM and developers should consult with the Regional Wildlife Science Collaborative and academic and non-profit entities to ensure best practices for wildlife surveys to maximize data quality, statistical power, and geographic coverage. This should also include consulting academic and non-profit subject matter experts who can advise on predicted changes to species ranges or behavior as a result of climate change. These monitoring methodologies should be considered for implementation within the Maine research array.

BOEM should develop baseline data via a marine mammal survey before construction occurs to determine how North Atlantic right whales and other whales use the WEAs to help plan for avoidance and mitigation during construction and operations. Comparable data collection should continue into the construction and throughout the operations phase to facilitate adaptive management. A coalition of states is developing an array of acoustic receivers to detect calling large whales. BOEM and future developers should support, help expand, and use the data from this network to improve avoidance and mitigation strategies for protecting marine mammals in the Gulf of Maine. BOEM should also work with the USFWS, states, and knowledgeable non-governmental organizations to develop baseline data followed by comparable data during construction and operations on how birds, bats, and sea turtles forage and migrate across the Gulf of Maine. Lastly, BOEM should leverage the existing efforts by NOAA, New England Fisheries Management Council, and academic institutions to build upon efforts to map coral gardens within the Gulf of Maine. Opportunities to expand a recent NOAA-funded effort to map corals in the eastern Gulf of Maine throughout the Gulf, with a focus on future WEAs and likely cable pathways to shoreside interconnections should be evaluated. BOEM and future developers should work regionally to address potential cumulative impacts to wildlife, especially rare and endangered species and should explore the possibility of developing a compensatory mitigation plan to ensure future development of offshore wind results in a net positive outcome (e.g., net increase in habitat area) for such species.

BOEM Requested Information: WEA and wind farm size, layout, and spacing

As articulated above, in the planning for and siting of WEAs, BOEM should designate multiple lease areas sufficient to accommodate at least 13 GW of offshore wind energy capacity, with each designated area capable of supporting an individual commercial-scale project (1 to 1.5 GW). Using the power production planning value recommended by the National Renewable Energy Laboratory, the area required to meet this planning target is approximately 1,250 mi^2 (800,000 acres),

which represents less than 6% of the total area identified by BOEM in its Request for Information. Additionally, as part of the siting process, BOEM should consider floating offshore wind array configurations other than 1 nm by 1 nm (as in the Southern New England WEAs). Different spacing and alignment may be more appropriate for floating offshore wind platforms and could influence the sizing and placement of WEAs in the Gulf of Maine. BOEM should also implement transit lanes between WEAs to allow for safe and efficient transit of maritime vessels.

Support for the Maine research array

As stated in our June 5, 2023, comment letter to BOEM, the Commonwealth supports the state of Maine's floating wind research array in the Gulf of Maine. The 9,700-acre offshore wind energy research lease represents an important opportunity to test designs and methods, understand impacts and opportunities, and develop technologies for the emerging floating offshore wind industry. It will also present important opportunities for regional collaboration from academic institutions to advance floating offshore wind in the United States. The timeline for the research array should closely align with that for commercial leasing in the Gulf of Maine. However, BOEM should ensure that commercial leasing will not be delayed due to development timelines or research schedules associated with the Maine research array. Effective and efficient communication channels should be established early in the process to allow for results of the research array to inform development in commercial leases in the new Gulf of Maine WEAs and elsewhere. This communication will allow for adaptive management as results from the research array can be integrated and used to inform construction and operations. As with commercial projects, the research array should be designed and operated to minimize potential impacts to marine resources, habitats, and uses.

Importance of stakeholder engagement

Commercial offshore wind leasing in the Gulf of Maine will require engagement with stakeholders throughout all planning phases. The Call Area is a large and extensively used area, supporting unique and endangered wildlife, abundant fisheries, and diverse cultural and economic resources. As such, adding new uses such as offshore wind must include meaningful stakeholder engagement. The public meetings that BOEM has held during the Request for Information and Draft Call Area stages of the Gulf of Maine leasing process have allowed various stakeholders to voice support and concerns. BOEM should continue to include robust stakeholder engagement throughout the establishment of WEAs, leasing, and permitting. As it moves toward offshore wind leasing in the Gulf of Maine, BOEM should continue to provide opportunities for input from stakeholder groups at key decision points. BOEM should strive for a transparent and collaborative leasing process, and to clearly communicate opportunities for stakeholder input.

The Commonwealth sincerely appreciates the ongoing collaborative efforts with the states of Maine and New Hampshire regarding our shared interests in planning for offshore wind in the Gulf of Maine and we look forward to continuing our joint efforts in supporting BOEM as the process moves forward. We also appreciate the joint efforts of the six New England states and federal agencies in developing a joint transmission development framework that will support the long-term goals to advance the integration of necessary clean energy, including offshore wind.

Thank you for the opportunity to provide comments on the Call for Information for offshore wind development in the Gulf of Maine. The Commonwealth appreciates BOEM for its expertise in siting energy on the continental shelf and working with the interested agencies and entities through the Gulf of Maine Task Force. My agencies and offices look forward to continuing to work with BOEM, key stakeholders like our commercial fishing industry, other federal agencies, and the states

of Maine and New Hampshire as the planning process for siting offshore wind in the Gulf of Maine continues.

Sincerely,

Rebecca Tepper, Secretary EEA

Attachment: Gulf of Maine map

cc:
James Bennett, David MacDuffee, Luke Feinberg, Bureau of Ocean Energy Management
Marc Sanborn, NH Department of Environmental Services
Dan Burgess, Maine Governor's Energy Office

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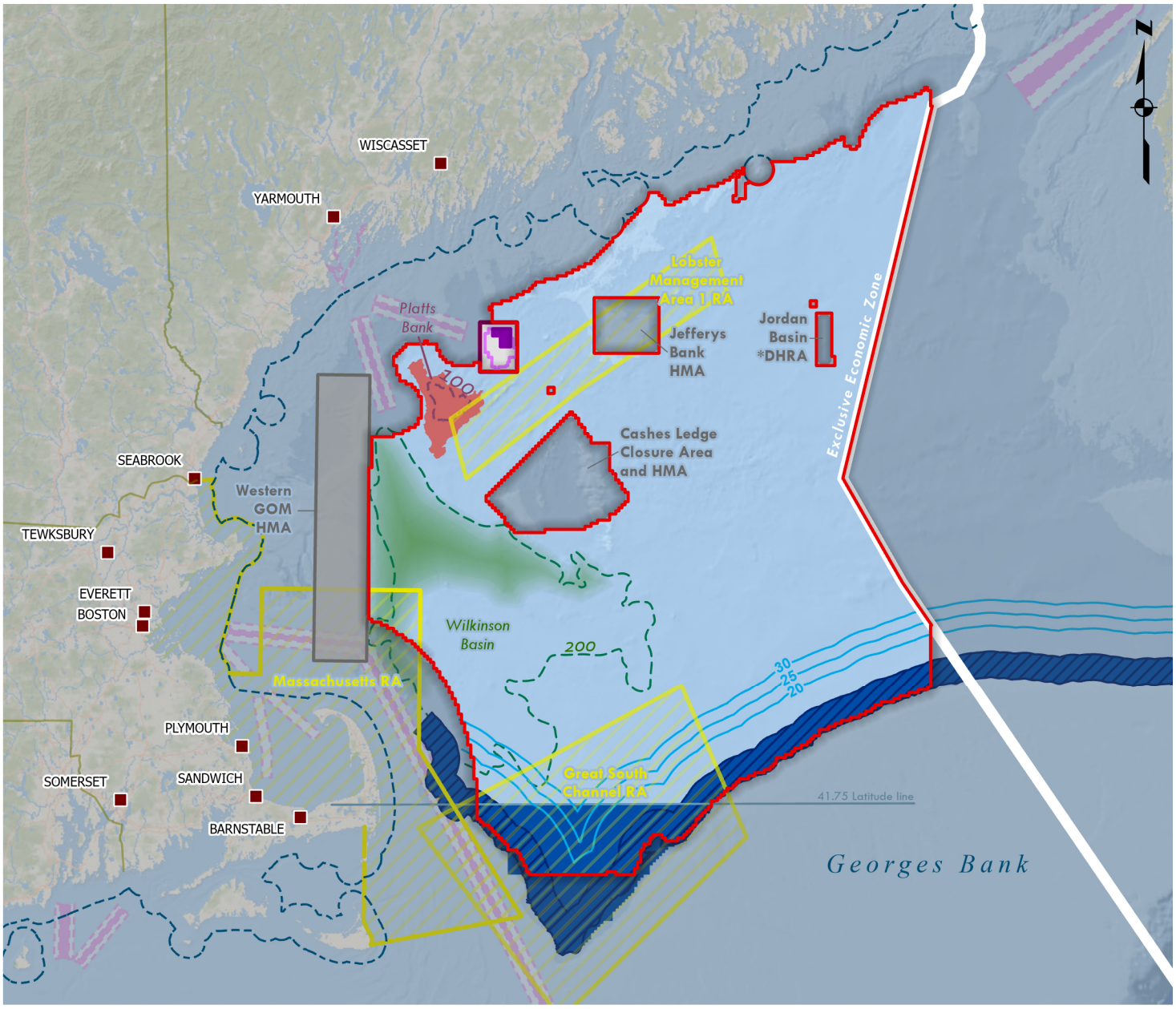
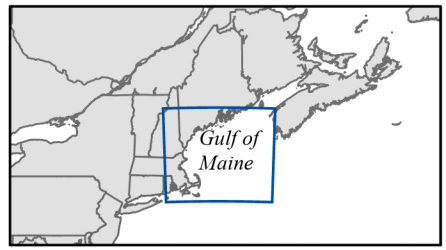


Map coordinate system: WGS 1984 Web Mercator (auxiliary sphere)
Basemap source: CHS, Esri, GEBCO, DeLorme, NaturalVue

Legend

- Gulf of Maine Call Area
- Gulf of Maine (GOM) Request for Competitive Interest (RFCI)
- Maine Research Array Narrowed Area of Interest (AOI)
- Maine Research Array Requested Lease Area
- Georges Bank 10-km buffer
- Georges Bank additional buffer distances (km)
- Georges Bank buffer extended to 41.75 latitude line
- Western GOM Habitat Management Area (HMA)
- Platts Bank: 100 m contour
- Platts Bank: 140 m contour
- Wilkinson Basin: 200 m contour
- Wilkinson Basin: Area of high groundfish landings (lbs.)
- Atlantic Large Whale Take Reduction Plan Restricted Areas (RA)
- US Coast Guard Traffic Separation Schemes
- US Coast Guard Traffic Lanes
- Select New England Electrical Transmission Substations
- Submerged Lands Act Boundary

*Dedicated Habitat Research Area (DHRA)



Massachusetts Office of Coastal Zone Management
Executive Office of Energy & Environmental Affairs

6/8/2023

BOEM Gulf of Maine Call Area