August 29, 2022

J.W. Mauger
Rear Admiral, U.S. Coast Guard,
Commander, First Coast Guard District
408 Atlantic Avenue
Boston, MA 02110-3350

Re: Port Access Route Study: Approaches to Maine, New Hampshire, and Massachusetts

Dear Admiral Mauger:

NOAA’s Stellwagen Bank National Marine Sanctuary (SBNMS) appreciates the opportunity to provide input to the United States Coast Guard (USCG) First District Port Access Route Study (PARS) on Approaches to Maine, New Hampshire and Massachusetts (MNMPARS)\(^1\) and ask that you consider the following recommendations:

1) Maintain the status quo for the Boston Traffic Separation Scheme (TSS);
2) Establish a fairway or TSS for vessel traffic heading in a north/south direction between the Cape Cod Canal and Ports north of Boston;
3) Establish a fairway or TSS in the northern portion of SBNMS for vessel traffic heading in a northeast/southwest direction between Boston and the Bay of Fundy TSS;
4) Address future activities of concern to SBNMS in this study such as wind energy development, larger vessel traffic entering the port of Boston and future operations at the Northeast Gateway deepwater port; and
5) Add environmental impacts associated with vessel operations such as water/air pollution discharges and ocean noise as a consideration for this PARS and all future PARS conducted by the Coast Guard.

The basis for these comments stems from our mandate under the National Marine Sanctuaries Act to protect sanctuary resources while also promoting uses consistent with that core resource protection mandate (16 U.S.C. 1431). We maintain that safe and vibrant maritime commerce can be accomplished in conjunction with the protection of living marine resources in national marine sanctuaries. SBNMS has a long-term collaborative partnership with the USCG and it is in that spirit we submit these comments and recommendations.

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MAINTAIN STATUS QUO FOR BOSTON TRAFFIC SEPARATION SCHEME

We request that no changes be made to the Boston TSS. This TSS, which transits the SBNMS in an east/west direction, is a powerful existing tool that separates vessel traffic from sensitive ecological resources and reduces the risk of environmentally harmful collisions between whales and shipping traffic in the sanctuary. Collaboration between NOAA (SBNMS staff and the National Marine Fisheries Service) and USCG to shift and narrow the Boston TSS in 2007 continues to reduce risk to feeding large whales in the sanctuary from both ship strike and underwater radiated noise exposure by minimizing exposure to where whales are present. (Figure 1). AIS data analyses indicate that the TSS continues to be particularly effective at condensing and reducing the environmental footprint of large commercial traffic (tankers, cargo, large passenger) coming to and from Boston from the south.

Figure 1. Top 50% of whale density locations from SBNMS marine mammal database and current Traffic Separation Scheme layout with SBNMS boundaries.
PROPOSED VESSEL ROUTE BETWEEN THE CAPE COD CANAL AND PORTS NORTH OF BOSTON

We also request the establishment of a north/south fairway or TSS for vessel traffic between the Cape Cod Canal and points north of Boston. Tug-tow and barge traffic densities are highest inshore of the sanctuary’s western boundary along the north and south shores of Massachusetts (Figure 2). However, there is a strong additional band of Massachusetts Bay transiting tug-tow traffic coming through the Cape Cod Canal that is widely distributed in the western part of SBNMS. Although this traffic tends to be operating at lower speeds and thus presents lower collision risks for whales, it does generate significant underwater radiated noise. Condensing this traffic pattern towards the sanctuary’s western-most boundary would reduce noise exposure on Stellwagen Bank and particularly on the northwestern corner of the bank, which is an important habitat for several whale and fish species that use lower frequencies to communicate with one another during feeding activities. The northwestern corner of Stellwagen Bank is also a prime destination for fishing and whale watching traffic. Thus, condensing tug-tow traffic to the west of this important ecological feature would also reduce overlap in spatial use and potential conflict among maritime sectors.

Figure 2. Top 50% of whale density locations from SBNMS marine mammal database and 2021 tug tow traffic with SBNMS boundaries. Figure shows approximate location of proposed fairway or Traffic Separation Scheme.
Similar analyses also suggest that SBNMS would benefit from a fairway or TSS to consolidate vessel traffic (primarily tankers) coming and going from Boston and Canadian ports in the Bay of Fundy. The densest band of larger commercial traffic leaving Boston for northern ports is more condensed at the sanctuary’s northwestern corner and becomes more distributed in the northeastern part of the sanctuary (Figure 3). The general pattern for this traffic is preferred relative to vessel traffic taking a more easterly direction when leaving Boston because it avoids the northwestern corner of Stellwagen Bank, which is a biologically important feeding area for several populations of large baleen whales and spawning area for commercial fish. This band of traffic is also south of areas used heavily by feeding whales on Jeffreys Ledge.

Figure 3. Top 50% of whale density locations from SBNMS marine mammal database and 2021 tanker traffic with SBNMS boundaries. Figure shows approximate location of proposed fairways or Traffic Separation Schemes.
ADDRESS FUTURE ACTIVITIES OF CONCERN TO SBNMS

There are several future activities that are of concern to SBNMS staff due to potentially negative impacts to sanctuary resources and we request that projections for them be included in this study. Offshore wind development in the Gulf of Maine has the potential to influence vessel traffic patterns in sanctuary waters, despite the exclusion of the sanctuary as an active siting environment. Vessels supporting construction and long-term maintenance during operations are likely to come and go from ports in Massachusetts and transit through SBNMS to future sites in the Gulf of Maine Planning Area. The SBNMS Advisory Council has raised concerns about the need to properly plan for vessel traffic associated with potential wind development areas, along with any submarine cable routes that will need to transit through SBNMS, both for power transmission and telecommunications. In addition to wind energy development, the completion of the Boston Harbor Dredging Project will allow larger vessels to access the Port of Boston. Larger vessels can produce higher levels of underwater noise in comparison to vessels with similar design and operational characteristics. Modifications to routing and operations that will apply to these vessels while they are in the sanctuary will help our staff predict whether noise levels in important habitats will increase. Finally, we note that the Area to be Avoided centered on the Northeast Gateway Deepwater Port currently affects vessel traffic patterns just outside the sanctuary’s northwestern boundary. Future use plans for the port and/or any decision to decommission this port should be addressed in this study. We would request any adjustments to existing routes addressing these future uses to offer more protection for sanctuary resources in addition to reducing threats of vessel collisions.

ADDRESS ENVIRONMENTAL IMPACTS OF VESSEL OPERATIONS IN THIS AND FUTURE PARS

Given the clear linkage between vessel operations and environmental impacts, we request that you add an additional overall objective for this study to “determine and mitigate environmental impacts of existing and anticipated vessel traffic.” We further request that the Coast Guard consider adding this objective to all future Port Access Route Studies. As we’ve shown in the past by working together to shift the Boston TSS, the placement of fairways and traffic separation schemes can have a dramatic impact on mitigating environmental impacts such as ship strikes on endangered marine mammals. These impacts are not limited to such incidents but also include issues like water and air pollution discharges in addition to impacts from underwater radiated noise. Research conducted by our staff since 2006 has recognized the sanctuary as a focal point for studying and reducing the influence of underwater radiated noise from vessels. This is because this noise uses the same lower frequency range that fish and whales use to communicate. Our

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Currently, PARS overall objectives include, but are not limited to, the following:
1) Determine present vessel traffic density.
2) Determine present vessel traffic movement.
3) Determine potential vessel traffic density.
4) Determine if existing vessel routing measures are adequate.
5) Determine if existing vessel routing measures require modifications.
6) Determine the type of modifications.
7) Define and justify the needs for new vessel routing measures.
8) Determine the type of new vessel routing measures.
9) Determine if the usage of the vessel routing measures must be mandatory for specific classes of vessels.
research also suggests that there is a 60-70% reduction in communication space for foraging North Atlantic right whales due to increasing background noise from vessels.³

Our staff can assist with understanding of the distribution and levels of noise generated by vessel traffic by developing predictive noise models. These models can support assessing how any new vessel routing measures will influence noise levels in the sanctuary. To ground-truth such models, we’ve maintained year-round listening stations in the sanctuary since 2016 (Figure 4).

Figure 4. Long term sound monitoring stations maintained in SBNMS

Recording data from these devices show that management measures such as concentrating vessel traffic and mandatory speed restrictions can result in significant reductions of vessel noise and these reductions have a significant, positive impact on the soundscape of the sanctuary by increasing the communication space for marine mammals, most importantly, baleen whales.

CONCLUSION

We believe that safe and responsible vessel traffic management within and around national marine sanctuaries can assure the protection of nationally significant marine resources. We request that the MNMPARS process take these recommendations into account, noting that significant conservation benefits can arise through rather minor adjustments and effects on shipping. We look forward to continued engagement with the USCG on the MNMPARS process and would also like to note that any specific actions proposed by the USCG as a result of the MNMPARS that may affect the resources of Stellwagen Bank National Marine Sanctuary require consultation with the Office of National Marine Sanctuaries (16 U.S.C. 1434 sec 304(d)).

At an appropriate point in the future, we would also appreciate your staff providing a briefing to our Sanctuary Advisory Council on the status of this study. If you have any questions or comments regarding this input, please feel free to contact me at 781-635-0163 or at pete.decola@noaa.gov.

Thank you for considering our comments and for our continued collaboration to safeguard America’s treasured marine resources.

Sincerely,

Captain Peter DeCola
U.S. Coast Guard (retired)
Superintendent
Stellwagen Bank National Marine Sanctuary

cc:
Todd Callaghan, Massachusetts Department of Coastal Zone Management
Mike Pentony, NOAA Greater Atlantic Regional Fisheries Office
Jon Hare, NOAA Northeast Fisheries Science Center