

New York Bight Fish, Fisheries, and Sand Features: In the Field

Mini STATEMENT OF WORK

Intro

The Bureau of Ocean Energy Management (BOEM) through the Marine Minerals Program (MMP) is offering a cooperative agreement opportunity to conduct field research to serve the public interest in offshore sand resources by investigating existing fish communities and their recovery following dredging of sand resources within the New York Bight (NYB) in the northwest Atlantic Ocean.

Background

BOEM anticipates that multiple sand resources may be accessed in federal waters of the New York Bight (NYB; waters off of New Jersey and New York) for shore protection projects within the next 5 years. Since dredging on the NYB OCS has been infrequent relative to other regions, research on biological activity and biophysical coupling will complement the geophysical and geotechnical data, and strengthen environmental analyses that consider the potential effects of dredging and benefits of mitigation measures.

The NYB is inhabited by a diverse community of fishes and invertebrates, with both resident and transient species. Many of these species are economically important to commercial, recreational, and charter fishing industries; protected species also occur in the NYB. Additionally, strong seasonal fluctuations in abiotic factors are often linked to changes in biological diversity. Therefore, the potential effects of sand dredging on ecosystem health and the recovery of fishes may vary spatially and temporally.

Purpose

The purpose of this study is to obtain field data on how marine fishes associate with sand habitats, specifically around potential sand resources in the NYB. BOEM wants to better understand how dredging impacts NYB fish and fisheries, including seasonally.

Objectives

Specific objectives include studying marine fishes in the NYB, especially ecologically and economically important species, including protected species. Stakeholder engagement should be used in addition to field research. Field data should be collected on species abundance, size composition, life stage, and distribution across the spatial continuum from the air-sea interface to the sea-sediment interface, to understand processes driving meso- and micro-scale patterns in species assemblages, biodiversity, and habitat associations.

If possible, the study should monitor conditions before, during, and after dredging, and should document biological activity and succession in these areas.

A recent BOEM-funded study analyzed existing data in the NYB (Grothues et al., 2021; [Executive Summary](#), [Volume 1](#), and [Volume 2](#)) and identified several key knowledge gaps:

- a better understanding of basic life history and ecology of NYB fishes,
- the role of bathymetric, bedform, and benthic features on the distribution of fishes including water column piscivorous and planktivorous fishes,
- behavioral responses to dredging activity and subsequent environmental change, and
- the effect of scale on our understanding of habitat and ecosystem function.

Study Area

The Study Area extends from the offshore extent of state jurisdiction (3 nm from shore) to 50 m deep (approximately 9 nm from shore), from Cape May, NJ through Montauk, NY, though field work will be focused in water <30 m deep (Figure 1). Data from state waters should be integrated as relevant and feasible. Specific sand resources with a higher potential for dredge projects may be targeted off NJ and NY (see full Statement of Work).

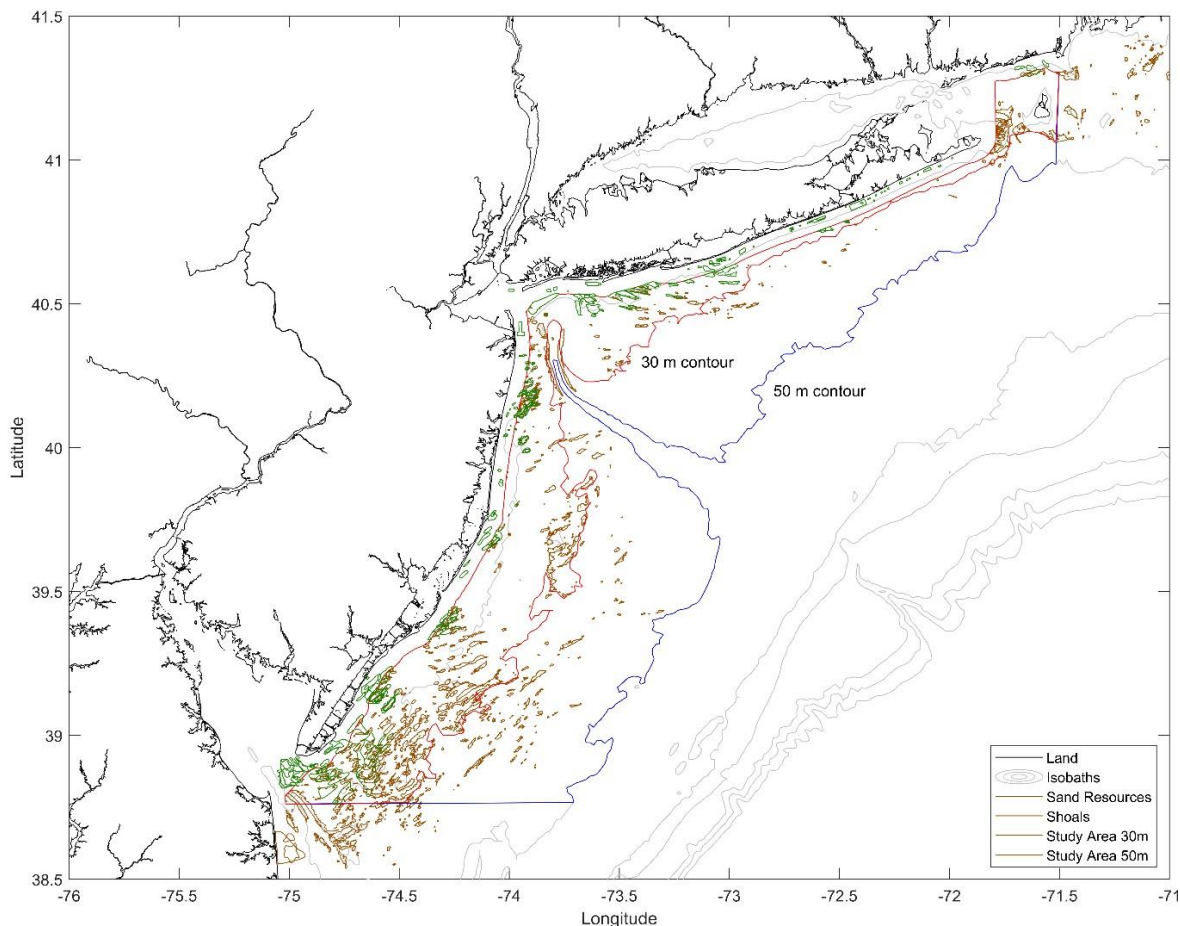


Figure 1. New York Bight (NYB) Study Area with Potential Sand Resources (from Grothues et al., 2021)

Total amount: \$825,000

Initial amount: FY21: \$135,000 (+ FY22: \$220,000)

Start: September 01, 2021

POP: Four years, until September 01, 2025

Project Title: New York Bight Fish, Fisheries, and Sand Features: In the Field

Open to: North Atlantic Coast Cooperative Ecosystem Studies Unit

Evaluation Criteria. All proposals will be evaluated in accordance with the following criteria:

1. Scientific Quality and Impact (10%):

Is the proposed study of high scientific quality with clear objectives? What is the relevance to BOEM mission?

2. Work Plan/Methodology (30%):

Is the strategy coherent and clear? Are the scientific objectives appropriate for the proposed time frame? Are the geographic areas selected for study appropriate? Are the proposed methods appropriate and adequate to meet the objectives? Are logistics adequately addressed? Does the proposal address contingency plans for missed field work, equipment failure, and other problems?

3. Experience/Competence of Research Personnel (25%):

Has the Applicant demonstrated (through bibliographic references, relevant education, experience, awards, etc.) that they are capable of doing the proposed research? Has the Applicant demonstrated a thorough knowledge of the scientific problem? Have products been on schedule and within budget?

4. Budget Justification and Clarity (20%):

Is project staffing sufficient (e.g., experience, knowledge and skills) to accomplish the proposed goals? Are field expenses, supplies, lab work, and other expenses appropriate? Are expenses adequately itemized?

5. Planned Products and Dissemination of Results(15%):

Are the products clearly defined? Will they be useful for offshore energy planning and decision-making? Will the results be published in a peer-reviewed form? Does the proposal indicate the Principal Investigator will provide data and metadata in a format that meets Federal data standards? Will the products be accessible and comprehensible to the public, including underrepresented groups and schools?

Deliverables

Deliverable products shall be submitted to the e-mail addresses shown below in accordance with the following schedule. In the event that the cooperator encounters or anticipates difficulty in meeting the delivery schedule, the COR will be notified in writing of the reasons for the delay and the projected revised delivery dates. Any other related effects of project delay will also be summarized.

Deliverable	Distribution	Due Date
A. Quarterly Progress Reports	One electronic copy to: COR CO Chief, DES DES Contact	At the end of each fiscal quarter
B. Project Management Plan	One electronic copy to: COR/CO	Draft within 20 days Final within 44 days
C. ATN Data Deliverable	Period data submission directly to the ATN *CO	Within 90 days of data collection
D. BOEM Data Deliverable	DVD or Hard Drive medium mailed to BOEM Sterling, VA office to the care of the ESP Representative *CO	Within 3 years, 9 months
E. Field Survey Plan	One electronic copy to: COR *CO	Within 6 months
F. Data analyses and Models	One electronic copy to: COR	Within 3 years, 9 months
G. Final Report	One electronic copy to: COR CO Chief, DES DES Contact	Within 3 years, 9 months

H. Presentation of Results	Presentation at Scientific Meeting (coordination with COR; paper sent electronically to COR, Chief, DES, DES Contact) * CO Outreach to fishing industry	Before end of agreement
I. Education	One electronic copy to: COR/CO DES Contact Outreach to 7-12 school	Before end of agreement
*Transmittal Letter Only		

ADDRESSES FOR DELIVERABLES

<u>Contracting Officer's Representative (COR)</u> Deena Hansen Bureau of Ocean Energy Management Environmental Assessment Division 45600 Woodland Road, VAM-OEP Sterling, VA 20166 Email: Deena.Hansen@boem.gov	<u>Contracting Officer (CO)</u> Dominique Bruce-Morton Bureau of Safety and Environmental Enforcement Acquisition Management Division 45600 Woodland Road, VAE-AMD Sterling, VA 20166 Email: dominique.bruce-morton@bsee.gov
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