

## Center for Coastal Monitoring and Assessment

### Mapping and Analysis to support New York State's Offshore Spatial Plan

[Quick Link to Report](#)

#### Goals and Objectives

The overarching goal of this project is to provide the State of New York with ecological information which will support plans to balance ocean uses and environmental conservation. Project priorities are to:

1. Identify coastal and marine information gaps, and compile high-priority biological, oceanographic and geophysical datasets
2. Develop maps showing the distribution of key species and habitats, and ensure these maps provide information at spatial scales useful to coastal managers
3. Apply an analytical approach that uses existing data, provides estimates of certainty, integrates ecosystem-level dynamics, and fills spatial gaps in survey data
4. Identify significant biological areas (i.e., hotspots), based on species distributions, abundance, and community metrics (e.g., species richness, diversity)
5. Compile data, maps and assessments into formats useful to State and federal decision-makers, offshore renewable energy developers and environmental advocates
6. Provide technical assistance to New York as they assess and integrate ecological and human use information, and identify significant offshore wildlife habitats

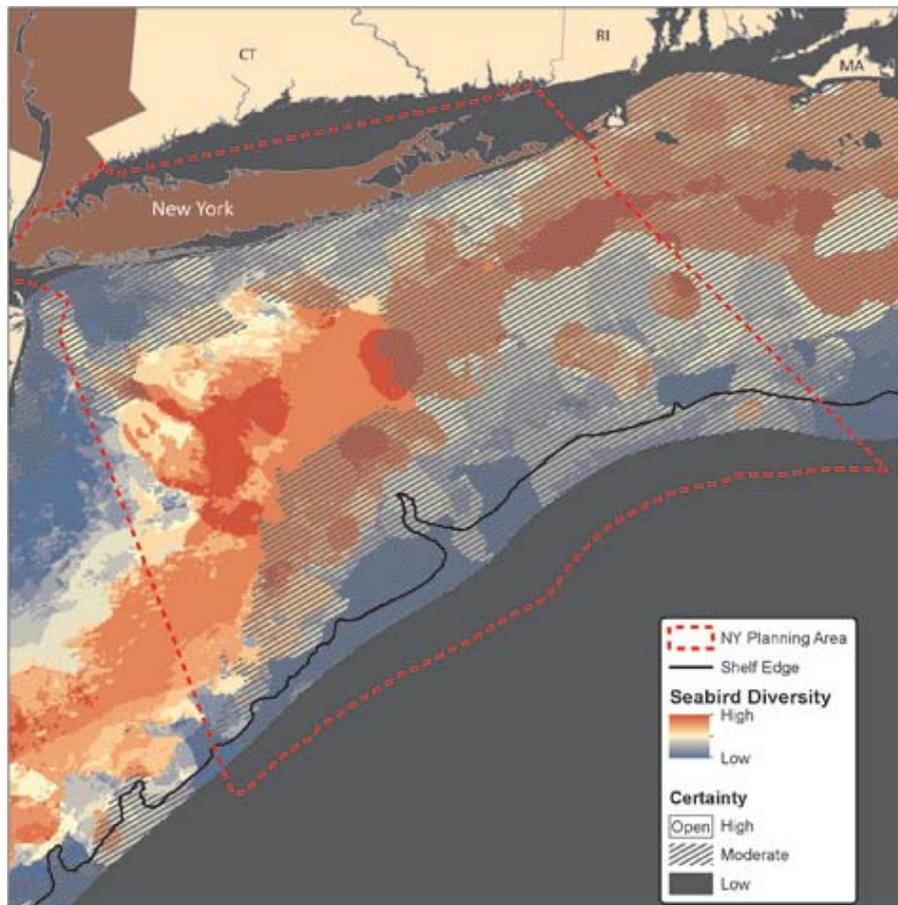


Figure 1. A map showing predicted seabird diversity and estimates of prediction certainty in the New York offshore planning area. This map was developed using a predictive spatial model applied to existing seabird survey data, provided by the Manomet Bird Observatory. Warmer colors identify areas with more species and cooler colors identify areas with fewer species. These types of maps can be used by coastal managers to protect critical seabird habitats and identify the most suitable sites for future wind farms.

## Project Summary

NOAA's Biogeography Branch has been working with the New York Department of State (DOS) since 2010 to interpret existing ecological information which will help New York improve the decision-making process for offshore alternative energy production, support existing ocean uses and protect critical coastal and marine habitats.

By 2013 New York plans to develop an amendment to its federally-approved Coastal Management Program to organize information and support offshore spatial planning. The Biogeography Branch is supporting New York's endeavors in a technical capacity by compiling datasets, developing maps and assessing the spatial distribution of: seabirds, bathymetry, surficial sediments, deep sea corals, and oceanographic habitats. New York plans to integrate this information with other ecological and human use data compiled by others (e.g. The Nature Conservancy, Northeast Fisheries Science Center) in an ecosystem-based management framework.

The ocean area offshore of New York has a significant amount of raw data, ranging from sediment samples to bird observations to ocean temperature profiles. But much of these data are for specific points in space and time, and are difficult to use for spatial planning, especially when decisions must be made in locations which are in-between surveys, have few surveys, have widely varying measurements or require a regional context. Where possible, we overcame these challenges by using a spatial analytical approach which applied predictive modeling to obtain continuous, fine scale and long-term average predictions of species and habitat distributions.

Our work produced derived geographical datasets, and commentaries on the quality of data, analytical methods and best uses of the data. In early 2012 we summarized this information in a report entitled "A Biogeographic Assessment of Seabirds, Deep Sea Corals and Ocean Habitats of the New York Bight". This report can be found at the bottom of this page.

Many academic, state and federal and non-governmental organization partners contributed to this project with data, analyses and reviews. Project partners included: the New York Department of State, Ocean and Great Lakes Program; the University of Alaska, Biology and Wildlife Department; University of Texas, Institute for Geophysics; The Nature Conservancy, Mid-Atlantic Marine Program; the National Marine Fisheries Service (NMFS), Northeast Fisheries Science Center, and the NMFS, Deep-Sea Coral Research and Technology Program.

We hope to continue working with the New York Department of State in the future. We have discussed doing similar work in support of Coastal Management Program amendments for Long Island Sound, and the Great Lakes, and adding data from new surveys, assessing wildlife vulnerabilities to different ocean uses, and integrating ecological information to identify unique and vulnerable offshore areas.



Figure 2. The title page of our report entitled "A Biogeographic Assessment of Seabirds, Deep Sea Corals and Ocean Habitats of the New York Bight: Science to Support Offshore Spatial Planning".

Figure 3. An image of deep-sea coral; information on these corals are a priority data need by the State and will be used to help identify ecologically important areas.

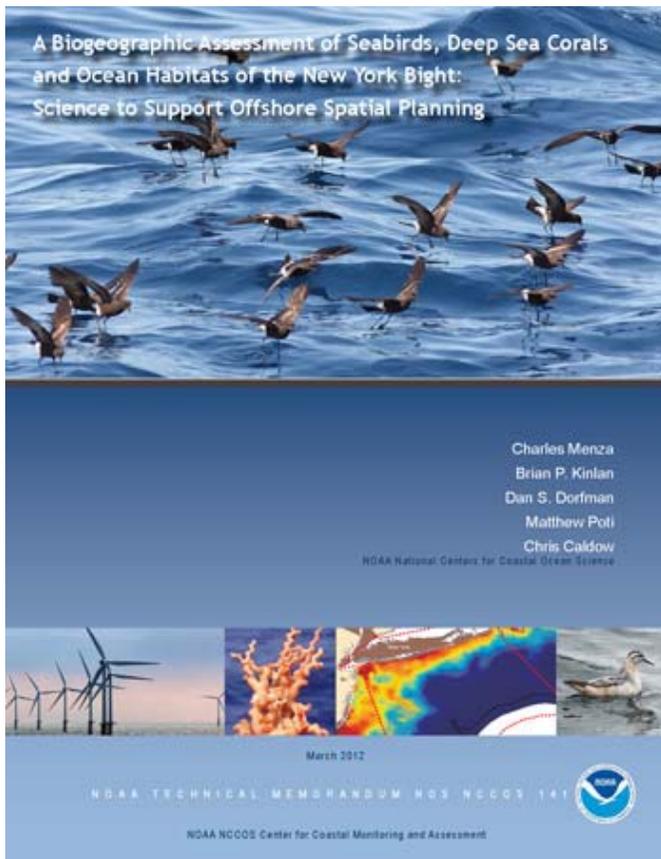


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## Products

- Report: "A Biogeographic Assessment of Seabirds, Deep Sea Corals and Ocean Habitats of the New York Bight: Science to Support Offshore Spatial Planning"
  - [Download All Sections of Report](#)
  - Download Individual Sections of Report
    - [Title Page](#) (PDF)
    - [Executive Summary](#) (PDF)
    - [Chapter 1 – Introduction](#) (PDF)
    - [Chapter 2 – Bathymetry](#) (PDF)
    - [Chapter 3 – Surficial Sediments](#) (PDF)
    - [Chapter 4 – Ocean Habitats](#) (PDF)
    - [Chapter 5 – Deep Sea Corals](#) (PDF)
    - Chapter 6 – Seabirds: [Part I](#), [Part II](#), [Part III](#), [Part IV](#) (PDF)
    - Chapter 6 Appendices - [A](#), [B](#), [C part I](#), [C part II](#), [C part III](#), [D](#) (PDF)
- [Fact Sheet: Mapping and Analysis to Support New York State's Offshore Spatial Plan](#) (PDF)
- Data

- Online supplements to the seabird chapter can be requested from Brian Kinlan at [brian.kinlan@noaa.gov](mailto:brian.kinlan@noaa.gov).

## Partners

- [New York Department of State](#)

## Relevant Links

- [NOAA Coastal and Marine Spatial Planning](#)
- [New York Department of States Division of Coastal Resources](#)
- [New York GIS Clearinghouse](#)
- [The Nature Conservancy's Northwest Atlantic Ecoregional Assessment](#)

## Time Frame

Ongoing: May 2010 - March 2012

## For More Information

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