

Individual Ocean Uses
Northeast United States
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1. INTRODUCTION

The Individual Ocean Uses layer depicts activity areas mapped by participants in the [Northeast Coastal and Marine Recreational Use Characterization Study](#), which was conducted by the [Surfrider Foundation](#), [SeaPlan](#), and [Point 97](#) under the direction of the [Northeast Regional Planning Body \(NE RPB\)](#). In order to fill a regional need to better understand the spatial patterns of important recreational activities in New England, the study was focused on collecting information on commercial whale watching, SCUBA diving, sailing races and regattas, competitive board and paddle events, beach going, wildlife viewing, surfing, and non-motorized boating sports. This document describes the processes for developing the data component of the study which focuses on individual coastal and ocean recreational uses, such as beach going, surfing, board and paddle sports, wildlife viewing, sightseeing, and other activities described in further detail below. Note that SCUBA diving was included in this survey so that data collected from individual users could be viewed alongside data collected in the separate component of this study that targeted SCUBA divers more specifically (see [study technical report for details](#)).

This dataset depicts data from the web-based Individual User Survey (IU Survey) component of the study. The survey employed an opt-in approach where anyone 18+ years of age could participate in mapping the locations of their coastal and marine recreational activities that took place over the last twelve months. This method was optimal for increasing sample sizes to obtain data from specific user group niches (e.g., windsurfers, bird watchers, kayakers) that are difficult to adequately and confidently capture through a general population survey. This approach is particularly relevant for economically valuable and spatially localized activities such as surfing, kayaking, and kiteboarding. These types of activities are practiced by a

relatively small percentage of the overall coastal and marine recreational population, yet they contribute significantly to local economies.

Data collection

To collect spatially explicit data on coastal and marine recreational activities, the team utilized Point 97's survey and mapping platform that was customized to this project and accessible through mobile phones, tablets, and desktop/laptop computers. The online survey was launched on November 13, 2014 and ended April 30, 2015. In the survey, respondents were asked to recount details of their coastal and marine recreation trips over the previous 12 months, and separately, of their last trip, including information about participation in recreational activities, the location of activities, and expenditures made.

Through outreach efforts led by the Surfrider Foundation, survey respondents were directed to a webpage to register for the survey. Respondents then received an email with a unique link to the online survey, which they could use at any time to return to the survey if they did not complete the questions in one sitting. The survey tool allowed users to map recreational activity by placing points on a map that depicted the location where an activity took place. Users could choose from the following categories:

- Beach going (sitting, walking, running, dog walking, kite flying, etc...)
- Scenic enjoyment/sightseeing
- Swimming or body surfing
- Biking or hiking
- Watching birds, whales, seals, and/or other marine life (from shore or private boat)
- Watching birds, whales, seals, and/or other marine life (from a charter/party vessel)
- Photography
- Sitting in the car watching the scene
- Collection of non-living resources (e.g. beach glass, shells, fossils)/beachcombing
- Kayaking or other paddling activity (e.g. canoe, standup paddleboard)
- Boating/sailing
- Surfing
- Camping
- Free diving/snorkeling (from shore or boat)
- Skimboarding
- SCUBA diving (from shore or private boat)
- SCUBA diving (from charter/party vessel)
- Kiteboarding
- Hang gliding/parasailing

Each point represents the response from a unique user; however, the user could record multiple activities at the same point. Users were then asked specific questions about each mapped point and follow-up questions about their most recent trip.

After the data collection phase was completed, the Surfrider Foundation conducted additional outreach to the SWG and gatekeepers to provide an update on the study and to validate the spatial data collected using SeaSketch, a web-based platform that allows registered users to view and interact with mapped ocean data, as well as webinars.

2. PURPOSE

This dataset fills a specific need identified by the Northeast Regional Planning Body to develop a better understanding of how and where humans use the ocean in the Northeast, inform regional ocean planning, and minimize ocean use conflicts. This dataset can also be used by stakeholders representing coastal and marine recreation interests to demonstrate the importance and location of these activities in the region.

3. SOURCES AND AUTHORITIES

- Bloeser, J., Chen, C., Gates, M., Lipsky, A., & Longley-Wood, K. 2015. Characterization of Coastal and Marine Recreational Activity in the U.S. Northeast. Point 97, SeaPlan, & Surfrider

4. DATABASE DESIGN AND CONTENT

Native storage format: ArcGIS File Geodatabase – simple feature class

Feature Types:

Shore-based activities: includes beach going, biking/hiking, camping, collection of non-living resources (e.g. beach glass, shells, fossils)/beachcombing, and hang gliding/parasailing.

Surface water activities: includes boating/sailing, kayaking or other paddling activity, kiteboarding, skimboarding, surfing, swimming/body surfing, and windsurfing.

Wildlife and sightseeing: includes photography, scenic enjoyment/sightseeing, sitting in the car watching the scene, and watching birds, whales, seals or marine life (from shore, private boat, or charter/party vessel).

Diving and Snorkeling: includes free diving/snorkeling, and SCUBA diving (from shore, private boat, or charter/party vessel).

Data Dictionary:

Line	Name	Definition	Type	Size
1	OBJECTID	Uniquely identifies a feature	OBJECTID	*
2	Shape	Geometric representation of the feature	geometry	*
3	other	"1" indicates that the survey participant engaged in an activity not listed as a survey activity choice	short	*
4	otherDesc	Describes, if applicable, the "other" activity that took place at the location	text	50
5	beachGoing	"1" indicates that the survey participant engaged in beach-going at that location	short	*
6	bikeOrHike	"1" indicates that the survey participant biked or hiked at that location	short	*
7	beachcombing	"1" indicates that the participant collected non-living beach resources and/or went beachcombing at that location	short	*
8	camping	"1" indicates that the participant went camping at that location	short	*
9	photography	"1" indicates that the participant took photographs at that location	short	*
10	scenicEnjoy	"1" indicates that the participant engaged in sightseeing or scenic enjoyment at that location	short	*
11	viewFromCar	"1" indicates that the participant took in the scene from a car at that location	short	*
12	wildViewShore	"1" indicates that the participant viewed wildlife from either the shore or from a private boat at that location	short	*
13	wildViewChrtr	"1" indicates that the participant viewed wildlife from a party or charter boat at that location	short	*
14	Hangliding	"1" indicates that the participant went hang gliding or parasailing at the location	short	*

14	kiteboarding	"1" indicates that the participant engaged in kiteboarding at that location	short	*
15	skimboarding	"1" indicates that the participant went skimboarding at that location	short	*
16	surfing	"1" indicates that the participant went surfing (from board or kayak or standup board) at that location	short	*
17	swimming	"1" indicates that the participant went swimming at that location	short	*
18	windsurfing	"1" indicates that the participant went windsurfing at that location	short	*
19	frdiveOrSnrkel	"1" indicates that the participant went free diving or snorkeling (from shore or boat) at that location	short	*
20	boatOrSail	"1" indicates that the participant went boating or sailing at that location	short	*
21	kayaking	"1" indicates that the participant went kayaking or engaged in another paddling activity (e.g. canoe, standup paddleboard) at that location	short	*
22	scubaChrtr	"1" indicates that the participant went SCUBA diving from a charter or party boat at that location	short	*
23	scubaShore	"1" indicates that the participant went SCUBA diving from shore or a private boat at that location	short	*
24	shoreBased	"1" indicates that the participant engaged in one or more of the activities classified as a shore based activity at that location	short	*
25	surfaceWater	"1" indicates that the participant engaged in one or more of the activities classified as a surface water activity at that location	short	*
26	wildAndSight	"1" indicates that the participant engaged in one or more of the activities classified as wildlife and sightseeing at that location	short	*
27	diving	"1" indicates that the participant engaged in one or more of the activities classified as diving or snorkeling at that location	short	*

Feature Class Name: RecreationalUsePoints

Total Number of Unique Features: 6,137

Dataset Status: Complete

5. SPATIAL REPRESENTATION

Geometry Type: vector point

Reference System: GCS North American 1983

Horizontal Datum: North American Datum 1983

Ellipsoid: Geodetic Reference System 1980

XY Resolution: XY Scale is 1000000000.0000001

Tolerance: 0.0000000089831528411952117

Geographic extent: -73.91 to -66.94, 40.79 to 45.13

ISO 19115 Topic Category: environment, oceans, biota, economy, society

Place Names:

Atlantic Ocean, Cape Cod Bay, Gulf of Maine, Long Island Sound, Massachusetts Bay, Narragansett Bay, Northwest Atlantic, Stellwagen Bank, Vineyard Sound

Recommended Cartographic Properties:

(Using ArcGIS ArcMap nomenclature)

Pie chart symbol, no leader lines, no outlines, HSV:

Shore Based Activities: 26-69-77

Surface Water Activities: 245-76-69

Wildlife and Sightseeing: 119-72-79

Diving: 195-69-78

6. DATA PROCESSING

Processing environment: ArcGIS 10.2, Windows 7 Ultimate SP5, Intel Xeon CPU

	Process Steps Description
1	Activity points from mapping application imported into ArcMap
2	Shore Based Activities, Surface Water Activities, Wildlife and Sightseeing, and Diving attribute fields were added and filled in through queries of survey data and field calculator operations
3	In an editing session, attributes were edited for accuracy and consistency; points that depicted activities that were outside the scope of the survey (e.g. fishing) were deleted.

7. QUALITY PROCESS

Attribute Accuracy: Recreational activity points are derived from an opt-in mapping tool used by participants in coastal and marine recreational activities to plot activity locations.

Logical Consistency: None

Completeness: Because respondents chose to participate in the survey, the sample is not random and may not be demographically representative of the overall population.

Positional Accuracy: Precision also depends on the scale at which the area was mapped and the survey participant's level of comfort with the survey tool. The application restricted the scale at which users could map points, reducing the amount of error that could occur from plotting points at too small a scale. Users were asked to map a point in the general area, or central location of where the activity took place.

Timeliness: This dataset represents data collected from November 2014 – March 2015 and users were asked to map activities over the past 12 months. As such, this dataset should be interpreted to represent activity over a specific period of time and is not representative of annual trends.

Use restrictions: Data are provided as is. NROC, the Northeast Regional Planning Body, Point 97, the Surfrider Foundation, and SeaPlan are not liable for any interpretations, assumptions, or conclusions based on these data. This data set must be cited on all electronic and hard copy products. This data set is not intended for navigation purposes.

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