

Coastal Wetlands  
Northeast United States  
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Prepared for:  
Northeast Regional Ocean Council  
Northeast Ocean Data Portal  
[www.northeastoceandata.org](http://www.northeastoceandata.org)

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## 1. INTRODUCTION

This dataset represents the extent and approximate location of coastal wetlands in the northeastern United States. The data presented was exclusively derived from the National Wetlands Inventory (NWI). The classification system used by the NWI was assessed by wetland specialists and classes were selected to specifically represent coastal wetlands. Coastal wetlands were defined as vegetated wetlands in saline or brackish waters that were not permanently flooded, or not in open water. The NWI classes that applied to this definition included:

- Estuarine intertidal emergent
- Estuarine intertidal scrub-shrub
- Estuarine intertidal forested
- Estuarine intertidal unconsolidated shore with organic soil types that were irregularly flooded

## 2. PURPOSE

This dataset aims to provide comprehensive and quality information regarding the locations and types of wetlands in the northeastern U.S.

## 3. SOURCES AND AUTHORITIES

- U.S. Fish and Wildlife Service, National Wetlands Inventory  
<http://www.fws.gov/wetlands/>

- North Atlantic Landscape Conservation Cooperative, Coastal Update to the National Wetlands Inventory  
<http://northatlanticlcc.org/projects/rapid-update-to-coastal-nwi/coastal-update-to-the-national-wetlands-inventory>

#### 4. DATABASE DESIGN AND CONTENT

Native storage format: ArcGIS File Geodatabase – simple feature class

Feature Types:

Polygons representing coastal wetland features

Data Dictionary:

Line	Name	Definition	Type	Size
1	OBJECTID	Uniquely identifies a feature	OBJECTID	*
2	Shape	Geometric representation of the feature	geometry	*
3	attribute	Alphanumeric code identifying the wetland classification of the polygon based on NWI wetland codes	text	20
4	wetlandsType	Type of wetland	text	50
5	acres	Area of wetland polygon in acres	double	*
6	Shape_Length	Length of feature in internal units	double	*
7	Shape_Area	Area of feature in internal units	double	*

Feature Class Name: CoastalWetlands

Total Number of Unique Features: 14791

Dataset Status: Complete

#### 5. SPATIAL REPRESENTATION

Geometry Type: vector polygon

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: -74.34 to -66.98, 40.50 to 45.10

ISO 19115 Topic Category: environment, oceans

Place Names: Place Names:

Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island

Recommended Cartographic Properties:

(Using ArcGIS ArcMap nomenclature)

Simple Fill Symbol: outline color: same as fill, outline width: 2, color model: HSV

Phragmites australis: 40-100-100

Unconsolidated Shore Organic Irregularly Flooded: 0-25-100

Scrub-Shrub Wetland Coniferous: 40-86-75

Scrub-Shrub Wetland Deciduous: 37-60-54

Emergent Non-persistent Wetland: 100-47-84

Emergent Persistent Wetland: 122-58-74

Forested Wetland: 160-100-45

Scale range for optimal visualization: 50,000 to 3,500,000

## 6. DATA PROCESSING

Processing environment: ArcGIS 10.1 SP1, Windows 7 Professional, Intel Core i5 CPU

	Process Steps Description
	Downloaded updated NWI data from the U.S. Fish and Wildlife Service
1	PROJECTED polygons from each state dataset from NAD 1983 Albers to GCS North American Datum 1983
2	SELECTED polygons determined to represent coastal wetlands by applying the SQL statement: "attribute" LIKE 'E2US4P%' OR "attribute" LIKE 'E2EM%' OR "attribute" LIKE 'E2SS%' OR "attribute" LIKE 'E2FO%'
3	EXPORTED selected coastal wetlands polygons to new feature class for each state
4	DELETED identical, overlapping polygons between state datasets
5	MERGED datasets from each state

## 7. QUALITY PROCESS

Attribute Accuracy: Original attribute descriptions and codes from the NWI were retained.

Logical Consistency: Polygon and chain-node topology are present. Every polygon has a label. No topological changes were made from source data.

**Completeness:** This dataset represents coastal wetlands in the northeastern U.S. from the NWI. Datasets were downloaded for the states Maine, Massachusetts, New Hampshire, Rhode Island, Connecticut, and New York. Each state dataset was examined for duplicate records, which were eliminated before merging into a single regional product. Only NWI features identified within wetland classes were retained.

An update to this coastal wetlands product was necessary in order to incorporate updates from a coastal wetlands mapping project completed by Virginia Tech in 2013. The Conservation Management Institute at Virginia Tech was contracted by the Wildlife Management Institute to complete wetland mapping initiatives for coastal areas within the North Atlantic Landscape Conservation Cooperative (NALCC) in 2013. The goal of this project was to provide a rapid update for wetland mapping in 162 coastal areas in selected areas within the NALCC, including Maine, Massachusetts, and New York. This rapid update was completed in September 2013, and was incorporated into the NWI in 2014.

The NWI data represents the extent of wetlands and deepwater habitats that can be determined with the use of remotely sensed data and within the timeframe for which the maps were produced. The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data, and the amount of ground truth verification work conducted. Certain wetland habitats are excluded from the National (NWI) mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and near shore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery. There is a margin error inherent in the use of imagery, thus detailed on-the-ground inspection of any particular site, may result in revision of the wetland boundaries or classification, established through image analysis. Wetlands or other mapped features may have changed since the date of the imagery and/or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site. It is recommended to refer to the source dataset indicated in the source citation information.

**Positional Accuracy:** NWI data are intended for use at a scale of 1:12,000 or smaller.

**Timeliness:** The NWI data is up to date as of 2014. Source data within the NWI was collected between 1977 and 2014.

**Use restrictions:** None

Distribution Liability: Data are provided as is. The Northeast Regional Ocean Council (NROC) and RPS Applied Science Associates are not liable for any interpretations, assumptions, or conclusions based on these data.