Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed

1.1. Name of the Data, data collection Project, or data-producing Program:
Massachusetts and Rhode Island 2016 BIRDS (Birds Polygons)

1.2. Summary description of the data:
This data set contains sensitive biological resource data for wading birds, shorebirds, waterfowl, raptors, diving birds, seabirds, passerine birds, and gulls and terns in Massachusetts, Rhode Island. Vector polygons in this data set represent bird nesting, migratory staging, and wintering sites. Species-specific abundance, seasonality, status, life history, and source information are stored in associated data tables (described below) designed to be used in conjunction with this spatial data layer. This data set is a portion of the ESI data for Massachusetts, Rhode Island. As a whole, the ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil, and include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources. See also the BIRDSPT (Bird Points) data layer for additional bird information.

1.3. Is this a one-time data collection, or an ongoing series of measurements?
One-time data collection

1.4. Actual or planned temporal coverage of the data:
2014 to 2016

1.5. Actual or planned geographic coverage of the data:
W: -71.8944, E: -69.6609, N: 42.8876, S: 40.9459

1.6. Type(s) of data:
(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Map (digital)

1.7. Data collection method(s):
(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys, enforcement activities, numerical model, etc.)

1.8. If data are from a NOAA Observing System of Record, indicate name of system:

1.8.1. If data are from another observing system, please specify:

2. Point of Contact for this Data Management Plan (author or maintainer)

2.1. Name:
ESI Program Manager

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:
orr.esi@noaa.gov

2.5. Phone number:

3. Responsible Party for Data Management
Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:
ESI Program Manager

3.2. Title:
Data Steward

4. Resources
Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):

5. Data Lineage and Quality
NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible
(describe or provide URL of description):

Process Steps:

- 2016-01-01 00:00:00 - SELECTING SPECIES AND DATA SOURCES: All of the digital polygon source data received from MA and RI for Birds were edited as needed to match NOAA ESI Shoreline layer included in this atlas. Major Sources for bird concentration areas depicted in this data include 2015 Massachusetts Wildlife Action Plan (MA SWAP), 2015 Rhode Island Wildlife Action Plan (RI WAP), 2016 RI DEM Natural Heritage Areas, and the Massachusetts Breeding Bird Atlas 2. Additional data and expert input was provided primarily by MA DFW NHESP, RI DFW, Mass CZM, Mass Audubon, Audubon Society of Rhode Island, NROC, and USFWS, Rhode Island NWR Complex. 2015 Massachusetts Wildlife Action Plan (MA SWAP) and 2015 Rhode Island Wildlife Action Plan (RI WAP) were developed to aid in the protection of Species of Greatest Conversation Need (SGCN) by MA DFW and a collaborative effort of RI DEM DFW, TNC, URI, and RINHS, respectively. All state and federally listed species are included, as well as other species of particular conservation interest such as small, localized “at-risk” populations; globally rare, keystone, and indicator species; or species of regional concern or high regional responsibility. Corresponding GIS data for the RI WAP distribution maps were provided by TNC; these maps are not a comprehensive inventory but provide an estimated range of each species within Rhode Island, and in some cases represent potential habitat. General distribution, abundance, and life history activity including seasonality was mapped for species in the Massachusetts and Rhode Island atlas according to these species profiles. Key habitats were mapped to the corresponding ESI classified shoreline lines and polygons (e.g. rocky shores, beaches, wetlands) in the geographic areas highlighted. If key habitats did not correspond to an ESI habitat, such as coastal dunes and thickets, or forests and grasslands, then either ESI habitat data were expanded upon to encompass the additional habitat, or generalized land polygons were created. Rocky habitats are represented by select areas of a .5 n.m. coastal water buffer. Massachusetts Breeding Bird Atlas 2 : 2007-2011 (BBA2) is a presence/absence survey conducted by Mass Audubon that maps the breeding range of each bird species in the state based on behavioral activity. Data is registered by coarse blocks (1/6 of a USGS topo map; each block is approximately 10 square miles. Nests of each species are not counted, just presence in appropriate breeding habitat during Safe Dates (period when the species is most likely to be breeding) and behavioral evidence that they are genuinely breeding. Range, not abundance, is measured.) Only confirmed breeding observations within the blocks were used for the purposes of mapping nesting areas in this atlas, though nesting may be occurring elsewhere as well. Mass Audubon provided GIS data for BBA2 blocks and species files that were used as a guide to assign nesting areas to ESI habitat polygons or geographic locations corresponding with species distribution. Nesting areas for colonial waterbirds in Massachusetts (terns, gulls, egrets, and herons) were mapped primarily using Mass CZM’s Colonial Waterbirds Important Nesting Habitat data layer developed for the 2015 Massachusetts Ocean Management Plan.
- 2016-01-01 00:00:00 - COLONIAL WATERBIRDS AND WADING BIRDS: GIS data for

colonial waterbird nesting sites in Rhode Island were provided by RI DFW. Nest sites were observed between 1971 and 2015 and were either mapped as points or converted to polygons. Additional nesting areas for colonial waterbirds and wading birds, including marsh species such as rails and bitterns, were mapped according to BBA2. MA DFW NHESP provided GIS data for roseate tern (state and federal endangered) and “rare tern” breeding, staging, and critical foraging habitats. The “ rare tern” species group includes all three state-listed species of concern terns in Massachusetts- Arctic tern, common tern, and least tern. The NHESP polygons were hand-delineated based on observation records using 2012 aerials and then modified to be congruent with the ESI shoreline and wetland polygons. The foraging areas were mapped in this atlas as general distribution polygons. Staging areas in the original NHESP dataset were determined by the presence of 100 or more individuals. The roseate tern was mapped in Rhode Island according the 2016 RI DEM Natural Heritage Areas with additional migration areas and general distribution mapped using the 2015 RI WAP. Nesting sites for the least tern (state threatened) in Rhode Island were mapped using data from RI DFW and the 2015 RI WAP. Select species were grouped for the purpose of mapping common activity areas in this atlas including foraging/general distribution (scientific names are provided only for species not otherwise included in the atlas): “egrets” (including great egret (Ardea alba), snowy egret (Egretta thula)), “gulls” , “marsh birds” (e.g. bitterns and rails,.including Virginia rail (Rallus limicola)) and “wading birds” (herons, clapper rail, and glossy ibis). Individual species life history activity areas were mapped separately when data was available. Additional distribution and activity areas for coastal waterbirds and wading birds, including roosting and wintering were mapped primarily using the 2015 RI WAP and 2015 MA SWAP. Additional seasonality and breeding information was based on species accounts in Massachusetts Breeding Bird Atlas 1 (published 2003) and the Mid-Atlantic/New England/Maritimes (MANEM), Waterbird Conservation Plan: 2006-2010.
- 2016-01-01 00:00:00 - WATERFOWL: Sea duck concentrations in Boston Harbor, Cape Cod Bay, Nantucket Sound, and Buzzards Bay were mapped using Mass CZM’s Sea Duck Core Habitat data layer developed for the 2015 Massachusetts Ocean Management Plan. These data represent regionally critical habitat for black scoter, common eider, long-tailed duck, surf scoter, and white-winged scoter. This wintering habitat is a special, sensitive or unique (SSU) resource area, and was mapped using effort-corrected sea duck sightings data from 2008-2012 provided by USFWS and long-tailed duck telemetry data from 2008-2009 collected by Mass Audubon. All five species were grouped as “sea ducks” in this atlas, as well as the red-breasted merganser, large numbers of which migrate to eastern Cape Cod Bay in the spring to join sea ducks. Huge flocks of long-tailed duck numbering in the 10, 000’s roost in Nantucket Sound as well. NROC data was used as a guide to map sea duck general distribution in federal waters. Sea ducks in Rhode Island were mapped according to the 2015 RI WAP and are concentrated in Narragansett Bay, coastal ponds, and nearshore waters including Block Island. Among other wintering and migratory waterfowl species mapped in this atlas to coastal waters

including inshore lakes, ponds, and wetlands, and a coastal buffer of .5 n.m., are “ diving ducks” (bufflehead (Bucephala albeola), canvasback (Aythya valisineria), common goldeneye (Bucephala clangula), greater scaup (Aythya marila), lesser scaup (Aythya affinis)), “geese” (Atlantic brant (Branta bernicla hrota), Canada goose (Branta Canadensis)), “waterfowl” (blue-winged teal, common gallinule, hooded merganser, wood duck (Aix sponsa)) and “dabbling ducks” (American wigeon (Anas Americana), northern pintail (Anas acuta), and ruddy duck (Oxyura jamaicensis)). Nesting areas were mapped for select species using data from BBA2 and USFWS. Major data sources include the 2015 RI WAP, 2015 MA WAP, and 2016 RI Natural Heritage Areas. Waterfowl presence in Narragansett Bay was supported by species observations from 2005 through 2015 of the Narragansett Bay Winter Waterfowl Survey that is conducted by a joint effort of the EPA Atlantic Ecology Division and NBNERR. Additional seasonality and breeding information was based on expert input and information provided by the USFWS, including the 2012 report Atlantic Coast Wintering Sea Duck Survey 2008-2011. SEABIRDS: Pelagic species mapped in this atlas include alcids, “loons” (common loon (Gavia immer), red-throated loon (Gavia stellate)) “shearwaters” (Cory's shearwater (Calonectris diomedea), great shearwater (Puffinus gravis), manx shearwater (Puffinus puffinus) , sooty shearwater (Puffinus griseus)), and phalaropes (e.g. red-necked phalarope (Phalaropus lobatus)). Broad distribution polygons were mapped using the 2015 RI WAP, 2015 MA SWAP, and NROC’s digital maps of predicted distribution and abundance of marine birds. Additional nesting site data for Leach’s storm petrel (state endangered) was provided by MA DFW NHESP; this seabird spends most of its life over the open ocean and breeds at only two locations in Massachusetts -Nomans Land Island and Penikese Island. (Citation: SEA DUCK CORE HABITAT, 2015 MASSACHUSETTS OCEAN MANAGEMENT PLAN)
- 2016-01-01 00:00:00 - SEABIRDS: Pelagic species mapped in this atlas include alcids, “loons” (common loon (Gavia immer), red-throated loon (Gavia stellate)) “ shearwaters” (Cory's shearwater (Calonectris diomedea), great shearwater (Puffinus gravis), manx shearwater (Puffinus puffinus), sooty shearwater (Puffinus griseus)), and phalaropes (e.g. red-necked phalarope (Phalaropus lobatus)). Broad distribution polygons were mapped using the 2015 RI WAP, 2015 MA SWAP, and NROC’s digital maps of predicted distribution and abundance of marine birds. Additional nesting site data for Leach’s storm petrel (state endangered) was provided by MA DFW NHESP; this seabird spends most of its life over the open ocean and breeds at only two locations in Massachusetts -Nomans Land Island and Penikese Island. (Citation: 2015 RHODE ISLAND WILDLIFE ACTION PLAN)
- 2017-01-01 00:00:00 - SHOREBIRDS: Shorebirds in this atlas were primarily mapped to coastal dune, beaches and flats, and small islands buffered .5 n.m. from the shoreline. The majority of shorebirds are migratory March through October, though some species, such as the purple sandpiper, winter along rocky shorelines October through April. Current nesting locations for the piping plover (state and federally endangered) were provided by MA DFW NHESP and USFWS, Monomoy NWR. Hand-delineated polygons based on observation records and using 2012

aerials were modified to be congruent with ESI shoreline and habitat polygons. Nesting areas for the American oystercatcher were mapped using the 2012 report provided MA DFW NHESP, Summary of 2011 Census of American Oystercatchers in Massachusetts, as a guide. Both piping plover and American oystercatcher (species of concern) nest sites in Rhode Island were provided by RI DFW; nest sites were observed between 1988 and 2014, and 2003 and 2015, respectively, and were mapped either as points or converted to polygons. For the purpose of mapping common shorebird migration in this atlas, several species were assigned to the species group “shorebirds” and include, among others, black-bellied plover (Pluvialis squatarola), dunlin (Calidris alpine), greater yellowlegs (Tringa melanoleuca), least sandpiper (Calidris minutilla), sanderling (Calidris alba), semi-palmated plover (Charadrius semipalmatus), semi-palmated sandpiper (Calidris pusilla), short-billed dowitcher (Limnodromus griseus), spotted sandpiper (Actitis macularia), whimbrel (Numenius phaeopus), and white-rumped sandpiper (Calidris fuscicollis). Individual species life history activity areas were mapped separately when data was available, e.g. migration areas for the red knot (federally proposed threatened). Additional distribution polygons and activity areas for shorebirds were mapped primarily using the 2015 RI WAP, 2015 MA SWAP, 2016 RI Natural Heritage Areas, and BBA2. Point data from 1974 through 2015 was also provided by the Manomet Shorebird Recovery Program, International Shorebird Survey (ISS), a monitoring program for shorebird populations and staging sites.
- 2016-01-01 00:00:00 - RARE PASSERINES: Nesting locations or vulnerable occurrences of rare, threatened or endangered passerines were included as polygons in this atlas if data was available from the 2015 RI WAP, 2015 MA SWAP, 2016 Rhode Island Natural Heritage Areas, or BBA2. It should be noted that additional rare passerine species may be nesting in the AOI but were not included due to lack of data. Marsh obligate passerine species were grouped as “marsh passerine” for the purposes of mapping shared distribution areas in this atlas and include, among others, the eastern meadowlark (Sturnella magna), Nelson’s sparrow (Ammodramus nelsoni), and willow flycatcher (Empidonax traillii). Over 30 Neotropical and a few Nearctic short and long distance migratory species were assigned to the species group “passerine” and mapped as general distribution polygons in coastal thickets located in Rhode Island. (Citation: MASSACHUSETTS STATE WILDLIFE ACTION PLAN 2015)
- 2016-01-01 00:00:00 - RAPTORS: Nesting sites in Rhode Island for the northern harrier and peregrine falcon were mapped either as points or converted to polygons using data from the 2015 RI WAP. MA DFW NHESP provided GIS data for bald eagle wintering grounds along the Merrimack and associated salt marshes where they forage, and nesting areas were mapped using BBA2. Nesting areas for barn owl, northern harrier, peregrine falcon, and short-eared owl also mapped according to BBA2. Six raptor species (American kestrel (Falco sparverius), barn owl, northern harrier, northern goshawk (Accipiter gentilis), peregrine falcon, and short eared owl) were grouped as “raptor” and mapped to shared general distribution areas on both Block Island and the southern shore of Rhode Island with

a concentration of “Common”. Monitored osprey (species of concern) nests from 2014-2016 were also mapped in this atlas as points for Rhode Island only and were provided by the Audubon Society of Rhode Island. Osprey nests are now ubiquitous in Massachusetts as well, especially on the Cape and Islands which is by far the most important ecoregion for ospreys in Massachusetts, but were not included in the atlas due to lack of complete data. Mass Audubon should be contacted directly for up-to-date information or review of specific locations.

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?

No

6.1.1. If metadata are non-existent or non-compliant, please explain:

Missing/invalid information:
- 1.7. Data collection method(s)
- 4.1. Have resources for management of these data been identified?
- 4.2. Approximate percentage of the budget for these data devoted to data management
- 5.2. Quality control procedures employed
- 7.1. Do these data comply with the Data Access directive?
- 7.1.1. If data are not available or has limitations, has a Waiver been filed?
- 7.1.2. If there are limitations to data access, describe how data are protected
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location
- 8.3. Approximate delay between data collection and submission to an archive facility
- 8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

6.2. Name of organization or facility providing metadata hosting:

NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:
https://www.fisheries.noaa.gov/inport/item/51685

6.4. Process for producing and maintaining metadata
(describe or provide URL of description):
Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access
NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

7.2. Name of organization of facility providing data access:
Office of Response and Restoration (ORR)

7.2.1. If data hosting service is needed, please indicate:

7.2.2. URL of data access service, if known:
https://response.restoration.noaa.gov/esi_download

7.3. Data access methods or services offered:
Data can be accessed by downloading the zipped ArcGIS geodatabase from the Download URL (see Distribution Information). Questions can be directed to the ESI Program Manager (Point Of Contact).

7.4. Approximate delay between data collection and dissemination:

7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:

8. Data Preservation and Protection

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:

(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)

8.1.1. If World Data Center or Other, specify:

8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:

8.2. Data storage facility prior to being sent to an archive facility (if any):

Office of Response and Restoration - Seattle, WA

8.3. Approximate delay between data collection and submission to an archive facility:

8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection

9. Additional Line Office or Staff Office Questions

Line and Staff Offices may extend this template by inserting additional questions in this section.