

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:

Louisiana and Lower Mississippi River 2014 ESI BIRD Polygons, Points

### 1.2. Summary description of the data:

This data set contains sensitive biological resource data for wading birds, shorebirds, waterfowl, raptors, diving birds, pelagic seabirds, passerine birds, and gulls and terns in coastal Louisiana and the Lower Mississippi River. Vector polygons represent locations of wading birds, shorebirds, waterfowl, raptors, diving birds, pelagic birds, passerine birds, and gulls and terns that may be particularly vulnerable because of nesting, migratory staging, and wintering activities. Vector points represent locations of nesting and roosting sites for shorebirds, wading birds, diving birds, seabirds, gulls, and terns. Species specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Louisiana. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

### 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:

2012 to 2014

### 1.5. Actual or planned geographic coverage of the data:

W: -94, E: -88.0002, N: 31.1273, S: 25.6169

This geographic extent includes the entire coastal Louisiana and Lower Mississippi River ESI study area. The spatial extent of individual layers or feature classes may vary.

### 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):*

Lineage Statement:

Process Steps 1 - 7 apply primarily to the birds mapped as polygons along coastal Louisiana. Process Step 8 applies to birds mapped as polygons in the lower Mississippi River. Process Step 9 applies to birds mapped as points in coastal Louisiana. Process Step 10 applies to birds mapped as points in the lower Mississippi River.

Process Steps:

- 2013-12-01 00:00:00 - Process steps 1-7 apply primarily to the birds mapped as polygons along coastal Louisiana. The mapping extent was dependent upon information availability and location of mapped coastal habitats and shorelines. Three main sources of data were used to depict bird distribution and seasonality for this data layer: 1) interviews conducted at workshops and via phone and email with resource experts from: Barataria-Terrebonne National Estuary Program (BTNEP), Louisiana Department of Wildlife and Fisheries (LDWF), U.S. Geological Survey (USGS), LDWF-Louisiana Natural Heritage Program (LNHP), Louisiana Audubon, Defenders of Wildlife, U.S. Fish and Wildlife Service (USFWS), and University of Louisiana - Lafayette (ULL); 2) numerous published and unpublished reports, published literature, and books; 3) survey data and vector digital data provided by: BTNEP, LDWF, LDWF-LNHP, Louisiana Audubon, eBird, USFWS, NMFS. Survey data on locations of breeding, wintering, and resident birds were provided via shapefiles, tabular digital data, or reports for the following species and species groups: snowy plover, Wilson's plover, piping plover, least tern, waterfowl, seabirds, bald eagle, redhead, scaup, colonial nesting waterbirds, white pelican, and beach-nesting birds. Polygon data were mostly displayed as received from the data providers. Survey data in point format that were located along the coast were often displayed as buffers 50 m on and off the shoreline for cartographic purposes. Processing methods for data sets that required additional processing are described in this Atlas' Introduction. Data sets were supplemented with information provided in hardcopy documents and by local resource experts.
- 2013-12-01 00:00:00 - Breeding and wintering shorebirds, diving birds, and terns: Survey data on locations of breeding and wintering shorebirds, diving birds, and terns were provided via shapefiles, tabular digital data, and expert local knowledge for the following species and species groups: snowy, Wilson's, and piping plovers; least tern; American oystercatcher; American white pelican; and migratory shorebirds. For areas where dense point data fell along the coast, or where polygonal coastal bird data was inconsistent with the boundaries of the current ESI shoreline, 50 meter on/off shoreline buffers or larger drawn-on polygons were created to simplify the digital and cartographic products.
- 2013-12-01 00:00:00 - Nesting seabird and waterbird colonies: Two distinct data sets were used to map colonial nesting seabirds and waterbirds. BTNEP provided

two products: 1) a published document (Fontenot et al. 2012. A catalog of Louisiana's nesting seabird colonies. Barataria-Terrebonne National Estuary Program, Thibodaux, LA. Report Number 34, hereafter referred to as 'the seabird compendium'); and 2) an accompanying spreadsheet of seabird/wading bird nest site locations from the 2006 nesting survey ONLY (the compendium presents additional years of data). The GPS locations from the seabird compendium were mapped as point locations throughout the atlas. The accompanying tabular data includes species present at each colony and a single count (pairs) per species. The majority of count data for the colonial nesting points were from the 2006 survey data, as provided via the compendium and spreadsheet (same data). There are a few records from 2008 that replaced 2006 counts ONLY when the 2008 counts were higher than the 2006 counts AND were published in seabird compendium. LNHP provided a polygonal waterbird nesting colony data set based on 2011 count data. These data were delivered as 1-mile grid cells; if any 2011 nesting colonies fell within a grid cell, it is mapped as a nesting polygon. The tabular information includes generalized species groups (anhinga, cormorants, pelicans, gulls, terns, wading birds) with aggregated counts per species group per grid, or group of connected grids. In many instances, the BTNEP 2006 point data overlaps the LNHP 2011 polygon data. The display of these two data sets does not imply that either or both sets of polygons or points (especially if counts are aggregated across the two data sets) reflect current nest locations or counts, but rather are to be used as a guide to what species could be present and what counts have been observed at colonies over two recent years. Resource experts should be contacted in the event of a spill.

- 2013-12-01 00:00:00 - Wetland-associated waterfowl: Waterfowl data was provided by LDWF with analytical assistance from the Gulf Coast Joint Venture. LDWF conducts aerial waterfowl surveys of coastal Louisiana using 27 systematically placed N-S transect lines in September, November, December, and January. This survey has been conducted since 1969, and ducks are counted by habitat type (agricultural/swamp, fresh marsh, intermediate marsh, brackish marsh, and saline marsh) along transects, then extrapolated to estimates in SW and SE Louisiana for reporting purposes. The Gulf Coast Joint Venture overlaid the transect data with the following data set: Sasser et al. 2008, Vegetation Types in Coastal Louisiana in 2007: U.S. Geological Survey Open-File Report 2008-1224, 1 sheet, scale 1:550,000, and calculated duck density estimates by habitat type (e.g., salt marsh, brackish marsh, intermediate marsh, and fresh marsh) for SE and SW LA. An additional waterfowl data set, also provided by LDWF, 'Coastal WMA Aerial Waterfowl Survey Data' was used to supplement the statewide data set in Wildlife Management Areas where more intensive surveys are conducted.

- 2013-12-01 00:00:00 - Redhead and scaup: Redhead were mapped along the Chandeleur Islands. Concentration estimates were based on data collected during 1981-2010 redhead midwinter gulf coast surveys. Scaup (greater and lesser) were mapped in nearshore Gulf of Mexico waters and in all of the major bay and lake systems throughout coastal LA. The spatial and tabular information for scaup

displayed in the ESI was based on data collected for a 2004 LSU thesis.

- 2013-12-01 00:00:00 - Bald eagles: LNHP provided a generalized polygon that represents bald eagle nesting habitat in coastal LA. (Citation: BALD EAGLE DISTRIBUTION IN LOUISIANA)

- 2013-12-01 00:00:00 - Gulf of Mexico seabirds: Information on the distribution of nearshore and offshore pelagic birds, gulls, terns, diving birds, etc. in the Gulf of Mexico was acquired through discussions with resource experts and published literature. The LDWF-LNHP provided information for some of the federally and state listed species and species of conservation concern for display in the ESI atlas and accompanying digital data in 2013. The available LNHP data sets are to be used for oil spill response and spill response planning only. These data represent existing information known to the LNHP at the time of the request and should never be substituted for consultation with the LNHP.

- The following applies to the birds mapped as polygons in the lower Mississippi river. Three main sources of data were used to depict bird distribution and seasonality for this data layer: 1) interviews conducted via teleconference, phone, and email with resource experts from: Barataria-Terrebonne National Estuary Program (BTNEP), LDWF-Louisiana Natural Heritage Program (LNHP), Louisiana Audubon, University of Louisiana - Lafayette, U.S. Fish and Wildlife Service (USFWS); 2) reports, published literature, and books and; 3) survey data and vector digital data provided by: BTNEP, LDWF, LDWF-LNHP, Louisiana Audubon, eBird, and USFWS. Interior least tern: LNHP provided a polygon representing the distribution of interior least tern during the nesting season. Nesting waterbird colonies: LNHP provided a polygonal waterbird nesting colony dataset based on 2004-2011 nesting survey data. These data were delivered as 1-mile grid cells; if any nesting colonies fell within a grid cell, it is mapped as a nesting polygon. The tabular information includes generalized species groups (cormorants, wading birds) with aggregated counts per species group per grid, or group of connected grids. Wetland-associated waterfowl: Waterfowl density data in coastal marshes were provided by LDWF with analytical assistance from the Gulf Coast Joint Venture (GCJV). LDWF conducts aerial waterfowl surveys of coastal Louisiana using 27 systematically placed N-S transect lines in September, November, December, and January. Ducks are counted by habitat type (agricultural/swamp, fresh marsh, intermediate marsh, brackish marsh, and salt marsh) along transects. LDWF and GCJV derived waterfowl densities by habitat types as defined by the habitat map of coastal LA (Sasser et al. 2008) The maximum density of each species in each habitat in each region, observed from 1997-2010, was mapped in the ESI using the habitat boundaries from Sasser et al. (2008). Of the habitats mapped, only fresh marsh occurs in the Lower Mississippi River ESI area of interest. Bald Eagles: LNHP provided a generalized polygon that represents bald eagle nesting habitat for the area of interest. Habitat-based polygons: Information from eBird and expert opinion from Louisiana Audubon was used to delineate the following areas and derive corresponding species lists and concentrations: Bonnet Carre and Morganza spillways, riverine sandbars, and river bend wetlands. Polygons were also delineated for the

Mississippi river and outlying wetlands representing the upper reaches of the Maurepas swamp, Barataria-Terrebonne basin, and Atchafalaya basin. Species lists were derived from eBird survey data and adjusted based on expert knowledge provided by Louisiana Audubon. The LDWF-LNHP provided information for some of the federally and state listed species and species of conservation concern for display in the ESI atlas and accompanying digital data in 2014. The available LNHP data sets are to be used for oil spill response and spill response planning only. These data represent existing information known to the LNHP at the time of the request and should never be substituted for consultation with the LNHP.

- The following applies to birds mapped as points in the coastal Louisiana. The mapping extent was dependent upon information availability and location of mapped coastal habitats and shorelines. Three main sources of data were used to depict bird distribution and seasonality for this data layer: 1) interviews conducted at workshops and via phone and email with resource experts from: Barataria-Terrebonne National Estuary Program (BTNEP), Louisiana Audubon, and Louisiana Department of Wildlife and Fisheries (LDWF); 2) published and unpublished reports and books; and 3) survey data and vector digital data provided by BTNEP and Louisiana Audubon. Survey data on locations of breeding and roosting birds were provided via shapefiles, tabular digital data, or reports for the following species and species groups: American oystercatcher, colonial nesting wading birds, seabirds, diving birds, gulls, and terns, snowy plover, and Wilson's plover. Point data were mostly displayed as received from the data providers. Processing methods for data sets that required additional processing are described in this Atlas' Introduction. Data sets were supplemented with information provided in hardcopy documents and by local resource experts. Breeding and wintering shorebirds, diving birds, and terns: Survey data on locations of breeding and wintering shorebirds, diving birds, and terns were provided via shapefiles, tabular digital data, and expert local knowledge for the following species and species groups: snowy, Wilson's, and piping plovers; least tern; American oystercatcher; American white pelican, and migratory shorebirds. For areas where dense point data fell along the coast, or where polygonal coastal bird data was inconsistent with the boundaries of the current ESI shoreline, 50 meter on/off buffers or larger drawn on polygons were created to simplify the digital and cartographic products. Nesting seabird and waterbird colonies: Two distinct data sets were used to map colonial nesting seabirds and waterbirds. BTNEP provided two products: 1) a published document (Fontenot et al. 2012. A catalog of Louisiana's nesting seabird colonies. Barataria-Terrebonne National Estuary Program, Thibodaux, LA. Report Number 34, hereafter referred to as 'the seabird compendium'); and 2) an accompanying spreadsheet of seabird/wading bird nest site locations from the 2006 nesting survey ONLY (the compendium presents additional years of data). The GPS locations from the seabird compendium were mapped as point locations throughout the atlas. The accompanying tabular data includes species present at each colony and a single count (pairs) per species. The majority of count data for the colonial nesting points were from the 2006 survey data, as provided via the compendium and spreadsheet (

same data). There are a few records from 2008 that replaced 2006 counts ONLY when the 2008 counts were higher than the 2006 counts AND were published in seabird compendium. LNHP provided a polygonal waterbird nesting colony data set based on 2011 count data. These data were delivered as 1-mile grid cells; if any 2011 nesting colonies fell within a grid cell, it is mapped as a nesting polygon. The tabular information includes generalized species groups (anhinga, cormorants, pelicans, gulls, terns, wading birds) with aggregated counts per species group per grid, or group of connected grids. In many instances, the BTNEP 2006 point data overlaps the LNHP 2011 polygon data. The display of these two data sets does not imply that either or both sets of polygons or points (especially if counts are aggregated across the two data sets) reflect current nest locations or counts, but rather are to be used as a guide to what species could be present and what counts have been observed at colonies over two recent years. Resource experts should be contacted in the event of a spill.

- The following step applies to the birds mapped as points in the lower Mississippi river. Two main sources of data were used to depict nest distribution and seasonality for this data layer. U.S. Fish and Wildlife Service (USFWS) provided a point location of a historical nest site for Interior least tern. In addition, Barataria-Terrebonne National Estuary Program (BTNEP) provided 2006 nesting survey data with geographic locations of nesting waterbird colonies. The above digital and/or hardcopy sources were compiled by the project biologist to create the NESTS data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. If necessary, edits to the NESTS data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

- 2013-12-01 00:00:00 - The above digital and/or hardcopy sources were compiled by the project biologist to create the BIRDS and BIRDPT data layers. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:24,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. If necessary, edits to the BIRDS and BIRDPT data layers are made based on the recommendations of the resource

experts, and final hardcopy maps and digital data are created.

**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/55625>

**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-](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](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.*