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:
2010 C-CAP 30 Meter Land Cover of Puerto Rico

1.2. Summary description of the data:
This data set consists of land cover derived from high resolution imagery and was analyzed according to the Coastal Change Analysis Program (C-CAP) protocol to determine land cover. This data set utilized 2010 CIR imagery provided by the United Stated Army Corps of Engineers.

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:
2015-07-30

1.5. Actual or planned geographic coverage of the data:
W: -67.304749, E: -65.231528, N: 18.547086, S: 17.867503

1.6. Type(s) of data:
(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Image (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:
NOAA Office for Coastal Management (NOAA/OCM)

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:
NOAA Office for Coastal Management (NOAA/OCM)

2.4. E-mail address:
coastal.info@noaa.gov

2.5. Phone number:
(843) 740-1202

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:

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:
- 2014-12-31 00:00:00 - This data set was created by Dewberry (www.dewberry.com). This version of the classification is the High Resolution Land Cover (2010-era) for the Island of Puerto Rico. This section outlines the classification procedure for the Puerto Rico High Resolution C-CAP. The color-infrared imagery used in producing this land cover product was also utilized in producing an associated impervious surfaces layer for the island. Non impervious features were mapped using a 0.25

acre minimum mapping unit (MMU) and impervious features were mapped using a 0.1 acre MMU. Image Preparation: The aerial imagery was supplied to Dewberry by the USACE. Due to quality issues during acquisition, the USACE had to perform additional post processing on the imagery to make it suitable for land cover mapping. Dewberry received the imagery on December 17, 2012 and performed a QA review to inspect and document voids, clouds/smoke cover, inconstant radiometry, shadows, and artifacts. Individual image tiles were merged into a single mosaic and re-sampled from the native 1-foot spatial resolution to 2-m. Automated Land Cover Classification: An Object Based Image Analysis (OBIA) approach was used to automate the preliminary land cover results. This approach uses eCognition software that groups pixels that share similar spectral properties based on the user's defined parameters and organizes these groups into polygons through a process called segmentation. Once the aerial imagery was segmented into image objects the land cover classification was performed using thresholding, thematic, and supervised classification processes in eCognition. Classification Review: Once various stages of the automated land cover classification processing were completed, the resulting land cover was edited manually by Dewberry's aerial photointerpreters using ERDAS Imagine software. The land cover was reviewed for geometry and classification errors and corrected using ERDAS' raster editing tools. A 30 meter land cover map was created from the 2 meter product by performing a majority focal analysis and incorporating the percent impervious values in accordance with the C-CAP 30 meter class definitions (High Intensity Developed > 79% impervious, Medium Intensity Developed > 49% impervious, and Low Intensity Developed > 19% impervious). Map Finalization: Dewberry used independent reviewer's comments to further refine the land cover map. Attributes for this product are as follows: 0 Background, 1 Unclassified (Cloud, Shadow, etc), 2 High Intensity Developed, 3 Medium Intensity Developed, 4 Low Intensity Developed, 5 Developed Open Space, 6 Cultivated Land, 7 Pasture/Hay, 8 Grassland, 9 Deciduous Forest, 10 Evergreen Forest, 11 Mixed Forest, 12 Scrub/Shrub, 13 Palustrine Forested Wetland, 14 Palustrine Scrub/Shrub Wetland, 15 Palustrine Emergent Wetland, 16 Estuarine Forested Wetland, 17 Estuarine Scrub/Shrub Wetland, 18 Estuarine Emergent Wetland, 19 Unconsolidated Shore, 20 Bare Land, 21 Open Water, 22 Palustrine Aquatic Bed, 23 Estuarine Aquatic Bed
- 2015-07-30 00:00:00 - Metadata imported

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)
- 3.1. Responsible Party for Data Management
- 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
- 7.3. Data access methods or services offered
- 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/48300

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:
NOAA Office for Coastal Management (NOAA/OCM)

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

7.2.2. URL of data access service, if known:
https://coast.noaa.gov/dataviewer/#/landcover/search/where:ID=6288

7.3. Data access methods or services offered:

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 for Coastal Management - Charleston, SC

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.