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:
Habitat characterization of the Tortugas Ecological Reserve south using photographic and quadrat methods

1.2. Summary description of the data:
We supply habitat characterization data along a single randomly oriented transect at each of 16 sampling stations in the Tortugas South Ecological Reserve. This information is collected from multiple stations on an intermittent or biennial basis.

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

1.4. Actual or planned temporal coverage of the data:
2007 to Present

1.5. Actual or planned geographic coverage of the data:
W: -83.15, E: -82.95, N: 24.7, S: 24.4833
Florida Keys National Marine Sanctuary - Tortugas Ecological Reserve

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

2.2. Title:
Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:
Michael.Burton@noaa.gov

2.5. Phone number:
252-728-8756

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:
Michael Burton

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?
No

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):
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:
- Once in the field, the boat captain navigates to previously selected station locations using a GPS. On-site, divers are deployed on the exact station GPS numbers and maintain contact with each other throughout the entire dive. Upon arrival at the bottom, one diver is responsible for swimming out the 30 m transect

tape along a predetermined random compass heading obtained from a data sheet. From 2007-2009, the procedure used was photographic transects done in the following manner: As this diver swims out the tape, the second diver takes photographs of the bottom around the tape, approximately 0.5m above the seafloor, with a digital camera in an underwater housing. The photographs are taken every 5 m along the tape (i.e., at 0, 5, 10, 15, 20, 25 and 30 m. When the first diver who swims out the tape gets to the end of the 30 m distance, he lays down the tape and swims back to the photographer and stays with him/her, as called for by the diver buddy system. Once the photographic transect is finished, diver #1 reels the tape back in, taking the two divers back to their starting point. Only one photographic transect is done per station. Images were analyzed later by determining the percentage of total area that belonged to each of four functional habitat types: coral, octocoral, sponge and macroalgae. In 2011, the procedure was changed from photographic transects to a quadrat characterization approach, completed as follows: Diver #1 swam out a 30 m transect tape as was done in previous years. Diver #2 followed behind, deploying a 0.25 m2 quadrat beside the transect tape at 0, 10, 20, and 30 m along the length of the tape. Total percent cover of abiotic substrate, defined as sand, hardbottom and rubble, was estimated within each quadrat. Biotic cover was estimated within four general functional habitat groups: coral, octocoral, sponge and macroalgae. Abiotic cover within each quadrat always totaled 100%, as the underlying substrate was quantified. Biotic cover did not necessarily total 100%, as there were often regions of uncolonized substrate. As time permitted, divers also recorded the dominant species within each quadrat to the finest taxonomic level. The habitat is never altered in any manner by lifting or moving structure, and the photographer made every effort in the early years to include the measuring tape in the photograph, as it is an aid to estimating the amount of total area in the image. Sometimes it is necessary for the photographer to turn the tape over so that the measuring marks appear in the photograph. On-site, no attempt to avoid structural features within a habitat such as a sand patch or large coral head should be made as these are real component of the habitats. The only instance when the transect should deviate from the designated path is to stay above 130 ft (limitations imposed by diving). The typical photographic transect should take only approximately 15 minutes regardless of habitat type, and the typical quadrat transect should take approximately 20 minutes.

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):
Visual data was reviewed by two or more people. Data was verified as it was entered into speadsheets

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)

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/24266

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?

No

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?

No

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

None

7.2. Name of organization of facility providing data access:

Southeast Fisheries Science Center (SEFSC)

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

7.2.2. URL of data access service, if known:

7.3. Data access methods or services offered:
Get from url

7.4. Approximate delay between data collection and dissemination:
365

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)
TO_BE_DETERMINED

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):
Southeast Fisheries Science Center - Miami, FL

8.3. Approximate delay between data collection and submission to an archive facility:
365

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
It is stored on an SEFSC server requiring authentication in order to access

9. Additional Line Office or Staff Office Questions

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