

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:

TriAXYS Directional Wave Sensor

### 1.2. Summary description of the data:

The TriAXYS directional wave sensor is deployed on 7 of the ten buoys (excluding Susquehanna, Norfolk and Upper Potomac) throughout the Chesapeake Bay. The sensor measures the wave height, period and direction. It is powered on at 35 minutes past the hour and observes the waves for a duration of 20 minutes and then reports an averaged value at the top of the hour.

### 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: -77.0357, E: -76.0436, N: 39.846, S: 36.9793

### 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:**

Katie Kirk

**2.2. Title:**

Metadata Contact

**2.3. Affiliation or facility:****2.4. E-mail address:**

katie.kirk@noaa.gov

**2.5. Phone number:**

410-267-5646

**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:**

Katie Kirk

**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?**

Yes

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

~35%

**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:

The TriAXYS directional wave sensor is powered on at 35 minutes past the hour and samples for a duration of 20 minutes. An average of the duration of sampling is reported to the Watchman500 in ASCII strings, which is sent to a shoreside server at the top of the hour via a cellular antenna. Once at the server, the data is processed (including assigning Qa/Qc flags) and then uploaded to the website in real-time.

**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):**

Currently, the CBIBS data is quality controlled in the CBIBS middleware system acting on incoming data. The data gets associated with a QC flag based on threshold values set for each parameter and the buoy status. The various flags include: -1 = Unknown(NaN), 0 = Good Data, 1 = Buoy Offline, 2 = Hard Limit Test Failed, 3 = Filled Value. The data will continue to be quality controlled in this way until QARTOD (Quality Assurance of Real-Time Ocean Data) standards are implemented or if the QARTOD standards are not used for a particular parameter.

QARTOD QC Tests will be applied in a module of the CBIBS middleware, acting on incoming data at 60 minute intervals and returning resultant flag values, which are stored with the data. Parameters for the tests, which can vary by Buoy, Sensor, Measurement Parameter, and Test Type, are stored in a dynamically accessible and editable QC Test matrix. There are Primary and Secondary Flags; Primary flags represent overall Data Quality, based on QARTOD Tests; Secondary flags complement the first level by providing the justification for the quality flags, based on quality control tests or data processing history.

## **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)
- 7.2. Name of organization of facility providing data access
- 7.2.1. If data hosting service is needed, please indicate

**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/29321>

**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](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:

There are no data access constraints and all available to the public.

### 7.2. Name of organization of facility providing data access:

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

#### 7.2.2. URL of data access service, if known:

<https://buoybay.noaa.gov/>

### 7.3. Data access methods or services offered:

The data is all available free to the public in real-time on the following website: <http://buoybay.noaa.gov>. The files with custom date ranges are available to download in .csv file format. The data can also be accessed at other sites, including <http://www.ndbc.noaa.gov/>.

### 7.4. Approximate delay between data collection and dissemination:

<10 minutes

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

N/A

## 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)*

NCEI\_MD

**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):**

NMFS Office Of Habitat Conservation - Annapolis, MD

TriAXYS Directional Wave sensors are deployed on seven of the ten buoys throughout the Chesapeake Bay. The three buoys that do not have wave sensors are located in (1.) Norfolk, Virginia, (2.) Upper Potomac near National Harbor, Maryland, and (3.) at the mouth of the Susquehanna River.

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

24 hr.

**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*

All data operations and storage take place on secure FISMA-compliant servers.

**9. Additional Line Office or Staff Office Questions**

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