SUBMISSION AGREEMENT
BETWEEN
THE MID-ATLANTIC REGIONAL ASSOCIATION COASTAL OCEAN OBSERVING SYSTEM
AND
THE NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION
FOR MID-ATLANTIC REGIONAL ASSOCIATION COASTAL OCEAN OBSERVING SYSTEM (MARACOOS) IN-SITU NON-FEDERAL STATION DATA.

2017-06-19

Introduction

This document represents the agreement that the Mid-Atlantic Regional Association Coastal Ocean Observing System (MARACOOS) (the "Provider") and the National Centers for Environmental Information (NCEI) (the "Archive") have reached for submitting the Provider's data, Mid-Atlantic Regional Association Coastal Ocean Observing System (MARACOOS) in-situ non-Federal station data., to the Archive for long-term preservation. It represents a joint effort between the Provider and the Archive to accurately document the agreement and the expectations between the two groups.

In order to ensure that the quality and integrity of the archived data is not compromised, the Provider and the Archive agree to maintain this agreement with accurate and up-to-date information through the life of the data submission.

Add comments as needed

Contacts

Persons included in all communications regarding the data submission.

Provider Contacts

Point of Contact, Transfer Point of Contact

Kelly Knee

MARACOOS

DMAC Manager

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Phone or email

Archive Contacts

Data Acquisition, NCEI-IOOS Point Of Contact

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Data Overview

The Mid-Atlantic Regional Association Coastal Ocean Observing System (MARACOOS), established in 2004, is one of the eleven Regional Associations (RAs) comprising the coastal network of U.S. IOOS. MARACOOS covers the ocean and estuaries from Cape Cod, MA to Cape Hatteras, NC. The RAs cover a broad range of ecosystems, driving the development of well-defined observing systems tailored to focus on regional and local priorities defined by regional managers, government agencies, academia, business and industry, non-governmental organizations, and members of the general public most connected to the wise use and management of marine and coastal ocean resources. Together, the RAs coordinate through the IOOS Association to establish linkages to ensure that the needs of the region are reflected in national policy and priority setting.

MARACOOS will be starting the automation process with two non-federal in-situ data sets, the Hudson River Environmental Conditions Observing System and the Maryland DNR Water Quality Monitoring Program, Eyes on the Bay. These are netCDF format in-situ buoy data collected in the MARACOOS region.

The Hudson River Environmental Conditions Observing System (HRECOS) has operated a collection of fixed, continuous, meteorological and water quality monitoring stations on the Mohawk and Hudson Rivers since 2008. The system is operated by a consortium of government, academic, and private institutions. With the exception of the Tivoli Bay water quality stations, which are removed during the ice season (January to April) all stations are operated year round. The system continuously monitors a total of 16 parameters, including water temperature, specific conductivity, salinity (calculated from specific conductivity and temperature), dissolved oxygen, depth, water elevation, pH, turbidity (NTU), chlorophyll, air temperature, barometric pressure, relative humidity, wind speed, wind direction, radiation, and rainfall recording data at 15-minute intervals. The parameters measured at each individual station are listed in the HRECOS QAPP.

The Maryland Department of Natural Resources (DNR) has operated a collection of fixed, continuous, water quality monitoring stations within the Chesapeake Bay and its tidal tributaries since 1998. The geographic distribution of sites varies from year to year, as stations have been added to the system or, in some cases, relocated. The stations are typically deployed from April through October, with a subset of stations deployed year-round insofar as ice conditions allow. The stations continuously measure a total of nine parameters, including water temperature, specific conductance, salinity (calculated from specific conductance and temperature), dissolved oxygen, turbidity (NTU/FNU), fluorescence and total chlorophyll (used to estimate chlorophyll a), pH, and depth, recording data at 15-minute intervals. At a subset of stations, blue-green algal concentrations or chlorophyll a and blue-green algal concentrations have been measured and recorded during some periods of time.

Applicable and Reference Documents

Documents applicable to or referenced from this agreement.

1. http://www.nodc.noaa.gov/data/formats/netcdf/v2.0/index.html

Submission Scope

Active Submission Period

2017-06-14 - 2017-06-14

Data Types

Below is a summary of the data sizing and submission schedule by data type group. Enter information on at least one data type.

Data Type Name	Data Sizing	Submission Schedule

air_pressure	multiple files	Monthly
air_temperature	multiple files	Monthly
depth	multiple files	Monthly
dew_point_temperature	multiple files	Monthly
large_scale_rainfall_amount	multiple files	Monthly
latitude	multiple files	Monthly
longitude	multiple files	Monthly
mass_concentration_of_chlorophyll _in_sea_water	multiple files	Monthly
mass_concentration_of_oxygen_in_ sea_water	multiple files	Monthly
relative_humidity	multiple files	Monthly
sea_water_electrical_conductivity	multiple files	Monthly
sea_water_ph_reported_on_total_sc ale	multiple files	Monthly
sea_water_salinity	multiple files	Monthly
sea_water_temperature	multiple files	Monthly
sea_water_turbidity	multiple files	Monthly
soil_temperature	multiple files	Monthly
surface_upwelling_photosynthetic_ photon_flux_in_air	multiple files	Monthly
thickness_of_rainfall_amount	multiple files	Monthly
time	multiple files	Monthly
water_surface_height_above_refere nce_datum	multiple files	Monthly
wind_from_direction	multiple files	Monthly
wind_speed	multiple files	Monthly
wind_speed_of_gust	multiple files	Monthly

Reviews and Testing

None. Upload the data files, if replacements, with the same file naming convention as the old files. The differing checksums will initiate an revision. MARACOOS will notify NCEI of any changes to this established procedure.

Providing System

Identification of the system providing the data to NCEI.

System Name: DAP01-VM
System Owner: RPS ASA
Physical Location: Exeter, RI
Additional Information: Add comments as needed on applicable data types, etc.

Transfer Interface

Data will be posted to the MARACOOS Web Accessible Folder (WAF) following the prescribed netCDF conventions as identified in the NCEI netCDF templates v2.0. The data files will have accompanying manifest files to validate transfer and data integrity.

Submission File Inventory

Information on each submitted file type from the Provider. Information on multiple file types can be added below.

File Type Name: Data Files

File Name Pattern:

[station]_[deployment number]_[YYYYMM].nc

File Name Field Definitions:

[station] - station identifier

[deployment number] - deployment number incase there a multiple deployments for the same month.

[YYYYMM] - Four digit year and two digit month for submitted data

nc - extension for netCDF file.

Example File Name:

HRALBPH_d1_201312.nc

File Format: netCDF-4

File Compression: None

File Size Average: 4.2MB

File Size Range: 4.1MB to 4.4MB

File Count (Rate): 16 files/month

Data Volume (Rate): 64 MB/month

Submission Schedule: Monthly

Additional Information: NCEI netCDF timeseries template V2.0 CF and ACDD compliant

Descriptive Information Attributes:

Attribute	Source	Use
creator_name	global arrtibute	For use in mapping to institutions and projects.
sea_area	global attribute	for use in mapping to sea names.
keywords	global attribute	For compiling a list of keywords specified from SECOORA
platform:long_name	variable attribute	for use in mapping to platforms.
instrument:long_name	variable attribute	for use in mapping to instruments.
institution	global attribute	for use in mapping to institutions.

Submission Manifest

A submission manifest file with a 32-character MD5 checksum value is required for each submitted file in order to ensure the integrity of the submitted data.

File Content Specification:

A submission manifest file contains a tab delimited list of submitted file names and associated SHA256 checksums for all of the submitted files.

File Transmission:
Monthly

File Name Pattern:
manifest.txt

File Name Definitions:
File will always be named 'manifest.txt'.

Example File Name:
manifest.txt

Archive Ingest
Ingest processing steps at the Archive and communication with the Provider.

Receipt Verification:
The Archive will use the provided file name and SHA256 checksum value to verify the integrity of a delivered file.

Error Reconciliation:
The Archive will report any problems or errors with file integrity, file name, checksum validation, or other errors that inhibit the data ingest and archive to the Provider. A new corresponding submission manifest will be required for files re-submitted by the Provider.

Receipt Confirmation:
The Archive will provide a notification describing the datasets publication and archival. Appropriate links to the archived data sets will be provided in the e-mail correspondence.

Quality Assurance:
No quality checks on the submitted data are planned.

Archive File Packaging:
Archival Information Packages (AIPs) will be organized into one AIP per platform type. The data files will be exact duplicates of the data that was posted to the FTP server.

Archive Storage
Archive attributes of each archived file type.

Archive File Type Name: Descriptive name for this archive file type

Archive File Attributes/IDs:

Attribute/ID Type	Value
None	Attribute/ID value

Archive Updates

New, never-before seen data files will be archived based on which buoy they are: each buoy will be assigned an accession number.

New, data from a previously submitted buoy: The AIP for that buoy will be updated (NCEI's major-revision) with the new data file.

Revised, data that was previously submitted that needs to be updated: If the naming conventions match and the checksums do not match, then the most recent submission of that file will be assumed to be the latest and greatest submission and will replace the previous file.

Retention Schedule

The data will be retained in the Archive for long-term preservation in accordance with NOAA data management standards. Information on data usage and archive value may be used for making decisions on continuing the duration of the archive.

(Notional) Disposition: Unknown/TBD

Constraints

No constraints apply or will apply to the archived data.

User Community

Oceanographers. Integrated Ocean Observing System affiliates.

User Documentation and Metadata

The Provider will supply information to the Archive for writing and maintaining standard archive metadata, which includes data discovery information, references and data archive access links for users. The following published documents and archived items will be referenced from the metadata and made available to users.

Representation Information Items

For data to be useful to users, present and future, its format specification and characteristics must be documented and preserved with the data. Representation Information provides users with syntax (structure) and/or semantics (meaning) to decode the encoded data.

Item	Description
Item name or citation	Item description or intended use

Preservation Descriptive Information Items

Preservation Descriptive Information items contain context, provenance, and/or quality information for the data.

Item	Description
Item name or citation	Item description or intended use

Access and Dissemination

The Archive will provide access services for the data and supporting information to the designated user community.

Additional Terms

None.