

**SUBMISSION AGREEMENT
BETWEEN
THE NORTHEASTERN REGIONAL ASSOCIATION OF COASTAL OCEAN
OBSERVING SYSTEMS
AND
THE NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION
FOR NORTHEASTERN REGIONAL ASSOCIATION OF COASTAL OCEAN
OBSERVING SYSTEMS (NERACOOS) NON-FEDERAL BUOY ASSETS**

2017-05-09

Introduction

This document represents the agreement that the Northeastern Regional Association of Coastal Ocean Observing Systems (NERACOOS) (the "Provider") and the National Centers for Environmental Information (NCEI) (the "Archive") have reached for submitting the Provider's data, Northeastern Regional Association of Coastal Ocean Observing Systems (NERACOOS) non-Federal Buoy Assets, 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.

The Request to Archive was approved through the ATRAC project "NERACOOS and CariCOOS non-Federal Station Assets through the University of Maine" (<https://www.ncdc.noaa.gov/atrac/inputoptions.html?id=8774>). There has been a renegotiation of the transfer process and NCEI will now pull the NERACOOS data from the NERACOOS Web Accessible Folder (WAF) at <http://www.neracoos.org/NCEI/>. The scope and size of the data holdings under this agreement are the same as what was agreed to in the Request to Archive for ATRAC project "NERACOOS and CariCOOS non-Federal Station Assets through the University of Maine" (<https://www.ncdc.noaa.gov/atrac/inputoptions.html?id=8774>).

Contacts

Persons included in all communications regarding the data submission.

Provider Contacts

Point of Contact, Add comma-separated roles, NERACOOS DMAC Lead

e.g., Principal Investigator, Transfer, etc., for Eric Bridger

the contact as applicable NERACOOS

Bob Fleming ebridger@gmri.org

University of Maine SMS

Scientist, Systems Administrator

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email or phone is fine.

Archive Contacts

Data Acquisition, Add comma-separated roles,
e.g., Ingest, Storage, Access, Stewardship,
User, etc., for the contact as applicable

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NCEI

Science Steward

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Data Overview

NERACOOS is one of 11 Regional Associations established nationwide through the NOAA Integrated Ocean Observing System (IOOS). IOOS coordinates the multi-agency, cooperative effort to routinely collect realtime data and manage historical information based on a continuously operating network of buoys, ships, satellites, underwater vehicles, and other platforms. These data are needed for many purposes which include rapid detection and prediction of changes in our nation's ocean and coastal waters.

NERACOOS will be starting the automation process with a group of non-federal in-situ data sets. These data sets are from two continuously operating networks of buoys in the Gulf of Maine. The buoy network is operated by the Physical Oceanography Group at the University of Maine.

Continuously collected historical data since the creation of the buoys networks will be submitted by University of Maine for archival initially, with periodic ongoing submissions of realtime data to continue in the future from operating buoys.

These data are needed and used for many purposes which include:

- a) rapid detection and prediction of short- and long-term changes in our nation's ocean and coastal waters.
 - b) providing data for assimilation into realtime weather forecast models.
 - c) providing offshore meteorological and oceanographic data for storm hazard assessment
 - d) assessment of weather and sea state for marine search and rescue, commercial shipping, fishing activities, and recreational boating.
 - e) validation of atmospheric and oceanographic model data.
 - f) validation of satellite data
- providing historical data for planning and engineering activities for transport, coastal infrastructure, and offshore mineral and wind energy production
- g) assessment of marine ecosystem health

in-situ observational data includes (but is not limited to) the following data types:

wInd speed and direction, barometric pressure, air temperature, visibility, significant wave height, dominant wave period, mean wave direction, subsurface water temperature, subsurface salinity, subsurface water density, subsurface conductivity, surface currents, subsurface currents (ADCP profiles), dissolved oxygen

Physical, Meteorological, Surface Measurements, Current Measurements, Moored Buoy

Applicable and Reference Documents

Documents applicable to or referenced from this agreement.

None

Submission Scope

Active Submission Period

2017-03-13 -

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
direction_of_sea_water_velocity	multiple files	Monthly
eastward_sea_water_velocity	multiple files	Monthly
latitude	multiple files	Monthly
longitude	multiple files	Monthly
northward_sea_water_velocity	multiple files	Monthly
sea_water_density	multiple files	Monthly
sea_water_electrical_conductivity	multiple files	Monthly
sea_water_salinity	multiple files	Monthly
sea_water_speed	multiple files	Monthly
sea_water_temperature	multiple files	Monthly
time	multiple files	Monthly
visibility_in_air	multiple files	Monthly
wind_from_direction	multiple files	Monthly
wind_speed	multiple files	Monthly
wind_speed_of_gust	multiple files	Monthly

Reviews and Testing

Describe the reviewing and testing procedures done by the Archive for the Provider's data, transfer interface, etc., prior to the data submission.

Providing System

Identification of the system providing the data to NCEI.

System Name: <http://www.neracoos.org/NCEI/>

System Owner: NERACOOS

Physical Location: Portland, Maine

Additional Information: open http access to Web Accessible Folder

Transfer Interface

Web Accessible Folder (WAF) for retrieval by NCEI

Submission File Inventory

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

File Type Name: manifest

File Name Pattern:

[station].[phenomena].[instrument].merged.nc.sha384

File Name Field Definitions:

[station] - station identifier.

[phenomena] - phenomena measured.

[instrument] - instrument used.

.merged.nc.sha384 - standard end of file name.

Example File Name:

A0101.currents.002m.merged.nc.sha384

File Format: ASCII

File Compression: None

File Size Average: 26KB

File Size Range: 4KB to 4KB

File Count (Rate): 7

Data Volume (Rate): Total data volume and/or the data volume rate at which this file will be submitted

Submission Schedule: Every month.

Additional Information: Add comments as needed for this file type

Descriptive Information Attributes:

Attribute	Source	Use
Name of attribute	Source of attribute value, e.g., file name	For search, results display, and/or cross-referencing

File Type Name: Data File

File Name Pattern:

[station].[phenomena].[instrument].merged.nc

File Name Field Definitions:

[station] - station identifier.

[phenomena] - phenomena measured.

[instrument] - instrument used.

.merged.nc.sha384 - standard end of file name.

Example File Name:

A0101.currents.002m.merged.nc

File Format: netCDF

File Compression: None

File Size Average: 1520KB

File Size Range: 188KB to 5608KB

File Count (Rate): 7 files per month.

Data Volume (Rate): 1520 KB per month

Submission Schedule: Every month

Additional Information: Add comments as needed for this file type

Descriptive Information Attributes:

Attribute	Source	Use
Keywords	global attribute	For compiling a list of keywords
institution	global attribute	For compiling a list of institutions
instrument_1:long_name	variable attribute	For compiling a list of instruments
platform_1:mooring_id	variable attribute	For compiling a list of platforms
sea_name	global attribute	For compiling a list of sea names

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 checksums for submitted files. The submission manifest will be in a file named [station].[phenomena].[instrument].merged.nc.sha384. There will be one manifest file for each data file submitted. The sha384 algorithm will be used to calculate each files cryptographic hash digest value. As new data files are generated, new manifest files will be generated to include the relative path to the new file and the sha384 checksum for that file. NCEI will monitor the manifest file(s) for changes and conduct the appropriate ingest task as noted in the Transfer Interface section.

File Transmission:

Every month.

File Name Pattern:

[station].[phenomena].[instrument].merged.nc.sha384

File Name Definitions:

- [station] - station identifier.
- [phenomena] - phenomena measured.
- [instrument] - instrument used.
- .merged.nc.sha384 - standard end of file name.

Example File Name:

A0101.currents.002m.merged.nc.sha384

Archive Ingest

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

Receipt Verification:

The Archive will use the provided file name and sha384 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 an inventory of the data ingested once it is completed or as requested by the Provider.

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
	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, climate researchers, offshore wind power engineers & researchers, commercial fishermen, commercial & military mariners, search and rescue personnel, civil & marine engineers, coastal planners, emergency response personnel, marine biologists, harbor pilots.

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.