SUBMISSION AGREEMENT
BETWEEN
THE PACIFIC ISLANDS OCEAN OBSERVING SYSTEM
AND
THE NATIONAL CENTERS FOR ENVIRONMENTAL INFORMATION
FOR PACIFIC ISLANDS OCEAN OBSERVING SYSTEM (PACIOOS) WATER
QUALITY BUOYS AND NEAR SHORE SENSORS

2017-02-16

Introduction

This document represents the agreement that the Pacific Islands Ocean Observing System (PacIOOS) (the "Provider") and the National Centers for Environmental Information (NCEI) (the "Archive") have reached for submitting the Provider's data, Pacific Islands Ocean Observing System (PacIOOS) Water Quality Buoys and Near Shore Sensors, 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, Data Provider

James Potemra

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System

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Archive Contacts

Data Acquisition, NCEI-IOOS Point of
Contact

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Data Overview

PacIOOS 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.

PacIOOS will be starting the automation process with a group of Water Quality buoys and near shore sensors.

There will be three water quality buoys and approximately 15 sites with nearshore sensors.

Applicable and Reference Documents

Documents applicable to or referenced from this agreement.

1. http://www.pacioos.hawaii.edu/certification/
2. http://www.pacioos.hawaii.edu/wp-content/uploads/2016/08/DMS_DataArchive.pdf

Submission Scope

Active Submission Period

2017-02-16 - 2050-05-27

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
depth	multiple files	Monthly
fractional_saturation_of_oxygen_in_sea_water	multiple files	Monthly
mass_concentration_of_chlorophyll_in_sea_water	multiple files	Monthly
mass_concentration_of_oxygen_in_sea_water	multiple files	Monthly
sea_water_ph_reported_on_total_scale	multiple files	Monthly
sea_water_salinity	multiple files	Monthly
sea_water_temperature	multiple files	Monthly
sea_water_turbidity	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: PacIOOS DMS

System Owner: Jim Potemra

Physical Location: UH Manoa, Honolulu, HI

Additional Information: Add comments as needed on applicable data types, etc.

Transfer Interface

We will pull from PacIOOS' http at http://www.pacioos.hawaii.edu/archive and each directory therin. NCEI will archive the data from PacIOOS' http server on a monthly basis. The packages will have associated checksum files that have similar names to the data files except for the replacement of the .nc with .sha256 on the checksum files. PacIOOS will be updating their files ~every month and NCEI will archive the files that have differing checksums or that do not previously exist.

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

File Name Pattern:

[station].[YYYY].sha256

File Name Field Definitions:

[station] - the abbreviation of the station name

[YYYY] - the four digit year for the data contained in the file.

sha256 - extension for the manifest file.

Example File Name:

WQB04agg.2010.sha256

File Format: netCDF-4

File Compression: None

File Size Average: 4KB

File Size Range: 4KB to 4KB

File Count (Rate): 16 files per year

Data Volume (Rate): 64 KB per year

Submission Schedule: Yearly

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

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File Type Name: Data File

File Name Pattern:

[station].[YYYY].nc

File Name Field Definitions:

[station] - the abbreviation of the station name.

[YYYY] - the four digit year for the data contained in the file.

nc - extension for the netCDF file.

Example File Name:

WQB04agg.2010.nc

File Format: netCDF-4

File Compression: None

File Size Average: 10MB

File Size Range: 3MB to 16MB

File Count (Rate): 16 files per year

Data Volume (Rate): 160 MB per year

Submission Schedule: Yearly

Additional Information: NCEI netCDF Templates v2.0 compliant.

Descriptive Information Attributes:

Attribute	Source	Use
standard_name	variable attribute	mapping to controlled vocabulary
long_name	variable attribute	mapping to controlled vocabulary
institution	global attribute	mapping to controlled vocabulary
creator_institution	global attribute	mapping to controlled vocabulary
publisher_institution	global attribute	mapping to controlled vocabulary
platform1:long_name	variable attribute	mapping to controlled vocabulary
instrument1:long_name	variable attribute	mapping to controlled vocabulary

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 one of the submitted files. There will be a manifest for each individual file. The manifests file naming convention will follow the naming convention for the associated netCDF file, with the exception of the extension. The file extension will be changed from .nc to .sha256 for the submission manifest. Below is an example of the contents of a submission manifest file:

$ more WQB04agg.2010.sha256
871828c8981acc94d5317f7222cc6df2c9a22f28958c05dea47b610d300835ca WQB04agg.2010.nc

File Transmission:

Every year in congruence with the netCDF file updates.

File Name Pattern:

[station].[YYYY].sha256

File Name Definitions:

[station] - the abbreviation of the station name

[YYYY] - the four digit year for the data contained in the file.

sha256 - extension for the manifest file.

Example File Name:

WQB04agg.2010.sha256

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. No e-mail receipt verification is required for PacIOOS.

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:

Data metadata will be checked against the CF standard name table.

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
Storage System	Silver Spring Maryland, Archive Management System

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.