Request to Archive
With The National Centers for Environmental Information
For Mid-Atlantic Regional Association Coastal Ocean Observing System (MARACOOS) in-situ non-Federal station data.
Provided by MARACOOS

2017-02-27

This information will be used by NCEI to conduct an appraisal and make a decision on the request.

1. Who is the primary point of contact for this request?

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MARACOOS
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Phone or email

2. Name the organization or group responsible for creating the dataset.

IOOS > Integrated Ocean Observing System, NOAA, U.S. Department of Commerce, Mid-Atlantic Regional Association Coastal Ocean Observing System

3. Provide an overview summarizing the scope of data you want to archive. Describe the outputs, data variables, including their measurement resolution and coverage.

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.

4. What is the time period covered by the dataset? (YYYY-MM-DD, YYYY-MM or YYYY)
From 2013-12-09
Ongoing as continuous updates to the data record

5. Edition or version number(s) of the dataset:
N/A

6. Approximate date when the dataset was or will be released to the public:
2017-03-31

7. Who are the expected users of the archived data? How will the archived data be used?
Oceanographers. Integrated Ocean Observing System affiliates.

8. Has the dataset undergone user evaluation and/or an independent review process? Did NCEI participate in design reviews?
No

9. Describe the dataset's relationship to other archived datasets, such as earlier versions or related source data. If this is a new version, how does it improve upon the previous version(s)?
N/A

10. List the input datasets and ancillary information used to produce the data.
water quality parameters are recorded by a YSI EXO2, 6600 or 6920 sonde according to the Water Quality Monitoring Standard Operating Procedure (HRECOS SOP 2012.12). Data are recorded by a data logger and transmitted to the HRECOS database via satellite, cellular modem,
wireless transmitter, or direct internet connection.

11. List web pages and other links that provide information on the data.
HRECOS: http://www.hrecos.org/
http://www.hrecos.org/images/Data/forweb/HRECOS.QAPP.2013.03.14.pdf
Maryland DNR: http://mddnr.chesapeakebay.net/

12. List the kinds of documents, metadata and code that are available for archiving. For example, data format specifications, user guides, algorithm documentation, metadata compliant with a standard such as ISO 19115, source code, platform/instrument metadata, data/process flow diagrams, etc.
1. CF compliance, and ACDD conventions.

13. Indicate the data file format(s).
1. netCDF-4 Classic

2. NCEI netCDF template v2.0

14. Are the data files compressed?
No

15. Provide details on how the files are named and how they are organized (e.g., file_name_pattern_YYYYMM.tar in monthly aggregations).
The files will be organized into catagories based on the funding project. Each project will then have a directory for each specific station which will contain individual data files. Individual data files represent one day of data for the specified station. The data files are then grouped by station.

[station]_[YYYY]-[MM]-[DD].nc
[station] - Abbreviation for the station name
[YYYY] - Four digit year
[MM] - two digit month
[DD] - two digit day

16. Explain how to access sample data files and/or a file listing for previewing. If it is not available now, when will it be available?
Data files can be found at http://sos.maracoos.org/maracoos_archive/. All sub-directories with names that end in *waf will be archive ready data. For example hrecos-waf/ is archive ready data, but maracoos-iso/ will not have archive files.

17. What is the total data volume to be submitted?
Historic Data: all historic data or data submitted as a completed collection.

Total Data Volume:	1.2GB
Number of Data Files:	19110

Continuous Data: data volume rate for a continuous data production.

Total Data Volume Rate:	61.6MB per Month
Data File Frequency:	500 per Month
Data Production Start:	2013-12-09

18. Are later updates, revisions or replacement files anticipated? If so, explain the conditions for submitting these additional data to the archive.
Revision/replacement files will be provided as applicable

19. Describe the server that will connect to the ingest server at NCEI for submitting the data.

Physical Location:	Exeter, RI
System Name:	DAP01-VM
System Owner:	RPS ASA
Additional Information:	

20. What are the possible methods for submitting the data to NCEI? Select all that apply.
1. FTP PULL
Data Provider will post the data on the Web Accessible Folder for NCEI to pull from.

21. Identify how you would like NCEI to distribute the data. Web access support depends on the resources available for the dataset.

1. Direct download links
2. Advanced web services (e.g., THREDDS Catalog Service)

22. Will there be any distribution, usage, or other restrictions that apply to the data in the archive?

No known constraints apply to the data.

23. Discuss the rationale for archiving the dataset and the anticipated benefits. Mention any risks associated with not archiving the dataset at NCEI.

Data Set fits within NOAA's mission. OSTP: Increasing Access to the Results of Federally Funded Scientific Research.

24. Are the data archived at another facility or are there plans to do so? Please explain.

No

25. Is there an existing agreement or requirement driving this request to archive? Have you already contacted someone at NCEI?

We've been in contact with Mathew Biddle at NCEI.

26. Do you have a data management plan for your data?

No

27. Have funds been allocated to archive the data at NCEI?

Through the Integrated Ocean Observing System Data Discover, Access, and Archiving Project.

28. Identify the affiliated research project, its sponsor, and any project/grant ID as applicable.

Hudson River (HRECOS), Maryland Department of Natural Resources, and potentially Pro-Bob.

29. Is there a desired deadline for NCEI to archive and provide access to the data?

No deadlines for archive or access.

30. Add any other pertinent information for this request.

We will be starting with the Hudson River Environmental Conditions Observing System (HRECOS), then integrate the Maryland Department of Natural Resources and "Pro-BOB" stations.

Please allow Mathew Biddle to attend the review meeting.