

NODC Submission Agreement Information Form

(V1.1, Revised 10/2008)

FORM APPROVAL PENDING

Following the definitions and principles of the *Open Archival Information System (OAIS) Reference Model (ISO 14721:2003)*, this form documents the mutual understanding between a *Producer*, defined as a person or organization who provides information to be preserved, and an *Archive*, defined as the organization that intends to preserve information for access and use over the long term. It should accompany all data submissions to the National Oceanographic Data Center (NODC) and be completed to the extent possible.

The information contained on this form may be used to:

1. Populate NODC's Accession Tracking Data Base and product-specific databases
2. Create metadata records conforming to the Content Standard for Digital Geospatial Metadata (CSDGM), Vers. 2 (FGDC-STD-001-1998) and/or ISO 19115
3. Generate a formal archive appraisal package, for submissions requiring management level approval
4. Develop a list of *Producer* requirements requested of the *Archive*

The information contained on this form is true and correct to the best understanding of the *Producer* and *Archive* at the time of its submission. In the future, this information may be amended, updated, or revised as necessary and some submissions may require management level approvals before archival services can be provided.

Instructions:

This form is divided into six sections. Section 1 provides only the most basic Tracking Information and is the only section absolutely required at the time of submission. **However, within 1 month all submissions must also include information for Section 2**, which provides basic Data Discovery and Usage Information, and all submissions should strive to provide information through Sections 3 and 4, which provide more comprehensive and detailed information on the data set and its requirements for long term stewardship. Section 5 is required for submissions to the *Archive* that are expected to be periodic or routine in nature, and supports automation of archival services. Section 6 is optional and is only required for submissions that are expected to need management level approval and a formal archive appraisal package. The *Archive* Point of Contact will provide guidance as needed on all of these questions and will work with the *Producer* to ensure both parties reach a mutual understanding.

When complete, please email the signed form (see the last page of the document) to the *Archive* Point of Contact with a copy to NODC.DataOfficer@noaa.gov. Closing the email with "Signed," followed by your name is an acceptable form of signature.

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Section 1 – Basic Tracking Information

All elements in this section are REQUIRED, and will enable the *Archive* to establish a unique and durable tracking number known as an NODC Accession Number for the submission. It also clearly establishes whether the *Archive* is able to freely redistribute the data, and if not, what the restrictions are. The *Producer* will be provided the Accession Number in a confirmation receipt, along with the web address where the *Producer* can access the data set.

1. Date of submission of this form (or its update):

30 October, 2008

2. Describe the scope of this data submission information.

Long-term stewardship at NODC for oceanographic mooring data (oceanographic and meteorological) from the Coastal Ocean Research and Monitoring Program, University of North Carolina at Wilmington.

3. What is the Data Set title? A useful title includes a listing of two or three of the observed variables, the name of one or two of the platforms used to collect data or the project responsible for the data collection activity, the location, and the range of observation dates. For example, “Temperature, salinity, and nutrient data from bottle casts from the *Akademic Korolev*, *Alpha Helix*, *Polar Star*, and *Surveyor* in the Bering and East Siberian Seas from 1987-1999.”

Currents, wave parameters, temperature, salinity, and meteorological observations from moorings of the Coastal Ocean Research and Monitoring Program in coastal waters near North Carolina, USA, 2000-2007.

4. Primary Point of Contact for *Producer* – please provide name, organization, position, address, telephone, fax, and e-mail address.

Dr. Lynne Leonard
University of North Carolina-Wilmington
Center for Marine Science
5600 Marvin K. Moss Lane
Wilmington, NC 28409
Ph: 910-962-2338
Fax: 910-962-2410
Email: lynll@uncw.edu

5. Primary Point of Contact for *Archive* – please provide name, organization, position, address, telephone, fax, and e-mail address.

Dr. Scott Cross
NOAA National Oceanographic Data Center
Southeast Regional Liaison
CCEHBR
219 Ft. Johnson Road
Charleston, SC 29412
Ph: 843-762-8567
Fax: 843-762-8700

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Email: scott.cross@noaa.gov

6. Can NODC freely and openly redistribute this dataset? If no, list the *Producer's* constraints of the Data Set in the *Archive* for Users in terms of:
 - a. User access to the Data Set
 - b. Uses of the Data Set by Users

Yes, access is unrestricted. The Principal Investigators (Originators), University of North Carolina at Wilmington Center for Marine Science, and the Grantor (See Data_Set_Credit) should be fully acknowledged in any publications in which any part of these data are used. Use of the data without completely reading and understanding of the metadata is not recommended. CORMP in University of North Carolina at Wilmington is not responsible for the misuse of data.

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Section 2 – Basic Data Discovery and Usage Information

All elements in this section are REQUIRED if applicable and allow the *Archive* to enable users to find, access, and use the data described by this submission. It is strongly recommended that this information be provided at the time of the submission though it is acceptable if some elements are provided shortly afterward.

1. What is the purpose for collecting this Data Set?

The strategic plan for the Congressionally mandated Integrated Ocean Observations System (IOOS) calls for a sustained, integrated system to improve weather forecasting, predictions of climate change and related impacts on coastal populations, safety and efficiency of marine operations, and coastal ecosystem health. The Coastal Ocean Research and Monitoring Program (CORMP) at the University of North Carolina at Wilmington (UNCW) is a research and monitoring program that addresses these goals in the coastal ocean. The program mission is to provide an interdisciplinary science-based framework that supports sound public policy leading to wise coastal use, sustainable fisheries and improved coastal ocean ecosystem health.

2. Provide a general descriptive abstract about the Data Set.

CORMP was initiated as a research and observation program focusing on the collection of data applicable to physical and ecological predictive models, fisheries sustainability, and habitat quality. CORMP consists of four focus areas: Ocean Observations, Data Management, Ecosystem Research and Modeling, and Outreach and Education that operate synergistically to: 1) provide a regional hub (SE US) in a national observing system; 2) collect and disseminate physical and ecological data; and 3) engage regional partners, stakeholders and end-users in the development and implementation of a sustainable coastal-ocean observing program. CORMP capitalizes on a combination of instrumented moorings, remote sensing and ecosystem models, and traditional ship-based observations to establish baseline conditions, identify responses to stochastic events, predict and verify long-term trends and identify linkages among coastal ocean ecosystem components. The information collected by CORMP help researchers determine a mechanistic understanding of factors affecting productivity in the coastal ocean in the region and will provide information that can be and is directly used in local-to federal fisheries management. Further, information collected by CORMP will be used by partner organizations to provide a real-time forecasting. The operational area for the CORMP observing network extends from estuaries (including the Cape Fear River Estuary and it's plume) to the coast, across the continental margin to the Gulf Stream, and from the SC/NC border to north of Cape Lookout. <1> Mooring: Core variables collected at each mooring includes water temperature and salinity, water column currents, surface wave directional spectra data. On some selected mooring stations, CORMP also measure turbidity and fluorescence. <2> Cruise: We sample the cape fear river plume every month by collecting data with a YSI-6820 Water Quality Sonde. This instrument measures (Temperature, Salinity, pH, Conductivity, Dissolved Oxygen, and Turbidity.) We collect Total Nitrate, Total phosphate, Nitrate, Phosphate, Ammonium and Chlorophyll a. Zooplankton samples are also collected at four of the plume stations. Our Onslow Bay sampling cruises are conducted bi-monthly. We sample six stations, each approximately five nautical miles apart, beginning at the Masonboro Inlet sea buoy and extending out to approximately 27

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miles offshore. Our most offshore sampling station (OB27) also serves as the location for a fixed underwater instrument mooring. Basic data including time (GMT), latitude, longitude, water depth, sea surface temperature, weather conditions, and sea state are noted upon arrival at every station. When on station, scientists take measurements of physical parameters (temperature, currents, salinity, etc.), light attenuation and collect water samples for analysis of nutrients, phytoplankton pigments, and CDOM using a Seabird SBE-25 CTD rosette.

3. What is the time period covered by the Data Set?

Ongoing, beginning in 2000.

4. What is the geospatial coverage of the Data Set (Easternmost longitude, westernmost longitude, northernmost latitude, southernmost latitude). Note western longitudes and southern latitudes are negative, and use decimal degrees if possible.

West_Bounding_Coordinate: -78.60; East_Bounding_Coordinate: -76.13 ;

North_Bounding_Coordinate: 34.81; South_Bounding_Coordinate: 33.14

5. List the measured variables or parameters in the Data Set (e.g., Temperature, Salinity, etc.)

Air temperature, air pressure, relative humidity, wind speed, wind direction, wind gust, Water temperature, water salinity, wave and current data.

6. List the platform(s) from which the Data Set is derived.

CORMP realtime stations: LEJ2, LEJ3, ILM2, ILM3, OCP1. CORMP Archived MooringsStations: OB1M, OB2M, OB3M, OB4M,OB5M,OB27M, LB1M, LB4M, LB5M, CORMP Cruise Stations: CFP1 CFP2 CFP3 CFP4 CFP5 CFP6 CFP7 CFP8 CFP9 CFP10 CFP11 OBSB OB05 OB10 OB15 OB20 OB27 Details: Please check

<http://www.cormp.org/cruises.php>

<http://www.cormp.org/moorings.php>

7. List the instrument(s) used to derive the Data Set.

ADCP, CT (microcat), weather station

8. List the observation types in the Data Set (e.g., Biological Data, Physical Data, etc.).

Physical data

9. List the mission/project name(s) to which the Data Set contributes.

Coastal Ocean Research and Monitoring Program (CORMP), Southeast Coastal Ocean Observing Regional Association (SECOORA), Integrated Ocean Observing System (IOOS)

10. Give the expected size(s) in bytes and number of files in the submission.

~360,000,000 bytes (360 Mb) per year total, in ~45 files.

11. Give the file format and format version (e.g., netCDF-3, HDF-5, ASCII CSV, etc.).

netCDF-3

12. Does this Data Set conform to any file-level data content or metadata content standards?

(e.g., COARDS/CF, HDF-EOS, WOCE, GHRSSST)

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SEACOOS CDL 2.0 convention

<http://seacoos.org/Research%20and%20Technology/Folder.Information%20Management/documentation/SEACOOS%20NetCDF%20Standard%20v2.0.pdf>

13. Please describe the file contents. Include enough information to make these data understandable to future users. For example, a table containing as applicable: parameter definition, data type, byte size/length, scale factor, offset, precision, and units. This information is especially important for ASCII and other formats which are not self-describing like netCDF and HDF. If this information is already contained in a file or file headers included in this submission, please indicate the file name.

File content information is contained in the header to each netCDF data file.

14. Give the file-naming convention for the file(s) to be submitted, with the range/domain of each field value in the filename.

StationName_year_datatype.nc Data type includes met (meterological data), ct (microcat or CT sensor), current (ocean current), wave For example: OCP1_2007.met.nc =
Station - OCP1, Year – 2007, Datatype – met

15. Please provide a list of existing reports, publications, user guides, web sites, or other supporting documentation relevant to the Data Set.

<http://www.cormp.org/moorings.php>

<http://www.cormp.org/cruises.php>

16. What metadata exists for this Data Set? Is it in a standard format/can it be automatically translated into a standard format? Describe the granularity of this metadata (For example, is it collection level metadata? If not, to what file or grouping of files does it apply?)

FGDC metadata at the collection level (CORMP overall and CORMP cruises) and at the mooring level.

17. If applicable, describe the temporal resolution primary parameters in the Data Set.

18. If applicable, describe the horizontal resolution of the primary parameters in the Data Set.

19. If applicable, describe the vertical resolution of the primary parameter(s) in the Data Set.

20. If applicable, describe the projection grid or coordinate system used in the Data Set.

21. If the Technical Contact for the *Producer* is different from the Primary Contact for the *Producer* (1.4), please provide name, organization, position, address, phone, fax, and email.

22. If the Metadata Contact for the *Producer* is different from the Primary Contact for the *Producer* (1.4), please provide name, organization, position, address, phone, fax, and email.

Xiaoyan Qi

University of North Carolina-Wilmington

Center for Marine Science

5600 Marvin K. Moss Lane

Wilmington, NC 28409

Ph: 910-962-2553

Fax: 910-962-2410

Email: dms@cormp.org

23. If the Technical Contact for the *Archive* is different from the Primary Contact for the *Archive* (1.5), please provide name, organization, position, address, phone, fax, and email.

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24. If the Metadata Contact for the *Archive* is different from the Primary Contact for the *Archive* (1.5), please provide name, organization, position, address, phone, fax, and email.

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Section 3 – Detailed Data Processing and Quality Information

All elements in this section are STRONGLY RECOMMENDED and allow the *Archive* to enable more complete and thorough understanding of the data over the long term.

1. What is the overall completeness and quality of the Data Set?

Complete, quality controlled.

2. Describe the data processing level of the Data Set. For example, is the Data Set unprocessed or minimally processed, quality controlled or calibrated, etc.? For satellite data, is it Level 0, 1, 2, 3, or 4?

3. Summarize the science algorithms(s) used to derive the Data Set.

4. Describe the steps taken to process the Data Set, including for each step the methodology, source data, and time/frequency, and listing any input data sets used to derive the Data Set. **Most data are downloaded from instrument directly except for those data from real time stations which were transmitted to land over iridium in real time. Then these data went through the real time filter to check for outliers. Data which was confirmed bad were excluded from the datasets. Please contact info@cornp.org if you have any questions.**

5. Describe the Data Set's dependency on other data (e.g. ancillary files), processing systems, software, or entities that are not to be submitted to the Archive.

Requires software of software libraries that read netCDF data.

6. Detail any measures taken by the Producer to assess the quality of the Data Set, including data comparisons, and an assessment of the attribute accuracy. Give information about omissions, selection criteria, and other rules used to derive the Data Set.

- **Evaluated by on the on-the-fly filter as documented on http://www.cornp.org/documents/QC_criteria.xls**
- **Reviewed by data manager manually.**

7. List any quality assessment parameters included in the Data Set. For example, this may be an explanation of quality flags and their range/domain of values.

qc_flag_aggregate=9: missing value; 0: not evaluated; 1: bad; 2: suspected; 3: good

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Section 4 – Data Stewardship Information

All elements in this section are STRONGLY RECOMMENDED and enable the *Archive* to provide more comprehensive *data stewardship* over the long term. Data stewardship requires a more extensive set of functions than traditional long-term preservation of data and information, and includes activities such as monitoring the needs of user communities, compliance testing, quality assurance, and use of this Data Set in larger integrated product databases. Importantly, this section provides the *Producer* with an opportunity to request specific services from the *Archive*. This document does not imply that all of these services will be provided, but typically the *Archive* will work to meet them on a best-effort basis.

1. Please describe any quality control or quality assurance procedures the *Archive* should perform on this Data Set when it is submitted to the *Archive*.

Filesize check upon receipt.

2. How will the *Producer* provide updates to the *Archive* when changes occur in the Data Set, transmission mechanism, format, content, etc.? How often might such changes be expected to occur?

Email to NODC Southeast Regional Liaison; expect updates ~annually.

3. Does the *Producer* request reports on the *Archive*'s dissemination of the Data Set? If so, what statistics should be included? (Please note federal regulations strictly limit the amount and kind of information that can be recorded by federal agencies.)

Yes, request semiannual report of:

- **total number of downloads**
- **total number of files downloaded**
- **total volume (bytes) of data downloaded.**

4. Does the *Producer* request standards compliance testing on the Data Set? For example, should the *Archive* verify data files are meeting netCDF Climate and Forecast (CF) conventions, or should metadata records be checked for adherence to the FGDC content standard? Will the *Producer* perform standards compliance testing prior to submission to the *Archive*?

***Producer* will ensure standards compliance.**

5. Suggest action(s) for the *Archive* in the case of an error in transmission (e.g. missing data, duplicate data, incorrect file name or size, failure of compliance checks).

Contact *Producer* via email.

6. Please list any known NODC product databases (e.g. World Ocean Data Base) that this Data Set should become a part of.
7. Please identify one or more Representative Users of the *Designated Community*. The Designated Community is defined in the OAIS Reference Model as the group of potential users who should be able to understand a Data Set over the long term. The *Archive* works specifically to preserve the data and information for this Designated Community.

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- a. Describe this user community and their requirements
- b. Provide Contact Information for a representative of this community - please provide name, organization, position, address, telephone, fax, and e-mail address

User community: state, federal resource managers, coastal marine research community.

Contact 1: P. Ansley Wren-Key, Coastal Carolina Univ, awren@coastal.edu

Contact 2: Devaliere, Eve M , Army Corp of Engineers, Eve.M.Devaliere@usace.army.mil

8. List security requirements for dissemination of the Data Set from the *Archive* to the users.
None.

9. Once the Data Set is transferred to the *Archive*, how long should it take for it to become searchable? How long should it take to become accessible online?

30 days.

10. Describe any preferred search criteria to be enabled for this Data Set in the *Archive* (e.g., search by time, search by geographic bounding box on a Polar Stereographic map, etc.)

Search by region, date, data type.

11. Describe any the preferred access mechanisms to be enabled for this Data Set in the *Archive* (e.g., OPeNDAP, Web Coverage Services, FTP, etc.)

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Section 5 – Logistics Information for Routine Transfers to the *Archive*

All elements in this section are REQUIRED for Data Sets that are expected to be routine, automatic transmissions to the *Archive* from the *Producer*. This information is required for the *Archive* to establish and maintain the automated ingest and archive procedures. Questions 1 through 5 in Section 4 above are also required for automatic submissions.

1. Provide the mechanisms used to transfer digital data to the *Archive*. For routine, repeated submissions include the server, location, and protocol used.
2. List any relevant Interface Control Document, Memorandum of Understanding, or other technical documents outlining how data will be transferred from *Producer* to *Archive*.
3. Describe the submission schedule in terms of starting/ending times and submission frequency for each submission session.
4. Give the volume of each submission session and the total anticipated volume per day or month in bytes.
5. List the steps in the transfer process from *Producer* to *Archive*.
6. List the *Producer's* preference for basic file validation routines (e.g. checksums, CRC32, MD5 or other).
7. Does the *Producer* request a periodic record of receipt from the *Archive* for purposes of tracking the submitted data?
8. List any security requirements needed during submission from the *Producer* to the *Archive*.
9. Is the content of each submission session considered by the *Producer* to be a continuation or new version of a previous submission, or is the content of each submission session considered by the *Producer* to be an independent or stand-alone collection of data?

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Section 6 – Archive Appraisal and Justification Information

Only in cases where a formal archive appraisal package is required by the *Archive* in order to gain management approval to provide archival services for this Data Set are these elements required. For these cases, also ensure the following questions have been answered: all of Section 2, and Section 3 questions 1 and 2. The Point of Contact for the *Archive* will provide additional guidance with this section.

1. What are the cost considerations for long-term maintenance of the Data Set? Are resources available for archiving and providing access to these records?
2. Has this Data Set ever physically resided at a scientific data center or center of data where stewardship was provided? Where does it reside now? What scientific expertise would best provide stewardship for this Data Set?
3. Where does this Data Set fit within NOAA's mission?
4. What is the value (scientific, public, government) of this Data Set in terms of current and anticipated future benefits?
5. Does the Data Set have legal mandates which require its archive at NOAA? Are there existing NARA disposition schedules that pertain to these records? If yes, please describe.
6. Is the Data Set unique? If not, where else does it exist?
7. Is the Data Set related to other records in a NOAA *Archive* (i.e. an extension, a new version, improved quality, etc.)? If yes, to what degree does this Data Set add value to other data sets held by NOAA or others?
8. Has the Data Set undergone user evaluation and/or scientific peer review, been used extensively in publications, and/or subjected to other appraisal processes? If yes, please describe.
9. What is the current storage media for the Data Set? If in electronic format, does it still exist on other media (e.g. paper, film)? If yes, is it required to maintain copies on other media?
10. Does appropriate hardware and software technology exist to enable usability of the Data Set? If yes, please describe.
11. Does the Data Set have intrinsic value? Intrinsic value implies that an object containing data has value beyond the data content in the object. For example, the original deck logs from the HMS *Beagle* have intrinsic value, but the digitized observations from those logs do not because the digitized files are easily copied viewed, and/or redistributed.

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The signatures below indicate the belief that the information contained on this form is true and correct to the best understanding of the *Producer* and *Archive*. These signatures also acknowledge that in the future, this information may be amended, updated, or revised as necessary and that some submissions may require management level approvals before archival services can be provided.

Lynn A. Leonard

Scott L. Cross

Point of Contact for the *Producer*
Printed Name and Date:

Point of Contact for the *Archive*
Printed Name and Date:

12/15/2008

12/16/2008