NOAA's Office of Ocean Exploration and Research (OER) is subject to NOAA's Public Access to Research Results (PARR)[1] policy and the implementing guidance contained in NOAA Environmental Data Management Committee (EDMC) Procedural Directives[2]. The PARR is NOAA's response to the White House's Office of Science and Technology Policy (OSTP) memorandum, dated February 22, 2013, Increasing Access to the Results of Federally Funded Scientific Research[3].

The Procedural Directive specific to competitive awards is the Data and Publication Sharing Directive for NOAA Grants, Cooperative Agreements, and Contracts[4], which requires OER to provide the following guidance to proposal writers that describes the data management responsibilities of any awardee.

Environmental data and information collected or created under NOAA grants or cooperative agreements must be made discoverable by and accessible to the general public, in a timely fashion (typically within two years), free of charge or at no more than the cost of reproduction, unless an exemption is granted by the NOAA Program. Data should be available in at least one machine-readable format, preferably a widely-used or open-standard format, and should also be accompanied by machine-readable documentation (metadata), preferably based on widely used or international standards. OER encourages awardees to submit data collected with NOAA funding as soon as possible in any case.

Proposals submitted in response to this Announcement must include a Data Management Plan of up to two pages describing how these requirements will be satisfied. The Data Management Plan should be aligned with the Data Management Guidance provided by NOAA in the Announcement. The contents of the Data Management Plan (or absence thereof), and past performance regarding such plans, will be considered as part of proposal review. A typical plan should include descriptions of the types of environmental data and information expected to be created during the course of the project; the tentative date by which data will be shared; the standards to be used for data/metadata format and content; methods for providing data access; approximate total volume of data to be collected; and prior experience in making such data accessible. The costs of data preparation, accessibility, or archiving may be included in the proposal budget unless otherwise stated in the Guidance. Accepted submission of data to the NOAA National Centers for Environmental Information (NCEI) is one way to satisfy data sharing requirements; however, NCEI is not obligated to accept all submissions and may charge a fee, particularly for large or unusual datasets.

A data management plan template is provided at the end of this section and the resulting plan should be no more than two pages. The contents of the Data Management Plan (or absence thereof), and past performance regarding such plans, will be considered as part of proposal review.

NOAA may, at its own discretion, make publicly visible the Data Management Plan

from funded proposals, or use information from the Data Management Plan to produce a formal metadata record and include that metadata in a Catalog to indicate the pending availability of new data.

Proposal submitters are hereby advised that the final pre-publication manuscripts of scholarly articles produced entirely or primarily with NOAA funding will be required to be submitted to NOAA Institutional Repository through the NOAA Central Library after acceptance, and no later than upon publication. Such manuscripts shall be made publicly available by NOAA one year after publication by the journal. Awardees are encouraged to publish in open-access journals, where appropriate.

The costs of data post-processing necessary to meet the Procedural Directive should be considered when calculating the proposal budget, keeping in mind that OER's data management team is available to provide some assistance and/or services, if needed.

Note that while submission of properly formatted data to the NOAA NCEI is one way to satisfy data sharing requirements, NCEI is not obligated to accept all submissions and may charge a fee for particularly large or unusual datasets.

PARR Compliance Guide

For reference, the following bullets define full PARR compliance. OER will negotiate data management plans with awardees to ensure compliance with PARR requirements. Responsibility for meeting these requirements may rest solely with the awardee or be shared between the awardee and NOAA, depending on the terms of the final Data Management Plan.

•   Datasets from every instrument/sensor are provided in archive-ready, open-source, non-proprietary formats.

•   Datasets of scientific logging and first hand scientific observations are preserved and converted into archive-ready formats.

•   Datasets are accompanied by ISO metadata with all mandatory elements completed and also data quality information and information necessary for an end user to completely understand the dataset and be able to use it.

•   Any post-processed datasets, data products, and reports generated by the researcher are documented with metadata describing the processing steps and quality assurance methods.

•   Full-complement of data is submitted for preservation and stewardship through the

NCEI archive processes and given Digital Object Identifiers.

• Any online products referencing the research and its data are provided for OER to reference in its own Digital Atlas, giving users a broad explanation of the expedition and comprehensive access to the data and other related resources.

• Any publications produced based on the funded research reference the DOIs of the data behind the publication and are published in scientific journals.

Data Management Plan Template

Please refer to the Frequently Asked Questions (FAQ) for Data Sharing for NOAA Grants (https://geo-ide.noaa.gov/wiki/index.php?title=FAQ_for_Data_Sharing_for_NOAA_Grants_PD) for any questions you may have when filling out this template. Some relevant FAQ questions are provided at the end of each question for your convenience.

a. What types of environmental data types or other information will be created during this project? (FAQ 1)

b. What is the tentative date by which the data will be made publicly accessible? (FAQ 2, 3)

c. If the data are not to be shared, under what authority are you requesting an exemption? (FAQ 10, 16, 23, 24)

d. Where will data be hosted for public access?

e. In what formats will the data be submitted? Open-standard, archive-ready formats are encouraged[5].

f. Will you provide metadata for the datasets or will you require assistance in doing so? At a minimum, the metadata should make the data independently understandable to the end user and include instrumentation used, data processing steps, and quality control procedures. The ISO 19115 metadata standard is encouraged. (FAQ 14, 15)

g. Can you provide an estimate of the total volumes of data to be archived by data type? (e.g., geophysical/bathymetry, oceanographic, video/images)

h. Can you provide examples of prior experience in making such data accessible?

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1 http://docs.lib.noaa.gov/noaa_documents/NOAA_Research_Council/NOAA_PARR_Plan_v5.04.pdf

2 https://nosc.noaa.gov/EDMC/PD.all.php

3 https://www.whitehouse.gov/sites/default/files/microsites/ostp/ostp_public_access_memo_2013.pdf

4https://nosc.noaa.gov/EDMC/documents/Data_Sharing_Directive_v3.0.pdf

5 Refer to NARA 2014-04: Appendix A, Revised Format Guidance for the Transfer of Permanent Electronic Records – Tables of File Formats for guidance on the preferred and acceptable formats defined by the National Archives and Records Administration (NARA).