OMB Control Number: 0648-0672
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RCOS CERTIFICATION REQUIREMENTS GUIDANCE

Directions:
For the purposes of these certification guidelines, when the verb "describe" is used it indicates that the RCOS shall give an account in text that responds to the requirement. This text shall contain sufficient information to demonstrate how the RCOS satisfies the certification requirement. The RCOS may include a link(s) to additional information. When the verb "document" is used, it indicates that the RCOS shall furnish a document(s) that responds to the requirement. A text statement accompanying the document(s) will normally be necessary to provide context for the document(s) and to demonstrate how the RCOS satisfies the certification requirement. The RCOS may include a link to a document in the accompanying text statement.

Documentation that addresses the certification requirements may include references to existing RCOS documents. All documents and materials may be submitted directly to the U.S. IOOS Program Office or made accessible for public viewing on the RCOS's website.

§997.21 Organizational Structure

(b) The application shall:

1) Describe the RCOS's organizational structure (e.g., 501(c)(3) tax-exempt organization, establishment via Memorandum of Understanding (MOU) or Memorandum of Agreement (MOA).

Description required

Identified RCOS organizational structure - no specific type is required

2) Document the RCOS's ability to satisfy applicable legal criteria for accepting and disbursing funds, and entering into agreements. Sufficient documentation may be provided in the form of: 1) evidence of a current grant, cooperative agreement, or contract in good standing with the Federal government; or 2) evidence of fiscal agreements, standard operating procedures for financial activities, and proof of an audit process.

Documentation required

Sufficient documentation may be provided in the form of: 1) evidence of a current grant, cooperative agreement, or contract in good standing with the Federal government, or 2) evidence of fiscal agreements, standard operating procedures for financial activities, and proof of an audit process.

3) Document the RCOS's measures for addressing issues of accountability and liability. For this criterion, accountability and liability refer to the RCOS's governance and management activities. Sufficient documentation may be provided in the form of: 1) a conflict of interest policy for the Governing Board or governing body, which clearly states that a member of the governing board will declare any conflict of interest he or she may have and will recuse him or herself

from associated funding decisions that may result in the Board member or a direct family member benefiting financially, and 2) a policy statement in the RCOS's by-laws that addresses liability issues.

Documentation required

1) A conflict of interest policy for the Governing Board or governing body that requires a Board member recuse themselves from funding decisions only when the decision may result in the Board member or a direct family member would benefit financially.

2) A policy statement in the RCOS's by-laws that addresses liability issues. This may include discussion on indemnification for the organization's director, officers, committee members and employees.

4) Describe the process the RCOS uses to set priorities for distributing funds (e.g., requirement for Governing Board or governing body approval when responding to funding opportunities or adjusting to funding level changes in existing agreements).

Description required

A description of the process the RCOS has in place to set priorities for distributing funds. This may include:

1. Identifying stakeholder needs through public meetings, surveys, outreach efforts, etc.;
2. How the governing body prioritizes those stakeholder needs - e.g. annual planning efforts; or
3. Selecting projects for funding based on prioritized needs - e.g. descoping efforts; response to funding opportunities & drafting proposals.

5) Document the by-laws, signed articles of agreement, or any binding agreements that demonstrate how the RCOS establishes and maintains a Governing Board or governing body. The documentation shall demonstrate:
   i. How the composition of the Governing Board or governing body is selected and how it is representative of regional ocean observing interests. NOAA defines "representative" in this specific context to include geographic, sector, expertise, and stakeholder considerations.

Documentation required

There is a description of the established process identifying how the governing body is selected. The process should address representation of geographic, sector, expertise, and stakeholder considerations. Approval does not require specific numbers of board members or how they are distributed across the categories listed, but acknowledges that a governing body that is representative of the regional observing system interests is desirable, encouraged, and actively pursued.

   ii. How and with what frequency the RCOS solicits and receives advice on RCOS participant diversity, stakeholder coordination, and engagement

strategies, to ensure the provision of data and information that satisfy the needs of user groups.

Documentation required

A RCOS should describe a repeatable process that is in place to solicit and receive advice on RCOS participant organizational, topical and geographic diversity, stakeholder coordination, and engagement strategies.

'Receiving advice' can mean any feedback that informs the RCOS on how it addresses organizational diversity, stakeholder coordination, etc. This could be from partners, stakeholders, members, perhaps even the Governing Council if it serves in an oversight role. External groups, advisors, and contractors could all fit this requirement. We've left this open to give each Regional Association the opportunity to do as it needs. The objective is that the RCOS has a process for actively seeking feedback on how and who it engages with.

There is no required repeat time on this process. The objective of the requirement is to show that the organization is actively soliciting feedback on how it interacts with regional stakeholders, data users, and active participants in the RCOS.

iii. How the RCOS collects and assesses user feedback to gauge the effectiveness of the regional system and subsystems in satisfying user needs, and how the RCOS responds to this user feedback in setting its priorities. Sufficient documentation may be provided in the form of a description of the method the RCOS uses in its annual planning process to assess priorities among the identified user needs in the region and to respond to those user needs.

Documentation required

The RCOS needs to document how it collects and assesses user feedback, and has some mechanism for considering and responding to this feedback. For example, the RCOS, in its annual planning process, will work with users to evaluate the effectiveness of the regional system in order to set future priorities, knowing that not all user feedback will be acted upon.

iv. Steps the RCOS takes to ensure decisions on priorities and overall regional system design are transparent and available. At a minimum, RCOS priorities and regional system design decisions shall be made accessible for public viewing on the RCOS's website.

Documentation required

The RCOS needs to provide documentation that its decision-making is transparent and the outcomes are available to the public. This does not mean that the RCOS is expected to make Board meetings open to the public or provide transcripts of Board meetings. The RCOS may have a publicly available explanation on how Board decisions are made. Summaries of the Board's decisions should be available to the public. For example, the RCOS could have a policy

that its priorities along with summaries of its decisions affecting the regional system design and operations shall be made accessible for public viewing on the RCOS's website.

§997.22 Membership Policy

The RCOS application shall describe:

(a) The process by which individuals or organizations may formally participate in the governance activities of the RCOS;

(b) The rights and responsibilities of this participation;

Description required

A written process exists that identifies how individuals or organizations may formally participate and engage in the governance activities of the RCOS. There are no criteria defining this participation and engagement.

(c) The process by which the RCOS strives for organizational diversity through intra-regional geographic representation, and diversity of activities and interests from both public and private sectors; and

(d) How the RCOS allows for participation from adjacent regions or nations.

Description required

The RCOS must demonstrate that these two processes are in place and are adequately described. The rule identifies "strives for organizational diversity" as including intra-regional representation and addresses interests from both the public and private sectors. The objective of this requirement is to ensure that a RCOS avoids the establishment of a limited and restricted organization that addresses a narrow set of user needs. This is consistent with the ICOOS Act language that states a RCOS shall work cooperatively with a variety of entities and consider the needs of multiple users within the region.

§997.23 Strategic Operational Plan

(b) Background and Context

The Strategic Operational Plan shall contain a Background and Context section that describes:

1) The role of the RCOS in furthering the development of the regional component of the System;

Description required

The RCOS provides a high-level description of how the RCOS contributes to the System. This should include summary statements about how the RCOS contributes to U.S. IOOS with some recognition of the different subsystems (observing, DMAC, modeling & analysis, governance, R&D, outreach/Education).

2) The process by which the RCOS updates the Strategic Operational Plan at least once every five years and how the RCOS seeks inputs from the broader user community;

Description required

The RCOS describes its process for updating and reviewing the Strategic Operational Plan, at least once every five years, and includes how the RCOS seeks inputs from its members, data providers, data users, regional stakeholders, and the general public. Evidence of input from the user community could be meeting with stakeholders to identify user needs as a part of the Strategic Operational Plan development process or posting the Plan on the website with a request for comments.

3) The RCOS's primary partners and any contributing observing systems. For the purposes of §997.23, NOAA defines a primary partner as any organization or individual that contributes significant staff time, funding or other resources to project activities. This is not an exhaustive list of all RCOS partners but the primary partners the RCOS is working with on a given project.

Description required

There is no minimum number of primary partners required for approval. The RCOS is only required to describe, at a high level, those organizations or individuals that contribute significant staff time, funding or other resources to project activities and any observing systems that the RCOS considers contributing to the regional observing system.

(c) Goals and Objectives

The Strategic Operational Plan shall contain a Goals and Objective section that describe:

1) How the RCOS addresses marine operations; coastal hazards; ecosystems, fisheries and water quality; and climate variability and change;

Description required

The RCOS provides a general high-level description of how these key societal focus areas direct the efforts of the RCOS. The description should connect RCOS activities with these four U.S. IOOS community-identified themes.

2) The major objectives that guide the RCOS's priorities for data collection and management, development of products and services, research and development, and education and outreach.

Description required

The RCOS provides a general description of its objectives for the DMAC, product development and services, research and development, and education & outreach subsystems.

(d) Operational Plan for the Observing System

The Strategic Operational Plan shall include or reference an Operational Plan for the Observing System that:

1) Describes the desired outcomes of the observing system;

Description required

The RCOS provides documentation that it has an Operational Plan for the Observing System, or similar document, that describes the desired outcomes of the observing system. This should be a high-level description and should focus on the outcomes that result from integrating the different elements of the overall observing system.

2) Describes the elements of the operational integrated observing system that will deliver those outcomes;

Description required

The RCOS provides documentation that it has an Operational Plan for the Observing System, or similar document, that describes the different elements of the operational observing system that delivers the outcomes in §997.23(d)(1). This may be a high-level description of the data collection, data management, and modeling and analysis systems, and how they are integrated to achieve the desired outcomes in §997.23(d)(1).

3) Documents to NOAA's satisfaction that the individual(s) responsible for RCOS operations has the necessary qualifications and possesses relevant professional education and work experience to deliver observations successfully. At a minimum the RCOS shall:
    i. Identify the individual(s) responsible for overall RCOS management;
    ii. Identify, as applicable, the individual(s) responsible for observations system management across the region;
    iii. Provide the curriculum vitae for each identified individual;

Documentation required

- The RCOS provides a name of the individual(s) responsible for overall RCOS management
- The RCOS provides a name of the individual(s) responsible for observation systems management across the region, not just in the region. To be approved the individual(s) should be working at a regional level. These individuals must still satisfy the requirements listed in §997.26(c) to be considered employees of a RCOS as defined in the rule.
- A Curriculum Vitae (CV) with detailed education and work experience for each individual. There is effectively no minimum qualification, except that the observation system manager has relevant education and work experience.
- In addition to providing some background on the individual's experience and knowledge proving they are capable of performing their work, the CV must clearly describe the roles and responsibilities of the individual in the RCOS. The applicant is responsible for documenting how each individual meets the requirements to be an employee of a certified RCOS. The CV must document that the individual performs one of the two roles identified in §997.23(d)(3). To do this, applicants must successfully describe the

role and responsibilities of the individual within the RCOS organization.

iv. Identify the procedures used to evaluate the capability of the individual(s) identified in subsection §997.23(d)(3) to conduct the assigned duties responsibly;

Documentation required

The primary purpose of this requirement is to ensure that: 1) the RCOS has a process in place for evaluating the capabilities of its key personnel and 2) the people hired can perform the duties required. The RCOS must identify the procedures it has in place to evaluate its personnel. This may include a formal hiring process, established position descriptions, and yearly performance reviews.

4) Describes how the RCOS manages ongoing regional system operations and maintenance. At a minimum the Strategic Operational Plan shall:
   i. Describe the RCOS's standard operating procedures for calibrating, validating, operating, and maintaining equipment owned and/or operated by the RCOS regularly and in accordance with manufacturer guidance or industry best practice. Equipment is defined in §997.1;

Description required

The RCOS describes the standard operating procedures required. For purposes of these regulations, the term "equipment" is defined as a tangible asset that is functionally complete for its intended purpose and has a capital cost of over $5000. Both individual sensors and collections of sensors on a platform are considered equipment and are subject to the $5000 minimum cost. The intent of the requirement is that for assets owned and/or operated by the RCOS as defined in the rule, the RCOS should describe a standard operating procedure for equipment maintenance according to best practices. Approval does not require specific actions, only that the RCOS describes the standard operating procedure it has established for calibration, operation, and routine maintenance of equipment in accordance with manufacturing guidance. For assets financially supported by the RCOS, fully or partially, but operated by a subcontractor, the RCOS may instruct subcontractors to follow best practices and state that equipment maintenance reports be available upon request. Language to this effect included in sub-award contracts would meet this requirement.

Our intent is to give the applicant flexibility in how they meet this requirement. We expect that most, if not all, applications for certification will come from organizations who work directly with Principal Investigators (PIs) that have years of experience in the operations of coastal observing systems. The processes these PIs have in place, represent "best practices" for the operation and maintenance of regional observing systems.

The standard operating procedures described by the RCOS to meet the requirements in section §997.23 d) 4) i) and ii), may at a minimum, be a broadly worded statement that is included in all sub-awards stating that sub-contractors should follow industry best practices and manufacturer guidance where applicable, and be prepared to provide documentation upon request.

A RCOS may add language to its standard operating procedure, specifying the need for specific requirements for calibration, validation, logs, record keeping, etc., depending on the experience of the sub-contractor, but this is not required to meet the certification requirements.

Note: For HF radar, it is sufficient to reference standard best practice procedures defined by the National HF Radar Steering Team, and to point to this document for the HFR Team's Best Practices: https://hfradar.ioos.us/hfrnet/documents/SCCOOS-BestPractices.pdf, as it is referenced in the National Plan.

ii. Describe the RCOS's standard operating procedures for maintaining equipment inventories, shipping logs and instrument history logs for equipment owned and/or operated by the RCOS.

Description required

The RCOS describes the standard operating procedures required. For purposes of these regulations, the term "equipment" is defined as a tangible asset that is functionally complete for its intended purpose and has a capital cost of over $5000. Both individual sensors and collections of sensors on a platform are considered equipment and are subject to the $5000 minimum cost. The intent of the requirement is that for assets owned and/or operated by the RCOS as defined in the rule, the RCOS should describe a standard operating procedure for maintaining equipment inventories, shipping logs and instrument history logs. Approval does not require specific actions, only that the RCOS describes the standard operating procedure it has established for maintaining inventories and logs. For assets financially supported by the RCOS, fully or partially, but operated by a subcontractor, the RCOS may instruct subcontractors that equipment inventories and logs reports be kept up to date and made available upon request. Language to this effect included in sub-award contracts would meet this requirement.

Our intent is to give the applicant flexibility in how they meet this requirement. We expect that most, if not all, applications for certification will come from organizations who work directly with Principal Investigators (PIs) that have years of experience in the operations of coastal observing systems. The processes these PIs have in place, represent "best practices" for the operation and maintenance of regional observing systems.

The standard operating procedures described by the RCOS to meet the requirements in section §997.23 d) 4) i) and ii), may at a minimum, be a broadly worded statement that is included in all sub-awards stating that sub-contractors should follow industry best practices and manufacturer guidance where applicable, and be prepared to provide documentation upon request.

A RCOS may add language to its standard operating procedure, specifying the need for specific requirements for calibration, validation, logs, record keeping, etc., depending on the experience of the sub-contractor, but this is not required to meet the certification requirements.

(e) Development of a Strategy to Sustain and Enhance the System

The Strategic Operational Plan shall describe its strategy for balancing changes in regional priorities with the need to maintain established data sets, the primary value of which may be in their long-term records. At a minimum the description shall:

1) Identify the guiding principles that inform the strategy;
2) Reference and show connections to a long-term (five-to-ten-year) regional Build-out Plan for the full implementation of the regional observing system based on the RCOS's priorities and identified user needs; and
3) Relate the annual planning process the RCOS uses to review its priorities in light of funding levels and its plans for system enhancement as outlined in the regional Build-out Plan.

Description required

- The RCOS provides a description of its strategy for balancing changes in regional priorities with the need to maintain established data sets. At a minimum, this description identifies the RCOS's guiding principles for prioritizing new activities against established data collection efforts.
- The RCOS provides or references a 5 to 10-year build-out plan that is based on the RCOS's priorities and identified user needs, and describes how this plan informs its strategy for balancing changes in regional priorities with the need to maintain established data sets.
- The RCOS provides a description of how its planning process is informed by its priorities and how it determines its ability to enhance the system based on the Build-out Plan. A description of the process used in the RCOSs annual descoping of its cooperative agreement with IOOS or other funding decisions, and how yearly funding levels may or may not trigger system enhancements would be sufficient to meet this requirement.

(f) Data Management and Communications (DMAC) Plan

The Strategic Operational Plan shall include or reference a DMAC plan that:

1) Documents to NOAA's satisfaction that the individual(s) responsible for management of data operations for the RCOS has the necessary technical skills, and possesses relevant professional education and work experience to support DMAC capabilities and functionality for the System. At a minimum the DMAC Plan shall:
    i. Identify the individual(s) responsible for the coordination and management of observation data across the region;
    ii. Provide the curriculum vitae for the identified individual(s);

Documentation required

- The RCOS provides a DMAC plan that documents the qualifications and the professional education and work experience of the DMAC manager.
- The RCOS provides a name of the individual(s) responsible for the coordination and management of observation data across the region, not just in the region. To be approved the individual(s) should be working at a regional level. These individuals must still

satisfy the requirements listed in §997.26(c) to be considered employees of a RCOS as defined in the rule.

- The RCOS provides a Curriculum Vitae (CV) listing the detailed education and work experience for each individual. There is effectively no minimum qualification, except that the data manager has relevant education and work experience and should be familiar with the DMAC objectives of U.S. IOOS.
- In addition to providing some background on the individual's experience and knowledge proving they are capable of performing their work, the CV must clearly describe the roles and responsibilities of the individual in the RCOS. The applicant is responsible for documenting how each individual meets the requirements to be an employee of a certified RCOS.
- The CV must document that the individual performs the three roles identified in §997.23(f)(1)(i). To do this, applicants must successfully describe the role and responsibilities of the individual within the RCOS organization.

iii. Identify the procedures used to evaluate the capability of the individual(s) identified in subsection §997.23(f)(1) to conduct the assigned duties responsibly.

Documentation required

The primary purpose of this requirement is to ensure that: 1) the RCOS has a process in place for evaluating the capabilities of its key personnel and 2) the people hired can perform the duties required. The RCOS must identify the procedures it has in place to evaluate its personnel. This may include a formal hiring process, established position descriptions, and yearly performance reviews.

2) Describes how data are ingested, managed and distributed, including a description of the flow of data through the RCOS data assembly center from the source to the public dissemination/access mechanism. The description shall include any transformations or modifications of data along the data flow pathway including, but not limited to, format translations or aggregations of component data streams into an integrated product.

Description required

The RCOS must provide a data management plan that documents the variety of ways that it obtains and disseminates each data stream. The RCOS must detail any modifications along the path from obtaining the data to dissemination of the data in each access node. How many different access nodes are there for each data stream? Is each incoming data stream available through all access nodes? Are the data from two access nodes (e.g. FTP and (SOS) exactly the same? Did the same processing occur for each output node (e.g. only one is an hourly average)? The documentation of these transformations and modifications may be different for different data providers based on their capabilities.

Note: Some data are served as a graphical product and not as a "data set through a server." Data served as a graphical product that contain specific parameters (e.g. latitude/longitude, and other attributes) that could be scraped to obtain numbers in a file that fit our traditional notion of "data." Therefore, these types of graphical products (e.g. those that originate as an Argos email with tagging info) need to be included as a data stream.

3) Describes the data quality control procedures that have been applied to data, not obtained through a federal data source, that are distributed by the RCOS. All data shall be quality controlled and QARTOD procedures shall be employed for data with QARTOD manuals. For each data stream, describe the quality control procedure applied to the data, by the RCOS or other named entity, between the data's collection and publication by the RCOS. The description will also include a reference to the procedure used.

Description required

- All data distributed by the RCOS (with the exception of Citizen Science data*) must be quality controlled either by the RCOS or by the entity providing data to the RCOS. This includes historical data. The rule requires that the quality control procedures, whether implemented by the RCOS or by an upstream data provider, must be documented by the RCOS.
    - Note: Historical data may be defined differently among Regional Associations (RA) but a previous application stating that historical data is > 72 hours was not accepted. The RA changed the criterion to 1 month, which was acceptable.
    - Regardless of the age, historical data must be quality controlled (if possible). If it can be quality controlled, it should be. Assumptions that historical data are not used operationally does not negate risk associated with the data. Climate studies might rely on historical data.
- A RCOS is not responsible for performing or describing the quality control procedures for data the RCOS obtains from a federal data source.
- In the case of wave buoy partnerships with the Coastal Data Information Program (CDIP), if a RCOS deploys a wave buoy and provides that data independently on the RCOS data portal, quality control must be performed according to QARTOD standards if available or documented procedures if QARTOD manual is not available.
- For each data stream, the RCOS should describe any quality control procedures used between obtaining the data and dissemination of the data for each output node. (In practice, the RCOS does not need to document the quality control procedures for each and every data stream. Data streams with similar quality control procedures can be combined into larger categories, and the quality control procedures for these larger categories can be described in the RCOS's Data Management Plan as part of the certification application). The quality control applied should be apparent to users and should also document any changes made to the data (e.g taking moving averages).
- If the RA will reference quality control procedures upstream, the detailed procedures by the upstream provider should be apparent to users. At a minimum, some quality control procedure must be applied to each data stream.

- For variables with documented QARTOD procedures, these procedures must be implemented and referenced on the RCOS's website.
- For variables *without* documented QARTOD procedures, the quality control procedures are subject to the judgment of the RCOS until QARTOD standards become available, but quality control of some type must be performed and referenced. The RCOS may choose to make data contributors responsible for quality control and reference the procedures in the DMAC plan, or may perform the quality control itself. Certification does not specifically mandate any DMAC requirements for metadata.
- The use of QARTOD protocols, for real time data streams, can be done in a "phased" implementation. QARTOD protocols do not need to be in place, for those variables with approved manuals, prior to certification, but this does not exempt these variables from the quality control requirement, and the certification application must describe how a RCOS will implement the QARTOD protocols over an identified period of time.

***A note on Citizen Science data:**
The sole exception to the requirement to perform quality control on data distributed by the RCOS, is for data collected as part of a "Citizen Science" effort or project. For the purpose of certification, we are defining Citizen Science data ***as any data that is collected by members of the general public who are not trained scientists, often in cooperation with a scientific program.***

It must be obvious to all users that Citizen Science data has not had any quality control done to it. For any website display, this data must be clearly marked as such, and for machine to machine transfer it must be flagged appropriately and a disclaimer should be associated with the transmission. Prior to approval of certification, we request that the RCOS share with us its plans for how they would do this.

We have defined Citizen Science data narrowly, and emphasize that quality control is to be performed on all the data that does not meet this definition, including research data.

4) Adheres to the NOAA Data Sharing Procedural Directive.[1] The System is an operational system, therefore the RCOS should strive to provide as much data as possible, in real-time or near real-time, to support the operation of the System. When data are collected in part or in whole with funds distributed to a RCOS through the U.S. IOOS Program Office, the RCOS should strive to make the data available as soon as logistically feasible for each data stream. When data are not collected with funds distributed to a RCOS through the U.S. IOOS Program Office, the data may be made available in accordance with any agreement made with the data provider.

Documentation required

[1] NOAA Data Management Handbook. https://www.noaa.gov/organization/administration/nao-212-15-Management-of-NOAA-Data-and-Information

The RCOS provides or references a Plan that describes how the RCOS is in compliance with the NOAA Data Sharing Procedural Directive. All data providers that are at least partially funded by the RCOS should share their data with the RCOS and the RCOS should strive to make the data available as soon as logistically feasible for each data stream. Descriptions or documentation of sharing agreements are necessary. This not only applies to assets fully funded by the RCOS, but also to missions funded by the RCOS using an instrument that may not be originally funded by the RCOS.

The NOAA Data Management Handbook is located at https://www.noaa.gov/organization/administration/nao-212-15-Management-of-NOAA-Data-and-Information.

5) Describes how the RCOS will implement data management protocols promulgated by the IOOC and the U.S. IOOS Program Office in a reasonable and timely manner as defined for each protocol;

Description required

The RCOS provides or references a Plan that describes how the RCOS will implement the protocols promulgated in a reasonable and timely manner. For example, in the case of the recently approved QARTOD manuals, the RCOS should describe the process the RCOS will use to begin to implement the quality control steps over an identified period of time. Since these practices will continue to be approved over the five-year duration of certification, the RCOS need only be able to describe the process it has in place for implementing these newly approved practices in a timely manner, and does not have to have these practices in place at the time it applies for certification.

6) Documents the RCOS's data archiving process or describes how the RCOS intends to archive data at a national archive center (NCEI) in a manner that follows guidelines outlined by that center. Documentation shall be in the form of a Submission Agreement, Submission Information Form (SIF) or other, similar data producer-archive agreement.

Documentation required

The standard for meeting this requirement:

Standard for Approval - In order to be certified, a RCOS must provide a Standard Operating Procedure (to be no more than 2 pages) that identifies (in general terms) their process for archiving data, identifies aggregated data sets to be archived, provides a timeline for completion of the necessary agreement with NCEI or other appropriate national data archive center. The approved agreement with NCEI will be in one of the following formats (B and C can be obtained from the ATRAC system):

A. Submission Information Form (deprecated);
B. Request to Archive; or

C. Data Submission Agreement.

- The RCOS provides documentation of its data archiving process OR describes how it intends to archive data at NCEI in a manner that follows guidelines outlined by the center. Ideally, a Data Submission Agreement between the RCOS and NCEI is provided. Minimally, the RCOS should provide a Request to Archive document, which provides a description of who it intends to have a submission agreement with in the future, and what data streams will be included in the Data Submission Agreement. Or, an e-mail exchange between NCEI and the RCOS.

Overall, there must be a plan in place through a Request to Archive to a) create a Data Submission Agreement and b) execute the agreement routinely. This process or documentation step that records the terms of that agreement allows us a trigger to check on progress.

The agreement will describe the method of data transfer (e.g. FTP push/pull) and the responsibilities of the RCOS and its partners. Overall, there are six questions that must be answered for each data set (#1, #2, and partially #4 are likely already discussed or referenced in earlier sections), and the RCOS must indicate whether or not the information currently exists or needs to be added to their data management plan:

1. List of parameters/observations being collected.
2. Processing steps/quality control including final format.
3. Timing of data submissions and approximate sizes.
4. Development of Data Documentation (metadata).
5. Data disposition (path to archive center, e.g. FTP push/pull).
6. Data affiliations, including both institutions and individual persons whose names will be associated with the data set in some way. (Where did it come from? Where does it go?).

The timing and granularity of the archive packages for data can be determined through negotiation with NCEI representatives. However, the RCOS should indicate the desired granularity of the archive information package (AIP) per data set (e.g. near-shore sensors). Examples:

- One AIP per platform, updated monthly.
- One AIP per month, with all platforms.
- One AIP per data set (i.e. Near-shore sensors), updated monthly.
- Any other variation that stakeholders might find beneficial.

NCEI will not be archiving numerical model output or data products at this time, however determination of what is or is not archived is determined by NCEI. IOOS encourages the RAs to maintain an open dialog with NCEI, especially concerning important products that may align with NCEI goals for science and preservation

An approach to have an agreement that aggregates records by type of platform or data set (e.g. near-shore sensors, water quality buoy) is reasonable, and IOOS will work with NCEI to

encourage this approach to archiving. However, ultimately the decision for what and how to archive data lies with NCEI.

IOOS has established a 5-year Service Level Agreement with NCEI (last signed in 2021) to ensure existing pipelines are functioning and properly stewarded. Since each of the 14 archive pipeline agreements contain detailed information on the data sets themselves and on how and when they will move from a provider to the archive (e.g. on the third Thursday of each month a file will be published to a certain FTP site for pickup by NODC.), each RA and data assembly center will manage their own agreements.

We have established a national level Submission Agreements for High Frequency (HF) radar data through the National Data Buoy Center (NDBC).. Similarly we have established a Submission Agreement for all glider data submitted to the Glider DAC. The Coastal Data Information Program (CDIP) has a Submission Agreement in place with NCEI and is archiving the wave data collected through their wave buoy program. For data that is submitted to these nationally coordinated efforts, the RCOS is not expected to establish their own Submission Agreement, since the archiving will go from the national servers to NCEI.

(g) Budget Plan

The Strategic Operational Plan shall include or reference a Budget Plan that:

1) Identifies who supports the RCOS financially;
2) Identifies how RCOS priorities guide funding decisions; and
3) Assesses funding constraints and the associated risks to the observing System that the RCOS must address for the future.

Documentation required

- The RCOS provides a Plan or references a document that identifies, generally, the sources and/or organizations that provide financial support for the RCOS. For example, the RCOS should identify if they collect dues, have grants or cooperative agreements with federal agencies, funding arrangements with non-profit organizations or foundations. Since specific funding sources are likely to change over the duration of the five year certification period, the intent of the requirement is to provide a list of the type of organizations and sources that the RCOS relies on for funding.
- The RCOS provides a Plan or references a document that describes how the RCOS uses its priorities to guide funding decisions. The description should be general and identify the process that the RCOS uses to determine funding decisions.
- The RCOS provides a Plan or references a document that identifies and assesses how future funding constraints may pose risks to the observing System.

§997.24 Gaps Identification

(b) The application shall

1) Document that the RCOS's asset inventory contains up-to-date information. This could be demonstrated by a database or portal accessible for public viewing and capable of producing a regional summary of observing capacity;

Documentation required

The RCOS must provide documentation of an online resource (web portal, web service) or submit a spreadsheet that contains a listing of the RCOS's assets along with a brief description of how the inventory is updated. The rule does require the establishment of a regional asset inventory, but states that a "database or portal accessible for public viewing" could demonstrate that a RCOS meets this requirement. An asset map that includes all assets within the RCOS domain that stream information, or for which data is available in its systems, is also acceptable. Systems that are not stationary (e.g. gliders, tags on animals) can be included in an inventory spreadsheet.

2) Provide a regional Build-out Plan that identifies the regional priorities for products and services, based on its understanding of regional needs, and a description of the integrated system (observations, modeling, data management, product development, outreach, and R&D). The RCOS shall review and update the Build-out Plan at least once every five years;

Documentation required

The RCOS provides a build-out plan that contains all of the information in the requirement:
1. Regional priorities for products and services based on understanding of regional needs.
2. A brief description of the integrated system including observations, modeling, data management, product development, outreach, and R&D.

The RA Build-out Plans, along with a statement or description on how the build-out plan will be reviewed and updated at least once every five years is sufficient to satisfy this requirement.

3) Document the priority regional gaps in observation coverage needs, as determined by an analysis of the RCOS asset inventory and Build-out Plan. The RCOS shall review and update the analysis of priority regional gaps in observation coverage needs at least once every five years.

Documentation required

The RCOS shall provide sufficient documentation of a priority regional gaps analysis that compares information from the asset inventory in §997.24(b)(1) and the build-out plan in §997.24(b)(2) and describes the gaps between the two. A statement or description of how the gaps analysis will be reviewed and updated at least once every five years is also required.

§997.25 Financial Oversight

(b) The application shall document compliance with the terms and conditions set forth in 2 CFR Part 215 – Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-profit Organizations, Subpart C – Post Award Requirements. Subpart C prescribes standards for financial management systems, among others. (Compliance with this criterion can be demonstrated by

referencing any existing grant, cooperative agreement, or contract the RCOS has with NOAA.).

Documentation required

The RCOS shall document its compliance with 2 CFR Part 215 or reference any existing grant, cooperative agreement, or contract the RCOS has with NOAA.

(c) The RCOS shall document annually the RCOS's operating and maintenance costs for all observing platforms and sensors, etc., owned and/or operated by the RCOS. This information shall be made available to NOAA upon request.

Documentation required

The RCOS should provide one-time documentation of its annual operating and maintenance costs for observing assets owned and/or operated by RCOS for the previous year.

A RCOS is only required to provide financial information on its own Operation and Maintenance costs for assets owned and/or operated by the RCOS as defined. The annual budgets submitted by the RCOS, as part of a cooperative agreement, will meet this requirement. The annual financial information is intended to report on expenditures by the RCOS. For example, in a RCOS to subcontractor relationship, only the RCOS funds to the sub-contractor would be included in the reports. Funds the sub-contractor receives from other entities would not be included in the report by the RCOS.

Public Burden Statement

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995 unless the information collection has a currently valid OMB Control Number. The approved OMB Control Number for this information collection is 0648-0672. Without this approval, we could not conduct this information collection. Public reporting for this information collection is estimated to be approximately 75 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. All responses to this information collection are voluntary, but required to obtain benefits pursuant to the Integrated Coastal and Ocean Observation System Act of 2009 (Public Law 111-11) (ICOOS Act), as amended by Section 103 of the Coordinated Ocean Observations and Research Act of 2020 (COORA) (Public Law 116-271, Title I). The information provided in this information collection will be used by NOAA staff to determine if the entity has successfully met the requirements to be certified as a Regional Coastal Observing System (RCOS). Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to DOC NOAA IOOS: ioos.regions@noaa.gov.