

SOP #27: Metadata Development

Version 1.0 (November 7, 2018)

Revision History Log: Only changes in this specific SOP will be logged here. For minor changes, version numbers increase incrementally by hundredths (e.g., version 1.01, version 1.02). Major revisions should be designated with the next whole number (e.g., version 2.0, 3.0, 4.0). Record the previous version number, new version number, date of revision, author of the revision; identify paragraphs and pages where changes are made, the reason for making the changes, and the person who approved the revision.

Previous Version Number	New Version Number	Revision Date	Author	Changes Made	Reasons for Change	Network Regional Reviewer Approval

Purpose

This Standard Operating Procedure (SOP) describes the guidelines for documenting data and how it should be accomplished for the Pacific Island Network (PACN) Anchialine Pool Monitoring Protocol.

Metadata Documentation

Data documentation is a critical step toward ensuring that data sets are usable for their intended purposes well into the future. This involves the development of metadata, which can be defined as structured information about the content, quality, condition and other characteristics of a given data set. Additionally, metadata provide the means to catalog and search among data sets, thus making them available to a broad range of potential data users. Metadata for all PACN monitoring data will conform to Federal Geographic Data Committee (FGDC) guidelines and will contain all components of supporting information such that the data may be confidently manipulated, analyzed and synthesized.

Updated metadata is a required deliverable that should accompany each season's certified data. For long-term projects such as this one, metadata creation is most time consuming the first time it is developed – after which most information remains static from one year to the next. Metadata records in subsequent years then only need to be updated to reflect changes in contact information and taxonomic conventions, to include recent publications, to update data disposition and quality descriptions, and to describe any changes in collection methods, analysis approaches or quality assurance for the project.

Specific procedures for creating, parsing, and posting the metadata record are found in PACN Metadata Development Guidelines, available from the Data Manager or on the PACN server. The general flow is as follows:

- 1) After the annual data quality review has been performed and the data are ready for certification, the Aquatic Ecologist (or a designee) updates the PACN Metadata Interview Form, available from the Data Manager or on the PACN server.
 - a) The metadata interview form greatly facilitates metadata creation by structuring the required information into a logical arrangement of 15 main questions, many with additional sub-questions.
 - b) The first year, a new copy of the metadata interview form should be downloaded. Otherwise the form from the previous year can be used as a starting point, in which case the Track Changes tool in MS Word should be activated in order to make edits obvious to the person who will be updating the XML record.
 - c) Complete the metadata interview form and maintain it in the project workspace. Much of the interview form can be filled out by cutting and pasting material from other documents (e.g., reports, protocol narrative sections, and SOPs).
 - d) The Data Manager can help answer questions about the metadata interview form.
- 2) Deliver the completed interview form to the Data Manager according to SOP #26: “Product Delivery Specifications.”
- 3) The Data Manager (or GIS Specialist for spatial data) will then extract the information from the interview form and use it to create and update an FGDC- and NPS-compliant metadata record in XML format. Specific guidance for creating the XML record is contained in PACN Metadata Development Guidelines.
- 4) The Data Manager will post the record and the certified data to the Integrated Resource Management Applications Portal (<https://irma.nps.gov/App/Portal/Home>), and maintain a local copy of the XML file for subsequent updates.
- 5) The Aquatic Ecologist should update the metadata interview content as changes to the protocol are made, and each year as additional data are accumulated.

Identifying sensitive information

Part of metadata development includes determining whether or not the data include any sensitive information, which is partly defined as the specific locations of rare, threatened or endangered species. Prior to completing the metadata interview form, the Aquatic Ecologist should identify any sensitive information in the data after first consulting SOP #28: “Sensitive Information Procedures.” Their findings may be documented and communicated to the Data Manager through the metadata interview form.