

NOAA Fisheries
Pacific Islands Fisheries Science Center

Electronic Logbook Certification Guidelines
For Logbook Reporting in Pacific Island Fisheries

Version 1.7



**National
Oceanic and
Atmospheric
Administration**

**Electronic Logbook Certification Guidelines for
Logbook Reporting in Pacific Island Fisheries**

Contact Information

Person or Organization	Contact Information
Fisheries Monitoring and Socioeconomics Division, Pacific Islands Fisheries Science Center (PIFSC), National Marine Fisheries Service	David Hamm 2570 Dole Street Honolulu, HI 96822-2396 Phone: (808) 983-5330 Email: David.Hamm@noaa.gov
E-Log-App Test Team, PIFSC	2570 Dole Street Honolulu, HI 96822-2396 Phone: (808) 983-5326 Email:
E-Log-App Technical Panel, PIFSC	Kurt Kawamoto 2570 Dole Street Honolulu, HI 96822-2396 Phone: (808) 983-5330 Email: Kurt.Kawamoto@noaa.gov
Pacific Islands Fisheries Science Center (PIFSC), National Marine Fisheries Service	2570 Dole Street Honolulu, HI 96822-2396 Phone: (808) 983-5300
Pacific Islands Regional Office (PIRO), National Marine Fisheries Service	1601 Kapiolani Blvd., Suite 1110 Honolulu, Hawaii 96814 Phone: (808) 944-2200

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1 Overview

1.1 Purpose of this document

The purpose of this document is to explain to electronic logbook vendors how to get an electronic logbook computer program (E-Log-App) certified for use in federal PIR (Pacific Islands Region) fisheries. The certification is required before an E-Log-App can be approved for use in PIR fisheries.

1.2 Intended Audience: Electronic Logbook Vendors (including developers)

These guidelines are written primarily for electronic logbook vendors.

For the purposes of this document, the term “vendor” refers to any party that provides electronic logbook products to fishers. It excludes parties belonging to the federal government. Vendors include sellers, commercial developers (including permit-holder or operator developers) and persons providing electronic logbook products free of charge.

These guidelines also serve as a reference for the E-Log-App Test Team and Technical Panel.

1.3 Content

- Overview
- Roles and Responsibilities
- Certification Criteria
- E-Log-App Validation Testing
- Vendor Roadmap
- Related Documents and Appendices

1.4 Background

1.4.1 Electronic Logbooks

The reporting and recordkeeping rules for Pacific Islands Region fisheries (50 CFR §665.14 – Appendix 1) were modified in 2007 to give fishers the option to submit electronic logbook forms (electronic logbooks). This change followed a 2006 recommendation by the Western Pacific Regional Fishery Management Council, “Regulatory Amendment to the Fishery Management Plans of the Western Pacific Region Authorizing the Optional Use of Electronic Logbook Forms.”¹ The objectives of allowing electronic logbook use include:

Allowing fishers to record and submit their data electronically whenever possible

Reducing the amount of time spent by fishers complying with federal reporting requirements

Improving the accuracy of the data collected

¹ Regulatory Amendment Authorizing the Optional Use of Electronic Logbook Forms, November 2006, Western Pacific Regional Fishery Management Council, 1164 Bishop St., Suite 1400, Honolulu, Hawaii, 96813

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Reducing the amount of time spent by NOAA Fisheries Service processing the logbook data

1.4.2 Electronic Logbook computer programs (E-Log-Apps)

An E-Log-App is any system that collects logbook data and generates electronic logbooks (see Figure 1. Electronic Logbook computer program (E-Log-App)). It may be a standalone system or a sub-system (component) of another application such as a vessel management system. It may run on a personal computer (e.g., desktop, laptop, or handheld device) or other host devices such as a vessel monitoring system.

For the purposes of this certification, the E-Log-App includes components that perform the following functions:

Gathering logbook data (e.g., data entry)

Generating electronic logbooks

Viewing logbook data held in the application's database and the electronic logbook

It does not include or cover any related application, operating system, or hardware.

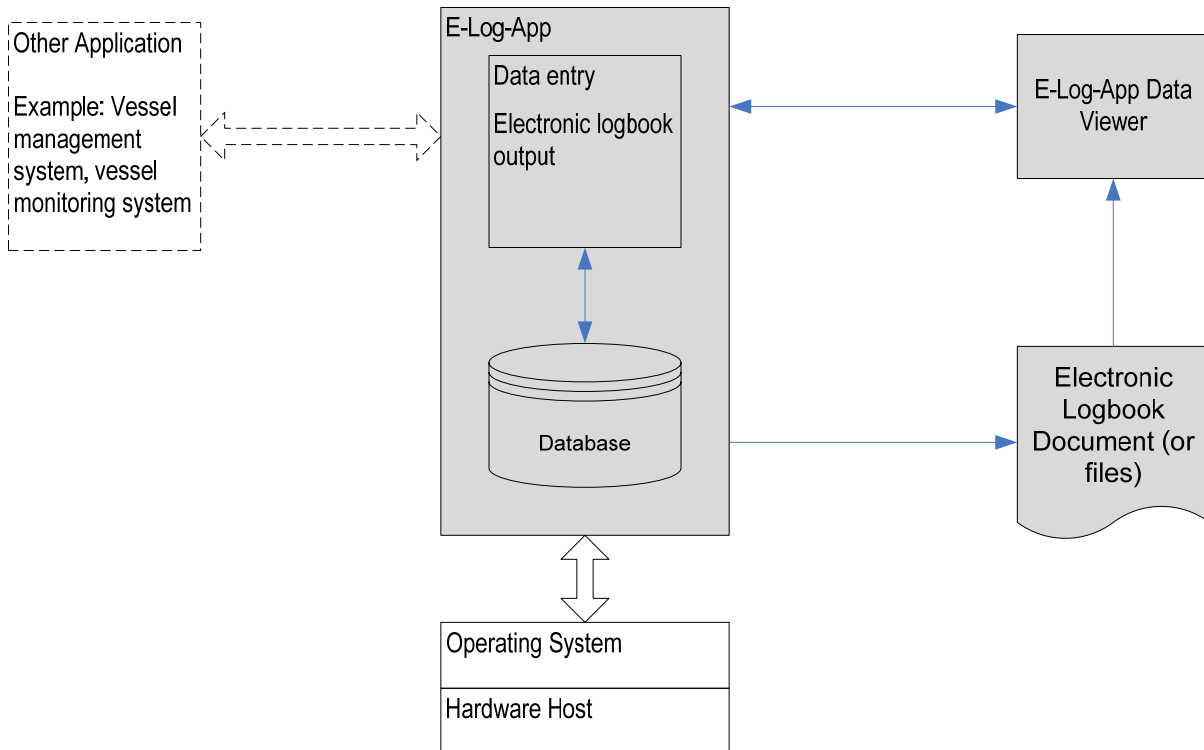


Figure 1. Electronic Logbook computer program (E-Log-App)

1.4.3 Certification

This document describes mandatory certification of E-Log-App programs for use in Pacific Islands Region fisheries. It also includes voluntary guidelines and recommended practices.

The aim of the certification is to encourage the use of electronic logbooks for the reporting of catch and effort data by promoting standard data exchange procedures, formats, and application validation tests.

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The certification benefits (a) fishers who must report catch and effort data to NOAA Fisheries, (b) vendors who provide software and services to fishers, and (c) NOAA Fisheries which collects the catch and effort data.

It gives fishers who want to use E-Log-Apps confidence that the E-Log-App meets NOAA Fisheries' minimum, prescribed requirements. It gives vendors (e.g., software developers) technical guidelines for meeting the electronic logbook requirements for federal Pacific Islands Region fisheries. The certification also allows vendors to substantiate their claims about E-Log-App products and gives NOAA Fisheries confidence that electronic logbooks meet their minimum, prescribed level of quality and performance.

PIFSC (Pacific Islands Fisheries Science, NOAA Fisheries) will conduct the validation testing and PIRO will publish a notice identifying certified e-log applications.

1.4.4 *Technical Specification*

The goals of the technical specification are:

- Complete, accurate, and successful reporting of electronic logbook data
- Efficient and accurate data entry

All data elements required for an electronic logbook must be supported. And, data values must be correctly transferred from the E-Log-App database to the electronic logbook in the correct file format.

Complete reporting means that all logbook information recorded by the fisher is reported in the electronic logbook. Accurate reporting means that the data recorded by the fisher is reported in the electronic logbook. Successful reporting means that each element of an electronic logbook submitted to NMFS can be loaded directly into the NMFS logbook data system using an automated system.

1.4.5 *Limitations*

- A certification does not guarantee that a product is free of defects. It states only that a product passed validation tests aimed at complete, accurate, and successful reporting of logbook data.

Validation testing is not intended to replace the vendor's software quality assurance tests. It is not intended to identify most software defects. Validation tests aim only at the electronic logbook features included in the electronic logbook technical specification (section 3 Certification Criteria).

Validation testing does not cover many factors that may be critical to fishers (the buyers) including: efficiency with respect to computing resources (disk, memory, CPU), reliability, security/auditability of confidential data, and job/work impacts.

- A certification does not protect the vendor from a product liability claim made by a customer.
- The use of a certified E-Log-App does not release the fisher from any requirement in 50 CFR §665.14 "Records and recordkeeping."

Example: If a fisher uses an E-Log-App and loses data as a result of a hardware failure, the fisher is still required to meet the reporting requirements of the current rules.

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1.5 Terminology

Term	Description
Certification	A notice by PIRO that the validation of an E-Log-App has been completed and that the E-Log-App and vendor meet the criteria set by PIFSC for reporting logbooks in federal Pacific Islands Region fisheries
E-Log-App	An electronic logbook computer program which records fishing logbook data and generates logbooks for federal Pacific Islands Region fisheries. Electronic Logbooks are also referred to as ELB in other regions.
E-Log-App Viewer	An electronic logbook computer program that reads electronic logbook data.
E-Log-App Technical Panel	A group of experts who answer questions and resolve disputes on behalf of PIRO and PIFSC. The panel also provides technical guidance to PIRO and PIFSC.
E-Log-App Test Team	A group that performs the E-Log-App tests and reports the results.
E-Log-App Validation Test	A method of measuring conformance between the E-Log-App the Technical Specification
Electronic Logbook	Logbook data on an electronic storage device.
Electronic Logbook Document	An electronic document of logbook data stored in a PIR file specification (XML, Extensible Markup Language).
Electronic Logbook File(s)	One or more electronic file(s) containing logbook data.
Electronic Signature	" . . . a method of signing an electronic message that -- (A) identifies and authenticates a particular person as the source of the electronic message; and (B) indicates such person's approval of the information contained in the electronic message." (GPEA, section 1709(1)).
Fisher	A Permit Holder or Operator
NMFS	National Marine Fisheries Service (NOAA Fisheries)
Operator	Fishing vessel operator. Captain of a fishing vessel.
Permit Holder	Owner of a valid federal PIR fishing permit

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PIFSC	Pacific Islands Fisheries Science Center of the NOAA Fisheries Service.
PIFSC/FMSD	Fisheries Monitoring and Socioeconomics Division (PIFSC). FMSD is responsible for gathering, analyzing, and reporting on PIR logbook data.
PIR	Pacific Islands Region. This refers to the Western Pacific area and includes all federal fisheries referred to as “Western Pacific Fisheries” in 50 CFR 665.
PIRO	Pacific Islands Regional Office of the NOAA Fisheries Service.
Product	For the purposes of this document, “product” refers to an implementation of the Technical Specification for electronic logbooks
Technical Specification	The technical specification for electronic logbooks for federal Pacific Islands Region (PIR) fisheries. Technical Specifications are fishery specific, in most cases.
Validation	The process of testing an E-Log-App product to determine if it meets the PIR E-Log-App technical specification.
Vendor	A seller of an electronic logbook computer program, including developers working for a fisher or commercial software vendors.
WP Council	Western Pacific Regional Fishery Management Council, 1164 Bishop St., Suite 1400, Honolulu, Hawaii, 96813

1.6 Certificates

1.6.1 Certifications Described in this Document

Technical Specification and Certificate Code	Description	Expiration Date
PIR-LB-1.1-1.x.x	Pacific Islands Region, Logbook, Pelagic Longline, Version 1	

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1.6.2 Technical Specification and Certificate Code Naming

The technical specification and certificate code consists of four parts:

Region Code - Report Code - Fishery Extension Number - Version Number

The Region Code is always “PIR” for Pacific Island Region logbooks.

Report Codes

Code	Description
LB	Logbooks
SR	Sales Reports

Fishery Extension Numbers

Fisheries Number	Fisheries Description	Fishery Extension Number
1	Pelagic Fisheries	<i>1.1 Pelagic Longline</i> <i>1.2 Pelagic Troll and Handline</i>
2	Crustacean Fisheries	
3	Bottomfish/Seamount Groundfish Fisheries	
4	Precious Coral Fisheries	<i>4.1 Precious Coral Harvesting Log</i>

Version Numbers

Version number format: <Specification number>.<File format number>.<Revision number>

Piece	Description
Specification number	Indicates a set of requirements in the technical specification, but excluding the file format.
File format number	0, 1, 2, 3 – Indicates a specific file format (example: xml, dbf)
Revision number	0 – Indicates the first version based on a set of requirements

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and file format.

>0 – Indicates a minor change to the file format or the requirements.

Examples:

PIR-LB-1.1-1.0.0 Pacific Islands Region, Logbook, Pelagic Longline, Version 1.0.0

PIR-SR-1.3-1.0.0 Pacific Islands Region, Sales Report, Crustacean, Version1.0.0

1.6.3 Certificate Description

Item	Description
Certification Number	A unique, numeric identifier. Example: 10012
Certification Title	The name of the certification. Example: NOAA Fisheries PIR Electronic Logbook Certificate, PIR-LB-1.1-1.0.0
Specification Code	The version code or codes covered by the certificate. Example: PIR-LB-1.1-1.0.0
Product Name	The name of the E-Log-App product
Product Version	Version number of the E-Log-App product
Vendor Information	Business name, address, and phone numbers of the person or organization that provides the E-Log-App to fishers.
Certification Date	Date of recognition by the Certificate Issuer that the product conforms to certification criteria.
Expiration Date, if applicable	Date when the certification expires. If blank, the Certificate Issuer will notify This may not be specified at the time the certificate is issued.
Issuer name and signature	The name and signature of an official of the Certificate Issuer
Vendor name signature	The name and signature of the vendor

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2 Roles and Responsibilities

2.1 Vendors

The term “vendor” refers to a person or organization that provides E-Log-App programs to fishers. A vendor may be a seller of E-Log-Apps or a developer of E-Log-Apps. A vendor may be commercial or non-profit enterprise. The term “vendor” does not include parties belonging to the federal government.

The vendor is responsible for:

- Acquiring or developing E-Log-Apps
- Meeting each of the certification criteria specified below (Section 3)
- Submitting E-Log-Apps to the E-Log-App Test Team for Validation
- Distributing or selling the certified E-Log-App to fishers (NOAA Fisheries will not distribute products for vendors.)
- Reviewing and commenting on proposed changes to certification requirements

2.2 Fishers: Permit Holders and Vessel Operators

Fishers include federal fishing permit holders and vessel operators (or captains).

Permit holders, or their designated vessel operators, are responsible for the proper use and submission of electronic logbooks.

Permit holders are responsible for registering with NOAA Fisheries/PIFSC to report logbook data electronically.

2.3 NOAA Fisheries Service (Certificate Issuer)

NOAA Fisheries is responsible for issuing certificates for validated PIR E-Log-Apps. All NOAA Fisheries roles and responsibilities regarding PIR E-Log-App certification fall to either PIFSC or PIRO (see Figure 2. Certification and Operations Organizations).

2.3.1 PIRO

PIRO is responsible for:

- Publishing (notifying the public of) the certification process for potential E-Log Apps
- Publishing a list of certified E-Log Apps

2.3.2 PIFSC

PIFSC is responsible for:

- Recommending to the Regional Administrator the certification of an E-Log-App for use in specific Pacific Islands Region fisheries based on validation test results
- Registering permit holders who want to submit electronic logbooks through a signed Letter of Agreement that pre-authorizes future electronic logbook submissions
- Staffing the E-Log-App Technical Panel with impartial experts

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- Managing and maintaining at least one E-Log-App Test Team
- Establishing and maintaining certification criteria (including this document) for electronic reporting in the Pacific Islands Region
- Annual reviews and revisions, if necessary, of E-Log-App requirements and certification criteria
- Notifying vendors of changes to certification requirements and expiration dates
- Notifying fishers and vendors of changes to E-Log-App certification expiration dates

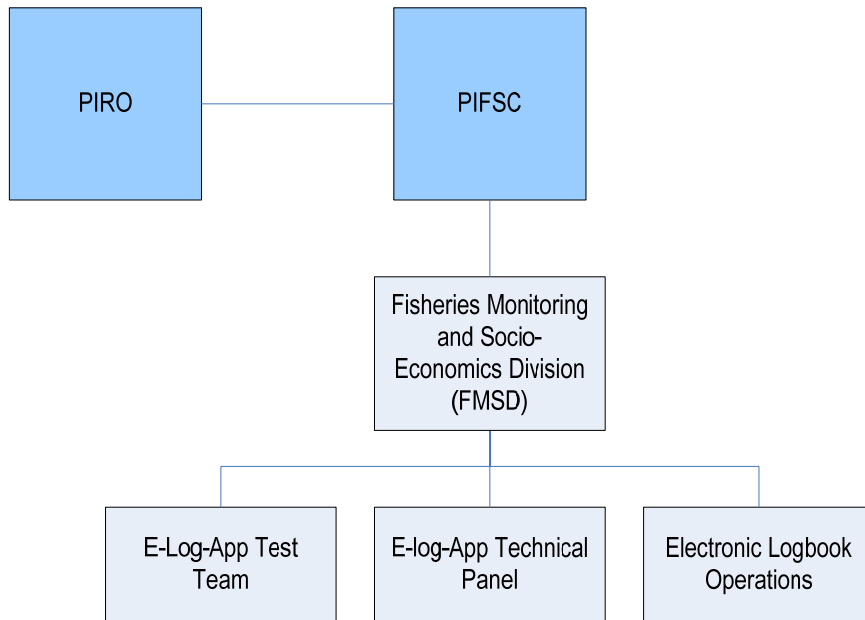


Figure 2. Certification and Operations Organizations

2.4 FMSD (Fisheries Monitoring and Socioeconomics Division), PIFSC

FMSD is responsible for:

- Discussing and agreeing to electronic logbook file formats with vendors
- Managing and running the Test Teams, Technical Panel, and Electronic Logbook Operations

2.5 Test Teams

Each E-Log-App Test Team validates E-Log-App products against the certification criteria.

The Test Team is responsible for:

- The testing of one or more validations
- Running E-Log-App tests on an E-Log-App for the vendor
- Maintaining a record of the test results

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- Informing the vendor and the Science Director of test results
- Recommending certification of the E-Log-App to the Science Director based on a successful validation test.

2.6 Technical Panel

The E-Log-App Technical Panel is a group of E-Log-App subject matter experts appointed by the Science Director.

The Panel acts on behalf of the Science Director to:

- Answer questions about E-Log-App certification and criteria
- Resolve disputes about conformance criteria and validation testing raised by vendors or fishers
- Make recommendations to revise certification criteria

The Panel also provides technical guidance to PIRO and PIFSC.

2.7 Electronic Logbook Operations

Electronic Logbook Operations is responsible for:

- Developing and maintaining a registration form for Permit Holders
- Accepting and processing electronic logbooks submitted by Permit Holders
- Storing and archiving electronic logbooks
- Keeping and monitoring electronic logbook processing statistics (e.g., volume, success/failure)

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3 Certification Criteria

This section describes the requirements that an E-Log-App must satisfy to conform to an electronic logbook specification. It includes technical requirements or references to those requirements in the appendices, terms of certification, and optional recommendations. The technical specification is described in 3.2 of this section and the appendices.

A vendor’s E-Log-App product conforms to this specification as a PIR certified electronic logbook if it meets the following conditions:

- The E-Log-App must support the Electronic Logbook Processing Requirements (3.2.1)
- The E-Log-App vendor must provide a standalone, read-only E-Log-App data viewer for authorized personnel to review E-Log-App data (3.2.2)
- The E-Log-App must support data entry and viewing of all required data elements for testing purposes. (3.2.3)
- The E-Log-App must support common information requirements and the fishery specific electronic logbook specifications (3.2.4)

Fishery Specific Conformance Requirements

Fishery	Certification	Requirement
Pelagic longline	PIR-LB-1.1-1.f.0	The E-Log-App must conform to the PIR-LB-1.1-1.f.0 information requirements in Appendix 3 where f=file format number

- The vendor must agree to the Terms of Certification (3.3)

3.1 Terminology

The following terms are used in the Technical Specification to indicate importance of the requirement.

Must	“This word, or the terms "REQUIRED" or "SHALL", mean that the definition is an absolute requirement of the specification.”
Must not	“This phrase, or the phrase "SHALL NOT", means that the definition is an absolute prohibition of the specification.”
Should	<p>“Should” indicates that a requirement is recommended, but not required to conform to the specification</p> <p>“This word, or the adjective "RECOMMENDED", mean that there may exist valid reasons in particular circumstances to ignore a particular item, but the full implications must be understood and carefully weighed before choosing a different course.”</p>

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Should not	“This phrase, or the phrase "NOT RECOMMENDED" mean that there may exist valid reasons in particular circumstances when the particular behavior is acceptable or even useful, but the full implications should be understood and the case carefully weighed before implementing any behavior described with this label.”
May	<p>“May” indicates a feature or action that is allowed or permitted.</p> <p>“This word, or the adjective "OPTIONAL", mean that an item is truly optional. One vendor may choose to include the item because a particular marketplace requires it or because the vendor feels that it enhances the product, while another vendor may omit the same item. An implementation which does not include a particular option MUST be prepared to interoperate with another implementation which does include the option, though perhaps with reduced functionality. In the same vein, an implementation which does include a particular option MUST be prepared to interoperate with another implementation which does not include the option (except, of course, for the feature the option provides.)”</p>

From IETF (Internet Engineering Task Force), “Key words for use in RFCs to Indicate Requirement Levels,” <http://www3.tools.ietf.org/html/rfc2119>

3.2 *Technical Specification*

This section covers the topics listed below. Some specifications reference detailed specifications in the one or more appendices. The referenced appendices contain some absolute (must have) requirements for E-Log-Apps.

Topic	Detailed Specifications
Logbook Processing Requirements	Not applicable
Inspection Tools	Not applicable
Common Information Requirements	Appendices
Fishery Specific Information Requirements	Appendices

3.2.1 *Logbook Processing Requirements*

3.2.1.1 *Creation of Electronic Logbook Documents or Files*

The E-Log-App must be capable of creating electronic logbook documents on demand in the agreed upon file format using standard file naming conventions. The electronic logbook document file contents may vary by fishery.

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Fishery	Electronic Logbook Document Contents
1.1 Pelagic Longline	One trip including all sets, catch records, protected species interaction records, and E-Log-App information

3.2.1.2 Electronic Signature

The E-Log-App must support at least one of the approved electronic signature methods (Appendix 5).

3.2.1.3 Storing Electronic Logbooks on Approved Removable Storage Media

The E-Log-App must be capable of storing the electronic logbook on at least one of the approved removable storage media (e.g., diskette) for submission to NOAA Fisheries. The list of approved removable storage media types is available in the Permit Holder Letter of Agreement.

3.2.1.4 Efficient and accurate data entry

The E-Log-App must provide an efficient and accurate data entry module.

3.2.1.5 Maintenance of PIR Standard Codes

The E-Log-App must support the capability to modify the PIR Standard Codes. These codes may be periodically updated by PIFSC to add new codes, update existing codes, or to make codes obsolete.

Acceptable methods of providing this capability include code data maintenance modules which allow the users to modify the codes and vendor provided updates, upgrades, or patches.

3.2.2 Inspection Tool for Use by Authorized Personnel

The vendor must provide a companion E-Log-App viewer program and documentation for use by authorized personnel or agencies to inspect E-Log-App data. The E-Log-App viewer must run on Windows XP compatible operating systems. The documentation must include installation instructions and user instructions for law enforcement personnel.

The E-Log-App viewer must provide read-only access to all elements of the electronic logbook database and electronic logbook files. The viewer must not have the capability to modify logbook data.

Authorized Personnel and agencies include employees of NOAA Fisheries Office of Enforcement and the US Coast Guard. They may also include persons and agencies authorized by NOAA Fisheries to review sensitive logbook data.

3.2.3 Electronic Logbook Test Support Requirements

For test purposes, the E-Log-App must allow data entry of all electronic logbook data elements. (See Appendix 3 for specific data elements that must be enterable.)

3.2.4 Information Requirements

3.2.4.1 Common Information Requirements

The information requirements common to all E-Log-Apps for all fisheries are contained in Appendix 2:

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Common Information Requirements. It covers the following requirements:

Requirement	Description
PIR Standard Codes	Reference codes for common information requirements. Example: Port code HNL for Honolulu, HI.
Date / Time	Date and time formatting requirements
Calendar Date	Calendar date formatting requirements
Geographic Location	Geographic (latitude/longitude) formatting requirements
Source Keys	Requirements for reporting keys or identifiers used in the E-Log-App itself. Some source keys are required or recommended to allow cross-referencing between PIFSC logbook records and the fisher's E-Log-App.
Unknown values	Requirements for recording unknown (null) values.
Electronic Logbook file names and extensions	File naming conventions for electronic logbook files.

3.2.4.2 Fishery Specific Electronic Logbook Requirements

The E-Log-App must support the creation of the electronic logbook in a file format agreed upon by PIFSC and the vendor. The preferred file format for electronic logbook submission to PIFSC is XML.

Fishery specific information and file layout specifications are available in the Appendices. The electronic logbook structure and data requirements will be specified in terms of an XML document.

Fishery	Reference	Specifications
1.1 Pelagic Longline	50 CFR 665, Subpart C Western Pacific Pelagic Longline	PIR-LB-1.1-1 Appendix 3

3.3 Terms of Certification

3.3.1 Vendor Agreement to Provide Litigation Support to NOAA Fisheries

The vendor must agree to provide litigation support to NOAA Fisheries in enforcement matters. The scope of litigation support will include, but is not limited to:

- Technical capabilities of the E-Log-App
- E-Log-App support and training content
- Alterations to the E-Log-App

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3.3.2 Analysis of data and data modifications in the E-Log-App Agreement to Provide Validation Test Support

The vendor must agree to provide technical and hardware support to the Test Team during validation testing. Hardware support will include providing all hardware necessary to conduct validation tests. Technical support will include on-site or phone support for all validation test activities.

3.3.3 Certification Timeframe

Once PIFSC has certified and approved an E-Log-App for use in a Pacific Islands Region fishery, PIRO will publish a notice of the certification within five business days.

The certification expiration date for a product is determined by NOAA Fisheries requirements changes and reporting activity by product users.

- NOAA Fisheries may set an expiration date for a certification based on requirements changes. NOAA Fisheries will notify the vendor at least 120 days prior to the expiration.
- NOAA Fisheries will set an expiration date for a certification if the product has not been used to submit an electronic logbook for three years.

3.3.4 Confidentiality of Test Results

Validation test results are confidential and may be released to the public only with the explicit written permission of the vendor.

3.3.5 Denial of Certification

Certification may be withheld from a vendor for reasons including, but not limited to, the following:

- Failure to pass the validation tests
- Failure by the vendor to agree to the Terms of Certification

3.3.6 Notification of Revisions to Certification Criteria / Certification Code Expiration

NOAA Fisheries will publish revisions to the electronic logbook requirement and certification criteria as a Notice in the Federal Register. Revision notices may also include expiration dates for existing product certifications.

PIFSC will notify each vendor when a notice affects certifications held by the vendor.

Vendors will have 120 days to comply with revised requirements.

3.3.7 Notification of Changes to the Product

The vendor must report to the E-Log-App Technical Panel any changes to the certified product along with updated copies of the product prior to deploying the changes to customers. If the change affects the E-Log-App components used to meet the requirements in section 3, NOAA Fisheries may require a recertification of the E-Log-App. The Technical Panel will notify the vendor within 30 days with a recertification statement. The recertification statement will say whether a recertification is required, the reasons for recertification, and when the recertification must be completed.

The vendor may report planned changes to the certified product to NOAA Fisheries and request an advisory recertification statement within 30 days.

Electronic Logbook Certification Guidelines for Logbook Reporting in Pacific Island Fisheries

Emergency Fixes: These requirements allow the vendor to provide quick code upgrades for customers to handle critical defects. The vendor must report the code change prior to deploying the change to a customer.

The report of planned or actual changes must include the following information:

Scope of Change(s)	Reason for Change
Capabilities affected by the changes	What features or capabilities were affected by the change(s)
Logbook reports affected by the changes	List of logbooks affected
Technical background	Affected modules. Changes to third-party products.

Exclusions: Changes that result from operating system upgrades and patches.

3.3.8 Retirement of a Certification

A vendor may voluntarily retire a certification to terminate its obligation to provide litigation support for the product. The vendor must notify NOAA Fisheries and each of their application license holders in writing of their voluntary certification retirement. The vendors' obligation to provide litigation support will terminate 180 calendar days after the notification is received.

3.3.9 Revocation of a Certification from E-Log-App

NOAA Fisheries may revoke certification from an E-Log-App under the following conditions:

- E-Log-App failures in the field
- NOAA Fisheries repeatedly receives inaccurate or incorrectly formatted electronic logbooks and the error is traced to a defect in the E-Log-App.
- Failure to report product changes to NOAA Fisheries.
- Vendor modifies a certified E-Log-App and sells or releases application upgrades without reporting the modification to NOAA Fisheries.
- An electronic logbook is submitted from an E-Log-App that was modified after certification without notification to NOAA Fisheries.
- Misrepresentation of the certification
- Vendor violates advertising prohibitions (see below)

3.3.10 E-Log-App copy for NOAA Fisheries

The vendor must provide one current copy of the certified E-Log-App product to NOAA Fisheries with documentation.

Electronic Logbook Certification Guidelines for Logbook Reporting in Pacific Island Fisheries

3.3.11 Advertising

The vendor may state that its product is “certified for Electronic Logbook submission for the following Pacific Islands Region fisheries: ...” For example:

Acme Electronic Logbook has been certified by NOAA Fisheries for electronic reporting of logbooks for the following Pacific Islands Region fisheries: Pelagic Longline, Pelagic Troll and handline.

Prohibitions

- A vendor must not use the following in the vendor’s name or the product name: NMFS, NOAA Fisheries, PIFSC, or PIRO.
- Vendor must not claim an endorsement by NOAA Fisheries, PIFSC, or PIRO for its product based on the certification.

Electronic Logbook Certification Guidelines for Logbook Reporting in Pacific Island Fisheries

4 E-Log-App Validation

4.1 Overview

The purpose of the validation process (see Figure 3. Validation Testing) is to test the E-Log-App against the certification requirements (3.0) using specified test plans.

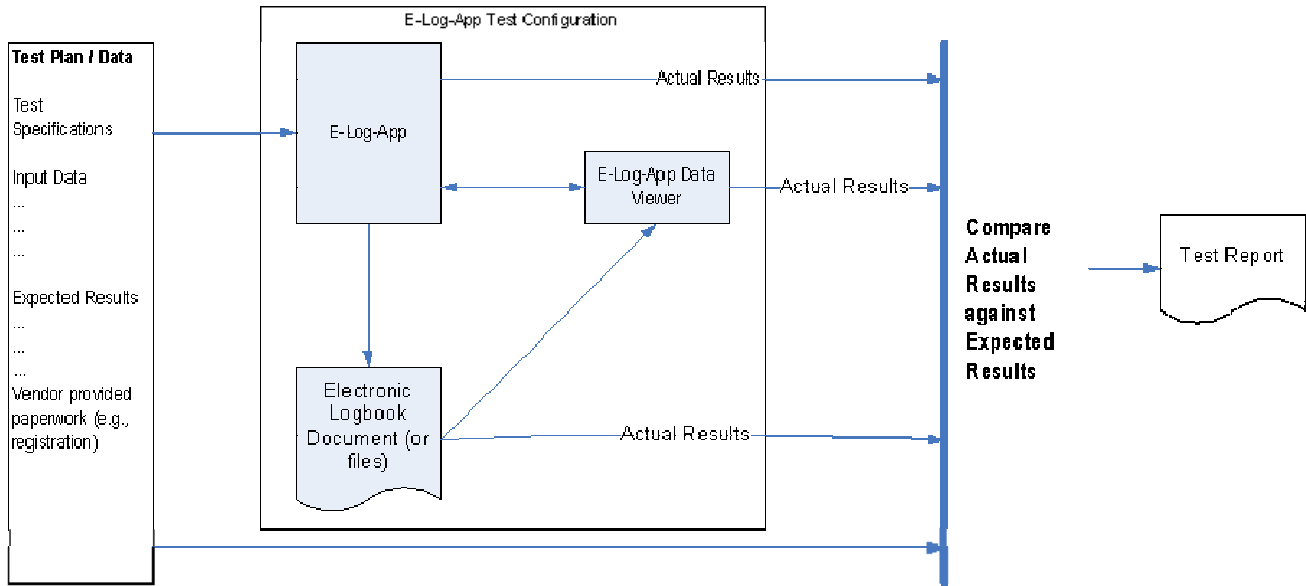


Figure 3. Validation Testing

4.2 Test Plans and Data

Test plans and data are generally fishery specific.

Certification	Fishery	Test Plans and Data
PIR-LB-1.1-1	1.1 Pelagic Longline	Appendix 4

4.3 Test Report

The Test Report includes the results of the validation testing. It also includes vendor provided information (including registration information and any affidavits or agreements), product information, date and time of testing, and individual test results. The Test Report should include enough information to set up and repeat the test.

4.4 Exclusions

Not all requirements can be easily tested. The following requirements will be validated based on the vendor’s assertion that the requirement is being met:

The E-Log-App data viewer must not be capable of modifying the logbook data.

Electronic Logbook Certification Guidelines for Logbook Reporting in Pacific Island Fisheries

5 Roadmap to E-Log-App Certification

This section describes the steps a typical vendor will take to develop and maintain a certified E-Log-App for the PIR. It will also describe E-Log-App use from the perspective of Fishers (permit holders and operators) and NOAA Fisheries.

5.1 Vendors Roadmap

The typical vendor will build an E-Log-App, get the product certified, sell or distribute the product, and manage the certification status of the product over its lifetime (see Figure 4. Vendor's roadmap).

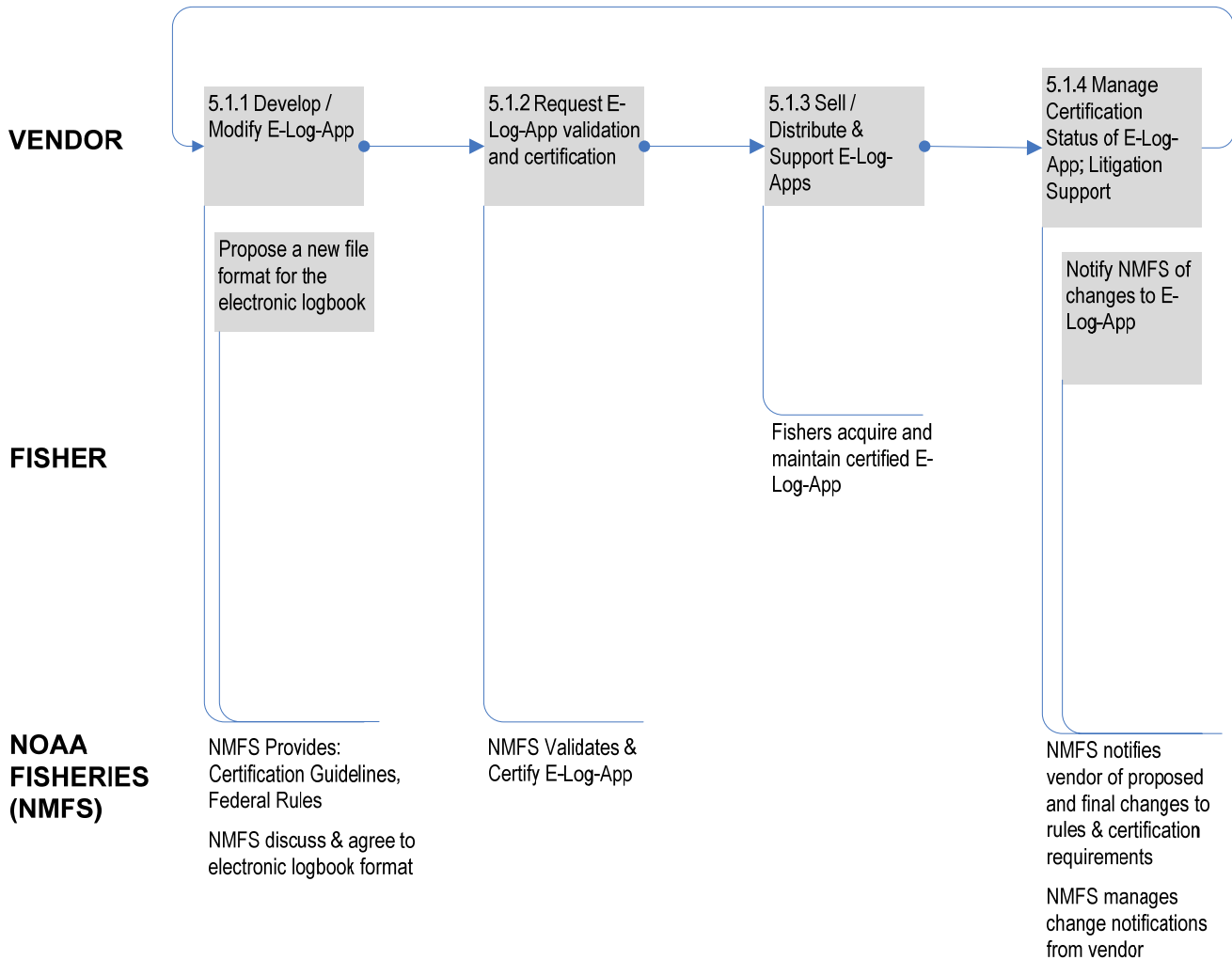


Figure 4. Vendor's roadmap

5.1.1 Develop / Modify E-Log-App

This step builds or modifies an E-Log-App that meets the requirements of this document.

Electronic Logbook Certification Guidelines for Logbook Reporting in Pacific Island Fisheries

<p>Inputs:</p> <p>Customer requirements</p> <p>Vendor proposal for electronic logbook file format</p> <p>Federal requirements: Reporting and Recordkeeping Rules; E-Log-App Certification Guidelines</p> <p>Resources: Test Team, Technical Panel</p>	<p>Outputs:</p> <p>New/modified E-Log-App built to conform to the requirements in section 3.</p> <p>Agreement on electronic logbook file format and a report type code (optional)</p>
---	--

5.1.2 *Request E-Log-App Validation and Certification*

This step validates the conformance of an E-Log-App with the certification requirements. The vendor's product is certified when the E-Log-App is successfully validated.

This step may include the following activities:

- Contact the Test Team to register for and schedule the Validation
- Support Validation activities
- Resolve Certification Issues
- A vendor may submit questions about the Technical Specification or the certification guidelines to the E-Log-App Technical Panel. A vendor may also appeal the results of a Validation Test to the E-Log-App Technical Panel
- Receive notification of denial or certification

<p>Inputs: E-Log-App, Test Plan, Test Data</p> <p>Resources: E-Log-App Test Team and Technical Panel</p>	<p>Outputs: Test Results, Certification (or reason for denial of certification)</p>
--	--

5.1.3 *Sell / Distribute / Support Certified E-Log-App*

This step delivers certified E-Log-Apps to fishers in the field. The vendor may distribute or sell copies of the certified E-Log-App configuration to fishers or resellers. This may include other products and services such as support contracts.

The vendor may include in its advertisement a statement that the product has a current certification (see Terms of Certification).

<p>Inputs: E-Log-App, E-Log-App Certificate</p> <p>Resources: Electronic Logbook Operations (PIFSC)</p>	<p>Outputs: Certified E-Log-Apps deployed in the field</p>
---	---

Electronic Logbook Certification Guidelines for Logbook Reporting in Pacific Island Fisheries

5.1.4 *Manage Certification Status of E-Log-App; Litigation support*

This step performs all actions needed to maintain the certification status of the E-Log-App. It includes providing litigation support to NOAA Fisheries, if needed. Key activities are managing requirements changes (those initiated by NOAA Fisheries and those initiated by the vendor.)

Inputs:	Outputs:
Proposed changes to reporting and recordkeeping rules	Vendor E-Log-App change notifications to NOAA Fisheries and E-Log-App license holders
Proposed changes to certification guidelines	E-Log-App Change notifications (to NOAA Fisheries)
Other changes (e.g., vendor initiated, customer requests)	Requests for advisory memos (to NOAA Fisheries)
Requests for litigation support from NOAA Fisheries	Litigation support to NOAA Fisheries
Advisory Recertification Memo from NOAA Fisheries	
Resources: NOAA Fisheries, WP Council	

5.1.4.1 *Monitor and respond to NOAA Fisheries Requirement Changes*

This step ensures that the vendor's E-Log-App has a current certification when NOAA Fisheries changes certification requirements and sets obsolescence dates for current certifications. PIFSC will notify vendors holding a certification of any change to the certification (Figure 5. NOAA Initiated Changes). NOAA Fisheries will also publish requirements changes as a Notification in the Federal Register.

This step may involve:

- Monitoring rule-making activity for the fishery
- Monitoring changes to E-Log-App requirements by NOAA Fisheries
- Reviewing the changes
- Modifying the E-Log-App and recertifying it, if necessary
- Distributing the modified E-Log-App to fishers

Electronic Logbook Certification Guidelines for Logbook Reporting in Pacific Island Fisheries

Inputs:

Notification from PIFSC
 Notification in Federal Register
 WP Council announcements and proposals
 Proposed rule-changes from NOAA Fisheries

Outputs:

Expired vendor certifications
 New certifications
 E-Log-App upgrades for fishers

Resources: NOAA Fisheries, WP Council

Fisheries rule-making: Changes to federal fisheries rules (e.g., Reporting and Recordkeeping) can affect E-Log-App requirements. Rule changes typically start as WP Council proposals. Vendors can keep tabs on WP Council activity at <http://wpcouncil.org/>. Not all E-Log-App requirements changes, however, will be preceded by WP Council activity.

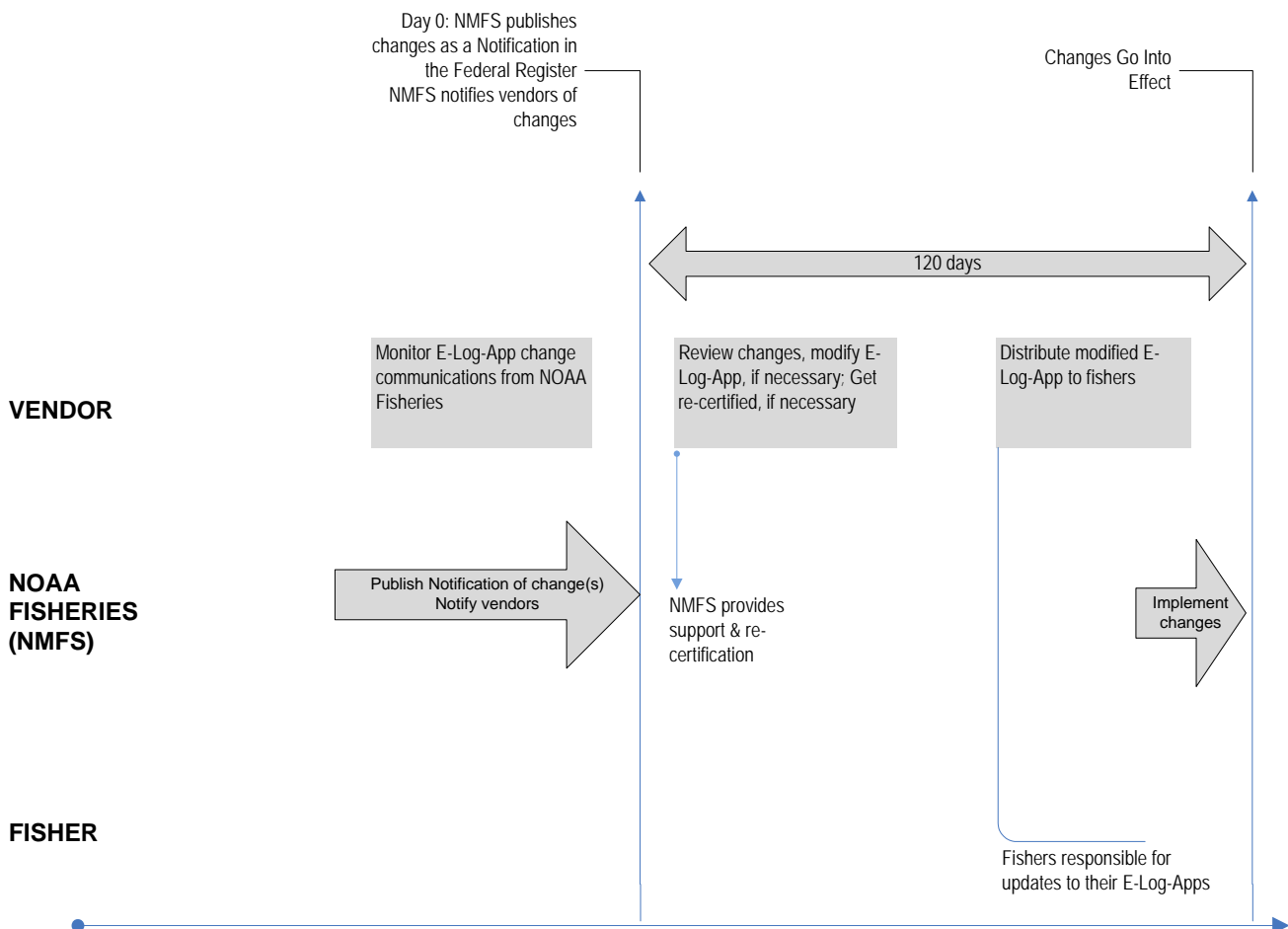


Figure 5. NOAA Initiated Changes

Electronic Logbook Certification Guidelines for Logbook Reporting in Pacific Island Fisheries

5.1.4.2 Vendor initiated E-Log-App changes

Vendors may need to modify certified E-Log-Apps for various reasons including product enhancements and fixing defects. If the change affects the E-Log-App components used to meet the requirements in section 3, NOAA Fisheries may require a recertification of the E-Log-App.

Before distributing the modified E-Log-App to fishers, the vendor must notify the Technical Panel of the change. The Technical Panel will determine if the E-Log-App needs to be recertified and issue a written advisory memo.

For planning purposes, vendors may request the advisory memo before the change is actually made.

5.1.4.3 Litigation Support

The vendor may be called to provide litigation support to the NOAA Fisheries Office of Law Enforcement. The vendor will make available a technical expert on the certified E-Log-App product for interviews, meetings, and court appearances.

5.1.4.4 Retire E-Log-App Certification

When the vendor wants to stop selling and supporting an E-Log-App product, it must notify NOAA Fisheries and all E-Log-App license holders. The vendor's obligation to provide litigation support for the product will cease 180 days after such notification.

5.2 Fisher's Perspective

The Electronic Logbook certification gives the fisher assurance that an E-Log-App conforms to the electronic logbook specification established by NOAA Fisheries. This section describes the steps (Figure 6) most fishers will take to report logbook data electronically.

Electronic Logbook Certification Guidelines for Logbook Reporting in Pacific Island Fisheries

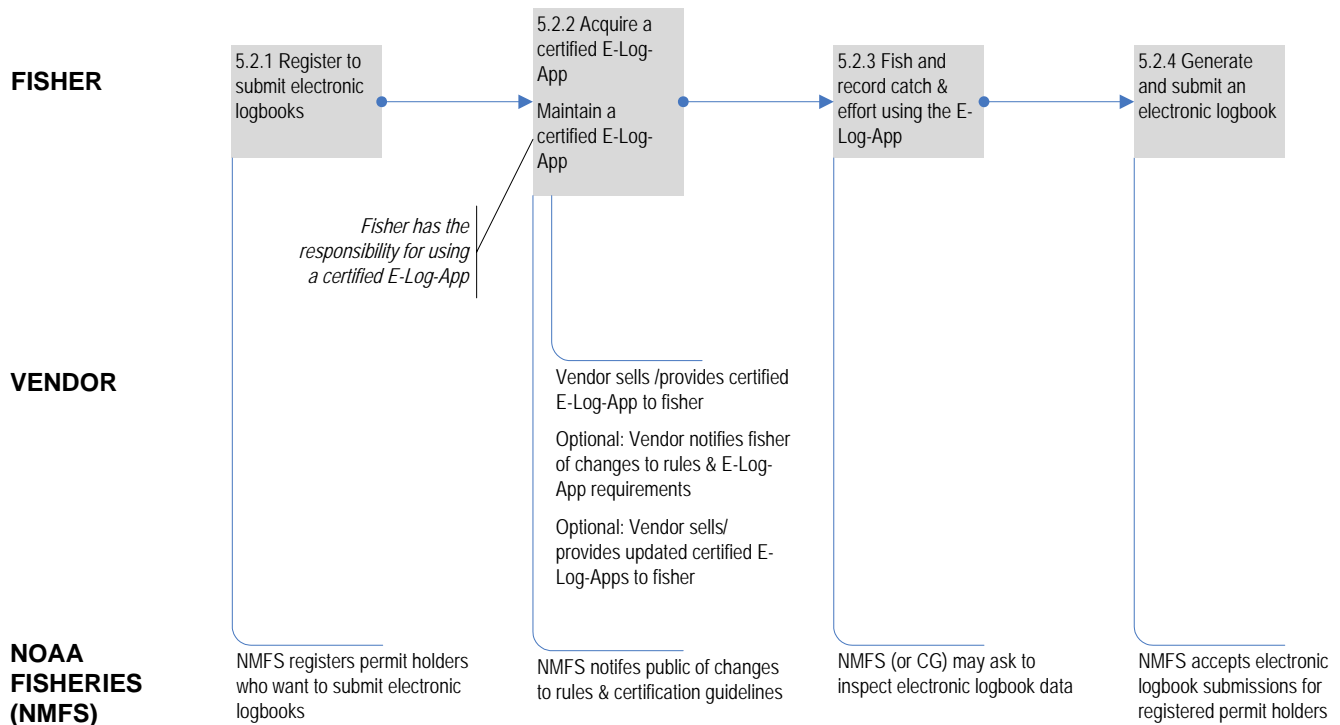


Figure 6. Fisher’s perspective.

5.2.1 Register to submit electronic logbooks

Permit holders who want to allow their operators to submit electronic logbooks must first register with NOAA Fisheries.

NOAA Fisheries requires a permit holder to sign an electronic logbook agreement before the permit holder’s operators can submit electronic logbooks.

5.2.2 Acquire a certified E-Log-App; maintain a certified E-Log-App

Fishers who want to submit electronic logbooks for a fishery must acquire an E-Log-App certified for that fishery. The fisher is also responsible for maintaining the certified E-Log-App. For example, if the certification for the E-Log-App expires or is revoked, it is the fisher’s responsibility to replace the E-Log-App with another certified product.

PIFSC will notify registered permit holders of any changes to certification expiration dates.

5.2.3 Fish and record catch & effort using the E-Log-App

A fisher using (a) a permit whose permit holder is registered for electronic logbook reporting and (b) a certified E-Log-App may record logbook data (catch & effort) according to §665.14.

Enforcement officials (US Coast Guard or NOAA Fisheries Office of Law Enforcement) may board the fisher’s vessel and ask to review the fisher’s logbook data. The fisher is obligated to give the enforcement official access to the E-Log-App.

Fishers should have a paper logbook forms available in case the E-Log-App fails or becomes unavailable due to computer or hardware failure.

Electronic Logbook Certification Guidelines for Logbook Reporting in Pacific Island Fisheries

5.2.4 Generate and submit an electronic logbook

A fisher using (a) a permit whose permit holder is registered for electronic logbook reporting and (b) a certified E-Log-App may submit electronic logbooks according to the terms of §665.14.

5.3 NOAA Fisheries Perspective

The Electronic Logbook certification gives NOAA Fisheries assurance that electronic logbooks will conform to an agreed upon electronic logbook specification. This section describes the steps (Figure 7. NOAA Fisheries) NOAA Fisheries will take to support the use of electronic logbooks in the PIR.

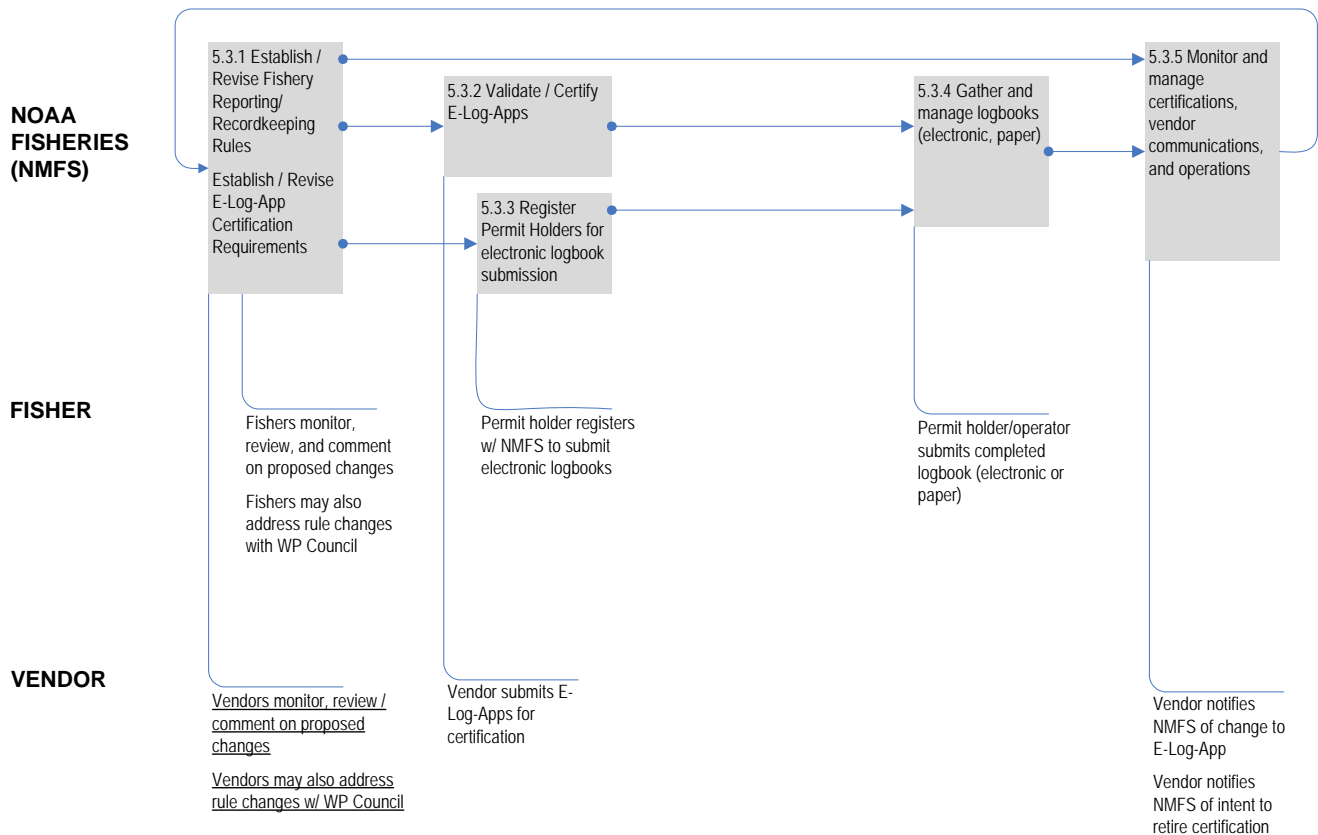


Figure 7. NOAA Fisheries perspective

5.3.1 Establish or revise fishery “Recordkeeping and reporting” rules and E-Log-App Certification guidelines

NOAA Fisheries creates, maintains, and revises federal recordkeeping and reporting rules for federal fisheries. Formal rule changes start in collaboration with the WP Council. Rule change proposals typically originate from WP Council staff.

Electronic Logbook Certification Guidelines for Logbook Reporting in Pacific Island Fisheries

This document will be maintained by NOAA Fisheries/PIFSC according to 3.3.6.

<p>Inputs:</p> <p>Proposed changes to reporting and recordkeeping rules</p> <p>Proposed changes to certification guidelines</p> <p>Resources: NOAA Fisheries, WP Council</p>	<p>Outputs:</p> <p>New rules or certification guidelines</p> <p>Communications to vendors and fishers</p>
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5.3.2 *Validate and certify E-Log-Apps*

PIFSC (Test Team) performs validation testing and certifies the E-Log-App. Based on the certification, PIFSC recommends approval of the E-Log-App to the Regional Administrator. The Regional Administrator approves the E-Log-App based on the certification and PIFSC recommendation. The Technical Panel will resolve any disputes raised by vendors regarding the validation test itself or validation test results for a product.

<p>Inputs:</p> <p>E-Log-Apps, E-Log-App certification guidelines (test plans, data), technical queries from vendors</p> <p>Resources: Test Team/PIFSC, Technical Panel/PIFSC, Regional Administrator</p>	<p>Outputs:</p> <p>Validation test results, E-Log-App certifications</p> <p>Approvals of E-Log-Apps for use in fisheries</p>
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5.3.3 *Register Permit Holders for electronic logbook submissions*

PIFSC will register permit holders who want the option of reporting electronically.

<p>Inputs:</p> <p>Signed Letters of Agreement from permit holders</p> <p>Resources: PIRO, FMSD/PIFSC</p>	<p>Outputs:</p> <p>List of permit holders registered for electronic logbook use</p>
--	--

5.3.4 *Gather and manage electronic and paper logbooks*

PIFSC (Electronic Logbook Operations) will gather and manage electronic logbooks submitted by fishers. It will perform quality assurance tests, manage corrections, and keep electronic logbook submission statistics (volume, success rates), and E-Log-App defect reports.

Electronic Logbook Certification Guidelines for Logbook Reporting in Pacific Island Fisheries

<p>Inputs:</p> <p>List of permit holders registered for electronic logbook use (from PIRO)</p> <p>Electronic and paper logbooks</p> <p>Resources: Electronic Logbook Operations</p>	<p>Outputs:</p> <p>Logbook data; electronic logbook performance reports (submission statistics; success/failure); e-log-app defect reports</p>
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5.3.5 *Monitor and manage certifications, vendor/fisher communications, and operations*

PIFSC will send change certification-related notifications to vendors and registered electronic logbook fishers. It will manage product certifications including responses to requests for advisory memos.

PIFSC will review electronic logbook use, certification, and this document at least once per year to review relevance and content. If necessary, PIFSC will recommend revisions.

PIRO and PIFSC will monitor electronic logbook performance, input from vendors and fishers, and recommend changes to rules or certification criteria, as needed.

<p>Inputs:</p> <p>Electronic Logbook performance reports</p> <p>E-Log-App defect reports</p> <p>Change reports from vendors</p> <p>New or revised rules or certification guidelines</p> <p>Complaints or suggestions from fishers or vendors</p> <p>Resources: Electronic Logbook Operations, Technical Panel, PIRO</p>	<p>Outputs:</p> <p>Advisory Recertification Memo to vendors</p> <p>Certification expirations</p> <p>Certification revocations (for defective E-Log-App applications)</p> <p>Change notifications to vendors and permit holders</p> <p>Recommendations for changes to rules or certification criteria (including the addition of new certifications)</p>
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Electronic Logbook Certification Guidelines for Logbook Reporting in Pacific Island Fisheries

6 Related Documents & References

Related Documents

Electronic Logbook User Authorization and Registration Letter

Certification Declaration

Federal Register Notice

Pacific Islands Region Logbook Family of Forms (ICR Reference Number: 200611-0648-005), OMB Action, February 23, 2007. <http://www.cio.noaa.gov/itmanagement/0214ren06.pdf>

**Electronic Logbook Certification Guidelines for
Logbook Reporting in Pacific Island Fisheries
Appendix 1 - Logbook Rules and Regulations**

**NOAA Fisheries
Pacific Islands Fisheries Science Center**

**Electronic Logbook Certification Guidelines
For Logbook Reporting in Pacific Island Fisheries
Appendix 1 - Logbook Rules and Regulations**

Version 1.7



**National
Oceanic and
Atmospheric
Administration**

**Electronic Logbook Certification Guidelines for
Logbook Reporting in Pacific Island Fisheries
Appendix 1 - Logbook Rules and Regulations**

Appendix 1. Logbook Rules and Regulations

Rules and regulations for Pacific Island Region (Western Pacific) fisheries are contained in 50 CFR Part 665 (Title 50: Wildlife and Fisheries Part 665—Fisheries in the Western Pacific). Current regulations are listed on <http://www.gpoaccess.gov>.

The rules and regulations change periodically. Vendors should review [gpoaccess.gov](http://www.gpoaccess.gov) for current information. As of April 2008, key fishing reporting and recordkeeping rules and regulations (from 50 CFR § 665.14) are:

(a) *Fishing record forms.* (1) *Applicability.* The operator of any fishing vessel subject to the requirements of §§665.21, 665.41, 665.61(a)(2), 665.61(a)(3), 665.61(a)(4), 665.81, or 665.602 must maintain on board the vessel an accurate and complete record of catch, effort, and other data on paper report forms provided by the Regional Administrator, or electronically as specified and approved by the Regional Administrator. All information specified by the Regional Administrator must be recorded on paper or electronically within 24 hours after the completion of each fishing day. The logbook information, reported on paper or electronically, for each day of the fishing trip must be signed and dated or otherwise authenticated by the vessel operator in the manner determined by the Regional Administrator, and be submitted or transmitted via an approved method as specified by the Regional Administrator, and as required by this paragraph (a).

(2) *Timeliness of submission.* (i) If fishing was authorized under a permit pursuant to §§665.21, 665.41, 665.61(a)(1), 665.61(a)(3), or 665.81 the vessel operator must submit the original logbook form for each day of the fishing trip to the Regional Administrator within 72 hours of the end of each fishing trip, except as allowed in paragraph (iii) of this section.

(ii) If fishing was authorized under a permit pursuant to §665.61(a)(4) the vessel operator or vessel owner must submit the original logbook form for each day of the fishing trip to the Regional Administrator within 72 hours of the end of each fishing trip.

(iii) If fishing was authorized under a PRIA bottomfish permit pursuant to §665.61(a)(2), PRIA pelagic troll and handline permit pursuant to §665.21(f), crustaceans fishing permit for the PRIA (Permit Area 4) pursuant to §665.41, or a precious corals fishing permit for Permit Area X-P-PI pursuant to §665.81, the original logbook form for each day of fishing within the PRIA EEZ waters must be submitted to the Regional Administrator within 30 days of the end of each fishing trip.

**Electronic Logbook Certification Guidelines for
Logbook Reporting in Pacific Island Fisheries
Appendix 1 - Logbook Rules and Regulations**

(iv) If fishing was authorized under a permit pursuant to §665.602, the original logbook information for each day of fishing must be submitted to the Regional Administrator within 30 days of the end of each fishing trip.

The permits referenced above include:

§§ 665.21 Permits (Western Pacific Pelagic Fisheries)

§§ 665.41 Permits (Western Pacific Crustacean Fisheries)

§§ 665.61(a)(2) and 665.61(a)(3) Permits (Bottomfish and Seamount Groundfish Fisheries)

§§ 665.81 Permits (Precious Coral Fisheries)

§§ 665.602 Permits and Fees (Western Pacific Coral Reef Ecosystem Fishery)

**Electronic Logbook Certification Guidelines for
Logbook Reporting in Pacific Island Fisheries
Appendix 2 – Common Information Requirements**

**NOAA Fisheries
Pacific Islands Fisheries Science Center**

**Electronic Logbook Certification Guidelines
For Logbook Reporting in Pacific Island Fisheries
Appendix 2 – Common Information Requirements**

Version 1.5



**National
Oceanic and
Atmospheric
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**Electronic Logbook Certification Guidelines for
Logbook Reporting in Pacific Island Fisheries
Appendix 2 – Common Information Requirements**

Appendix 2. Common Information Requirements

Current requirements and specifications are available on request from FMSD/PIFSC.

1. PIR Standard Codes

PIFSC will publish current code documents for use with electronic logbooks. The documents are available in an Excel spreadsheet at: <http://www.pifsc.noaa.gov/fmsd/>

Standard Codes	Description
Bait Codes	Each record represents a current bait code
Port Codes	Each record represents a departure or arrival port for fishing in the region
Species Codes and Protected Species Codes	Each record represents a species of significance to NOAA Fisheries as catch, by-catch, or protected species.

Data Dictionary

A. Species Codes

Each record represents a species of significance to NOAA Fisheries. An E-Log-App must support the use of current Species codes to record SpeciesCode and SpeciesName.

Attribute	Datatype	Description
Code	Text	Alphanumeric code representing a species of interest for catch or bycatch reporting
Name	Text	A description of the species
Effective Date	Date	First date that this code may be used
Expiration Date	Date	Last date that this code may be used. If this value is not specified, the code is considered valid.

Requirements Source: FMSD

B. Bait Codes

Each record represents a current bait code. An E-Log-App must support the use of current Bait Codes to record BaitCode and BaitName.

Attribute	Datatype	Description
Code	Text	Alphanumeric code representing a type of bait of interest for catch reporting

**Electronic Logbook Certification Guidelines for
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Appendix 2 – Common Information Requirements**

Attribute	Datatype	Description
Name	Text	A description of the bait
First Effective Date	Date	First date that this code may be used
Expiration Date	Date	Last date that this code may be used

Requirements Source: FMSD

C. Port Codes

Each record represents a departure or arrival port. The E-Log-App must support the use of current Port codes to record DeparturePort, DeparturePortName, ReturnPort, and ReturnPortName.

Attribute	Datatype	Description
Code	Text	Alphanumeric code representing a port
Name	Text	A description of the port
First Effective Date	Date	First date that this code may be used
Expiration Date	Date	Last date that this code may be used

Requirements Source: FMSD

2. Date / Time

Date/time values must follow the dateTime specification under section 3.2.7 of the XML Schema Part 2: Datatypes Second Edition (W3C Recommendation 28 October 2004, <http://www.w3.org/TR/xmlschema-2/>). This is equivalent to the Extended format ISO 8601, 4.3 Date and Time Format with UTC (Coordinated Universal Time).

Date/time values must include year, month, day, hour, minute, and timezone information. Date/time values may include second and fractional second information, if the E-Log-App can accurately provide it.

The XML dateTime specification is flexible and supports a single date/time value to be represented in more than one way.

Recommendation:

We recommend reporting date/time values in Hawaii Standard Time (-10:00) using the following format:

YYYY-MM-DDThh:mm±hh:mm

where

YYYY – four digit year

MM – two digit month (01, 02, 03, ..., 12)

**Electronic Logbook Certification Guidelines for
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Appendix 2 – Common Information Requirements**

DD – two digit day of the month (01, 02, 03, ..., 31)
 hh – two digit hour of the day (00, 01, 02, 03, ..., 23)
 mi – two digit minute (00, 01, 02, ..., 59), and
 ±hh:mm – difference from UTC (Example: the offset for Hawaii Standard Time is -10:00).
 Example: October 20, 1997 3:15 PM HST is represented as 1997-10-20T15:15-10:00

3. Calendar Date

Calendar date values must follow the date specification under 3.2.9 of the XML Schema Part 2: Datatypes Second Edition (W3C Recommendation 28 October 2004, <http://www.w3.org/TR/xmlschema-2/>).

Date values must include year, month, and day. Date values may include the timezone.

The XML date specification is also flexible and allows a single date value to be represented in more than one way.

Recommendation:

We recommend reporting calendar dates in Hawaii Standard Time (difference from UTC = -10:00) using the following format:

YYYY-MM-DD±hh:mm

where

YYYY – four digit year,
 MM – two digit month (01, 02, 03, ..., 12),
 DD – two digit day of the month (01, 02, 03, ..., 31), and
 ±hh:mm – difference from UTC (Example: the offset for Hawaii Standard Time is -10:00).

Example: May 12, 2007 is 2007-05-12-10:00

4. Geographic Location

Geographic locations must be represented by latitude and longitude coordinates expressed as degrees, minutes, and direction (hemisphere).

	Degrees	Minutes	Direction (hemisphere)
Latitude	integer 0 >= degrees latitude <= 90	Integer 0 >= minutes <= 59	Text (1 character) N=north, S=south
Longitude	Integer 0 >= degrees longitude <= 180	“	Text (1 character) E=east, W=west

5. Source Keys (linking electronic logbook data to its source application)

**Electronic Logbook Certification Guidelines for
Logbook Reporting in Pacific Island Fisheries
Appendix 2 – Common Information Requirements**

An E-Log-App (application) Source Key (SK) is an alphanumeric code that uniquely identifies a record in the fisher’s E-Log-App. SKs can be used to link (cross-reference) records in the E-Log-App database to logbook records stored at NOAA Fisheries. SKs can be used to support testing, corrections, and to trouble-shoot electronic logbook submission problems.

An E-Log-App must create and store a Logbook Page ID (see below).

An e-log app may also create and store an SK for the Trip and for other logbook details (e.g., PS interaction or catch records). These are not required.

A. Logbook Page ID

The E-Log-App must create a unique Logbook Page Identifier (SK) for each Logbook header record.

Format: <Vessel Identifier> - <Harvest Day> - <Harvest Identifier>

Data item	Description
Vessel Identifier	<p>The vessel identifier should be the fishing vessel’s Coast Guard Official number, if it exists.</p> <p>If the vessel does not have an Official number, then the vessel identifier is the State number, if it exists.</p> <p>If the vessel does not have either an Official number or a State number, then the vessel identifier is the Country identifier.</p>
Harvest Date	<p>YYYYMMDD</p> <p>This is the day when the fish are harvested.</p> <p>For pelagic longline fisheries, this is the haul date.</p>
Harvest Identifier	<p>This is a sequential number (1, 2 ...) used to allow multiple harvest events on the same day. In most cases, the harvest identifier value will be 1. Harvest identifiers greater than 1 may be used to describe atypical fishing activity or for testing purposes. (Example: Vessel A hauls lines set by Vessel B after Vessel B is disabled.)</p>

Example: HA999-20071012-1

Vessel identifier: HA999

Harvest date: 20071012 (October 12, 2007)

Harvest Identifier: 1

B. Other Source Keys

The E-Log-App may store an SK corresponding to the following records on in the E-Log-App:

**Electronic Logbook Certification Guidelines for
Logbook Reporting in Pacific Island Fisheries
Appendix 2 – Common Information Requirements**

Data item	Description
Trip Source Key	A trip record that represents a fishing trip (departure date and port, return date and port, etc.). Each trip record may a period of time covering one or more sets.
Logbook Detail Source Key	A catch record that represents the volume of fish (species, number kept, number released, etc.). Each catch record must be a part of one logbook header. Or, protected species interaction (species, number injured, number dead, etc.). Each catch record must be a part of one logbook header.

These values may be used to cross reference data in the E-Log-App to the electronic logbook contents.

6. *Unknown Values*

When a report value is unknown, it must be represented in the report as an empty, zero length string.

Data Type	Representation of unknown (null) value	Notes
Date	Empty string, zero length	
Number	Empty string, zero length	Zero must be represented as 0 or 0.0
String	Empty string, zero length	
Date/Time	Empty string, zero length if date is unknown. YYYY-MM-DD if date is known, but time is unknown	

Example:

If latitude is known to be exactly 21 degrees 0 minutes north, then minutes should be represented as “0”

If latitude is known to be 21 degrees north, but the position cannot be resolved to the minute, then minutes should be represented as “”, a zero length empty string.

Unknown Values in XML

When the electronic logbook is stored in an XML document, an element with an unknown (null) value must be represented in one of three ways:

1. Omit the element from the document.
2. A single empty-element tag (e.g., <HooksLost/>)
3. The element start tag followed immediately by its end tag (e.g., <HooksLost></HooksLost>)

We recommend omitting the element from the document.

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This allows the developer to use the XML schema definition for internal testing. (In most cases, PIFSC will provide an optional XML schema for each XML document type).

7. *Electronic Logbook filename and extension*

Electronic Logbook filenames must follow the filename and filename extension requirements below.

PIR-LB – <fishery> – <trip departure date> -- <vessel ID>-<sub no>-<opt>. <Ext>

Part	Description
<fishery>	fishery extension number (see Fishery Extension Numbers, Section 1)
<deparature date>	Trip departure date of fishing (harvest) activity, YYYYMMDD.
<vessel identifier>	Coast Guard Official Number, State vessel identifier, or country vessel identifier
<sub no.>	submittal number; 0 for initial submission, 1 for first correction, 2 for second correction, etc.
<opt>	Optional file identifier. This may be used to name test file outputs or to distinguish two files with the same harvest date.
<ext>	xml – XML file Other filename extensions may be used based on an agreement between PIFSC and the vendor.

Example:

PIR-LB-1.1-20070715-99999-0-1.xml

Logbook, Pacific Island Region Fishery 1.1 (Pelagic Longline), Trip departure on July 15, 2007, Coast Guard Official Number 9999, initial submission, file 1, in XML

8. *References*

ISO 8601, Data elements and interchange formats – Information interchange – Representation of dates and times, Third edition 2004-12-01

XML Schema Part 2: Datatypes Second Edition, W3C Recommendation 28 October 2004,
<http://www.w3.org/TR/xmlschema-2>

“Key words for use in RFCs to Indicate Requirement Levels,” Network Working Group, Internet Engineering Task Force, <http://www3.tools.ietf.org/html/rfc2119>

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Appendix 3. Pelagic Longline Logbook Information Requirements

Current requirements and specifications are available on request from PIFSC/FMSD.

1. PIR-LB-1.1-1.x.x – Pelagic Longline, Version 1

C. Preferred File Format – XML

The preferred format for electronic logbooks is an XML document following the specification described below. Section B illustrates the logical structure of valid documents. Section C contains a “data dictionary” defining the names, types, and cardinality of the elements contained in the document. A sample document is provided in Section D. Finally, Section E describes a W3C XML Schema which may be useful in the development of Electronic Logbook applications and tools.

D. Document Structure

The following diagram (Figure 8 Pelagic Longline, Document Structure, Version 1) shows the major headings (nodes) in the Electronic Logbook for the Pelagic Longline fishery.

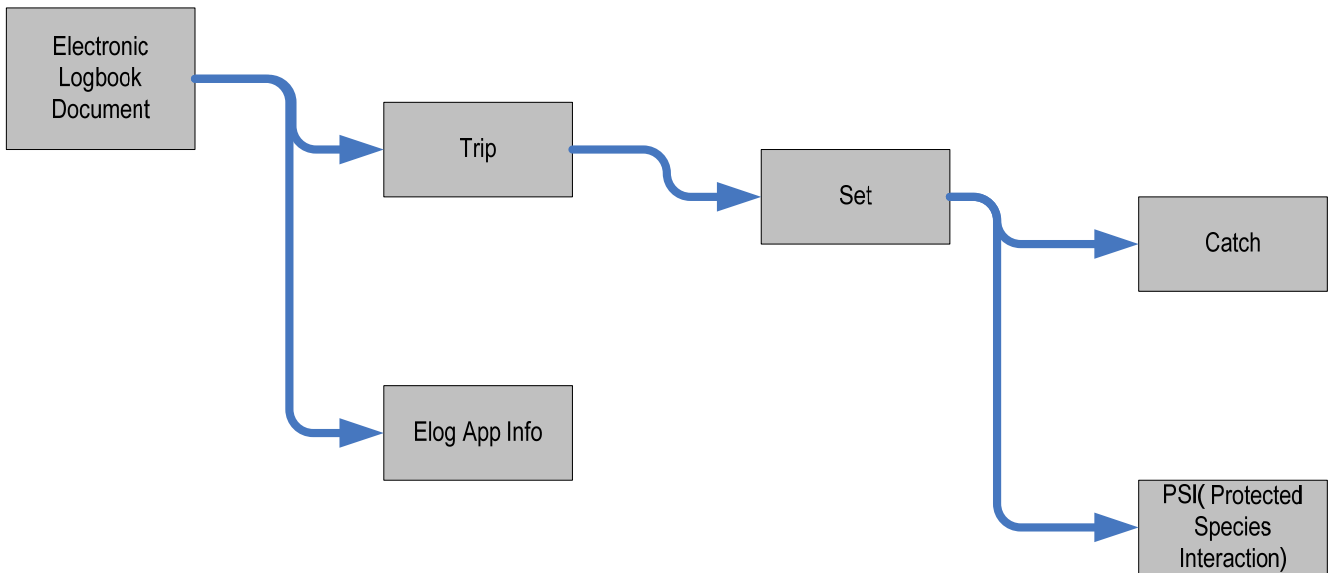


Figure 8 Pelagic Longline, Document Structure, Version 1

A data dictionary below describes the content of this document in detail.

E. Data Dictionary

The E-Log-App must be capable of gathering and reporting each of the data elements listed below. Some elements must contain non-null values in the electronic logbook.

Column Descriptions

Name is the name of an element that must be supported in the document or file.

Type describes the kind of data value (e.g., date, date/time, string) that must be used in for a

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particular element.

Test describes whether the element must be enterable for test purposes. (This is specified as "n/a" for container elements because the container's elements are specified.)

Cardinality describes the number of non-empty (non-null) elements that must be stored

Description describes the data element.

1) Special types used in the schema

The schema largely makes use of simple XML Schema types such as xs:string and xs:integer. However, it has been found convenient to define the following custom types as well.

Name	Allowable values
yes-or-no	The single characters 'Y' or 'N'
latitude-degrees	Integer, must be between 0 and 90, inclusive.
latitude-minutes	Integer, must be between 0 and 59, inclusive.
latitude-direction	The single characters 'N' or 'S'
longitude-degrees	Integer, must be between 0 and 180, inclusive.
longitude-minutes	Integer, must be between 0 and 59, inclusive.
longitude-direction	The single characters 'E' or 'W'
port-code	See <code>elog-schema.xsd</code>
target-code	Either 'T' (Tuna) or 'B' (Swordfish)
count	Non-negative integers (0, 1, 2, ...)
species-code	See <code>elog-schema.xsd</code>
ps-code	See <code>elog-schema.xsd</code>
bait-code	See <code>elog-schema.xsd</code>

2) Section LogbookReport

This is the top-level section

Elements

Name	Type	Cardinality	Test	Description
ReportSourceKey	string	Zero or one	yes	A unique application source key for the electronic

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Name	Type	Cardinality	Test	Description
				logbook. For use in corrections and other tasks that require linking a submitted report to the fisher's application data. (see section Appendix 2)
Region	string	Exactly one	No	Region: PI
ReportType	string	Exactly one	No	Report Type: LB
Version	string	Exactly one	No	PIR certification version code
SubmissionNumber	integer	Exactly one	No	Submission number; 0 for an initial submission, 1 for the first correction, 2 for the second correction, etc. For PIR-LB-1.1-1.0.0, this value must be 0. Corrections are not supported.
Filename	string	Exactly one	Yes	Document file name (see section Appendix 2) PIR-LB-1.1-<trip departure date>-<vessel id>-<submission-no>-<opt>.<ext>
Trip	[Container]	Exactly one	n/a	Container element for trip data.
ELogInfo	[Container]	Exactly one	n/a	Container element for electronic logbook product information

3) Section Trip

The Trip section must be contained within exactly one LogbookReport

Elements

Name	Type	Cardinality	Test	Description
TripSourceKey	string	Zero or one	No	A unique application source key for the trip. For use in corrections and other tasks that require linking a trip in a submitted report to the fisher's application data. (See Appendix 2)
LandingDate	date	Exactly one	Yes	Date the vessel arrived at port from a fishing trip
IsObserver	yes-or-no	Exactly one	yes	Was an observer present, Y or N
DepartureDate	date	Exactly one	Yes	Date that the vessel left port for longline operations
DeparturePort	port-code	Exactly one	yes	Port code for port of departure. See Port Code listing for valid port codes and names. If the port code = 111, then port name should be a free text description of the port location

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Name	Type	Cardinality	Test	Description
				(city, state/province code) Example: SFO
DeparturePortName	String	Exactly one	Yes	Departure port name See Port Code listing for valid port codes and names. If the port code = 111, then port name should be a free text description of the port location (city, state/province code) Example: San Francisco, CA
ReturnDate	Date	Exactly one	Yes	Date that the vessel arrived back in port
ReturnPort	port-code	Zero or one	Yes	Port code for return Port See Port Code listing for valid port codes and names. example: HNL
ReturnPortName	String	Exactly one	Yes	Return port name See Port Code listing for valid port codes and names. If the port code = 111, then port name should be a free text description of the port location (city, state/province code) example: Honolulu, HI
VesselName	string	Exactly one		Name of the fishing vessel at the time of the trip
VesselIdentifier	string	Exactly one		Vessel identifier. This must contain the current: (1) Coast Guard official number, (2) State issued vessel number, or (3) Country based vessel number. If the vessel has more than one vessel number, then this element must contain (1), if it exists. Otherwise, this element must contain (2), if it exists. If (1) and (2) do not exist, this element must contain (3).
PIRPermitNumber	string	Exactly one	Yes	Pacific Island Region permit number that authorizes fishing activity in the Western Pacific Pelagic Fisheries under 50 CFR §§665.21
NPSPermitNumber	integer	Zero or one	Yes	National Permit System permit number that authorizes fishing activity, if it exists
Set	[Container]	One or more	n/a	Container element for data elements common to a single line set.

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4) Section: Set

The Set section must be contained within exactly one Trip

Elements

Name	Type	Cardinality	Test	Description
LogsheetSourceKey	string	Exactly one	No	A source key formatted as follows: <vessel-identifier>-<harvest date>-<harvest identifier>. (See Appendix 2)
SignDate	date	Exactly one	yes	Date of signature.
CML	string	Exactly one	Yes	State of Hawaii Commercial Marine License number of the person who signed the fishing logbook.
Target	target-code	Exactly one	Yes	Target code, T (tuna) or B (swordfish).
BaitCode	bait-code	Zero or one	Yes	Bait code of the type of bait used on this set. See Bait Code listing for valid code values. Example: 14
BaitName	string	Exactly one	Yes	Name of the type of bait used on this set. See Bait Code listing for valid codes and names. Example: Squid lure
MainlineLength	integer	Exactly one	Yes	Length in nautical miles of the line put out for set
HooksSet	count	Exactly one	Yes	Number of hooks put out for set
HooksLost	count	Zero or one	Yes	Number of hooks lost.
HooksFloatMin	count	Exactly one	Yes	Minimum number of hooks between floats
HooksFloatMax	count	Exactly one	Yes	Maximum number of hooks between floats
Lightsticks	count	Exactly one	Yes	Number of lightsticks put out during the setting of hooks
ShallowSetCertNum	string	Zero or one	Yes	Number of swordfish shallow set certificate (if any)
IsSideSet	yes-or-no	Exactly one	Yes	Was the gear set off the side of the vessel, Y or N.
BeginSetDatetime	datetime	Zero or one	Yes	Date/time at which the setting of hooks began.

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Name	Type	Cardinality	Test	Description
BeginSetLatDeg	latitude-degrees	Zero or one	Yes	Degrees (0-90) component of the latitude of the position where the setting of hooks began
BeginSetLatMin	latitude-minutes	Zero or one	Yes	Minutes (0-59) component of the latitude of the position where the setting of hooks began.
BeginSetLatDir	latitude-direction	Zero or one	Yes	Direction component of the latitude of the position where the setting of hooks began. N=North, S=South, Allowable values: N, S
BeginSetLonDeg	longitude-degrees	Zero or one	Yes	Degrees (0-180) component of the longitude of the position where the setting of hooks began.
BeginSetLonMin	longitude-minutes	Zero or one	Yes	Minutes (0-59) component of the longitude of the position where the setting of hooks began.
BeginSetLonDir	longitude-direction	Zero or one	Yes	Direction component of the longitude of the position where the setting of hooks began. E=east, W=west
EndSetDatetime	datetime	Zero or one	Yes	Date/Time at which the setting of hooks ended.
EndSetLatDeg	latitude-degrees	Zero or one	Yes	Degrees (0-90) component of the latitude of the position where the setting of hooks ended
EndSetLatMin	latitude-minutes	Zero or one	Yes	Minutes (0-59) component of the latitude of the position where the setting of hooks ended.
EndSetLatDir	latitude-direction	Zero or one	Yes	Direction component of the latitude of the position where the setting of hooks ended. Allowable values: N, S
EndSetLonDeg	longitude-degrees	Zero or one	Yes	Degrees (0-180) component of the longitude of the position where the setting of hooks ended.
EndSetLonMin	longitude-minutes	Zero or one	Yes	Minutes (0-59) component of the longitude of the position where the setting of hooks ended longitude, minutes (0-59)
EndSetLonDir	longitude-direction	Zero or one	yes	Direction component of the longitude of the position where the setting of hooks ended.E=east, W=west. Allowable values: E, W
BeginHaulDatetime	datetime	Zero or one	Yes	Date/Time at which the hauling of hooks/line began.
BeginHaulLatDeg	latitude-	Zero or one	Yes	Degrees (0-90) component of the latitude of the

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Name	Type	Cardinality	Test	Description
	degrees			position where the hauling of hooks began
BeginHaulLatMin	latitude-minutes	Zero or one	Yes	Minutes (0-59) component of the latitude of the position where the hauling of hooks began
BeginHaulLatDir	latitude-direction	Zero or one	Yes	Direction component of the latitude of the position where the hauling of hooks began. N=north, S=south. Allowable values: N, S
BeginHaulLonDeg	longitude-degrees	Zero or one	Yes	Degrees (0-180) component of the longitude of the position where the hauling of hooks began.
BeginHaulLonMin	longitude-minutes	Zero or one	Yes	Minutes (0-59) component of the longitude of the position where the hauling of hooks began.
BeginHaulLonDir	longitude-direction	Zero or one	Yes	Direction component of the longitude of the position where the hauling of hooks began.. E=east, W=west. Allowable values: E, W
EndHaulDatetime	datetime	Zero or one	Yes	Date/Time at which the hauling of hooks/line ended.
EndHaulLatDeg	latitude-degrees	Zero or one	Yes	Degrees (0-90) component of the latitude of the position where the hauling of hooks ended.
EndHaulLatMin	latitude-minutes	Zero or one	Yes	Minutes (0-59) component of the latitude of the position where the hauling of hooks ended.
EndHaulLatDir	latitude-direction	Zero or one	Yes	Direction component of the latitude of the position where the hauling of hooks ended.Allowable values: N, S
EndHaulLonDeg	longitude-degrees	Zero or one	Yes	Degrees (0-180) component of the longitude of the position where the hauling of hooks ended.
EndHaulLonMin	longitude-minutes	Zero or one	Yes	Minutes (0-59) component of the longitude of the position where the hauling of hooks ended.
EndHaulLonDir	longitude-direction	Zero or one	Yes	Direction component of the longitude of the position where the hauling of hooks ended. Allowable values: E, W
Catch	[Container]	Exactly one	n/a	Container element for catch records for a single set.
PSI	[Container]	Zero or more	n/a	Container element for PSI (protected species interaction) records for a single set.

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5) Section: Catch

The Catch section must be contained within exactly one Set.

Elements

Name	Type	Cardinality	Test	Description
CatchSourceKey	string	Zero or one	Yes	An application source key for the logbook catch record. For use in corrections and other tasks that require linking logbook catch records in a submitted report to the fisher's application data.
SpeciesCode	species-code	Exactly one	Yes	Species identification code See Species Code listing for valid code and name values. Example: 12
SpeciesName	string	Exactly one	Yes	Species name. See Species Code listing for valid code and name values. Example: Moonfish
NumKept	count	Exactly one	Yes	Number kept by the vessel's crew of this particular species
NumReleased	count	Exactly one	Yes	Number released by vessel's crew of this particular species

6) Section PSI

The PSI (protected species interaction) section must be contained within exactly one Set

Elements

Name	Type	Cardinality	Test	Description
PSISourceKey	string	Zero or one	Yes	An application source key for the logbook PSI record. For use in corrections and other tasks that require linking logbook PSI records in a submitted report to the fisher's application data.
SpeciesCode	ps-code	Exactly one	Yes	Protected Species identification code from the Protected Species code list. See Protected Species Code listing for valid code and name values.

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Name	Type	Cardinality	Test	Description
				Example: 54
SpeciesName	string	Exactly one	Yes	Protected species name. See Protected Species Code listing for valid code and name values. Example: Leatherback turtle
Injured	count	Exactly one	Yes	Number of this particular protected species caught during fishing, but released injured.
Uninjured	count	Exactly one	Yes	Number of a protected species caught during fishing, but released alive and uninjured.
Dead	count	Exactly one	Yes	Number of this particular species caught during fishing, but released dead.

7) Section ELogInfo

The ELogInfo section must be contained within exactly one LogbookReport

Elements

Name	Type	Cardinality	Type	Description
CertNum	Integer	Exactly one	Yes	Certification number (issued by NMFS)
License	string	Exactly one	No	Product license number (issued by vendor)
Vendor	String	Exactly one	No	Vendor name. This must be the same vendor name used for the certification.
ProductName	String	Exactly one	No	Product name (issued by vendor)
ProductVersion	String	Exactly one	No	Product version (issued by vendor)

F. Example

```
<?xml version="1.0" encoding="UTF-8"?>
<LogbookReport>
  <Region>PI</Region>
  <ReportType>LB</ReportType>
  <Version>PIR-LB-1.1-1.0.0</Version>
  <SubmissionNumber>0</SubmissionNumber>
  <Filename>PIR-LB-1.1-20070108-VES1234-0.xml</Filename>
  <Trip>
    <LandingDate>2004-01-11-10:00</LandingDate>
    <IsObserver>N</IsObserver>
    <DepartureDate>2004-01-08-10:00</DepartureDate>
  </Trip>
</LogbookReport>
```

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```

<DeparturePort>HNL</DeparturePort>
<DeparturePortName>Honolulu, HI</DeparturePortName>
<ReturnDate>2004-01-11-10:00</ReturnDate>
<ReturnPort>HNL</ReturnPort>
<ReturnPortName>Honolulu, HI</ReturnPortName>
<VesselName>THE-VESSEL-NAME</VesselName>
<VesselIdentifier>THE-VESSEL-ID</VesselIdentifier>
<PIRPermitNumber>THE-PIR-PERMIT-NUMBER</PIRPermitNumber>
<Set>
  <LogsheetSourceKey>VES1234-20080108-1</LogsheetSourceKey>
  <SignDate>2004-01-11-10:00</SignDate>
  <CML>12345</CML>
  <Target>T</Target>
  <BaitCode>10</BaitCode>
  <BaitName>SAURY (SCOMBERESOCIDAE) (SANMA)</BaitName>
  <MainlineLength>34</MainlineLength>
  <HooksSet>2150</HooksSet>
  <HooksLost>0</HooksLost>
  <HooksFloatMin>28</HooksFloatMin>
  <HooksFloatMax>28</HooksFloatMax>
  <Lightsticks>0</Lightsticks>
  <IsSideSet>N</IsSideSet>
  <BeginSetDatetime>2004-01-10T07:20:00-10:00</BeginSetDatetime>
  <BeginSetLatDeg>20</BeginSetLatDeg>
  <BeginSetLatMin>29</BeginSetLatMin>
  <BeginSetLatDir>N</BeginSetLatDir>
  <BeginSetLonDeg>155</BeginSetLonDeg>
  <BeginSetLonMin>7</BeginSetLonMin>
  <BeginSetLonDir>W</BeginSetLonDir>
  <EndSetDatetime>2004-01-10T12:20:00-10:00</EndSetDatetime>
  <EndSetLatDeg>20</EndSetLatDeg>
  <EndSetLatMin>39</EndSetLatMin>
  <EndSetLatDir>N</EndSetLatDir>
  <EndSetLonDeg>155</EndSetLonDeg>
  <EndSetLonMin>39</EndSetLonMin>
  <EndSetLonDir>W</EndSetLonDir>
  <BeginHaulDatetime>2004-01-10T15:40:00-10:00</BeginHaulDatetime>
  <BeginHaulLatDeg>20</BeginHaulLatDeg>
  <BeginHaulLatMin>55</BeginHaulLatMin>
  <BeginHaulLatDir>N</BeginHaulLatDir>
  <BeginHaulLonDeg>155</BeginHaulLonDeg>
  <BeginHaulLonMin>49</BeginHaulLonMin>
  <BeginHaulLonDir>W</BeginHaulLonDir>
  <EndHaulDatetime>2004-01-10T20:40:00-10:00</EndHaulDatetime>
  <EndHaulLatDeg>20</EndHaulLatDeg>
  <EndHaulLatMin>11</EndHaulLatMin>
  <EndHaulLatDir>N</EndHaulLatDir>
  <EndHaulLonDeg>155</EndHaulLonDeg>
  <EndHaulLonMin>5</EndHaulLonMin>
  <EndHaulLonDir>W</EndHaulLonDir>
  <Catch>
    <SpeciesCode>2</SpeciesCode>
    <SpeciesName>STRIPED MARLIN</SpeciesName>
    <NumKept>5</NumKept>
    <NumReleased>0</NumReleased>
  </Catch>
  <Catch>
    <SpeciesCode>5</SpeciesCode>
    <SpeciesName>SPEARFISH</SpeciesName>
    <NumKept>2</NumKept>
    <NumReleased>0</NumReleased>
  </Catch>

```

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```
<Catch>
  <SpeciesCode>7</SpeciesCode>
  <SpeciesName>BLUE SHARK</SpeciesName>
  <NumKept>0</NumKept>
  <NumReleased>1</NumReleased>
</Catch>
<Catch>
  <SpeciesCode>11</SpeciesCode>
  <SpeciesName>MAHIMAHI</SpeciesName>
  <NumKept>4</NumKept>
  <NumReleased>0</NumReleased>
</Catch>
<Catch>
  <SpeciesCode>16</SpeciesCode>
  <SpeciesName>BIGEYE TUNA</SpeciesName>
  <NumKept>10</NumKept>
  <NumReleased>0</NumReleased>
</Catch>
<Catch>
  <SpeciesCode>21</SpeciesCode>
  <SpeciesName>PROMFRET</SpeciesName>
  <NumKept>5</NumKept>
  <NumReleased>0</NumReleased>
</Catch>
<PSI>
  <SpeciesCode>55</SpeciesCode>
  <SpeciesName>ALBATROSS</SpeciesName>
  <Injured>1</Injured>
  <Uninjured>0</Uninjured>
  <Dead>0</Dead>
</PSI>
</Set>
</Trip>
<ELogInfo>
  <CertNum>12345</CertNum>
  <License>THE-LICENSE</License>
  <Vendor>THE-VENDOR-NAME</Vendor>
  <ProductName>THE-PRODUCT-NAME</ProductName>
  <ProductVersion>THE-PRODUCT-VERSION</ProductVersion>
</ELogInfo>
</LogbookReport>
```

G. XML Schema

A schema has been prepared in the W3C XML Schema language corresponding to the structure defined in Section C. This schema is composed of two files. The main schema document is

<URL-TBD>/PIR-LB-1.1-1.0.xsd

This schema makes use of data types defined in the file

<URL-TBD>/PIR-LB-1.1-1.0-types.xsd

Electronic Logbook applications and tools should produce XML documents which validate under this schema.

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Appendix 4 - Pelagic Longline Test Specification**

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Appendix 4 - Pelagic Longline Test Specification**

Appendix 4. Pelagic Longline Test Specification

Current test specifications are available upon request from PIFSC/FMSD and include the following areas:

2. PIR-LB-1.1-1 Test Specifications

H. Test Plans

8) Terms of Certification Check

Verify that the vendor has satisfied all the absolute requirements (must-have) in the Terms of Certification.

9) Data entry test

The purpose of this test is to demonstrate that the E-Log-App allows the operator to store and edit all data elements and to enter test data into the system. This test uses the Completeness test data for data entry.

10) Electronic Logbook Read-only Viewer

The purpose of this test is to demonstrate that the E-Log-App viewer allows the user to view all electronic logbook data elements. This test uses the results of the data entry test.

11) Electronic Logbook (Output) Test

The purpose of this set of tests is to demonstrate that the E-Log-App allows the user to create Electronic Logbook files with the agreed upon content and in the agreed upon format.

Electronic Logbook Document or File

Completeness test – The purpose of this test is to demonstrate that the E-Log-App can correctly report each of the required data elements in the correct report section and in the correct format.

Data element format test – The purpose of this test is to demonstrate that the E-Log-App correctly and accurately formats non-null and null values for dates, times, geographic locations. It also tests the creation of the Logbook Header Page ID.

Scenario test – The purpose of this test is to demonstrate the E-Log-App can correctly report a range of different fishing activity scenarios. Examples: zero catch set, PS interactions

12) Supported Media Test

The purpose of this set of tests is to demonstrate that the E-Log-App can correctly submit data on approved media.

13) Data entry Efficiency and Accuracy Test

The purpose of this set of tests is to demonstrate that the E-Log-App produces a positive user experience that ensures accurate data entry and submission.

14) PIR Standard Codes Update Test/Check

The purpose of this set of tests is to demonstrate that the E-Log-App can accommodate any required changes to standard codes.

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Logbook Reporting in Pacific Island Fisheries
Appendix 4 - Pelagic Longline Test Specification**

I. Test Data

1) Completeness test data

Summary: One value for each data element

2) Data elements format test data

Summary: Non-null and null values for each date, time, and geographic location data element.

3) Scenario test data, 3 trips

Summary: Typical trip data with some atypical situations (zero catch sets, PS interactions).

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Appendix 5 – Electronic Signatures**

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Appendix 5. Electronic Signatures

Current policies, guidelines, procedural directives, and business plans for electronic signatures are available upon request from PIFSC/FMSD. Vendors should be familiar with NOAA Fisheries [e-signatures policy \(32-110\)](#) and [procedural directive \(32-110-01\)](#).