



REQUEST FOR PROPOSAL

FISS Field Data Collection Application

Replacement for EaSea – Entry At-Sea Data Collection Application

International Pacific Halibut Commission (IPHC)

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Executive Summary

The International Pacific Halibut Commission (IPHC) is seeking a vendor to design, build, and deliver a next-generation at-sea data collection application to replace EaSea — the Windows tablet application supporting the Fishery-Independent Setline Survey (FISS) since 2016. EaSea is dependable but built on the aging .NET Framework 4.8.1 stack, with a device-dependent architecture and multi-hop sync pipeline that constrain scalability and long-term maintainability.

The replacement system must be offline-first and ruggedized for use aboard chartered longline vessels operating from Northern California through the Aleutians and the Bering Sea. It must run on a rugged Windows tablet that also hosts Sea-Bird Scientific software (SeatermV2 / Fathom) for the SBE 19plus V2 SeaCAT instrument, so a single device per vessel covers both functions.

Delivery is structured in two phases:

- Phase 1 (required): Full replication and replacement of EaSea workflows, validations, data structures, and reporting — covering trip setup, set and haul data, halibut biological sampling, 20-hook counts, bycatch, protected species and depredation, seabird observations, and end-of-day reporting — with equivalent or improved performance and clear conflict resolution and duplicate prevention.
- Phase 2+ (optional, modular): Extended capabilities including barcode/QR specimen tracking, electronic measurement device integration, an HQ data portal, automated reporting, and exploratory AI-assisted data collection.

Beyond the application, IPHC requires a modern development stack, full source code delivery with IPHC IP ownership, version control collaboration with IPHC's in-house developer, documented acceptance criteria, security and compliance controls, and training and handover. Vendors should respond with their relevant expertise, recommended technical stack, timeline and budget, and proposed approach to phased implementation.

2. Introduction

2.1 Purpose

This RFP describes the functional, technical, and operational requirements for developing the next-generation entry at-sea data collection application (name TBD) to fully replace EaSea and support FISS data collection.

2.2 Background

The IPHC conducts the FISS annually to collect biological, catch, environmental, and incidental interaction data across the Pacific halibut range, from Northern California through Alaska's Aleutian Archipelago and the Bering Sea. Operations are conducted aboard chartered vessels by Setline Survey Specialists (Field) [SSS(F)] using standardized longline gear at predetermined station locations.



Since 2016, data have been recorded using EaSea on rugged Windows tablets. EaSea is a Visual Basic .NET / .NET Framework 4.8.1 WinForms application (DevComponents DotNetBar 14.1 UI) using Entity Framework 6.1.1 against a local SQL Server LocalDB instance. When connectivity is available it syncs to Azure SQL via the deprecated Microsoft Synchronization Framework 2.2, and stores blobs using the WindowsAzure.Storage 2.x SDK — both long superseded by current Azure equivalents. Data then imports into IPHC's on-premise database via scheduled tasks. Although dependable, EaSea's core dependencies are all deprecated or in maintenance mode and are incompatible with current development environments. Its device-dependent architecture and multi-hop sync pipeline limit scalability and maintainability.

Field operations occur in remote maritime environments with limited or no connectivity. The application must therefore prioritize: reliable offline functionality, high performance and low latency, data integrity and redundancy, and ease of use in challenging field conditions.

3. Project Scope

The selected vendor shall design, develop, test, and deliver a complete application including:

- Application architecture and design
- Touch-optimized UI for rugged tablets
- Paper-to-digital data entry workflow fallback (see §9.4)
- Offline-first data collection and storage
- Data synchronization and transmission mechanisms
- Local and cloud backup implementations
- Validation and data quality controls
- Technical documentation and user training materials

Optional (priced separately):

- Long-term support and maintenance
- API or data-layer integration with Setline and other IPHC systems

Provided by IPHC upon contract award (subject to NDA):

- Full IPHC database schema, including schemas used by EaSea and Setline (see §9.4)
- Access to IPHC's in-house developer for data semantics, business rules, and downstream workflows
- Representative sample data to support design and testing

3.1 Implementation Phasing

Phase 1 – Core Field Data Collection System (Required)



The initial delivery must fully replicate and replace EaSea, including all workflows, validations, data structures, and reporting required for FISS operations in a fully offline environment. The Phase 1 system must:

- Operate independently of internet connectivity
- Support all data collection workflows described in Section 6
- Maintain compatibility with existing downstream systems
- Provide equivalent or improved performance, stability, and usability
- Provide a mechanism for conflict resolution and duplicate prevention

Phase 2+ – Extended Capabilities (Optional / Modular)

Additional capabilities (Sections 5.1 and 10) are considered future enhancements. These are not required for initial deployment but must be supported through a modular architecture allowing incremental development without disrupting core functionality. Vendors are encouraged to propose phased implementation strategies and provide separate cost estimates for optional modules.

4. High-Level Requirements

- Operate fully offline in remote maritime environments
- Provide fast, low-latency data entry suitable for real-time sampling
- Support touchscreen, soft keyboard, and external keyboard input
- Support easy configuration of sampling rates by regulatory area on a year-to-year basis
- Be intuitive for users with varied technical experience
- Provide multiple layers of data backup, storage, and recovery
- Support configurable defaults, validation controls, and automated workflows
- Fully replicate all existing EaSea functionality as a minimum baseline

4.1 Hardware Requirements

The application must run on a single rugged Windows tablet per vessel that also hosts Sea-Bird Scientific software (SeatermV2 and Fathom) for the SBE 19plus V2 SeaCAT. Vendors shall:

- Confirm compatibility with then-current Sea-Bird published requirements for Fathom and SeatermV2
- Not impose hardware requirements exceeding those tools except where justified by application performance needs
- Document any application-specific hardware requirements above the Sea-Bird baseline

General hardware expectations: rugged Windows tablet suitable for marine/deck environments; 64-bit Windows OS; minimum 1920×1080 display with auto-scaling; touchscreen with gloved operation



support; at least one USB port; Wi-Fi for in-port synchronization; sufficient internal storage for a full season of trip data plus redundant local backups. IPHC has not pre-selected a specific tablet model.

4.2 User Authentication

- Device authentication via Microsoft Entra ID (Microsoft 365)
- Application based on Windows login
- Role-based access control for creation, editing, and finalization of field records

4.3 Configurable Defaults & Validation Controls

Req ID	Requirement
FR-201	Configurable default values for commonly used fields (species, hook counts, sampling options).
FR-202	User-defined validation parameters (ranges, thresholds, required fields).
FR-203	Real-time inline validation warnings.
FR-204	Ability to revise entries without data corruption or instability.

4.4 Trip Setup & Operational Workflow

- Trip Planning Wizard to preload charter region(s), personnel, delivery/offload ports, and survey stations
- Automatic preparation of trip defaults for rapid deployment

4.5 Data Redundancy & Protection

- Multiple redundant local storage paths (device, SD card, encrypted storage)
- Export to removable media (USB)
- Cloud synchronization when connectivity is available
- Automatic data integrity checks and corruption detection
- Protection from data loss during editing or power interruption

4.6 Data Transmission & Synchronization

- Support Wi-Fi, wired, and removable media transmission
- Resume interrupted uploads
- Maintain audit logs of all submissions



5. Technical Objectives

- Cross-platform, modular architecture for long-term maintainability
- Integration readiness with future IPHC systems
- Eliminate dependencies on deprecated or end-of-life components
- Support extensible modules for future sampling workflows
- Enable future enhancements (analytics, GPS integration, sensor inputs)

5.1 Future Integration & Extensibility (Phase 2+)

The following capabilities are not required for Phase 1 but must be architecturally supported. The system must use a modular design with clearly defined data interfaces, separating core data models from input methods (manual, device, AI), and supporting plug-in or service-based extensions.

Capability	Description
Barcode / QR scanning	Integration with USB/Bluetooth or camera-based scanners for specimen tracking (otoliths, tissue samples, fin clips). Scanned IDs must link to fish records and validate against expected formats.
Electronic measurement devices	Support for digital scales and electronic measuring boards. Measurements must associate with the active fish record, support both streaming and user-triggered capture, and fall back gracefully to manual entry.
External sensors & peripherals	Standardized interfaces (serial, Bluetooth, API) for GPS devices, environmental sensors, and future vessel instrumentation. Integrations must be enable/disable-able without impacting core workflows.
AI-assisted data collection	Architecture must support future image/video attachment to records, storage of AI-derived measurements alongside manual data, and APIs for automated species ID, length estimation, and hook counts.

6. Data Collection & Workflow Requirements

The application must support the complete FISS workflow from trip setup through set deployment, haul operations, biological sampling, protected species reporting, seabird observations, and end-of-day reporting. All workflows must provide high-speed, low-tap entry, operate entirely offline, and remain compatible with Setline (see §9.4). Full workflow detail, validation rules, and business logic will be provided to the selected vendor at project kickoff. Representative data structures are shown in Appendix B.

6.1 Trip Setup

- Create/manage vessel trip records (vessel code, trip number, dates, ports)



- Configure planned fishing days and assigned stations
- Record bait and ice quantities, type, and vendor information
- Assign daily activity codes (fishing, in port, running, etc.)
- Validations: trip dates within FISS season; start precedes end; station plan matches regional assignments

6.2 Set Data Collection

Captures GPS coordinates, set time, skates deployed, hook counts, bait/gear type, SeaCAT position/depth, BAD usage, buoy IDs, swell height, wind direction, missing bait counts, and protected species monitoring status. Key validations include unique buoy IDs, hook count range checks, BAD performance warning (<40 m), and SeaCAT deployment offset warning (>0.5 nm).

6.3 Haul Data Collection

Captures haul start/end times, skates hauled (including partials), sea state (Beaufort), hauling direction, parted gear locations, retained bycatch (species, condition, weight), and set effectiveness flag with reason codes. Key validations include soak time warnings (<5 or >24 hours), sea state warning (>Beaufort 7), and mutually exclusive deck/shack sampler IDs.

6.4 Halibut Biological Sampling

Core per-fish data: skate number, length (cm), weight (kg), sex, maturity, prior hook injury, condition/comment codes, and notes. Specimen collection covers otoliths (standard and archive series), tag releases and recoveries, and maturity/fecundity samples. The workflow enforces randomized otolith selection by region/year-specific rates, prompts for upcoming samples, prevents tagging of otolith-selected fish, and prevents maturity sampling on males. Duplicate or improbable entries require confirmation; invalid combinations are flagged. The region/year-specific otolith sampling rates, maturity rate tables, and fecundity study rates are calibrated fisheries science that must be migrated faithfully from the existing system — not reimplemented from scratch. IPHC will provide the current rate tables at project kickoff. The new application must support annual updates to these rates without code changes.

6.5 20-Hook Count & Whole Haul

Captures species code, count per skate (0–99), and estimated average weight. Warns if total observations per skate $\neq$ 20.

6.6 Bycatch Sampling

Captures species code, length, weight, sex, maturity (species-specific categories), and notes. Must be expandable for new partner projects and species without code changes.



6.7 Protected Species & Depredation

Captures encounter type, species, count, condition, closest approach, visibility, time, gear interaction details, and depredation indicators. Auto-flags Short-tailed Albatross sightings. Enforces required fields for depredation events. Architecture must support future photo/video attachment.

6.8 Seabird Observations

Captured after each set: species, count inside/outside 50 m, visibility, time, offal discharge status, and composition difference flag.

6.9 End-of-Day Reporting

The application must automatically generate and transmit the following reports to the vessel email system:

- Daily Summary (green logbook equivalent)
- Trip Summary (weekly call-in and hail-in)
- Sampling Summary (otolith/specimen tracking)
- State Area Summary
- Discard Summary
- Sale Information Report (catch summary data including trip plan, daily catch totals, and trip catch totals, transmitted to the IPHC office to populate downstream tools such as the FISS Tracker and fish sales spreadsheet — see Appendix B, §B.5–B.8)

7. Data Backup & Transmission

7.1 Redundant Storage

- Local device storage
- Internal SD card
- USB thumb drive backups (odd/even drive rotation)
- Cloud/OneDrive when available

7.2 Automatic Save Triggers

- On tab change; on new record or deletion; on application entry/exit
- Time-based autosave (~30 seconds)
- Manual save



7.3 Transmission Methods

- Low-bandwidth email call-in reports
- USB transfer
- Cloud upload when connectivity is available

8. Development Stack & IP Ownership

8.1 Modern Development Stack

The application shall be implemented using a modern, well-supported programming language and framework with strong community or vendor support, long-term sustainability, modular architecture support, cross-platform deployment capability, and offline-first application patterns. Reliance on deprecated, end-of-life, or niche technologies is not acceptable.

8.2 Source Materials Delivery

Upon project completion, the vendor shall deliver all materials required for ongoing development and maintenance, including: full application source code; build scripts and pipeline definitions; configuration and environment files; dependency manifests; technical architecture documentation; API documentation; and deployment instructions and runbooks. All materials must be in human-readable, production-ready form.

8.3 Intellectual Property

IPHC shall retain full ownership of all delivered source code, documentation, build and deployment artifacts, UI/UX assets, and any derivative works. IPHC holds unrestricted rights to modify, extend, maintain, distribute, or redeploy the application. No third-party licensing restrictions may impede IPHC's ability to use or maintain the delivered system.

9. Version Control, Collaboration & Vendor Information

9.1 Repository Requirements

All source code, configuration, and documentation shall be maintained in the official IPHC GitHub repository. The vendor shall use Git-based workflows compatible with IPHC coding standards, maintain clear commit histories, and perform development in feature branches with pull requests for review.

9.2 Code Quality & Documentation



Documentation must include: developer setup instructions; high-level architecture overview; module/function-level documentation; data model and schema definitions; and validation and business rule definitions. All migrated business rules — including otolith sampling rate logic, validation constraints, and report calculations — must have automated unit test coverage. Tests must be included in the delivered codebase and integrated into the build pipeline.

9.3 Collaboration with IPHC Staff

The vendor shall participate in periodic code reviews, provide access to development environments and build pipelines, support knowledge transfer throughout the project, and ensure the codebase is structured for joint contribution and long-term enhancement.

9.4 Setline Integration

Setline is IPHC's existing in-house data entry and editing application — a legacy VB6 application connecting to the IPHC database via ODBC, operable only on-premise. The new application must remain compatible with data structures that Setline reads and writes. Vendors are not expected to modify Setline; any Setline-side changes will be handled by IPHC's in-house developer.

Upon contract award and NDA execution, IPHC will provide: the relevant IPHC database schema (tables, columns, data types, key constraints); representative sample data; and the Setline VB6 source code for reference. Vendors should rely primarily on the database schema and direct consultation with IPHC's developer for data semantics. The existing data model and entity relationships encode Setline compatibility and represent the ground-truth specification for the new system's data layer. Vendors must treat the schema as authoritative and replicate it faithfully. The validation logic embedded in the existing application — including BAD performance warnings, soak time bounds, buoy ID uniqueness, otolith/tag mutual exclusion, and maturity/sex constraints — must be fully extracted, documented, and unit-tested in the new implementation. IPHC will provide direct access to these rules at kickoff.

Vendors shall describe in their proposal:

- Proposed approach for ensuring data compatibility with the IPHC database and Setline workflows
- How conflict resolution and duplicate prevention will be handled between field-collected and Setline-edited data
- Assumptions about network access and any IPHC-side infrastructure dependencies

10. Vendor Response Requirements

10.1 Vendor Expertise

Provide a concise summary of qualifications including: relevant past projects involving field data collection or mission-critical systems; experience with offline-first applications or scientific/fisheries data tools; and examples of successful delivery and collaboration with scientific or government organizations.



10.2 Technical Stack Recommendation

Specify: preferred programming languages and frameworks; compatibility with Microsoft Visual Studio (strongly preferred); and assessment of suitability for long-term maintenance, extensibility, and vendor/community support.

10.3 Timeline and Budget

Provide: estimated development timeline from kickoff to delivery; cost range for full Phase 1 implementation; and optionally, a cost breakdown by phase or functional module.

11. Deliverables, Acceptance & Security

11.1 Vendor Deliverables

- Project plan with milestones and risk register
- Design artifacts (architecture, data model, UI mockups)
- Working software meeting all requirements
- Test plan and test evidence (unit, integration, UAT)
- User documentation and training materials
- Deployment guide and operations runbook
- Maintenance and support proposal (SLAs, response times)

11.2 Acceptance Criteria

- All functional requirements satisfied and demonstrated
- Successful on-device testing in offline mode
- All validations and report outputs verified
- Data compatibility with Setline confirmed (see §9.4)
- No critical or high-severity defects outstanding
- Otolith sampling rate logic verified against region/year reference tables for all active regulatory areas; maturity and fecundity sampling triggers confirmed correct
- End-of-day reports generated and transmitted successfully to vessel email system for all report types (Daily Summary, Trip Summary, Sampling Summary, State Area Summary, Discard Summary)

11.3 Security & Compliance

- Authentication via Microsoft Entra ID when online; cached credentials when offline



- Backend API credentials stored securely
- Source code and application scanned for vulnerabilities; all medium/high findings mitigated prior to release
- Encryption at rest for sensitive data and during transmission; minimum AES-256 for data at rest; no legacy cipher suites (3DES, RC4, SHA1) permitted. Backend API credentials must use Microsoft Entra managed identity or equivalent secrets management — not plaintext or weakly protected configuration files
- Least-privilege role configuration
- Audit logging for submissions and key events

11.4 Training & Handover

- Train-the-trainer session for SSS(F) and HQ staff
- Admin guide and configuration handbook
- Knowledge transfer to IPHC technical staff

12. Extended Platform Capabilities (Phase 2+)

IPHC envisions the application evolving into a broader operational platform. These capabilities are not required for Phase 1 but must be supported through the modular architecture defined in Sections 5 and 8.1. Vendors should provide separate cost estimates for any Phase 2+ modules they propose.

Module	Description
HQ Tool Integration	Fish sales tracking, revenue calculations, survey tracking tools, and catch rate summaries. Goals: single source of truth, elimination of duplicate entry, shared datasets.
Remote Data Entry & HQ Interaction	Remote HQ data entry and editing, secure portal access, real-time or near real-time interaction, and potential camera/microphone-assisted workflows.
Real-Time Data Portal	HQ visibility into vessel operations, trip progress and catch summaries, synced when connectivity is available.
Automated Reporting	Automatic hail-in/report generation and transmission when connected, with configurable triggers and transmission logging.
Flexible Sampling	Support for off-station sampling, optional fields, and validation overrides with logging.

13. Evaluation Criteria



IPHC is willing to work with any qualified contractor or development team capable of collaborating during normal IPHC business hours. Proposals will be evaluated on:

- Demonstrated experience delivering similar projects
- Relevant client references and past performance
- Responsiveness and timeliness of communication throughout the proposal process
- Overall value and cost-effectiveness of the proposed solution

14. Support & Service Level Agreement

IPHC retains full ownership of all custom source code, documentation, configuration, data models, workflows, business logic, UI/UX designs, and other deliverables developed under this contract.

Use of commercially available software, open-source components, third-party libraries, frameworks, APIs, and external services is permitted, provided all dependencies are fully documented and disclosed, and do not impose restrictions preventing IPHC from maintaining, modifying, extending, or redeploying the application.



Appendix A – Glossary

Term	Definition
ADFG	Alaska Department of Fish and Game – regulatory body for state waters off Alaska.
BAD	Bird Avoidance Device; streamer lines used to deter birds during setting; must be effective to 40 m.
Beaufort Scale	Scale of wind/sea intensity used to quantify sea state (1–12+).
DFO	Department of Fisheries and Oceans – Canada.
ESA	Endangered Species Act – U.S. protections and reporting requirements.
Federal Waters	U.S. waters from 3 to 200 nautical miles offshore (EEZ).
FISS	Fishery-Independent Setline Survey conducted by IPHC.
IPHC	International Pacific Halibut Commission.
MMPA	Marine Mammal Protection Act (U.S.).
NMFS	National Marine Fisheries Service – U.S. federal regulator.
O32/U32	Over/Under 32 inches; legal size classification for halibut.
Otolith	Calcified ear structure used for age estimation; sampled in FISS.
SeaCAT	Oceanographic instrument deployed near sets to collect environmental data.
Set	A discrete length of setline gear (several skates) deployed on a station.
Setline	IPHC data entry and editing application; also refers to the longline gear itself.
Skate	Unit of longline gear (~1,800 ft).
SSS(F)	Setline Survey Specialists (Field).
Station	Predetermined fishing location with a unique identifier.



Appendix B – Representative Data Structures

These structures represent the key data collected by the application. They are provided for scoping and compatibility purposes; the full IPHC database schema will be provided to the selected vendor upon contract award. Compatibility with Setline is required — see §9.4. The schemas in §B.5–B.8 (sale information / catch summary data) are conceptual examples intended to communicate data requirements and downstream reporting needs, not prescriptive database designs. Vendors are expected to evaluate the application architecture and propose the most appropriate storage and data model structure based on their implementation approach. The information represented must be capturable, reportable, and transmissible to downstream IPHC processes regardless of how it is stored internally.

B.1 Set Record

Field	Type/Format	Notes
SetStartLat / SetStartLon	Degrees minutes seconds	Start coordinates
SetEndLat / SetEndLon	Degrees minutes seconds	End coordinates
SetTime	HHMM	Military time
SkatesDeployed	Integer	Total skates
HookCountPerSkate	Integer	Per-skate count
BaitType	Code (2-char)	Per set
GearType	Code (1-char)	Fixed/Snap
SeaCATLat/Long	Degrees minutes seconds	Device position
SeaCATDepth	Fathoms	Deployment depth
BADPort/STBD	Code	TL/NU
BADPerformance	Meters	Effective distance
BuoyIDPort/STBD	Alphanumeric	Uniqueness enforced
SwellHeight	Meters (##.##)	
WindDirection	Code (1-char)	
MissingBaitPerSkate	Integer	
PSMonitored	Y/N	Protected species monitoring

B.2 Haul Record

Field	Type/Format	Notes
HaulStartTime	HHMM	



Field	Type/Format	Notes
HaulEndTime	HHMM	
SkatesHauled	Decimal (##.##)	Partial skates allowed
SeaState	Integer (##)	Beaufort (1–12+)
HaulDirection	Enum	Forward/Backward
PartedGear	Text	Skate and hook positions
RetainedBycatch	Structured	Species, condition, weight
Effective	Y/N	
IneffectiveReason	Code	Required if not effective

B.3 Halibut Record

Field	Type/Format	Notes
Skate	Integer (##)	
Length	Integer (### cm)	
Weight	Decimal (###.## kg)	
Sex	Enum (M/F/U)	
Maturity	Enum (1–4/U)	
PHI	Enum (1–4/U)	Prior Hook Injury
ConditionCode	Enum	L,N,C,V,X,E,S,T,D
Notes	Text	
OtolithNumber	Integer (0001–9999)	0001–4999 standard; 5000–9999 archive
OtolithStatus	Enum	lost/broken/crystallized/missing/other
TagNumber	Text	
TagType	Text	
ReleaseCondition	Enum (E/M/P/D)	If tagged and released
VialNumber	Text	
GonadWeight	Decimal	

B.4 Trip Plan



Field	Type/Format	Notes
TripID	Integer	System-generated primary key
Year	Integer (YYYY)	
VesselCode	Text (3 chars)	e.g. PEN
TripNumber	Integer	
ReportDate	Date	Date report generated
TripStartDate	Date	Departure date
ProjectedEndDate	Date	Expected completion
CurrentStatus	Enum	Fishing/Offload/Running Day/Weather Day/Repair Day/In Port
BaitLoadedLbs	Decimal (#####)	Initial bait loaded
IceLoadedTons	Decimal (##.##)	Initial ice loaded
IceSupplier	Text	Source of ice
InitialProjectedHailLbs	Decimal (#####)	First projection
RevisedProjectedHailLbs	Decimal (#####)	Latest projection
DeliveryPort	Text	Intended delivery location
DeliveryDate	Date	
DeliveryTime	HHMM	
IceNeededTons	Decimal (##.##)	Additional ice requested
BaitNeededLbs	Decimal (#####)	Additional bait requested
Comments	Text	Sampler comments
LastUpdated	DateTime	Last update from vessel
ActiveTrip	Y/N	Current trip indicator

§B.5–B.8: Sale Information / Catch Summary Data. The following schemas represent the catch summary information currently output in the daily email report to the IPHC office, where it is used to populate the FISS Tracker and fish sales spreadsheet. In the existing system, much of this information is derived through calculations at report time rather than stored in dedicated database tables. The schemas below illustrate the data that must be captured and made available to downstream processes; they are not intended to dictate internal storage design. Vendors should propose the most appropriate implementation approach.

B.5 Trip Catch on Board



Field	Type/Format	Notes
TripID	Integer	Links to TripPlan
Cmnme	Text	Species name
Category	Text	<10, 10/20, Round, etc.
WeightLbs	Decimal (#####)	Current onboard amount
LastUpdated	DateTime	Update timestamp

B.6 Trip Daily Catch

Field	Type/Format	Notes
TripPlanID	Integer	Links to TripPlan
CatchDate	Date	Fishing day
SpeciesCode	Text	
Category	Text	
WeightLbs	Decimal (#####)	Daily total

B.7 Trip Station Catch

Field	Type/Format	Notes
TripPlanID	Integer	Links to TripPlan
CatchDate	Date	
StationNumber	Integer	e.g. 3016, 3047
SetlineGrid	Text	SG
SpeciesCode	Text	
Category	Text	
WeightLbs	Decimal (#####)	Catch at station

B.8 Trip Projected Activity

Field	Type/Format	Notes
TripPlanID	Integer	Links to TripPlan
ActivityDate	Date	



Field	Type/Format	Notes
ActivityType	Enum	Fishing/Offload/Running Day/Weather Day/Repair Day/In Port Day
PlannedStations	Text	Comma-separated 4-digit integers
SetNumber	Integer	Sequential order of sets for vessel in survey year

Addendum 1 — Clarifying Questions & Answers

FISS Field Data Collection Application (IPHC-2026-MR-010)

Original RFP dated 24 June 2026 | Addendum dated 08 July 2026

The following questions were received from prospective vendors during the proposal period. Answers apply equally to all vendors. This addendum supplements, and in one instance corrects, the original RFP dated 24 June 2026. All other RFP terms remain unchanged.

Correction to Section 11.2 (Acceptance Criteria)

Section 11.2 listed five end-of-day report types under acceptance criteria, omitting one that appears in Section 6.9. The corrected list is:

End-of-day reports generated and transmitted successfully to vessel email system for all report types (Daily Summary, Trip Summary, Sampling Summary, State Area Summary, Discard Summary, **Sale Information Report**).

Questions & Answers

Q1. Does HQ edit or finalize trip/field records in Setline while a trip is still active in the field, or only after the trip closes? Does the existing schema include a record status field (e.g., draft/submitted/finalized)?

A: Under the current workflow, Headquarters (HQ) does **not** edit or verify trip records while a trip is still active in the field. Data remain on the field tablet until the trip is complete and the data package has been transmitted to HQ. Verification and editing within Setline occur only after the trip has been completed and submitted.

The existing database schema distinguishes between unverified and verified records. Once HQ staff complete the review process, a verification date is recorded in the database to indicate that the record has been verified. This verification status is used as a quality-control milestone rather than a permanent lock; verified records can still be edited later if corrections are required.

Although concurrent editing between the vessel and HQ is not part of the current workflow, we see this as a desirable capability for a future version of the system. The ability for HQ staff to review or edit data while a trip is still underway, using appropriate synchronization and conflict-resolution mechanisms would be considered a future enhancement rather than a core requirement for the initial implementation

Q2. What format are end-of-day reports transmitted in today (plain text, PDF, CSV, etc.), and is entry into the FISS Tracker and fish sales spreadsheet currently manual or automated?

A: Currently, end-of-day reports are transmitted as plain text (.txt) files that are generated by the field software and sent to HQ via email when connectivity is available.

The downstream processing of these reports is largely automated. The FISS Tracker application and the fish sales spreadsheet ingest these exported files to generate catch summaries, revenue estimates, trip progress, and other operational reporting. While the current text format supports this workflow, it requires custom parsing and is less flexible than more structured formats.

For the next-generation application, IPHC would encourage the use of a structured export format such as CSV (or another similarly structured, machine-readable format agreed upon during development). This would simplify integration with existing reporting tools, improve reliability, and reduce the amount of custom parsing required. Longer term, the preferred approach would be to eliminate intermediate report files entirely by allowing these downstream tools to consume the data directly through a shared database or API when connectivity permits, while retaining offline operation and export capabilities for remote field conditions.

Q3. Has IPHC pre-selected a specific rugged tablet model?

A: No. As stated in Section 4.1, IPHC has not pre-selected a specific tablet model for the new application. For context, the current EaSea deployment runs on Panasonic FZG2-1 and Dell Latitude 7220 Rugged Extreme tablets; IPHC is also currently field-testing a Surface Pro for Business (11th Gen, Intel). Vendors should confirm compatibility with then-current Sea-Bird published requirements and document any application-specific hardware needs above that baseline; hardware recommendations from vendors are welcome.

Q4. Is historical data migration from EaSea / the existing on-premise database in scope for Phase 1, or is the new application only responsible for data collected going forward?

A: Yes. Historical data migration from EaSea is in scope for Phase 1. We plan on using the same database tables in the new application as we do for EaSea, so the transition to the new application can be smoother.

Q5. Is SeaCAT position/depth data entered manually in Phase 1, with automated instrument integration deferred to Phase 2+?

A: Yes, for Phase 1: SeaCAT position and depth are entered manually as part of Set Data Collection (Section 6.2). Note that Sea-Bird's SeaCAT software (SeatermV2/Fathom) is proprietary, and IPHC has not confirmed whether automated data integration with it is technically feasible. SeaCAT compatibility is included in this RFP to avoid requiring two separate tablets in the field, not to signal that automated integration is planned or committed. Vendors should not assume automated SeaCAT integration will be pursued in any phase; at most it should be treated as a possible future exploration under Section 5.1, contingent on Sea-Bird's software supporting it.

Q6. Is there a target budget or not-to-exceed figure for the Phase 1 work?

A: IPHC has not established a fixed budget or not-to-exceed figure for Phase 1. Vendors should propose an appropriately scoped solution meeting the RFP requirements; cost and value will be considered as part of the evaluation described in Section 13.

Q7. Is 13 July a first-review checkpoint only, or does IPHC expect to award directly from that initial review?

A: As stated in Section 13, this RFP is open until filled. Proposals received by 12 July at 23:59 PST will be included in the initial review on 13 July 2026, but IPHC may continue accepting and evaluating proposals after that date. The initial review date is not a guaranteed award date.

Q8. Will the database schema, EaSea screenshots, or current otolith/maturity/fecundity rate tables be shared under NDA during the proposal stage?

A: No. Consistent with Section 3, the full database schema, representative sample data, and current rate tables will be provided only to the selected vendor after contract award and execution of an NDA. These materials will not be shared with prospective vendors during the proposal stage.

Q9. Does IPHC expect a specific technology stack (e.g., .NET/C#), or is any stack that runs natively on the rugged tablet acceptable?

A: Any modern, well-supported technology stack is acceptable, provided it satisfies Section 8.1 (no deprecated or end-of-life dependencies) and runs natively on the rugged tablet alongside Sea-Bird's software. Visual Studio compatibility (Section 10.2) is a stated preference, not a requirement to use a specific language or framework.

Q10. How many vessels/tablets are in scope, and roughly how much data does one vessel generate per season?

A: The number of chartered vessels (and corresponding tablets) typically ranges from 6 to 20 per season and varies year to year based on funding approved by the Commissioners. Vendors should design a scalable, offline-first architecture rather than assuming a fixed vessel count.

Typical survey effort per vessel is approximately:

- Trips per season: 2–12
- Sets per season: 40–250
- Stations sampled per season: Generally equivalent to the number of sets (one set per station under standard operations)
- Sampling period: Approximately May through September

The amount of biological data collected varies considerably depending on catch rates. While set-level data are relatively small, fish-level records make up the majority of the dataset. Depending on region and catch rates, a vessel may record several thousand to tens of thousands of individual fish records over a season, in addition to associated bycatch, seabird, protected species, and operational records.

Although the application should be designed to accommodate these volumes efficiently, the overall data size is modest by modern standards (current Azure SQL database size is ~90MB). Performance, reliability, and offline responsiveness are considerably more important than storage capacity.

Q11. Will IPHC's in-house developer be available during the build, and will a non-production database be available for development and testing?

A: Yes, to both. IPHC's in-house developer will be available throughout the build for data-semantics and business-rule questions, consistent with Sections 3 and 9.3. IPHC also maintains non-production databases in both Azure and on-premise for development purposes, which will be made available to the selected vendor for development and testing.

Q12. The end-of-day reports are emailed to "the vessel email system." What does that use technically (e.g., satellite gateway, specific mail service), and who provides credentials?

A: IPHC does not have detailed technical specifications for the vessel email systems to provide. Vessels are chartered and may vary in their satellite/email setup, so the application should send reports using standard email transmission methods rather than assuming a specific gateway, provider, or credential scheme. Vendors should propose an approach that works universally across whatever vessel email configuration is in use, rather than one tailored to a single known system.

Q13. For yearly otolith/maturity/fecundity rate updates, will these be administered through an in-app screen or a configuration file, and who will maintain them?

A: Rate updates will be managed via configuration files maintained by IPHC's in-house developer, not a dedicated in-app administration screen. This satisfies the Section 6.4 requirement that rate updates be supportable without code changes.

Q14. Will IPHC provide a sample tablet and test data for offline on-device acceptance testing during the proposal stage?

A: No sample tablet will be provided. Regarding test data: the non-production databases referenced in Q11 (Azure and on-premise) contain copies of production data rather than synthetic sample data, which is part of why NDA execution is required before access is granted, per Section 3. This data will be made available to the selected vendor after contract award, not during the proposal stage.

Q15. Should support and maintenance pricing be included in this proposal, or will IPHC request that separately?

A: Yes — include support and maintenance pricing as part of this proposal, formatted as described in the RFP: a separately priced item (Section 3) presented as part of the maintenance and support proposal, including SLAs and response times, required under Section 11.1.

Q16. Is there a required proposal format or page limit, and will there be an opportunity to present or demo prior work as part of the evaluation?

A: No formal page limit, but vendors should provide sufficient detail to evaluate qualifications, approach, and cost without unnecessary length (approx. 10–20 pages excluding appendices is a reasonable guideline). IPHC may invite one or more vendors to present or demo relevant prior work following the initial review.

Questions regarding this addendum should be directed to secretariat@iphc.int.