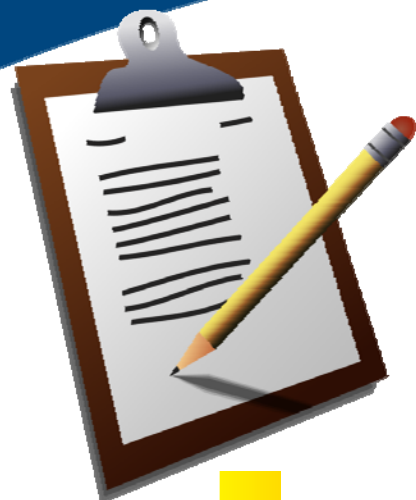


Tab B, No. 7



**NOAA
FISHERIES**

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Southeast For-Hire Integrated Electronic Reporting



Gulf of Mexico
Fishery Management Council
January 30, 2018

SEFHIER Structure

Implementation Team:

- 53 individuals representing Council staff (SAFMC, GMFMC, MAFMC), Gulf States MFC, ACCSP, HMS, SEFSC, NEFSC, GARFO, SERO, NOAA GC, HQ, MRIP, Strategic Planner

Subgroups:

1. Data Housing
2. Minimum Standards
3. Survey Design
4. Compliance Enforcement
5. Outreach & Education
6. Program Management and Budget

Implementation Team Meetings

- Information gathering, group discussion
- Presentations:
 1. National Overview of ER
 2. iSnapper
 3. LGL TX Charterboat
 4. CLS America
 5. ACCSP eTrips
 6. SAFMC Pilot
 7. SEFSC Shrimp eLB
 8. GARFO eVTR
 9. HMS eDealer
 10. HMS recReporting
 11. For-Hire Electronic Logbook Pilot Study in the Gulf of Mexico
 12. SCDNR Charterboat Logbook Reporting Program

Data Housing (2 meetings)

1. Access
2. Minimum Standards / API
3. Adaptability
4. Integration with other data streams
5. Staffing needs
6. Funding needs

SELECTED:



Minimum Standards (1 meeting)

- Focused on minimum standards for data transmission from user to agency.
- SEFHIER will generate:
 1. White Paper on Location Devices (drafted)
 2. Codified Regulations (drafted)
 3. Technical Guidance Document (for SERO site)
 4. Type Approval List for hardware
- These will borrow heavily from work already accomplished in other regions.

Survey Design (4 meetings)

Goals:

- Provide data that are more robust and timely than those delivered by the MRIP Charter Survey
- Integrate with existing programs (SRHS, HMS, MRIP, etc.)

General categories:

1. Elements
2. Validation
3. Integration
4. Calibration

Survey Design: Elements

- Consistency with fields collected by other surveys
- Quick to complete
- Critical elements only
- Dynamic elements every trip, more static elements via occasional random selection

Survey Design: Validation

- Self-reported data must be validated to be useful
- Dockside validation to verify catch and effort must be independent of vessel trip reports
- Dockside biological sampling to get length and weight data, age data (otoliths), and reproductive parameters (gonads)
- At-sea validation sampling would be useful for validating discards but is burdensome and expensive
- Compliance monitoring to estimate non-reporting rates

Survey Design: Integration

- Consistency between regions and across programs to reduce angler burden and streamline data collection
- Avoid double-counting and duplication of effort
- Coordinate with existing surveys including LA and TX, if possible
- Trip Management System is critical design element

Survey Design: Calibration

- SEFHIER will need to run concurrently with existing surveys for a minimum of three years to allow calibration to existing surveys
- Failure to calibrate may reduce SEFHIER utility for stock assessments
- Calibration will require duplication of effort and additional expense for captains and samplers
- Partnerships with States will be critical design element

Compliance/Enforcement (2 meetings)

- Timeliness – automated
- Non-reporting – automated
 - Link Hail-Out + eLogbook + GPS track
 - Follow-up on movements not associated with Hail-Out as “Other” or eLogbook report
- Penalties (Delayed Permit Renewal, Summary Settlements)
- Rewards (List of Compliant Vessels?)

Compliance/Enforcement: Lessons Learned

- Staff intensive
 - Partner with states
 - Include all relevant federal offices (SFD, SEFSC, GC, OLE, Permits)
 - Automate whenever possible
- Outreach:
 - Early, often, and clear explanation of requirements and consequences
 - Training is needed for program implementation and compliance
 - Phase-in may help implementation and compliance
 - Good, ongoing communication among staff, captains, and vessels owners is critical
- Compliance protocols should be established from the start, including;
 - Permit holds & sanctions
 - Permit renewal is a somewhat ineffective compliance point because reports may not be submitted until the permit is renewed.
 - Coordinate with GC and OLE to determine chain of custody / law enforcement requirements, especially where 3rd party vendors involved

Outreach/Education (1 meeting)

- ~3000 new participants in logbook program
- Outreach critical
 - Permit owners
 - Program requirements, especially WHY?
 - Information sources
 - Applications
 - Personal use
 - Data and Resource Managers
 - Enforcement
 - Dockside Agents

Outreach/Education

1. Workshops
2. Webinars
3. Letters/Emails
4. Websites
5. Print Media
6. Social Media
7. Industry Organizations
8. Training Videos
9. Early Adopters
10. Dockside

A multi-pronged approach is necessary.

The best advocates for the program and the best trainers for participants are other fishermen.

Program Management/Budget

- Meetings will be scheduled after further progress is made in other subgroups.

Questions?

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Regulatory Context

- Gulf Council and South Atlantic Council have developed generic amendments to fishery management plans that would require electronic reporting of landings, effort, and economic data by federally permitted for-hire (charter and headboat) vessels.
- Gulf Amendment will require all for-hire vessels with federal permits for the Gulf to declare a fishing trip before leaving port and submit an electronic report for each trip prior to the vessel offloading fish. In addition, the amendment would require vessel operators to have National Marine Fisheries Service (NMFS) approved hardware/software with global positioning system (GPS) capabilities that, at a minimum, archives vessel position data to NMFS. The GPS portion of the hardware would be permanently affixed to the vessel and turned on, unless an exemption is provided.
 - Gulf Charter/Headboat for Reef Fish
 - Historical Captain Gulf Charter/Headboat for Reef Fish
 - Gulf Charter/Headboat for Coastal Migratory Pelagic Species
 - Historical Captain Gulf Coastal Migratory Pelagic limited-access permits.
- South Atlantic will require charter vessels with a federal permit for the South Atlantic to submit electronic catch and effort reports weekly on a trip level, but has no declaration or landing notification requirements. The amendment would also modify the electronic reporting timeline for headboats.
 - South Atlantic Charter/Headboat for Snapper-Grouper
 - South Atlantic Charter/Headboat for Coastal Migratory Pelagic Species
 - Atlantic Dolphin/Wahoo open-access permits

Data Housing (2 Subgroup Meetings)

| Question / Issue | SERO | SEFSC/ SRHS | ACCSP |
|---------------------------------------|---|---|---|
| What is the system currently housing? | Data in support of all SERO online systems is stored in the Neptune database. SERO online systems include: Catch Shares Online System (CSOS), PIMS, and PIMS Online. Data includes vessel, permit, shares, allocation, VMS and historical data. | Most production data is stored on the SECPR Oracle instance. It includes our coastal and pelagic logbook systems, dealer landings database, commercial dockside sampling system, wreckfish logbook system, NDA system, vessel operating units, and others. SRHS data is housed in SEFSC in Miami, the electronic logbooks are currently collected through the BlueFin platform (web portal and mobile app). | Standard Atlantic Fisheries Information System (SAFIS) - Dealer data collection for all Atlantic Federal dealer and most state dealers, ~50% of state VTRs, For-Hire planned 1/1/18. Data Warehouse - Comprehensive (of extant data) to 1950 for dealer and trip reports, universal permit data, automated confidentiality. |
| Preferred data format | Microsoft SQL Server | Oracle. Data can be loaded to the Oracle system in any basic format, csv, text, etc. eLog system data is exported to Oracle as JSON files. | Oracle 12c |
| Data storage format | Microsoft SQL Server | Oracle 12c | Oracle 12c |
| Staffing requirements | 3 FTE | 3 FTE. SRHS Beaufort staff dedicated to SRH eLog - 3 FTEs. Additionally, 11 port agents have limited SRH eLog responsibilities. Currently SRH eLog is managed by BlueFin - staffing would be dependent on their needs to manage the additional vessels. | No additional staff needed |
| Budget | Labor budget includes 3 FTE/year at a cost of \$500K annually. Hardware, software and support costs are roughly \$60K annually. | Approximately \$600 annually | No additional funding needed |

Data Housing

| Question / Issue | SERO | SEFSC/ SRHS | ACCSP |
|--|--|--|---|
| Available space for staff | SERO has physical space for 3 FTE and hardware. | Space is tight, would require coordination b/t Miami and Beaufort, could lease space | Yes |
| Server space availability | SERO data systems are scalable so data capacity is not a concern. | Yes, 96TB for VMS, 128 TB for land server | Yes, sufficient server space is available. ACCSP server capacity recently upgraded |
| Hardware / Systems / Data Storage Requirements | None. Existing systems are scalable. | None. Existing systems are scalable. | None. Existing systems are scalable. |
| How to transmit data to end Users | Federal end users can access the data directly. External users can access a subset of the data via web interfaces. Data can be provided via web services as requested. | Daily updates once trip data are submitted | Data products created as needed may include views and materialized views, many agencies direct connect using sql*net/odbc. Online query interface available to those who wish, data can be downloaded on demand through query interface. We services (API) are available or can be created as needed. |
| Ability to interact with MAFMC data system | Yes | No current interactions but possible | Yes |
| System ability with GOM, SATL data | Yes | Yes | Yes |

Data Housing

| Question / Issue | SERO | SEFSC/ SRHS | ACCSP |
|---|---|---|--|
| How would system work with location data | Position fix data is imported periodically from the primary VMS data source. The period is flexible and can be performed as often as required. | Direct access to Vtrack. Oracle can accept position data, the system would just need to be expanded- SRHS is currently looking to expand position data collection and have put in grants for the expansion as the GOM has required archived GPS points that we must begin to collect in the future. | Yes. Location data would be another data source, could be brought in as other data sources are. |
| How would system link location and catch data | Logbook data is not currently imported into Neptune. Logbook data would need to be imported and a linking table or key relationship established between the data. | Use unique (vessel indicator) to link to catch record | Use device serial number to link with vessel record and use pl/sql procedures to match records. |
| Flexibility to modify system | Highly flexible. | Highly flexible | Highly flexible |
| Time needed for system mods | Most changes can be implemented in less than one week. | Minor changes through approval process, major changes with discussion and approval process | Minor changes within days. New initiatives or substantive changes require coordination. |
| Built in QA/QC | A QA/QC environment already exists. Data is prefreshed from production as needed. | Yes | Yes. Built in data entry and referential integrity checks. Automated auditing processes in place, could be easily modified to perform additional checks. |
| How would permit database be linked? Is a direct link needed? | N/A | Yes | Direct data link in place to SEFSC copy of permits. Software does automatic imports when needed. |

Data Housing

| Question / Issue | SERO | SEFSC/ SRHS | ACCSP |
|--|--|--|---|
| How do others access data | Federal end users can access the data directly. External users can access a subset of the data via web interfaces. Data can be provided via web services as requested. | Data sharing agreement | Direct access to database with permission, other access possible, automatic downloads of appropriate data daily, online query interface designed to be easily customized. |
| Can fishermen view their own data? | This functionality could easily be developed in the existing CSOS application. | We are building this ability along with our modifications to support commercial electronic logbooks | Yes, with fishermen's ID which is given when a fishermen registers with SAFIS |
| Can fishermen revise their data? | | Yes, we are building this ability along with our modifications to support commercial electronic logbooks | Yes. eTrips tool revises entries, also on-line tool can be used. |
| For revised data, are old data stored and are old data propagated through the system | | New systems contain versioning software to track changes. | |
| Support services, including 24/7 support | support is provided via SERO personnel during working hours and a call service after hours. | Working hours only | 24/7 support desk |
| Can system accommodate HMS data? | Yes. Neptune already houses a subset of HMS data. | Yes | Yes. All HMS dealer data processed through SAFIS. A strong working relationship has been established with HMS. |
| System ability to integrate MATL, GULF, SATL data | Yes | Yes | Yes |



Data Housing

| Question / Issue | SERO | SEFSC/ SRHS | ACCSP |
|--|------|-------------|----------|
| Delays in delivering data to stock assessments | No | No | No |
| Access to VMS Data | Yes | Yes | Yes |
| Database Interruptions | Some | Some | Very Few |