NOAA FISHERIES

Greater Atlantic Regional Office

Fisheries Dependent Data Collections

Vessel and Dealer Reporting

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Terms of Reference

5. What are the major fishery-dependent data sources successes and how should they be supported?

6. What are the major fishery-dependent data limitations/weaknesses and how could they be resolved? Define potential improvements and priorities for recommended improvements.

Overview

- **Regulations**
- **History**
- **Vessel Trip Report Processing**
- **Dealer Report Processing**
- **Audits**
- **Data Reconciliation Process**
- **Strengths, Challenges, Proposed Solutions**

Regulations

Regulations

50 CFR 648.7 Regulations for dealer & vessel reporting

50 CFR 648.4 All NER-permitted vessels report every trip regardless of species targeted or location fished (e.g. HMS or Gulf of Mexico)

Regional Administrator has overall authority to modify most reporting requirements outside of council process

Some recent changes are driven by regional fishery management councils and embedded in specific fishery management plans.

Changing reporting requirements may require regulation changes and require council action

A Brief History

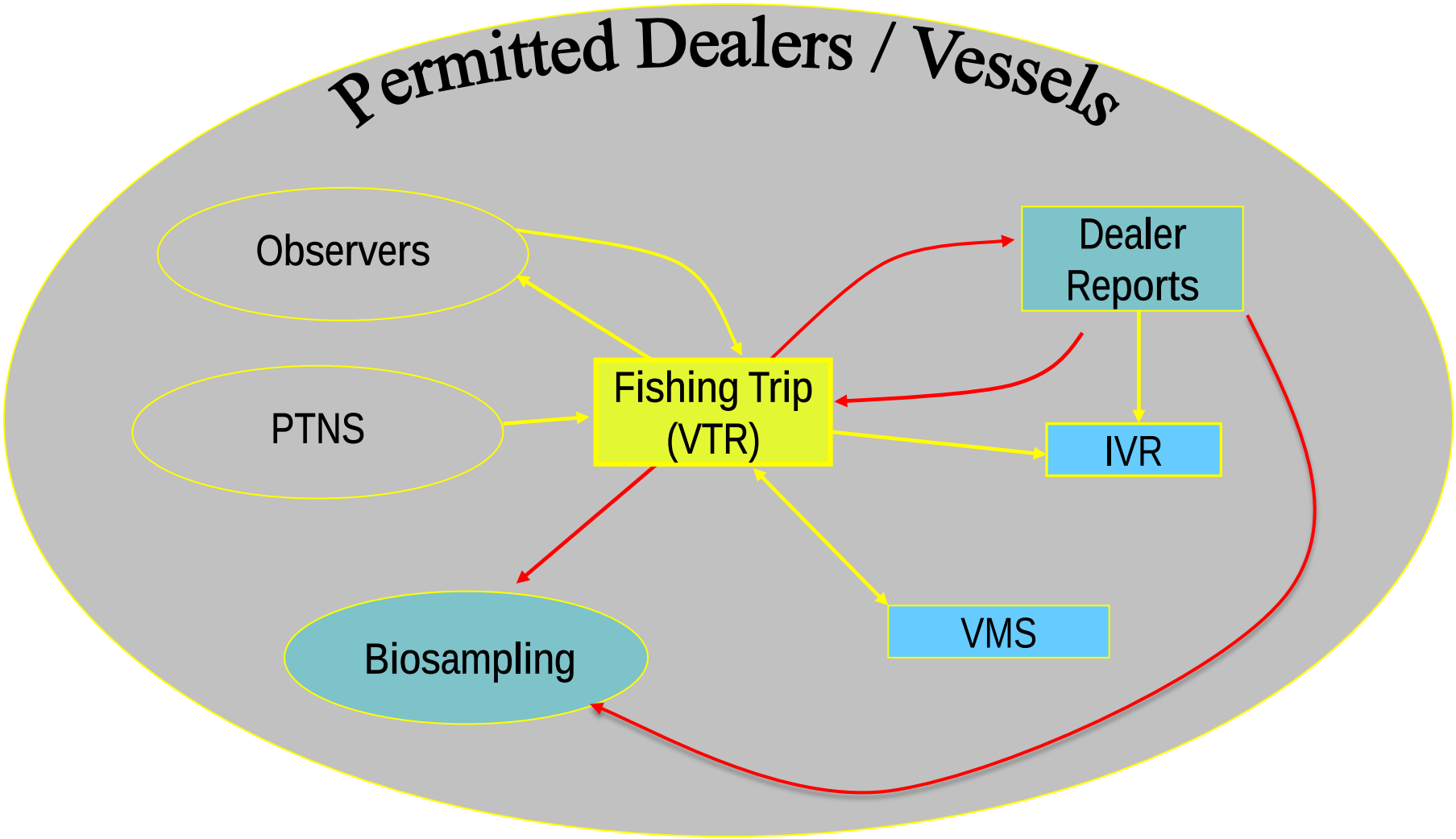
20+ Years of Fisheries Reporting

1992	Mandatory reporting for dealers with summer flounder permits
1994	Mandatory reporting for federally permitted vessels with summer flounder permits
1994-96	Expansion of mandatory reporting to all dealers & vessels with federal permits
1996-present	Expanded use of reports for monitoring quota limited fisheries
May 2004	Mandatory electronic reporting by federally permitted dealers for almost all species
2009-2010	Initiation of catch share program and calculation of “shares” using reports
Jan 2010	Mandatory electronic reporting by dealers with federal lobster only permit
May 2010	Initiation of multispecies catch share program & weekly reporting
2012	Annual catch limit (ACL) monitoring

- Used for monitoring quotas coast wide
- Vessels with only a federal lobster permit do not have to report to us – most have to report to states
- Weekly reporting later expanded to herring, mackerel, surfclam/ocean quahog IFQ

Shift in emphasis from broad data needs at the stock level to detailed trip by trip accuracy of landings, location, gear, etc. for use in assessments and in-season management. Need for financial accounting accuracy

Simplified Data Collection Model



Vessel Reporting

Vessel Trip Report Form

FISHING VESSEL TRIP REPORT

NOAA Form No. 88-30
OMB No. 0648-0212
Expires 1/31/2013

DID NOT FISH
Start Date ____/____/____ (MM DD YY)
End Date ____/____/____ (MM DD YY)

VTR Serial Number: 12345678

1. Vessel Name	2. USCG Documentation or State Registration	3. NMFS Vessel Permit Number

4. Date and Time Sailed	5. Date and Time Landed
Date: ____/____/____ (MM DD YY) Military Time: ____ : ____ (HH MM)	Date: ____/____/____ (MM DD YY) Military Time: ____ : ____ (HH MM)

6. Trip Type – check one box and record the number of crew including the captain. Party/Charter must also include the number of anglers.

☐ Commercial: # of Crew_____ ☐ RSA/EFP: # of Crew_____ ☐ Party: # of Crew _____ # of Anglers _____ ☐ Charter: # of Crew _____ # of Anglers _____

COMPLETE A NEW FORM FOR EACH DIFFERENT CHART AREA, GEAR TYPE OR MESH/RING SIZE USED ON A TRIP.

7. Gear Code	8. Mesh/Ring Size	9. Gear Quantity	10. Gear Size	11. Fishing Depth (Fathoms)	12. Number of Hauls

13. Chart Area	14. Latitude	15. Longitude	16. Tow / Soak Time
	____ : ____ (DEGREES MINUTES)	____ : ____ (DEGREES MINUTES)	____ : ____ (HOURS MINUTES)

17. Species Code	18. Kept	19. Discarded	20. Dealer Permit Number	21. Dealer Name	22. Date Sold MM/DD/YY	23. Offloading Port for each species City	State

I certify that the information provided on this form is true, complete and correct to the best of my knowledge, and made in good faith. Making a false statement on this form is punishable by law (18 U.S.C. 1001).

24. Operator Permit Number	25. Operator Name	26. Operator Signature	27. Date Signed MM/DD/YY

NMFS COPY

VTR - Reporting Requirements

Report each fishing trip – all federally permitted vessels (commercial, recreational for-hire vessels)

Report each sub-trip (change in gear, mesh or statistical area) separately

Complete report before the vessel docks (except dealer & date sold)

Report by Deadline

- Weekly by Tuesday midnight for Multispecies, Herring, Surf Clam\Ocean Quahog and Squid/Mackerel/Butterfish permit holders.
- Monthly by 15th of month for all other species

Lobster-only permit holders are exempt from VTR reporting.

Processing Flow - Paper

USPS delivers mail (generally around noon)

Vessel trip reports (VTRs) are prepped for scanning and reviewed for gross errors

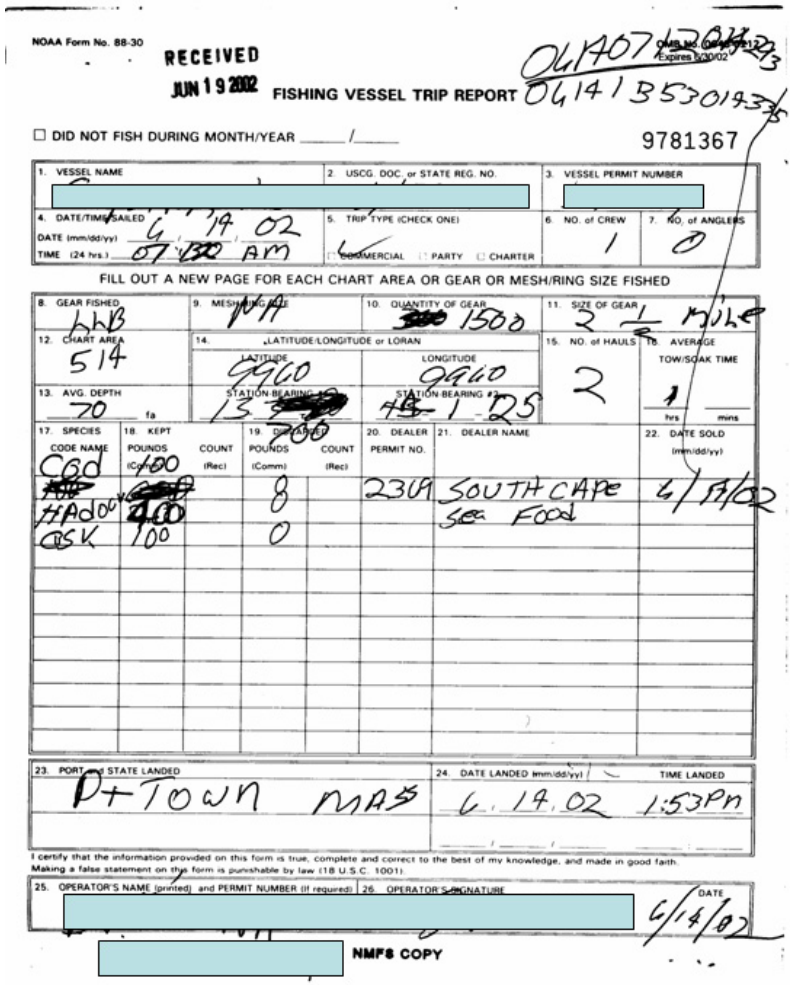
- VTRs that fail inspection are either corrected in-house or returned to the vessel owner for correction.

VTRs that pass review are scanned

Data entry is performed

Clean VTRs are generally available in our database the day we receive them.

Data Entry Challenges



NOAA Form No. 88-30

RECEIVED JUN 19 2002

FISHING VESSEL TRIP REPORT

☐ DID NOT FISH DURING MONTH/YEAR ____/____

9781367

1. VESSEL NAME	2. USCG. DOC. or STATE REG. NO.	3. VESSEL PERMIT NUMBER
[redacted]		[redacted]

4. DATE/TIME SAILED	5. TRIP TYPE (CHECK ONE)	6. NO. of CREW	7. NO. of ANGLERS
DATE (mm/dd/yy) 6 14 02	COMMERCIAL ☐ PARTY ☐ CHARTER	1	0
TIME (24 hrs.) 07 30 AM			

FILL OUT A NEW PAGE FOR EACH CHART AREA OR GEAR OR MESH/RING SIZE FISHED

8. GEAR FISHED	9. MESH/RING SIZE	10. QUANTITY OF GEAR	11. SIZE OF GEAR
LLB	N/A	1500	2 1/2 Mile

12. CHART AREA	14. LATITUDE/LONGITUDE or LORAN		15. NO. of HAULS	16. AVERAGE TOW/SOAK TIME
514	LATITUDE 9960	LONGITUDE 9960	2	1 hrs ___ mins
13. AVG. DEPTH 70 fa	STATION-BEARING 15	STATION-BEARING 14 1 25		

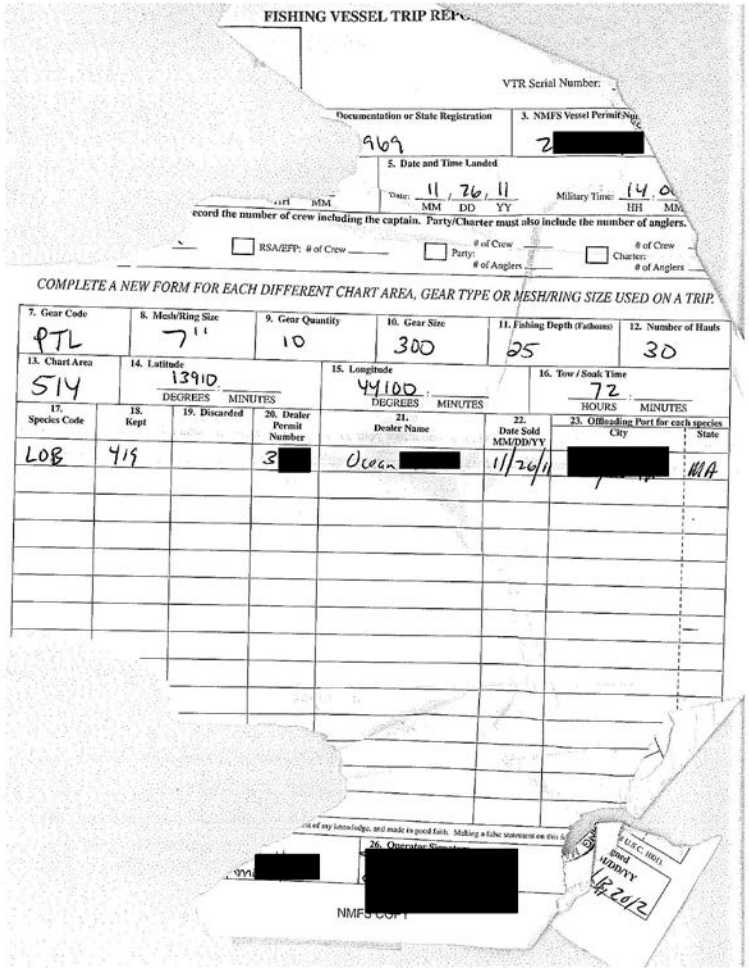
17. SPECIES CODE NAME	18. KEPT POUNDS (Comm)	COUNT (Rec)	19. DISCARDED POUNDS (Comm)	COUNT (Rec)	20. DEALER PERMIT NO.	21. DEALER NAME	22. DATE SOLD (mm/dd/yy)
Cod	400				2314	SOUTH CAPE SEA FOOD	6/14/02
HAD	400		8				
OSK	100		0				

23. PORT and STATE LANDED	24. DATE LANDED (mm/dd/yy)	TIME LANDED
P+TOWN MASS	6.14.02	1:53PM

I certify that the information provided on this form is true, complete and correct to the best of my knowledge, and made in good faith. Making a false statement on this form is punishable by law (18 U.S.C. 1001).

25. OPERATOR'S NAME (printed) and PERMIT NUMBER (if required)	26. OPERATOR'S SIGNATURE	DATE
[redacted]	[redacted]	6/14/02

NMFS COPY



FISHING VESSEL TRIP REP

VTR Serial Number:

Documentation or State Registration	3. NMFS Vessel Permit No.
969	2[redacted]

5. Date and Time Landed: Date: 11 / 26 / 11 (MM DD YY) Military Time: 14.0 (HH MM)

ecord the number of crew including the captain. Party/Charter must also include the number of anglers.

☐ RSA/EFP: # of Crew ____ ☐ Party: # of Crew ____ # of Anglers ____ ☐ Charter: # of Crew ____ # of Anglers ____

COMPLETE A NEW FORM FOR EACH DIFFERENT CHART AREA, GEAR TYPE OR MESH/RING SIZE USED ON A TRIP.

7. Gear Code	8. Mesh/Ring Size	9. Gear Quantity	10. Gear Size	11. Fishing Depth (Fathoms)	12. Number of Hauls
PTL	7"	10	300	25	30

13. Chart Area	14. Latitude (DEGREES MINUTES)	15. Longitude (DEGREES MINUTES)	16. Tow / Soak Time (HOURS MINUTES)
514	13910	44100	72

17. Species Code	18. Kept	19. Discarded	20. Dealer Permit Number	21. Dealer Name	22. Date Sold MM/DD/YY	23. Offloading Port for each species City	State
LOB	419		3[redacted]	Ocean [redacted]	11/26/11	[redacted]	MA

of my knowledge, and made in good faith. Making a false statement on this

[redacted] 26. Operator Si[redacted]

NMFS COPY

18 U.S.C. 1001. Dated MM/DD/YY 12/20/12

Processing Flow – Electronic Reporting FLDRS (Fisheries Logbook Data Recording System)

Vessel operator completes trip report

Vessel transmits encrypted file to NEFSC

File is decrypted, verified, loaded into raw data archive and Oracle schemas, then audited for errors which display in Web Portal

Trip data are extracted from database, rolled up to the sub-trip level (if necessary), converted to the NERO database structure

Converted data are loaded into the NERO database.

Processing Flow – FLDRS
Continued

During the load process (to NERO database) the data pass through the same audits as paper-based data

Vessel owners are notified of problems via a standard send-back process

Corrections are made by owner/operator Web Portal at NEFSC

Changes are pushed to NERO the following morning

Processing Flow: electronic Vessel Trip Reports (eVTR)

Four vendors have approved eVTR products. At present FLDRS is the only eVTR product in use.

- Focuses on multispecies vessels in one sector.
- No customers yet in other sectors or other fisheries.

A test and production portal for submission of trip reports has been developed.

Submissions will come to NERO and, assuming they pass the inline audits, will be loaded into the VTR database.

Submissions that fail the audits are rejected with error messages.

Current eVTR Strategy

- Improve quality & timeliness of vessel reporting
- Replace paper reports with equivalent electronic reports
- Generally focuses on multispecies fishery but planned expansion to other fisheries (such as IFQ clams, mid-Atlantic squid, butterfish)
- Bound by current regulations
- Move away from stove-pipe, single-purpose concept to integrated data system
- *More on this later*

Submitted VTR Counts - 2011 thru 2014

YEAR_ENTERED	ENTRY_SOURCE	VTR COUNT (Trip)	% OF YEARLY TOTAL
2011	FLDRS (eVTR)	290	0.1%
2011	VTR TEAM (paper)	164,726	66.7%
2011	FISH ON LINE (DNF)	81,895	33.2%
	2011 Total	246,911	
2012	FLDRS (eVTR)	2,239	0.8%
2012	VTR TEAM (paper)	151,391	56.5%
2012	FISH ON LINE (DNF)	114,328	42.7%
	2012 Total	267,958	
2013	FLDRS (eVTR)	4,264	1.8%
2013	VTR TEAM (paper)	126,856	54.1%
2013	FISH ON LINE (DNF)	103,376	44.1%
	2013 Total	234,496	
2014	FLDRS (eVTR)	5,359	2.5%
2014	VTR TEAM (paper)	121,180	56.1%
2014	FISH ON LINE (DNF)	89,617	41.5%
	2014 Total	216,156	

Dealer Reporting

Dealer Reporting Requirements

Submit reports electronically

Due midnight Tuesday for all previous week's purchases / receipts

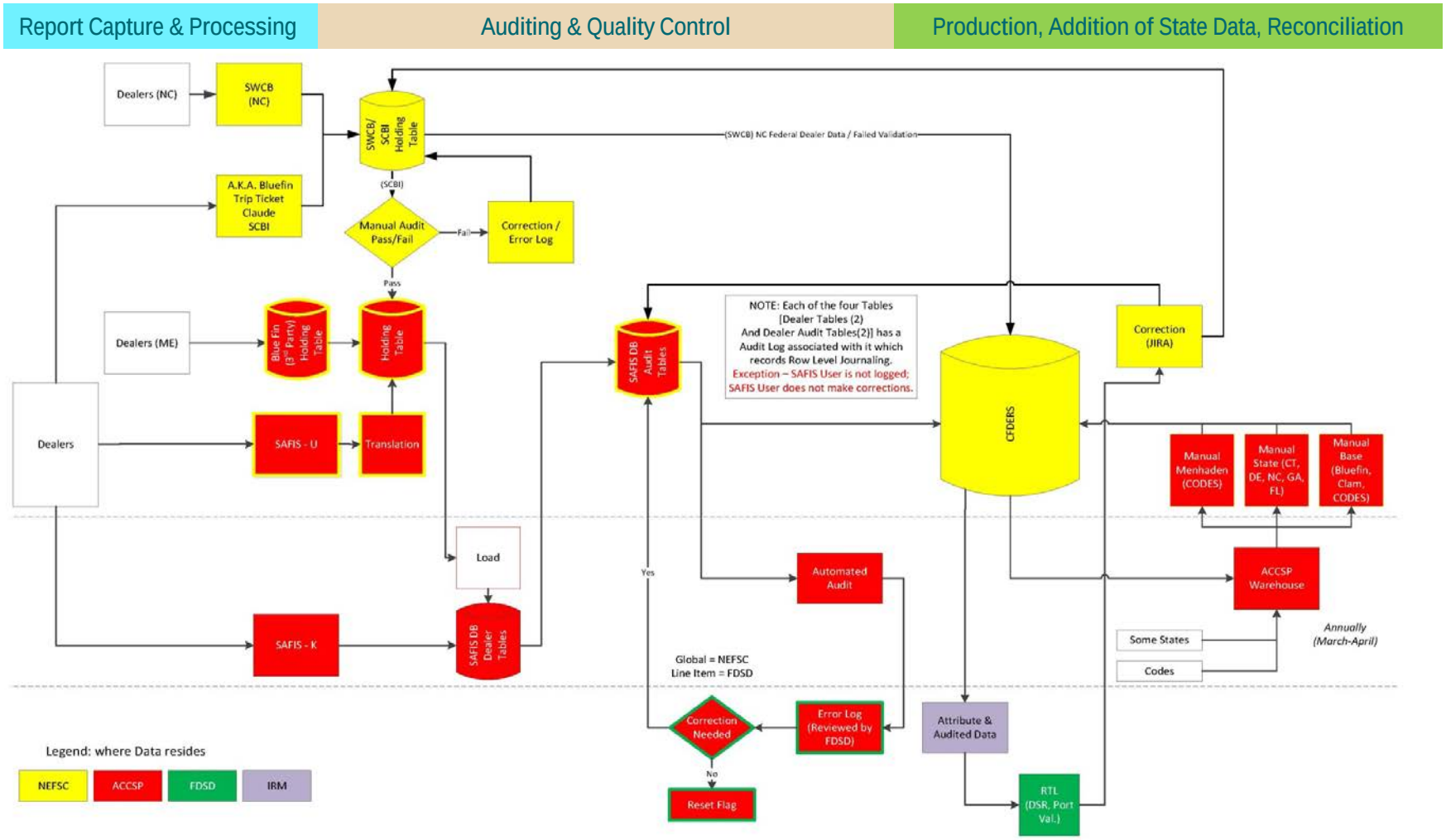
All species (with some exceptions)

Three federal reporting mechanisms (SAFIS – hosted by ACCSP)

- Web-based form
- File upload
- PC-based application

State agencies also have reporting requirements for state- permitted dealers

High Level Dealer Data Flow



Reported Landings by Collection Program (2012)

Partner	Pounds Landed	Percent of Total Landed Weight	Live Weight	Percent of Total Live Weight	Exvessel Value	Percent of Total Value
Maine	72,403,393	5.38%	81,421,273	9.11%	207,247,448	12.00%
New Hampshire	237,995	0.02%	237,995	0.04%	837,710	0.05%
Massachusetts	7,367,303	0.55%	16,138,768	0.98%	22,241,247	1.29%
Rhode Island	1,507,026	0.11%	6,165,126	0.23%	5,335,796	0.31%
Connecticut	8,202,924	0.61%	8,274,456	0.91%	20,689,680	1.20%
New York	1,228,785	0.09%	1,470,299	0.10%	2,309,296	0.13%
New Jersey	32,251	0.00%	40,330	0.01%	321,275	0.02%
Delaware	5,115,968	0.38%	5,115,473	0.33%	7,553,341	0.44%
Maryland	665,163	0.05%	665,163	0.00%	328	0.00%
Virginia	49,040,228	3.65%	57,254,141	3.21%	73,069,041	4.23%
NMFS - Northeast Region	1,186,730,443	88.25%	2,086,659,049	60.22%	1,370,520,326	79.34%
NMFS - Southeast Region	140,164	0.01%	160,109	0.02%	436,859	0.03%
Potomac River Fisheries Commission	11,337,184	0.84%	11,337,184	0.36%	8,105,391	0.47%
HMS	767,923	0.06%	960,039	0.39%	8,805,694	0.51%
Total	**1,344,776,750**		**2,275,899,405**		**$ 1,727,473,432**	

Audits / Quality Control

VTR Audits & Corrections

Audits take place throughout the processing cycle

Perform a full suite of audits weekly on the previous week's production

Audits cover

- Permit/Registration/Vessel Name
- Duplicate submissions
- Date sail, date land and date sold consistency
- Codes (such as gear, species) validity and range checks

A sample is visually reviewed

VTR Audits & Corrections

In 1Q 2013 we moved from a 'Web Audit Tool' to our standard audit platform

- RTL – see supplemental reading

It's a straightforward proposition to add audits to the base suite

We intend to add additional checks such as: Is catch consistent with gear reported?

Only so much can be done within a source stream with a single ticket approach

Dealer Audits & Corrections

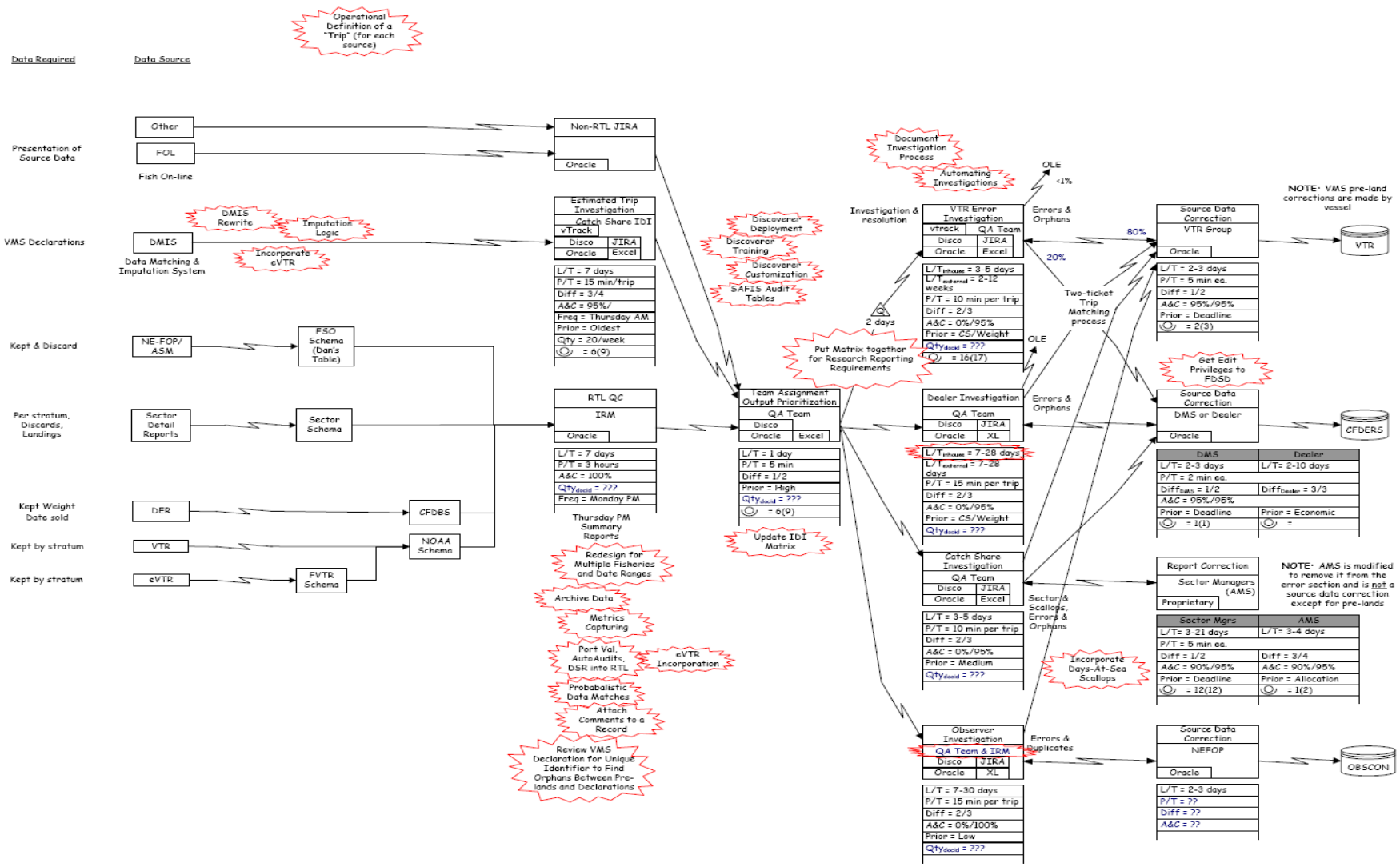
Staff resolve errors identified by custom and automated audits

- Identification of dealer entered, or missing, information errors
- Automated audits hosted by ACCSP identify duplicate entries and price errors.

NEFSC personnel perform audits prior to loading certain data sources

Data Reconciliation Process

Reconciliation Value Stream Map



Data Reconciliation Process

Quality assurance minimizes submission errors

Quality control identifies data errors after submission

- Match multiple data reporting streams and reconcile identified discrepancies
- Has written procedures and work instructions
- Issue-tracking tool deployed to track data correction

Measures and metrics developed to track progress of correction activities

Reports distributed to industry on reconciliation progress

- The Industry Data Investigation Team : six NMFS employees, nine contractors
- Focus on:
  - Discrepancies between data streams – vessel trip (VTR) with dealer reports
  - Working with dealers and vessel operators to correct errors

Data Reconciliation Process

Process defined to match various data reporting streams and to reconcile identified discrepancies

- Trip-matching conducted internally between dealer and vessel data within NMFS data streams
- Trip-matching conducted externally between sector and NMFS data streams for groundfish

Quality control applications developed to match trip information

- RTL (Raw Trip Level) application produces error and orphan reports
- Oracle Discoverer automates investigations
- Quota Monitoring report identifies trip source (handoff from APS)

Strengths, Challenges, & Proposed Solutions

Strengths

Reconciliation of catch share programs

- Approximately 50 million pounds were landed in the 2012 multispecies fishery and just 7000 pounds could not be reconciled

Zero backlog on VTR report processing

Increased compliance with reporting timelines

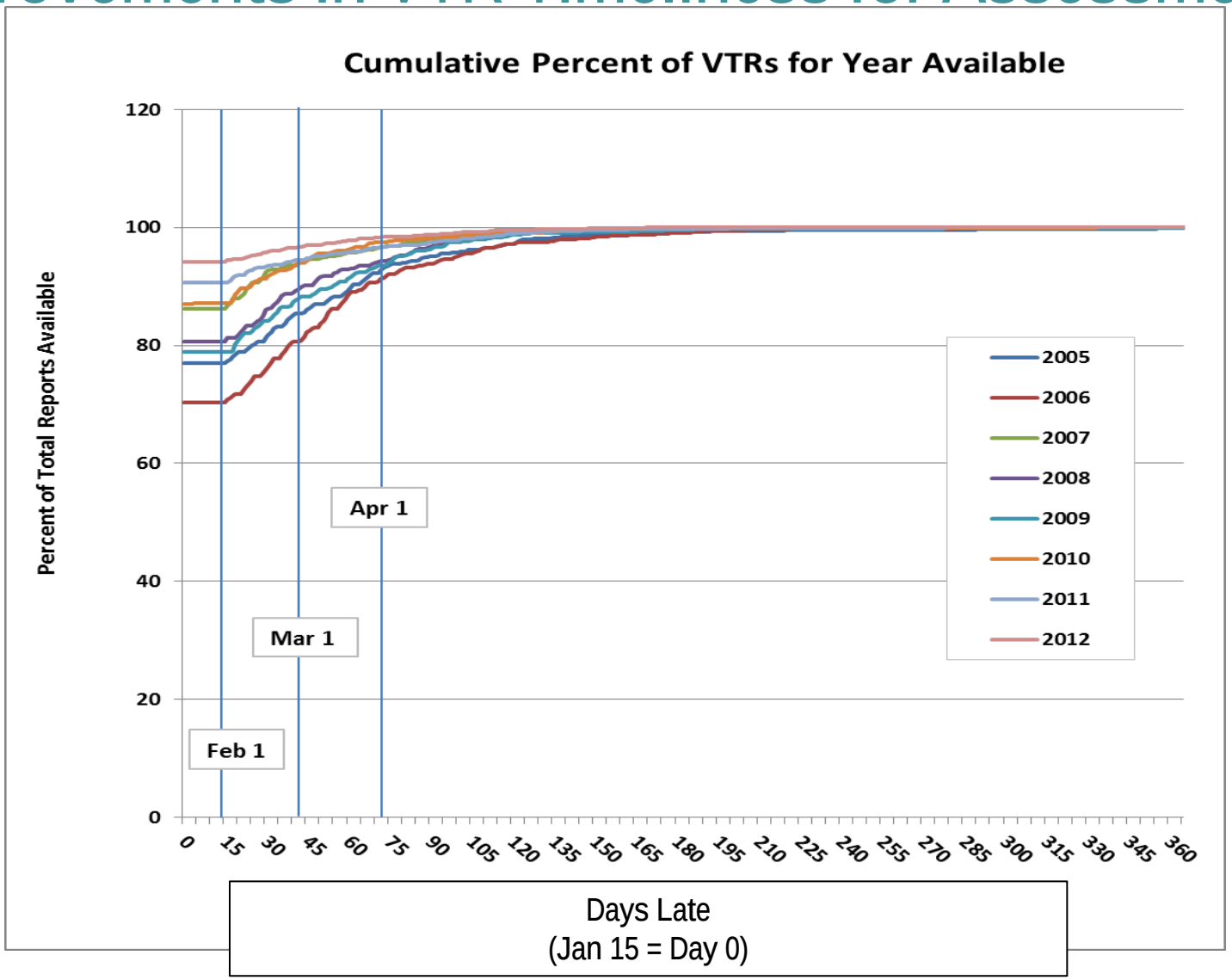
Increased communications with industry, sector managers, vessel operators and dealers

90% of landings data are received within three days of due date

No cost-recovery protests from industry concerning landings history

98% of all vessel reports utilized for stock assessments available by April 1

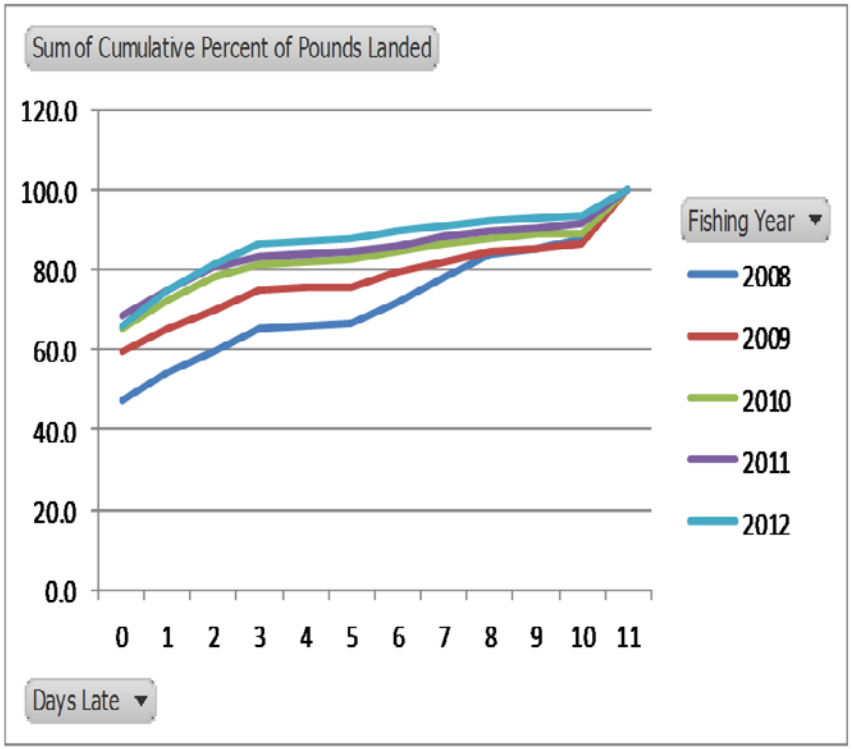
Improvements in VTR Timeliness for Assessments



Improvements in Timeliness of Dealer Reporting (All Species)

Sum of Cu Columr					
Row La	2008	2009	2010	2011	2012
0	47.3	59.7	65.0	68.2	65.7
1	54.5	65.3	72.6	75.0	75.0
2	59.3	70.0	77.8	80.8	81.1
3	65.1	74.7	81.1	83.4	86.7
4	65.9	75.3	81.9	84.1	87.3
5	66.5	75.7	82.3	84.5	87.6
6	71.5	79.3	84.4	86.0	89.5
7	77.8	81.7	86.5	88.2	91.2
8	83.6	84.4	87.7	89.4	92.0
9	85.4	85.4	88.7	90.4	92.8
10	87.5	86.4	89.3	91.3	93.6
11	100.0	100.0	100.0	100.0	100.0

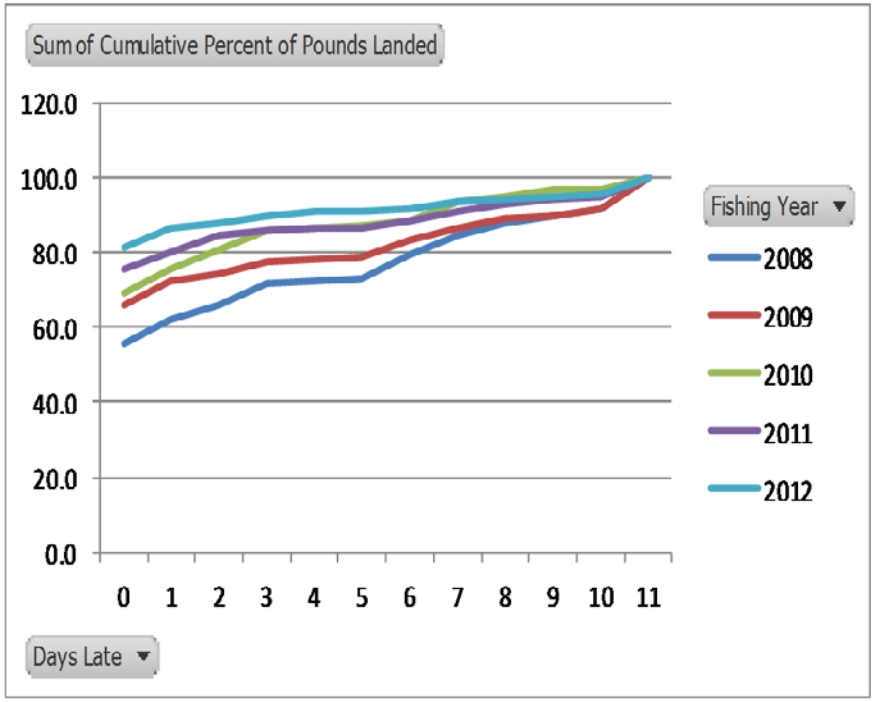
Cumulative percent of total pounds reported



Improvements in Timeliness of Dealer Reporting (Multispecies)

Sum of Cu Columr					
Row La	2008	2009	2010	2011	2012
0	55.6	65.9	69.2	75.7	81.5
1	62.1	72.0	75.2	80.0	86.1
2	65.9	74.5	80.8	84.3	87.6
3	71.8	77.3	85.8	86.0	90.0
4	72.4	78.2	86.4	86.5	90.9
5	73.2	78.6	86.8	86.6	90.9
6	79.2	83.4	88.6	88.4	91.6
7	84.7	86.4	93.3	91.2	93.4
8	88.0	89.3	95.0	92.5	94.4
9	89.5	89.6	96.4	93.9	94.6
10	91.8	91.4	96.7	94.7	95.3
11	100.0	100.0	100.0	100.0	100.0

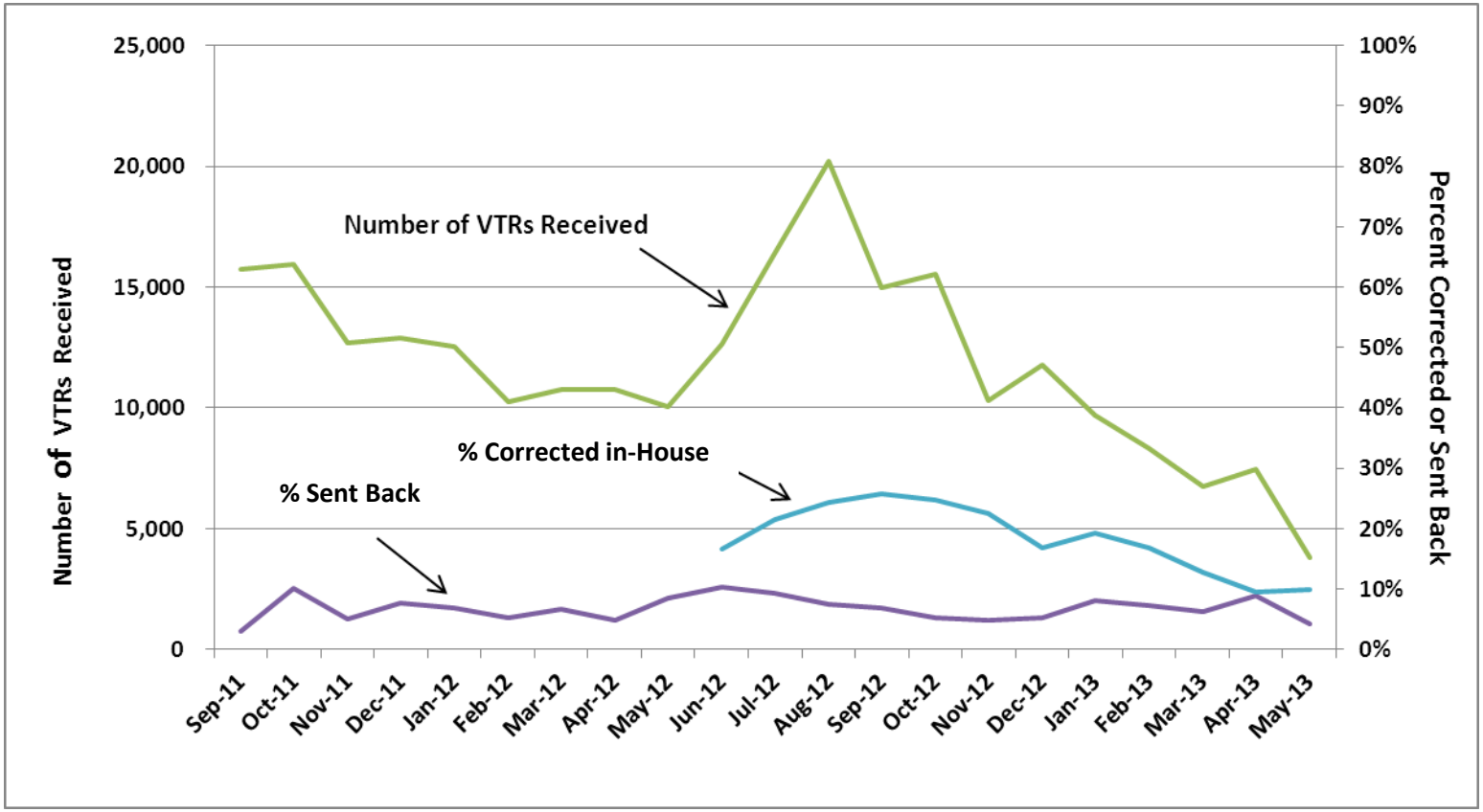
Cumulative percent of total multispecies pounds reported



Challenges

- Dealer reports
  - Timeliness for all species
  - No fishing locations
  - Match-up with VTR
  - Correct permit & VTR numbers
  - Single off loads from multiple trips
  - Reassignment of vessel offloads while in transit
- Vessel Trip Reports
  - Correct VTR Serial Number provided to dealer
  - Accurate location information
  - Timeliness
  - Trip/sub Trip level information
  - Spatial resolution
  - For-Hire Recreational Vessels
  - Incorrect reporting of some elements
  - Reporting of discarded catch

VTR Corrections & Sendbacks

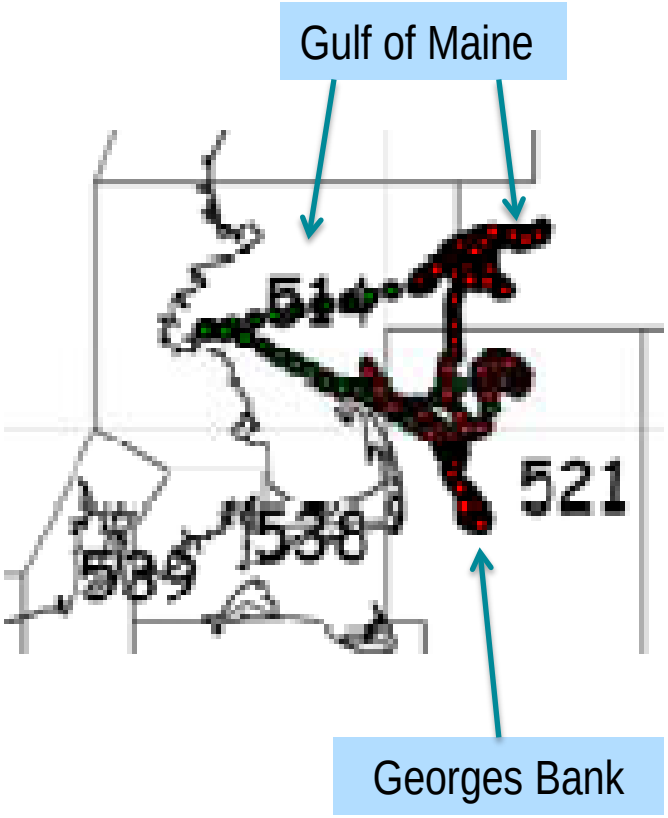


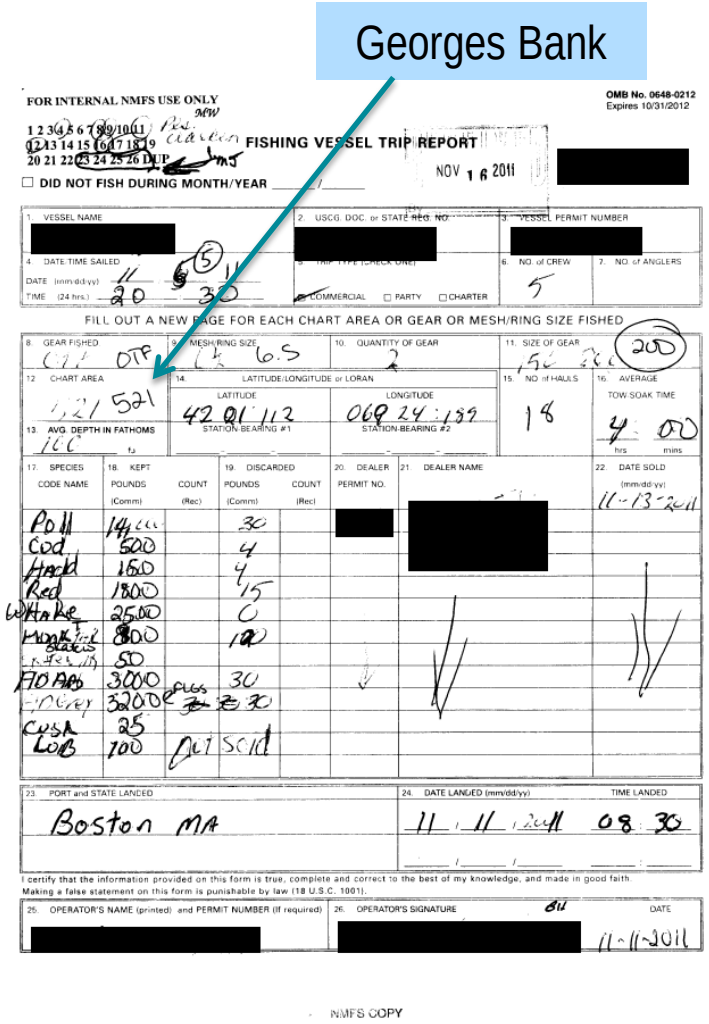
Reasons for sendbacks: damaged or invalid logbook,; DNF; problem with species reported (kept, discarded or spp code); problem with statistical area, Lat or Lon; problem with date (sail, land, sold or signed); problem with vessel, operator or dealer identification; problem with trip, gear, haul or tow information

We been sent back for corrections since Sept 2011 at a cost of about $10K + in postage alone.

Does not report all areas

Fishing in multiple stock areas





Overarching Challenges

- Disconnect in reporting regulations (for example, VTR serial number)
- Stove-piped systems (1990s technology)
- Lack of integration between reporting systems
- Complex regulations in reporting requirements (one size fits all)
- Party and charter boat reporting (no validation)
- Access to data
- Consistency of data management practices

Proposed Solutions

- Electronic Vessel Reporting – integrate with other collections
- Use smart technologies for reporting (for example, smart phones)
- On-Line correction of VTRs via web portal (Fish-on-Line)
- Eliminate paper-based reporting, did not fish reports, and no-purchase reports
- Initiate for-hire reporting validation programs
- Adapt reporting requirements to fishery
- Promote industry ownership of data
- Engage industry in designing reporting systems
- Get data right at its source
- Permit sanctions for failure to report
- Eliminate the requirement to complete VTRs prior to landing, enabling shore side web-based reporting
- Provide electronic access to data forCoast Guard and other law enforcement groups

Questions???

Comments…