

Shoreside EM Program Implementation Overview





Installation and Participants

2020 EM Pool = 28 vessels

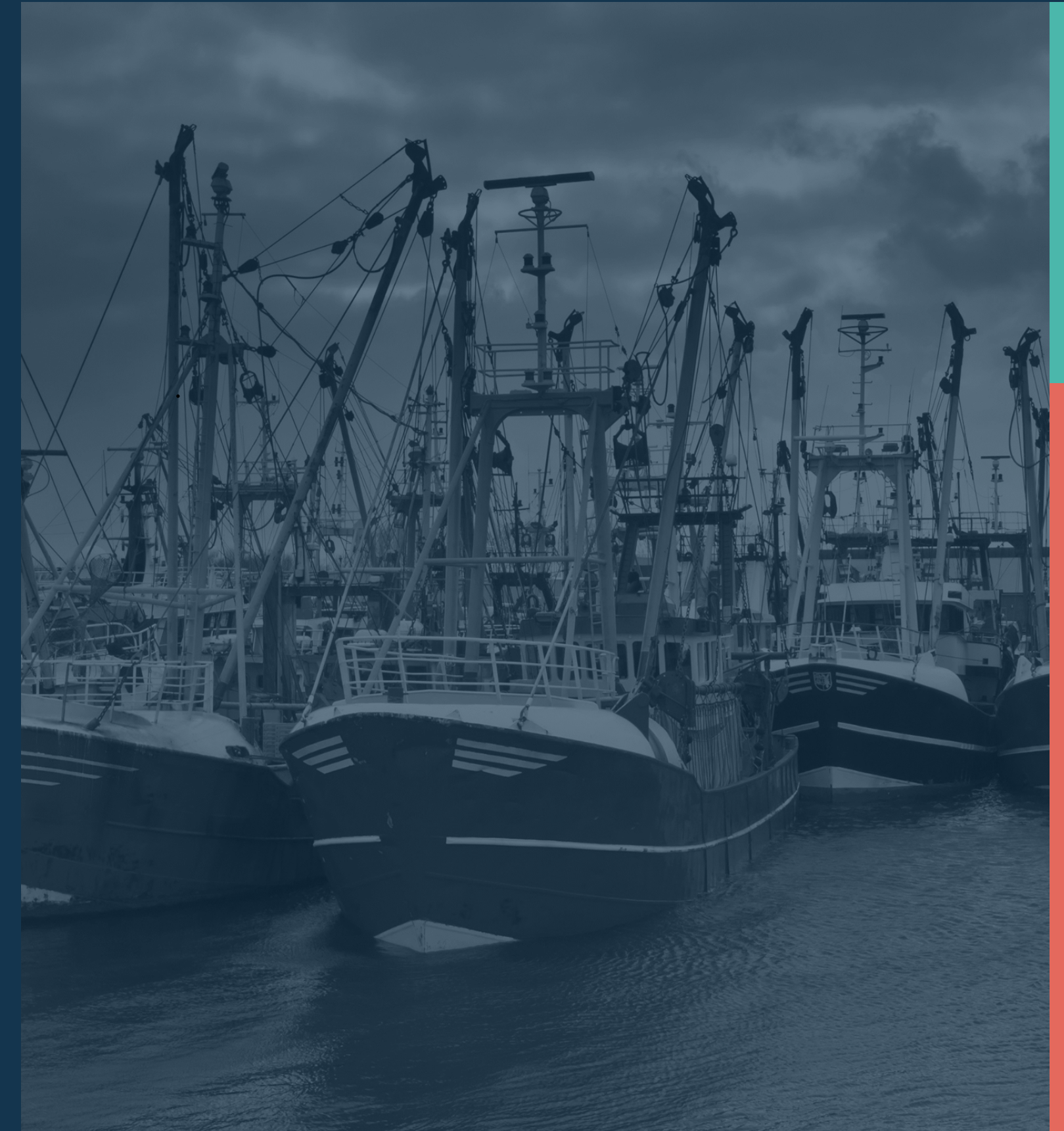
2021 EM Pool = 52 vessels total

- **21 new installs, 3 previously EM installed (whiting fishery)**
- **Installs in Dutch Harbor, Kodiak, Seattle WA, Reedsport OR**
- **44 Archipelago and 8 SWI systems**
 - **BS Only = 29 vessels**
 - **GOA Only = 10 vessels**
 - **BSAI/GOA = 13 vessels**

How Are We Doing?

Issue Reporting and Equipment Performance

1. Vessel initiated contacts and types
2. In season reported equipment issues (by location)
3. Specific component issues overview (vessel reported)



Vessel Contact Types

Procedures/EFP Requirements

- e.g. logbook submission issues, repair before/during offload, system reboots (not continuous power)

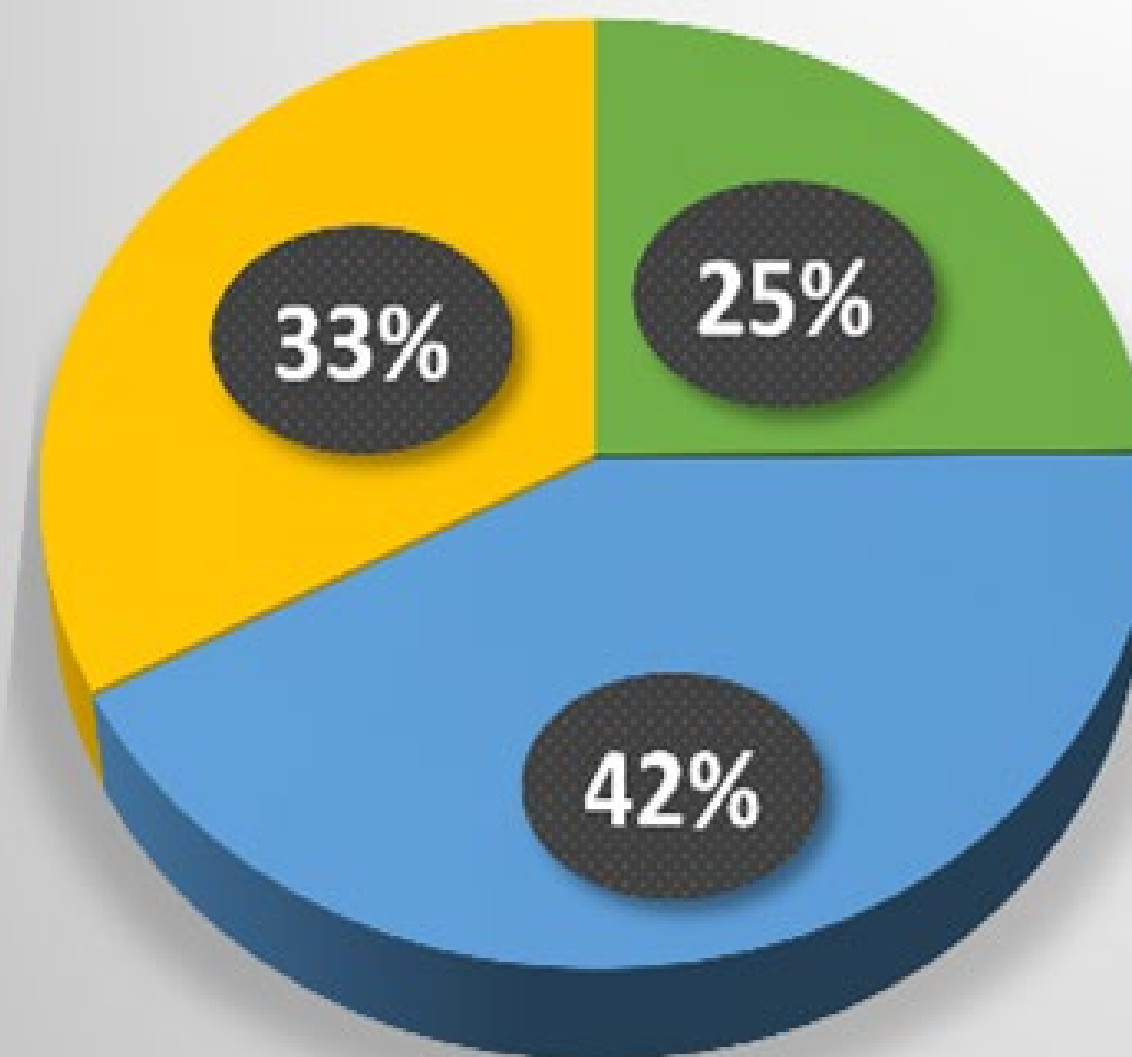
Malfunction (no service required)

- System or vessel resolved

Malfunction (service required)

- Technician required

Vessel-Initiated Contacts - By Type



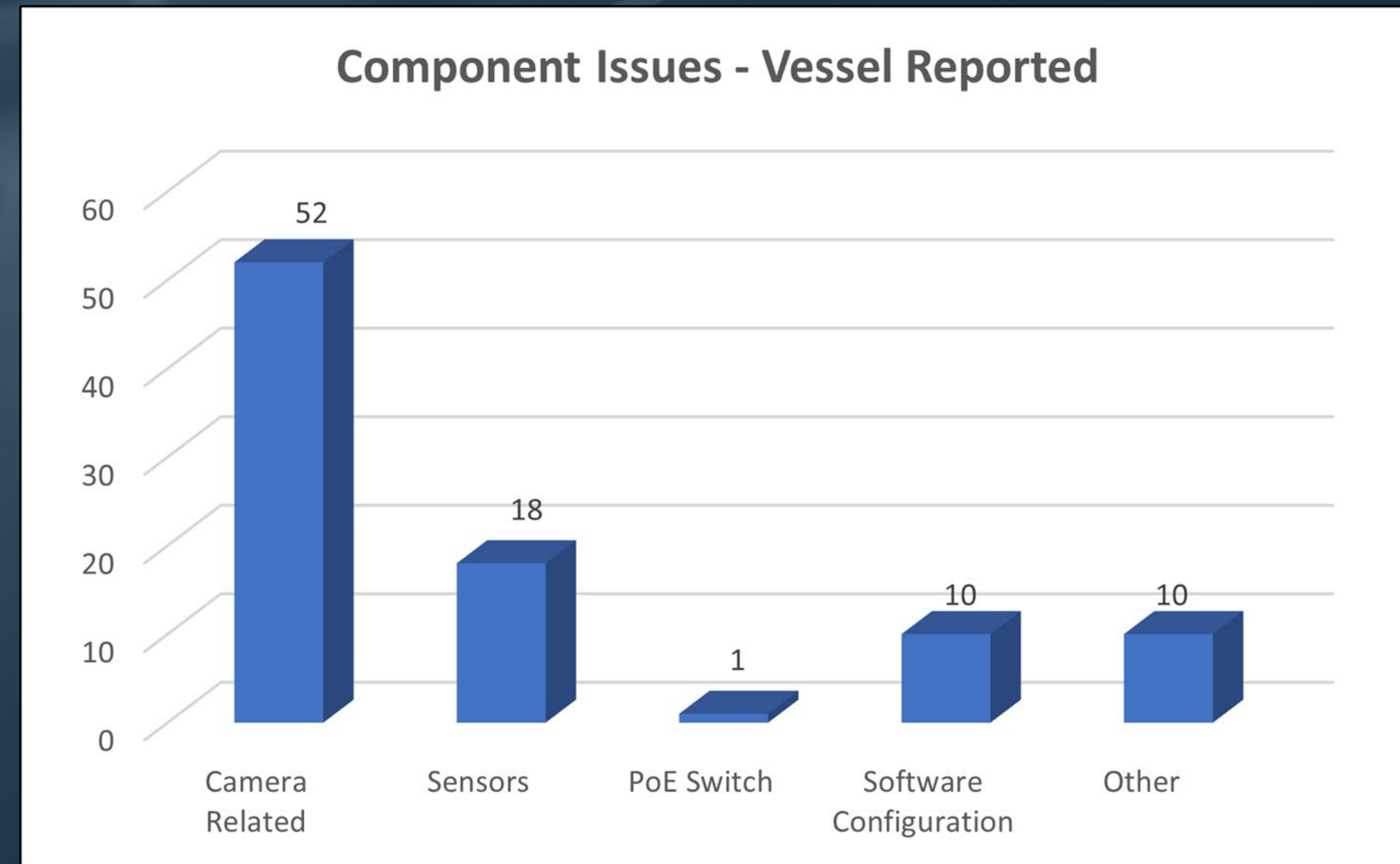
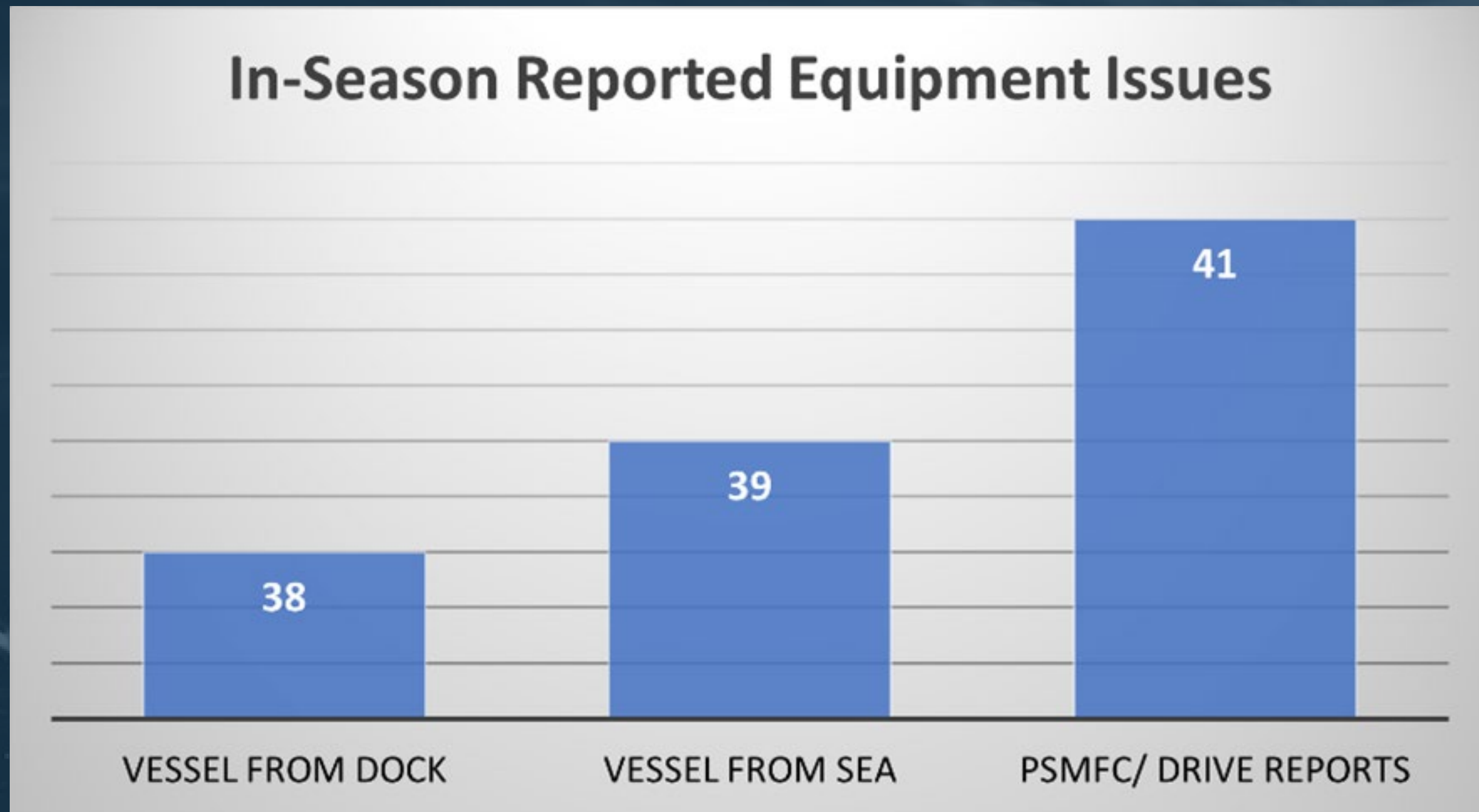
- Program Procedures / EFP Requirement
- Malfunction (service required)
- Malfunction (no service required)
* system or crew resolved

Jan 2020 through Apr 15, 2021

In-Season Equipment Issues

Reported From ...

Specific Component



Jan 2020 through Apr 15, 2021

Issue Reporting and Equipment Performance

How are we doing - Summary

- Equipment performing as expected and issues are getting resolved quickly
- Vessels doing a good job at identifying and reporting malfunctions and working with the remote support team to resolve
- Redundant camera views and backup sensors are helping reduce critical data loss
- Vessel Operators new to the EM program this year are up to speed with system operation and able to resolve minor issues on their own!

How Are We Doing?

Feedback Loops / Drive Report Overview

1. Reported Issues Categories
2. Data Quality Category – Issue types
3. Vessel EFP Reporting Category – Issue types



Drive Reports

- Completed/emailed after each trip
- Main Feedback loop
- Details on Issues encountered
- Comments on EFP requirements met

5 Reporting Categories (for some “metrics”)

Drive Report for Sensor and Video Review

This document summarizes EM data review for the following drive(s). This report may not be inclusive of all EM issues. This report may contain sensitive or confidential information and is intended only for the vessel owner(s), vessel operator(s), or authorized representative(s). If you are not the intended recipient, you may not access this report or share the information with any other unauthorized person, and must immediately destroy all copies. By downloading this document you acknowledge notification of any potential violations of the terms and conditions of the exempted fishing permit.

Report ID: 20_LESLIELEEL7	Date of Data Set Begin: 8/17/2020
Vessel Name: [REDACTED]	Date of Data Set End: 8/26/2020
Date of Report: 9/15/2020	Date Drive Received: 9/8/2020
Completed By: CAD	Number of Fishing Trips on Drive: 3

Trip Number:	Return Date:	Fish Ticket Number
1	8/21/2020	020460851
2	8/26/2020	020460852
3	8/29/2020	020461642

	Event	Present: (Y/N/P/NA)	Comments:
Reporting Issues	Hard drive submitted in the required time period	Yes	
	Hard drive submitted with a complete data set	Yes	
	Logbooks submitted in the required time period	Yes	
	Logbooks submitted complete	Yes	
	Number of trips on hard drive does not exceed maximum trips allowed under vessel's EFP	Yes	
	Vessel recording continued through offload	Yes	
Functionality Issues	Pre-Trip Function Test Completed	Yes	
	If a critical malfunction occurred, the vessel stopped fishing until it was resolved or downgraded (Note: they are allowed to complete the haul if gear is already deployed)	N/A	
Data Quality Issues	Sensor and Video Data Complete (No Time Gaps)	Yes	
	All catch handled inside of camera view and consistent with VMP. Camera views are unobstructed, lighting adequate, etc. Ability to identify the species of fish caught and/or discarded or the fate of the catch is uncompromised by image quality	Yes	
Catch-related Issues	All discarding occurred at VMP designated control point	Yes	
	All fish retained other than operational discards, animals larger than 6-Ft, unavoidable discards	Yes	
Other Notes:			

Drive Report Categories

1. Catch Issues

- handling/sorting & discards
- Retention /allowable discards

2. Data Quality Issues

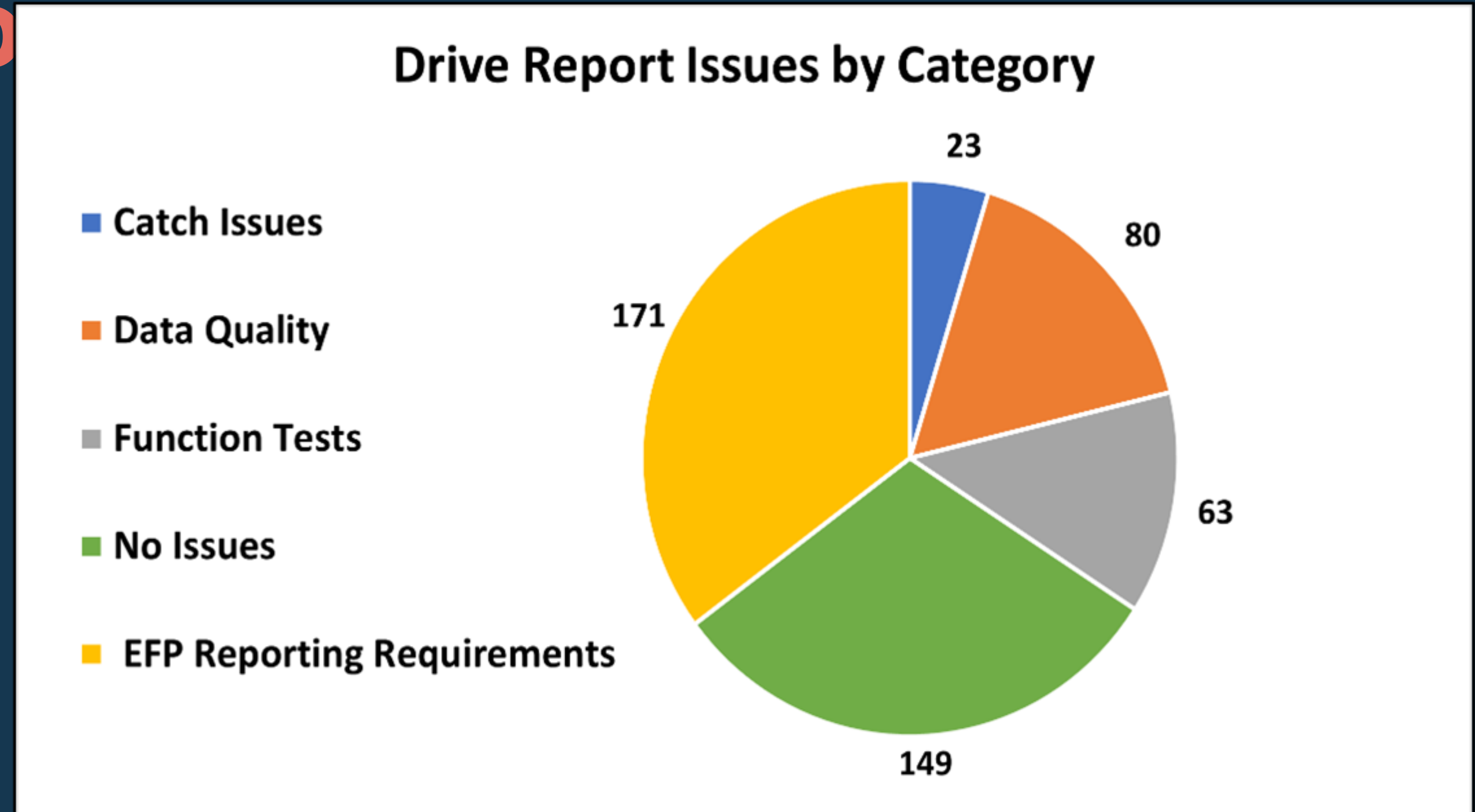
- Sensor and video data complete
- unobstructed camera views

3. Function Test Completed?

4. No Issues !

5. EFP Reporting Requirements

- Logbook and Hard drive submission
- Offload video recording



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Data Quality Issues

Video Gaps (major)

- gaps during fishing or offload

Video Gaps (minor)

- Gaps outside of fishing or offload

Data Gaps Short & Long

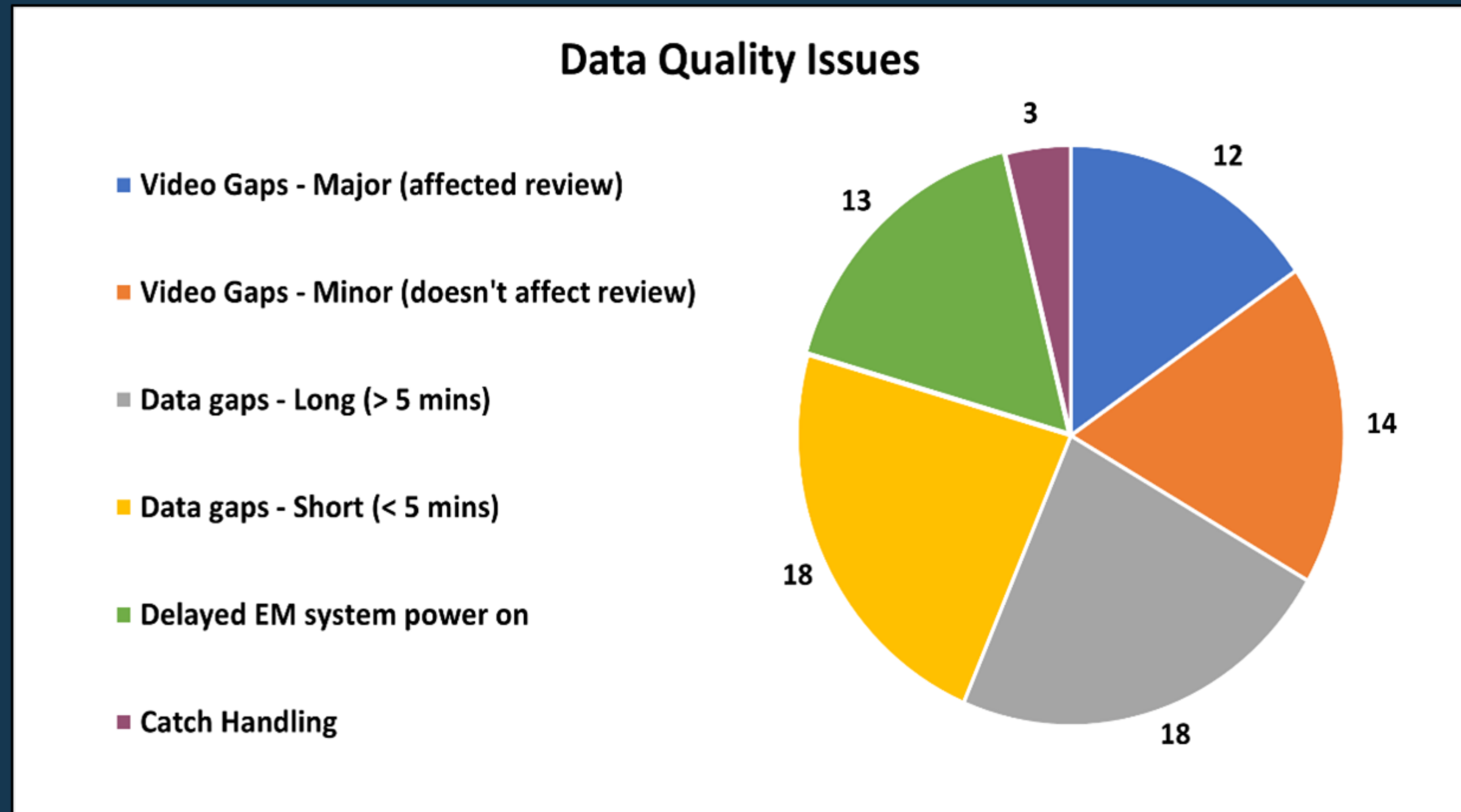
- Missing sensor and video data

Delayed Power On

- system not on prior to departing port

Catch Handling

- catch processed outside of view (primarily onboard use)



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EFP Reporting Requirements

Delayed Drive Submission

- >3 Trips

Log Submission

- within 24hrs of landing/offload

Trip Limit Per Drive

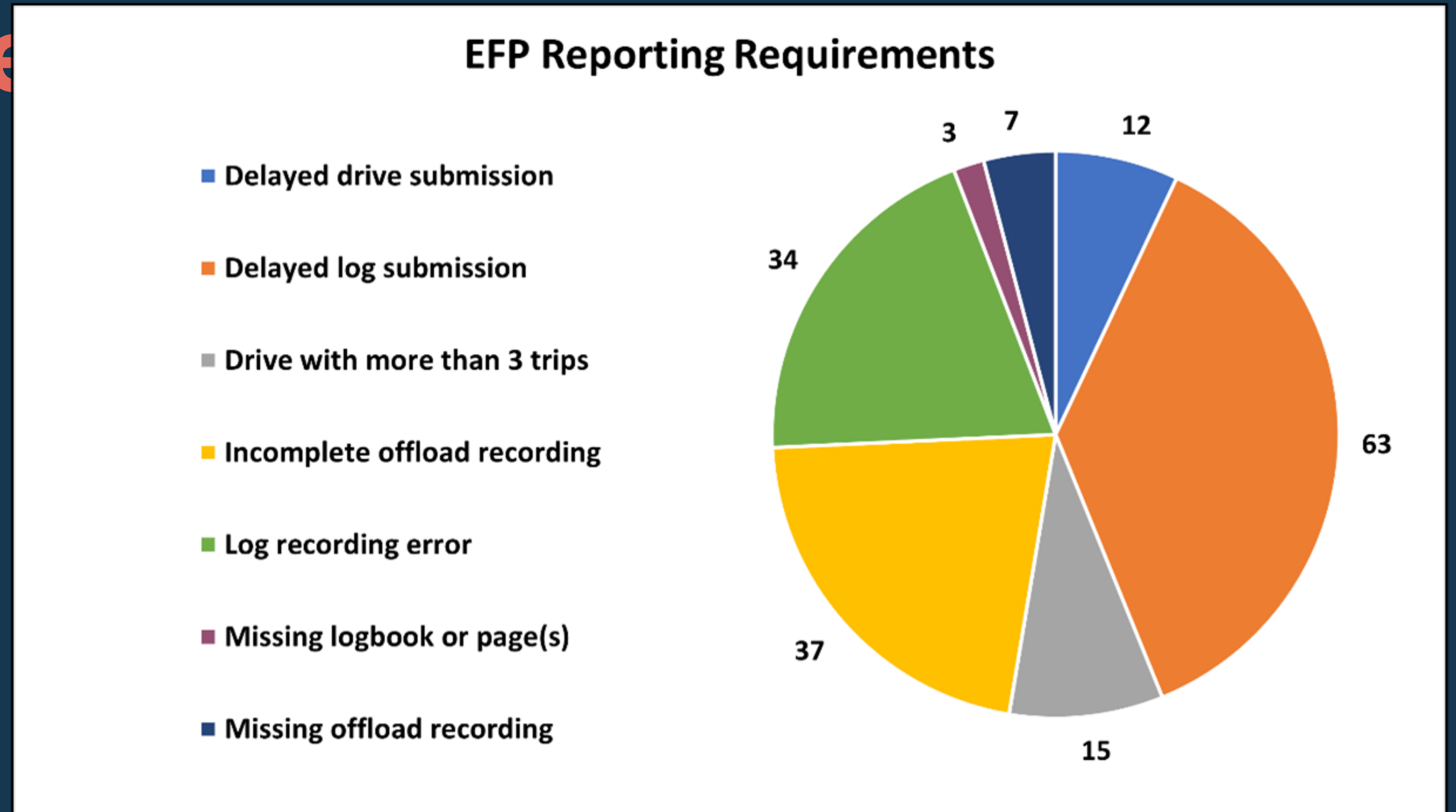
- currently 3 max

Incomplete/Missing Offload

- entire offload not recorded *

Log Recording Errors/Missing Logs

- Discards as comments, use on board missing



Jan 2020 through Apr 15, 2021

How Are We Doing?

Feedback Loops / Drive Report

Summary

1. Feedback loops are critical and working well
 - ✓ New vessels/relief operators up to speed quickly
 - ✓ fewer instances of repeat issues
2. Data quality and EFP reporting requirements continually improving
 - ✓ “No issues’ or minor issue only drive reports are on the rise!



Looking Forward ...

1. Continued EM Capacity Building

- be ready for future EM expansion for pollock program and other trawl fisheries (data review and equipment service capacity)
- what service ports and when/how to staff them
- explore the potential use of shoreside observers for other EM program assistance (e.g. electronic data transfer coordination)?

2. Continued Technology Advancements (hardware and software)

- continue to explore the use of AI algorithms and other technologies for video review efficiencies and reducing EM data size.
- e-log and e-data transmission capacity exploration



QUESTIONS?

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