Using Corporate Responsibility to Increase Vessel Compliance with NOAA's Right Whale Ship Strike Rule, Provide Increased Protection of North Atlantic Right Whales, and Recognize the Achievements of Deserving Maritime Companies

A report to the International Fund for Animal Welfare and National Marine Sanctuary Foundation by: Stellwagen Bank National Marine Sanctuary, 175 Edward Foster Road, Scituate, MA 02066 David Wiley, PhD, Michael Thompson, and Liam Waters Reporting period: January – May 2022 Report date: 1 March 2023

For information contact:

David Wiley, PhD; Research Ecologist; NOAA/ONMS/Stellwagen Bank National Marine Sanctuary; <u>david.wiley@noaa.gov</u>

Michael Thompson, Geographer; NOAA/ONMS/Stellwagen Bank National Marine Sanctuary; Michael.A.Thompson@noaa.gov

Liam Waters, Research Technician, NOAA/ONMS/Stellwagen Bank National Marine Sanctuary; liam.waters@noaa.gov

### Summary:

Vessel compliance for **305** ships operated by **206** companies that transited the National Oceanic and Atmospheric Administration's (NOAA) Off Race Point and Cape Cod Bay Right Whale Seasonal Management Areas (SMAs) during **2022** was evaluated using data from the US Coast Guard's Automatic Identification System (AIS). Ships and companies were graded A+ - F, based on their level of compliance with the 10 knot or less speed limit for those areas, as required by NOAA's Right Whale Ship Strike Reduction Rule (50 CFR 224.105). Based on this analysis, each ship and company were sent a "report card" package containing (1) a map showing their transits through the SMA(s), (2) the level of compliance for each transit, and (3) their overall grade based on the aggregation of all transits. Ships and companies receiving grades of A+ or A received a *Certificate of Corporate Responsibility* demonstrating their commitment to right whale conservation. As an aid to compliance, each package also contained information on NOAA's *Whale Alert* app. *Whale Alert* is a free smartphone/tablet application that displays all information mariners need for complying with SMA and other right whale conservation measures. It can be downloaded from WhaleAlert.org. **Packages were mailed in January 2023, timed to reach companies in time to emphasize and optimize SMA compliance for 2023.** 

Ninety percent of ships and 89% of companies received grades of A+ or A. Two percent of the ships and 2% of the companies received a failing grade. For commercial shipping categories, the "Local/Reserved" category received the most favorable grades (100% A+ & A; 0% F), followed by "Fishing" (97% A+ & A; 0% F) and "Tug" (93% A+ & A; 0% F). The top two categories undeniably benefit from the fact that these vessels rarely travel at speeds much in excess of ten knots even when outside of SMAs. Pleasure Craft were once again identified as a community in need of increased outreach and education with the highest percentage of failures across categories this year (14% F despite 85% A+ & A). Passenger vessels, the other historically low compliant group, showed improvement this year and recorded zero failing grades (73% A+ & A; 0% F). The sample size for passenger and pleasure craft remains small (29 and 14, respectively), as most vessels in this class do not currently carry AIS transmitters. This is slowly changing however, and these numbers are not quite as low as they have been in past years.

Only 5% (5/95) of first-time and potentially regulatorily naïve vessels failed to comply with the Off Race Point or Cape Cod Bay SMA requirements, suggesting **outreach was broadly effective at communicating SMA requirements to mariners and/or that mariners sufficiently understood SMA requirements to apply them to SMAs not previously transited**. Still, the impact of first-time transit vessels was not trivial, with **100% of all failing grades (5/5) attributed to first-time vessels**.

# Highlights:

**Reaching 90% compliance of vessels this year**. This accomplishment had many parts to it, but the most exciting were reaching **zero failing grades for "Passenger" vessels** (historically a less compliant category) **and zero failing grades for all returning vessels**. 100% of all failing grades were first time vessels, new to the SMA.

Historically low compliance categories "Passenger" and "Pleasure" had large jumps in A+ grades this year, with "Passenger" vessels increasing from 1% to 28% and "Pleasure" increasing from 29% to 64%. This large increase in A+ grades drove both of these categories to have their most compliant year on record in 2022.

The top two categories of total number of vessels ("Fishing" n=107; and "Tug" n=77) had very high compliance rates of 97% and 93% A+ & A respectively with 0% F for both.

# Superior mariner compliance identified for SMAs covered by the Right Whale Corporate Responsibility Project (RWCR)

NOAA's National Marine Fisheries Service (NMFS) recently completed a compliance analysis of shipping relative to SMAs and DMAs along the entire eastern seaboard of the US (see: National Marine Fisheries Service. 2020. North Atlantic Right Whale (*Eubalaena glacialis*) Vessel Speed Rule Assessment; https://media.fisheries.noaa.gov/2021-01/FINAL\_NARW\_Vessel\_Speed\_Rule\_Report\_Jun\_2020.pdf. National Marine Fisheries Service, Office of Protected Resources, Silver Spring, MD.). This report identified the SMAs specific to this project as having the highest compliance levels of all SMAs. In addition, SMAs in the Northeast, which is primarily the population of ships and companies involved with the RWCR project, demonstrated higher compliance rates than SMAs in the mid-Atlantic and southeast regions. *The Boston maritime community should be commended for their commitment to right whale protection and conservation.* A description of our Right Whale Corporate Responsibility Project can be found at page 32 of the report and figure 68 displays a sample report card. The report also recognized Whale Alert for its outreach to mariners and the public (pages. 34 -35).

# Continued Relationship with National Marine Fisheries Service's Greater Atlantic Regional Fisheries Office (GARFO)

The project has had a long collaboration with GARFO, and GARFO Regional Administrator **Michael Pentony once again joined SBNMS Superintendent Peter DeCola and IFAW's Patrick Ramage** in signing the letter and Corporate Responsibility Certificate(s) that are part of the mailing to each vessel and company.

# **Project Reporting:**

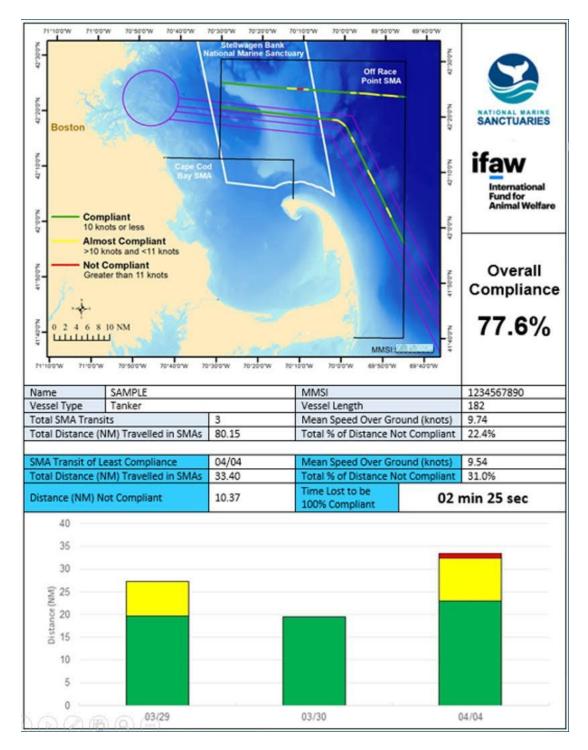
Lethal injury from collisions with vessels is a major problem facing the recovery of North Atlantic right whales, a species that remains on the brink of extinction and has been in decline since 2010. From 2010 – 2014, **Stellwagen Bank National Marine Sanctuary** (SBNMS) and the **International Fund for Animal Welfare (IFAW)** conducted a highly regarded "Report Card" Program detailing the compliance and commitment of vessels traversing the Cape Cod Bay and Off Race Point Seasonal Management Areas (SMAs), portions of which overlap with the sanctuary. SMAs require that ships slow to speed 10 knots or less to reduce the risk and consequences of collisions between right whales and vessels. This project has been considered a model program and was

provided the international Society for Marine Mammalogy's 2011 award for Excellence in Science Communication.

More recently, there has been considerable attention directed at the concept of corporate responsibility, and its ability to encourage companies to increase their commitment to behaviors that are in the public interest. In 2015, we initiated the **Right Whale Corporate Responsibility Program** using the Report Card model in combination with the corporate responsibility paradigm to increase the maritime industry's awareness of, and compliance with, NOAA's **Right Whale Ship Strike Reduction Rule** (50 CFR 224.105). In doing so, the project provides increased protection to North Atlantic right whales, recognizes deserving maritime companies for their contribution to right whale conservation, and provides incentive and information to companies needing to improve.

### The following objectives of the program have been accomplished this year:

1. Report Cards for **305 ships and 206 companies** were completed. A sample Report Card is below (Figure 1).



*Figure 1.* A sample report card showing: (1) a map of the vessel's transits through the SMAs, (2) each transits' dated level of compliance, (3) their overall grade based on the aggregation of all transits, and (4) the GIS calculated time for the least compliant transit to have been traveled at a compliant speed of 10 knots (e.g., 4/24/2017; 1 min, 40 seconds).

Report Card data have been analyzed and rated relative to Corporate Responsibility criteria as shown in Figure 2.

#### How Have Vessel Grades Been Determined?

Vessel grades are determined by analyzing ship speed derived from AIS tracks. Using AIS data we calculate a vessel's commitment to complying with NOAA's Right Whale Ship Strike Rule Rule when transiting the Off Race Point and Cape Cod Bay Seasonal Management Areas. Commitment is defined as the percent of distance traveled at compliant speed, combined with mean travel speeds (see below). Corporate Responsibility ratings range from A+ - F.

A+: 99 - 100% and mean speed =<10 kts.

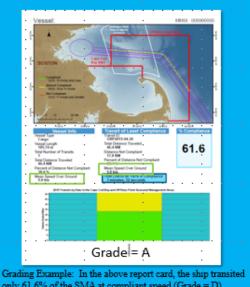
A: 90 - 98.9% or mean speed =<10 kts. and mean speed least compliant transit =< 10kts.

**B:** 80 – 89.9% or mean speed =<10 kts. and mean speed least compliant transit <10.5 kts.

C: 70 – 79.9% or mean speed 10 – 10.5 kts. and mean speed least compliant transit 10.5 – 11 kts.

D: 60 - 69.9% or mean speed >10.5 kts. and mean speed least compliant transit >11 kts.

F: <60% or mean speed >11 kts. and mean speed least compliant transit >11.5 kts.



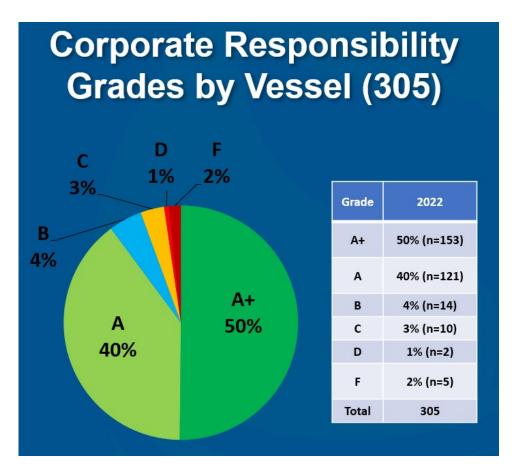
only 61.6% of the SMA at compliant speed (Grade = D). However, the mean speed of the transit was < 10 kts and the mean least compliant transit speed was also <10 kts. The ultimate grade was an A.

Figure 2. Categories and criteria used for grade determination.

2. Summary results were calculated for all vessels (Figure 3) and for each vessel category (Figures 4 and 5). Overall, 90% (274/305) of vessels received grades of A+ or A and 2% (5/305) received a grade of F. Relative to each vessel category, the "Local" category received the most favorable grades (100% A+; 0% A, B, C, D & F), followed by "Fishing" (62% A+; 35% A; 3% B, 1% C, 0% D & F) and "Tug" (49% A+; 44% A; 4% B; 1% C & D; 0% F). In past years, "tanker" ships had lagged behind "Tug" and "Cargo" in compliance rates. While this is still true in A+ grades, this year the "Tanker" community stepped up and had nearly identical overall compliance grades as "Cargo" (84% A+ & A; 4% F and 85% A+ & A; 3% F respectively). This is exciting to see and the "Tanker" community deserves credit for this increased compliance. It is also welcoming to see that "Cargo" vessels have continued their commitment to compliance shown in recent years.

Another encouraging trend is the large increases in "Passenger" and "Pleasure\*" A+ grades. Both of these categories have struggled with compliance in the past but had their most compliant year on record in 2022. Despite this good news, there should be a continued outreach presence within both of these categories since they have shown to have fluctuating levels of compliance in the past. Hopefully this progress can be built upon and is the start of a new, continued level of compliance, rather than an exceptionally good year.

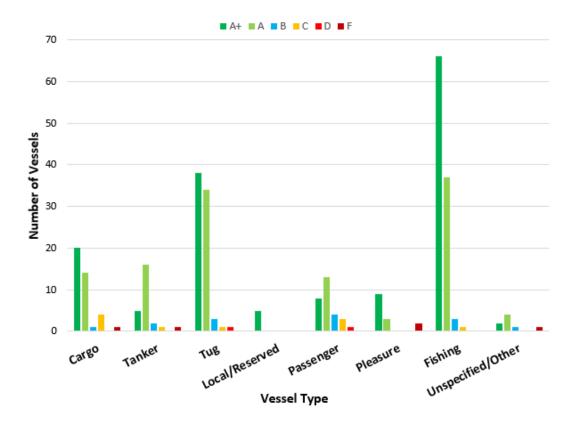
\* This category benefits from having sailing vessels included in the analysis



*Figure 3.* Aggregate Corporate Responsibility grades (percent compliance; graded A+ to F) for 305 vessels that transited NOAA's Off Race Point or Cape Cod Bay Seasonal Management Areas (SMAs) during 2022. SMAs were designated under the NOAA Right Whale Ship Strike Reduction Rule (50 CFR 224.105).

Vessel Type	A+	А	В	С	D	F	Total
Cargo	50% (n=20)	35% (n=14)	3% (n=1)	10% (n=4)	0% (n=0)	3% (n=1)	40
Tanker	20% (n=5)	64% (n=16)	8% (n=2)	4% (n=1)	0% (n=0)	4% (n=1)	25
Tug	49% (n=38)	44% (n=34)	4% (n=3)	1% (n=1)	1% (n=1)	0% (n=0)	77
Local, Reserved, And Dredgers	100% (n=5)	0% (n=0)	0% (n=0)	0% (n=0)	0% (n=0)	0% (n=0)	5
Passenger And High Speed Craft	28% (n=8)	45% (n=13)	14% (n=4)	10% (n=3)	3% (n=1)	0% (n=0)	29
Pleasure And Sailing	64% (n=9)	21% (n=3)	0% (n=0)	0% (n=0)	0% (n=0)	14% (n=2)	14
Fishing	62% (n=66)	35% (n=37)	3% (n=3)	1% (n=1)	0% (n=0)	0% (n=0)	107
Unspecified/Other	25% (n=2)	50% (n=4)	13% (n=1)	0% (n=0)	0% (n=0)	13% (n=1)	8

*Figure 4*. Grades (A+ - F) by vessel type for 305 vessels that transited the NOAA Off Race Point or Cape Cod Bay Seasonal Management Areas (SMAs) during 2022. SMAs were designated under the NOAA Right Whale Ship Strike Reduction Rule (50 CFR 224.105).



*Figure 5.* Grades (A+ - F) by vessel type for 305 vessels that transited the NOAA Off Race Point or Cape Cod Bay Seasonal Management Areas (SMAs) during 2022. SMAs were designated under the NOAA Right Whale Ship Strike Reduction Rule (50 CFR 224.105). Fishing vessels were included in the analysis for the first time in 2022.

3. Comparing project years (2015 – 2022, Figures 6 & 7), the overall combined A+ and A categories were: 72% (2015), 81% (2016), 78% (2017), 77% (2018), 85% (2019), 84% (2020), 86% (2021) and 90% (2022). Years 2018, 2019, 2020 and 2022 had the least percent of failing (F) grades (5% each). Comparing compliance levels over years indicated that "Tug" and "Cargo" vessels consistently demonstrated the highest compliance, while "Pleasure" and "Passenger" vessels consistently demonstrated the least compliance. Because of their emergency response purpose, law enforcement vessels are not included in SMA restrictions and were not included in the analysis starting in 2021.

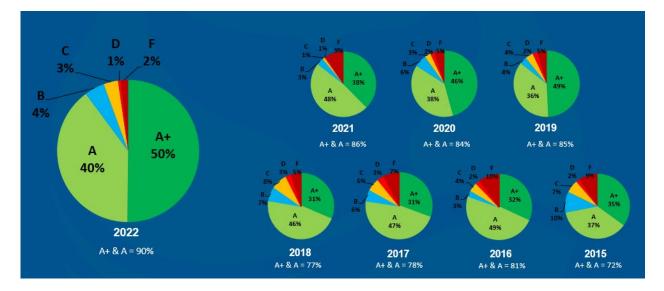
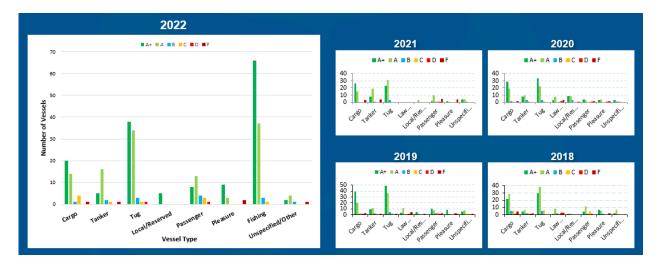


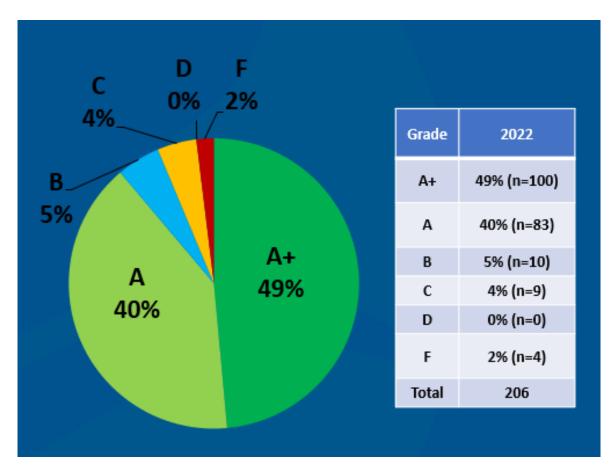
Figure 6. Overall compliance grades (A+ - F) by year (2015 – 2022).



*Figure 7.* Compliance levels by vessel category. Tug and Cargo vessels consistently demonstrated the highest compliance, while Pleasure and Passenger vessels consistently demonstrated the least compliance. Fishing vessels were included in the analysis for the first time in 2022.

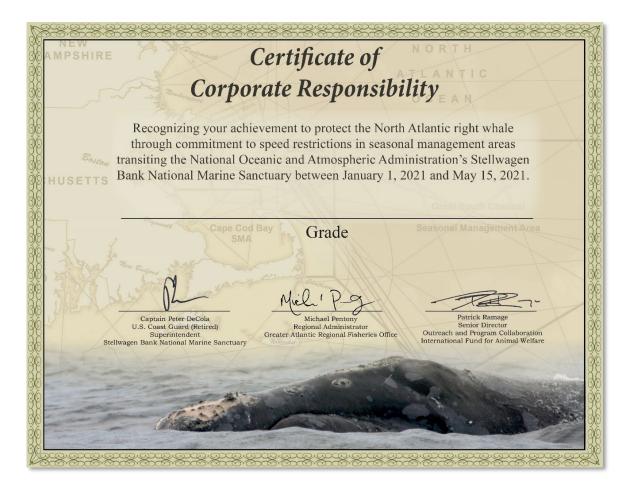
4. To further understand compliance levels and the effectiveness of outreach efforts, we analyzed the behavior of vessels that our database indicated had not previously transited the Off Race Point or Cape Cod Bay SMAs. Naïve, first-time vessels could be expected to have lower compliance, unless outreach was sufficient to educate them about SMA requirements despite mariners possibly having no previous experience with those requirements or not having previously transited the Off Race Point or Cape Cod Bay SMAs. Of the 305 vessels, 48% (n=95) were identified as first-time transits (although they could have transited other SMAs along the US East Coast). Of these, 5 vessels received failing grades. Thus, only 5% (5/95) of potentially naïve vessels failed to comply with the Off Race Point or Cape Cod Bay SMA requirements, suggesting outreach was broadly effective at communicating SMA requirements to mariners and/or that mariners sufficiently understood SMA requirements to apply them to SMAs not previously transited. In addition, 84% (80/95) of first-time vessels received A+ or A grades, again suggesting effective outreach and education to mariners. Still, the impact of first-time transit vessels was not trivial, with 100% of failing grades (5/5) attributed to first-time vessels. One note to acknowledge in regard to first-time vessels, and this year's analysis in general, is that fishing vessels were included in the general analysis for the first time but not included in the count of first-time vessels. This was a complex decision, but a large part was the fact that most fishing vessels are not new to these waters and would likely have already been familiar with the SMAs and their rules.

5. Grades were also calculated for **206 companies** involved with the vessels (Figure 8). **Eightynine percent (183/206) of companies received a grade of A+ or A and 2% (4/206) received a grade of F.** 



*Figure 8*. Of 206 companies involved with vessels transiting the Off Race Point or Cape Cod Bay SMAs, 89% (183) received a grade of A+ or A and 2% (4) received a failing grade.

6. A **Corporate Responsibility Certificate** (Figure 9) highlighting the grade received by a ship or company, and signed by SBNMS (Decola), IFAW (Ramage) and NMFS/GARFO (Pentony) leaders, was provided to all ships and companies receiving A+ and A grades (274 vessels and 183 companies).



*Figure 9.* A sample Corporate Responsibility Certificate provided to vessels (274) and companies (183) that received grades of A+ or A.

6. The addresses for all companies in the AIS/MSI database were obtained from public web searches by SBNMS staff.

7. **Report cards** for all vessels and companies, and **Corporate Responsibility Certificates** for vessels and companies with A+ or A ratings were **mailed January 2023 to emphasize and optimize mariner compliance for the 2023 SMA season**. Information on *Whale Alert* was included in each mailing. A sample mailing package is included in Appendix 1 of this report.

# Appendix I

A sample mailing package (attached).