



# National Transportation Safety Board

Capsizing and Sinking of Commercial Fishing  
Vessel *Scandies Rose*  
Sutwik Island, Alaska  
December 31, 2019

# Managing Director's Introduction

- Morgan Turrell, Director, Office of Marine Safety
- Bart Barnum, Investigator In Charge
- Paul Suffern, Meteorology Group Chairman
- Julia Paajanen, Report Writer/Editor
- Scott Rainey, Safety Recommendation Specialist

# Managing Director's Introduction

- Casey Blaine, Deputy General Counsel
- Doline Hatchett, Director, Office of Safety Recommendations and Communications
- Barbara Czech, Deputy Director, Office of Research and Engineering
- Dana Schulze, Director, Office of Aviation Safety
- Liam LaRue, Chief of Investigations, Office of Marine Safety
- Rob Jones, Deputy Chief of Investigations, Office of Marine Safety
- Eric Stolzenberg, Chief of Product Development, Office of Marine Safety



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## Accident Overview

Bart Barnum, IIC

# Staff Who Supported the Investigation

- Katy Chisom, MD-6
- Eric Emery, RE-10
- Brittany Rawlinson, RE-10
- Jeff Marcus, SRC-50
- Christy Spangler, SRC-60
- Rolando Garcia, MD-5
- Dr. Michelle Watters, RE-1
- Eric Weiss, SRC-10
- Jennifer Gabris, SRC-10
- Michael Karr, MS-10
- Jennifer Bishop, MD-2I

# Staff Who Produced Virtual Board Meeting

- James Anderson, SRC
- Deidre Esters, AD
- Kelley Romeo, CIO
- Rahiq Syed, CIO
- Carl Perkins, AD
- Brian Young, MS

# Parties to the Investigation

- US Coast Guard
- *Scandies Rose* Fishing Company
- National Weather Service

# Coast Guard Marine Board of Investigation – Public Hearing

- US Coast Guard – Lead Federal Agency
- Convened a Marine Board of Investigation
- Public Hearing Feb. 22 – March 5, 2021



# Scandies Rose

- 130-foot-long, 195-gross-ton
- Built 1978
- Partook in multiple fisheries
- Participated in the Coast Guard's Dockside Safety Exams

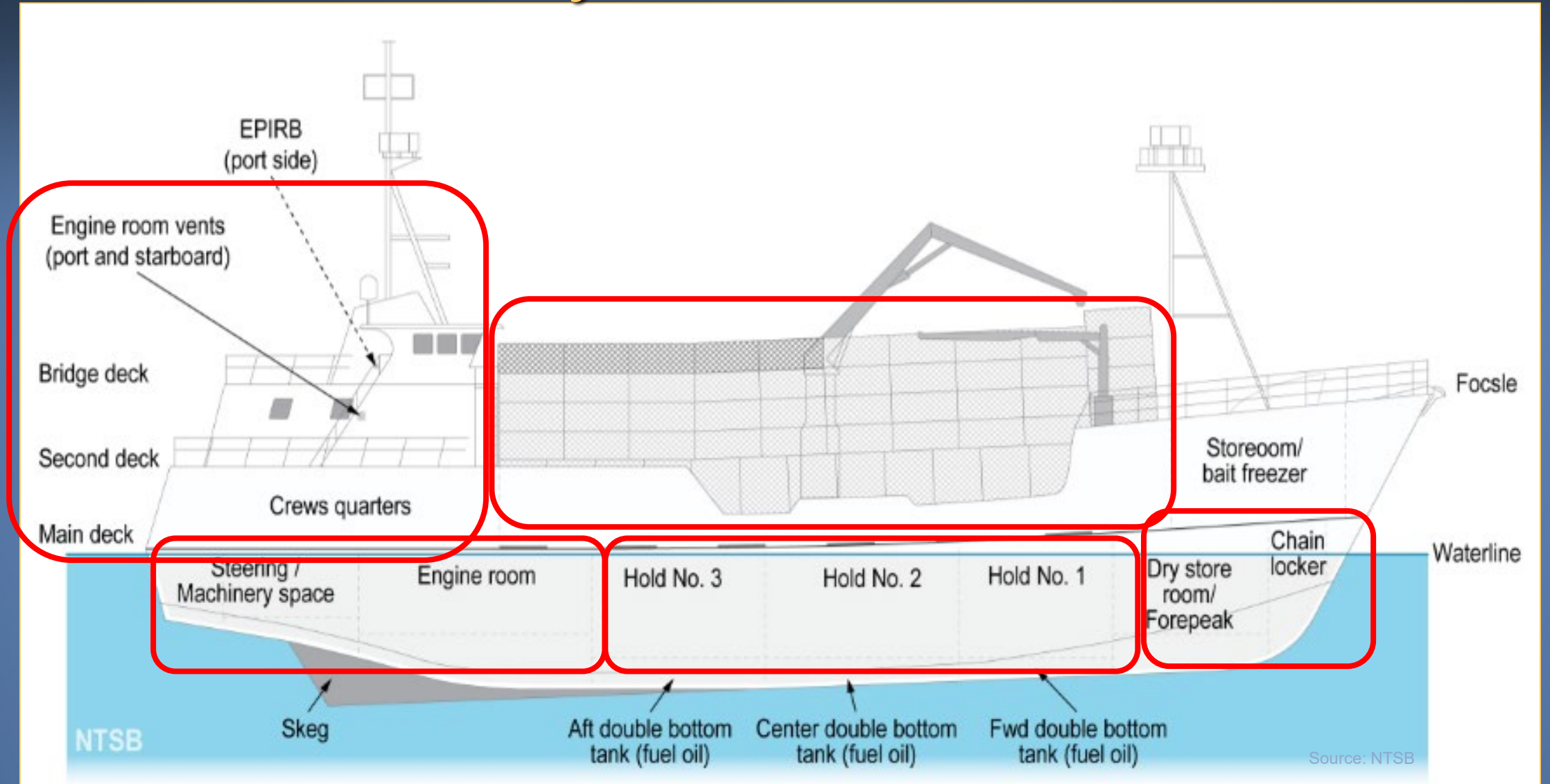


# Scandies Rose Fishing Company

- Company's only vessel
- Vessel captain
  - 45 years experience
  - Familiar with Gulf of Alaska and Bering Sea
  - Made determinations on when and where to fish



# Scandies Rose Layout



# Scandies Rose Accident Voyage

Deckhand 1  
onboard the  
*Scandies Rose*  
prior to departure



Photo of the  
*Scandies Rose*  
posted on social  
media a day  
before the  
accident

# *Scandies Rose* Accident Voyage

- December 30<sup>th</sup>, 8:35 PM vessel departed Kodiak
- National Weather Service issued marine forecast
  - Gale warning
  - Freezing spray warning



# Map of Accident Area



# Accident Events

December 31<sup>st</sup>

- 2:00 – 8:00 AM
  - 6 crew stand 1-hour bridge watches
  - Rounds made of the engine room
  - Freezing spray encountered
  - Weather began deteriorating

# Accident Events (cont.)

December 31<sup>st</sup>

- 8:00 AM – 2:00 PM
- Vessel on an even keel maintaining constant SW heading
- Captain stands 6-hour bridge watch
  - 11:18 AM – Calls *Amatuli* captain – temperature “very cold” and vessel experiencing light icing

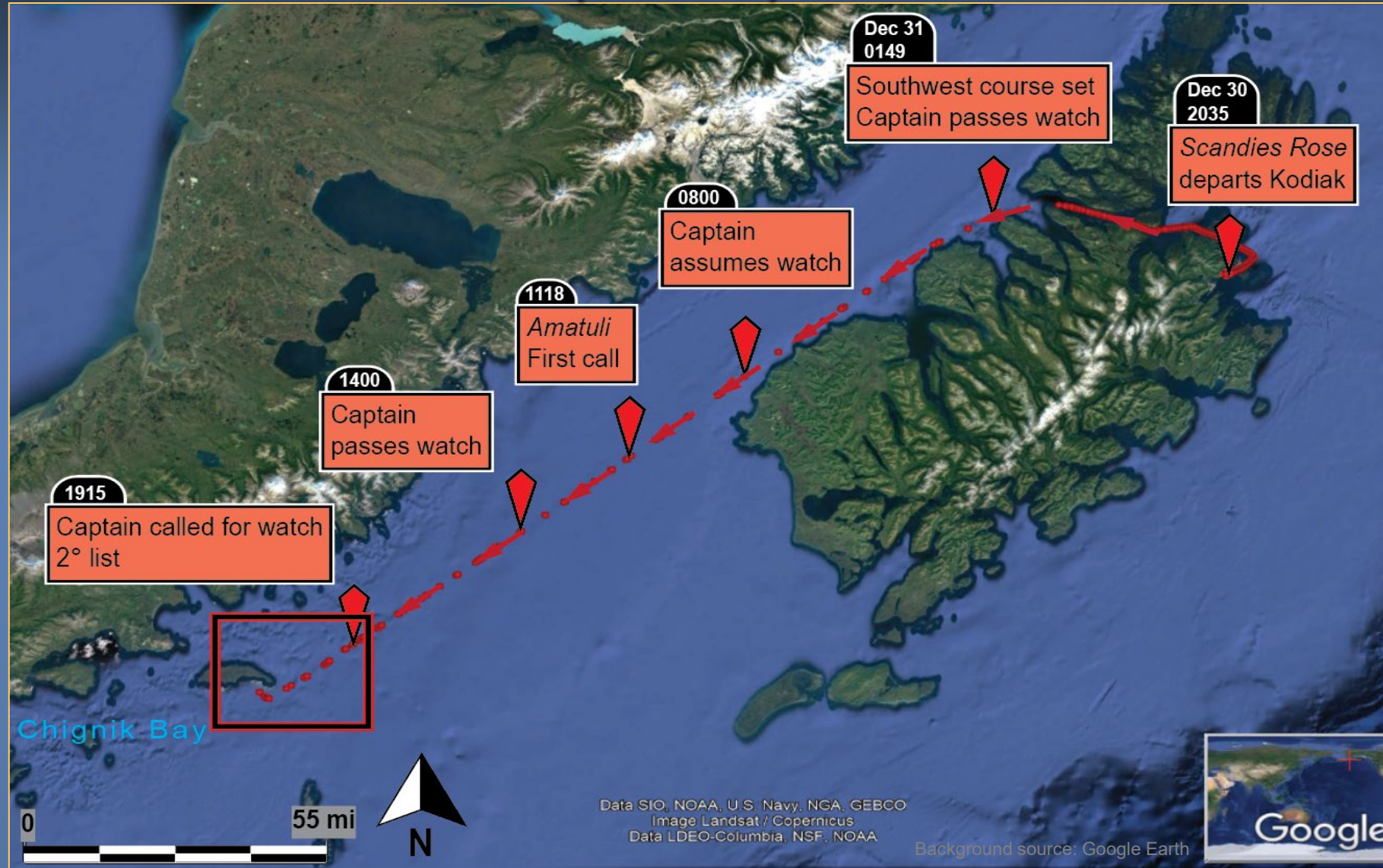


# Accident Events (cont.)

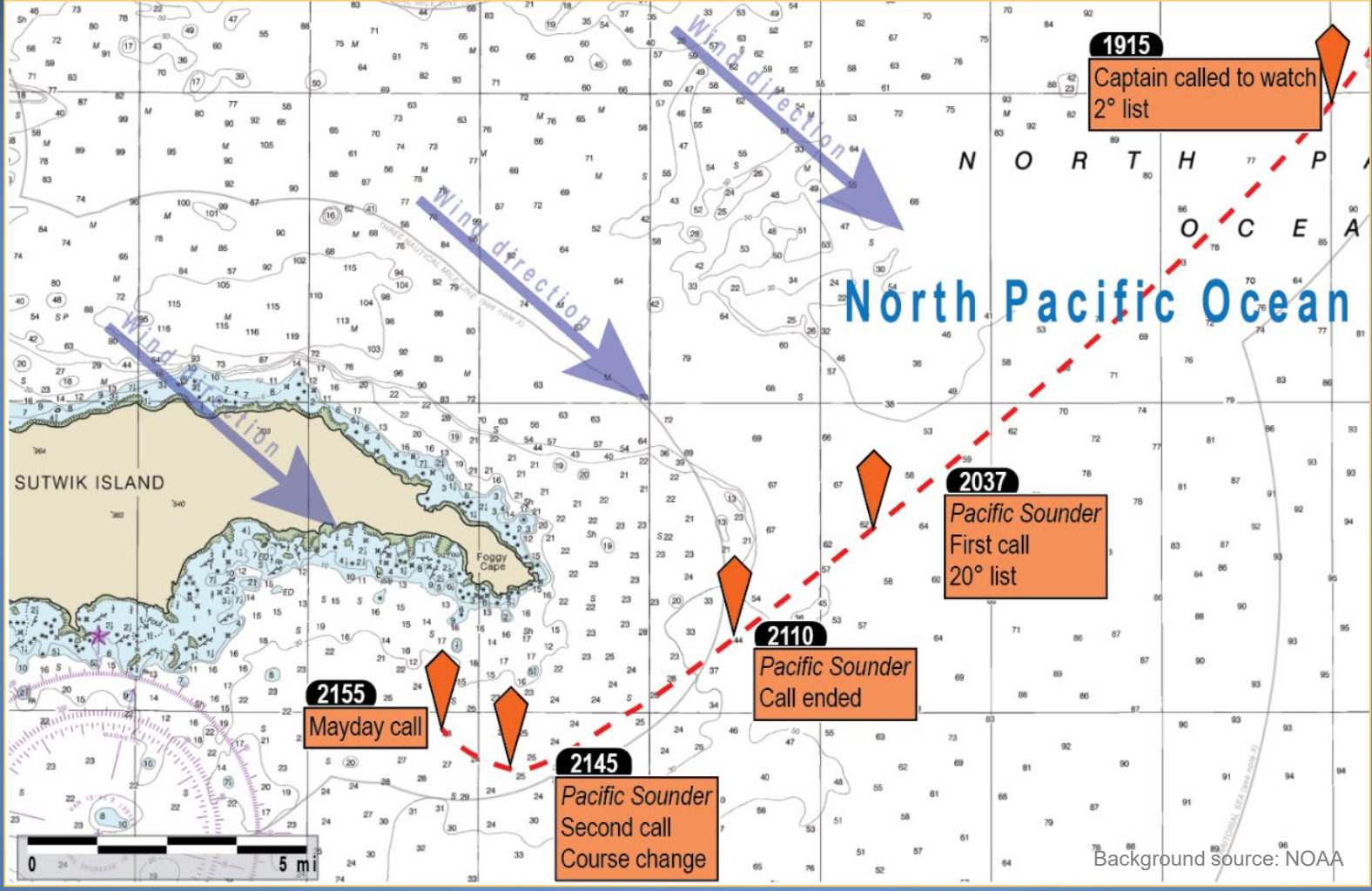
December 31<sup>st</sup>

- 2:00 PM – 7:15 PM
- Crew rotate through bridge watches
  - Wind and weather progressively got worse
  - Vessel producing more spray and accumulating additional ice

# Accident Events (cont.)



# Accident Events (cont.)



# Accident Events (cont.)

- Crew jolted from beds
- Struggle to don immersion suits
- 9:55 PM – Mayday call
- Vessel sinks



# Search and Rescue

- Survivors board life raft
- Helicopter locates both life rafts
  - Survivors rescued
  - Transported to hospital
- Search continues for additional survivors
- 1,400 square miles searched
- 8:08 PM search suspended



# Remote Operated Vehicle (ROV) Survey

- Vessel located in 160 feet of water, 1,100 feet from mayday position
- Emergency Position Indicating Radio Beacon (EPIRB) was not located
- No visual indication of hull breaches



# Safety Issues

- The effect of extreme icing conditions
- Lack of accurate weather data for the accident area
- The vessel's inaccurate stability instructions
- Need to update regulatory guidelines on calculating and communicating icing for stability instructions

# Excluded Factors

- The captain's predeparture decision-making
- Operational pressures
- Fatigue
- Drug and alcohol use
- The vessel's propulsion and steering systems
- The vessel's hull integrity





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## **Weather Factors**

**Paul Suffern, Meteorologist**

# Lack of Weather Observations

- Closest weather observation south of Alaskan Peninsula nearly 100 miles away



# Lack of Weather Observations

- Weather forecast matched the observation sites but not the weather reported at the accident site
- Recommendation proposed to National Oceanic and Atmospheric Administration (NOAA)



# Additional Icing Forecast Information

- Heavy freezing spray warning issued when icing rate exceeds 2 cm/hour
- National Weather Service Ocean Prediction Center experimental icing forecast provides icing rate graphically

# Additional Icing Forecast Information

- None of the mariners interviewed aware of the National Weather Service Ocean Prediction Center freezing spray site
- National Weather Service Ocean Prediction Center freezing spray graphical website developed in 2014 is considered experimental
- Recommendation proposed to National Weather Service



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## Operations and Survival Factors

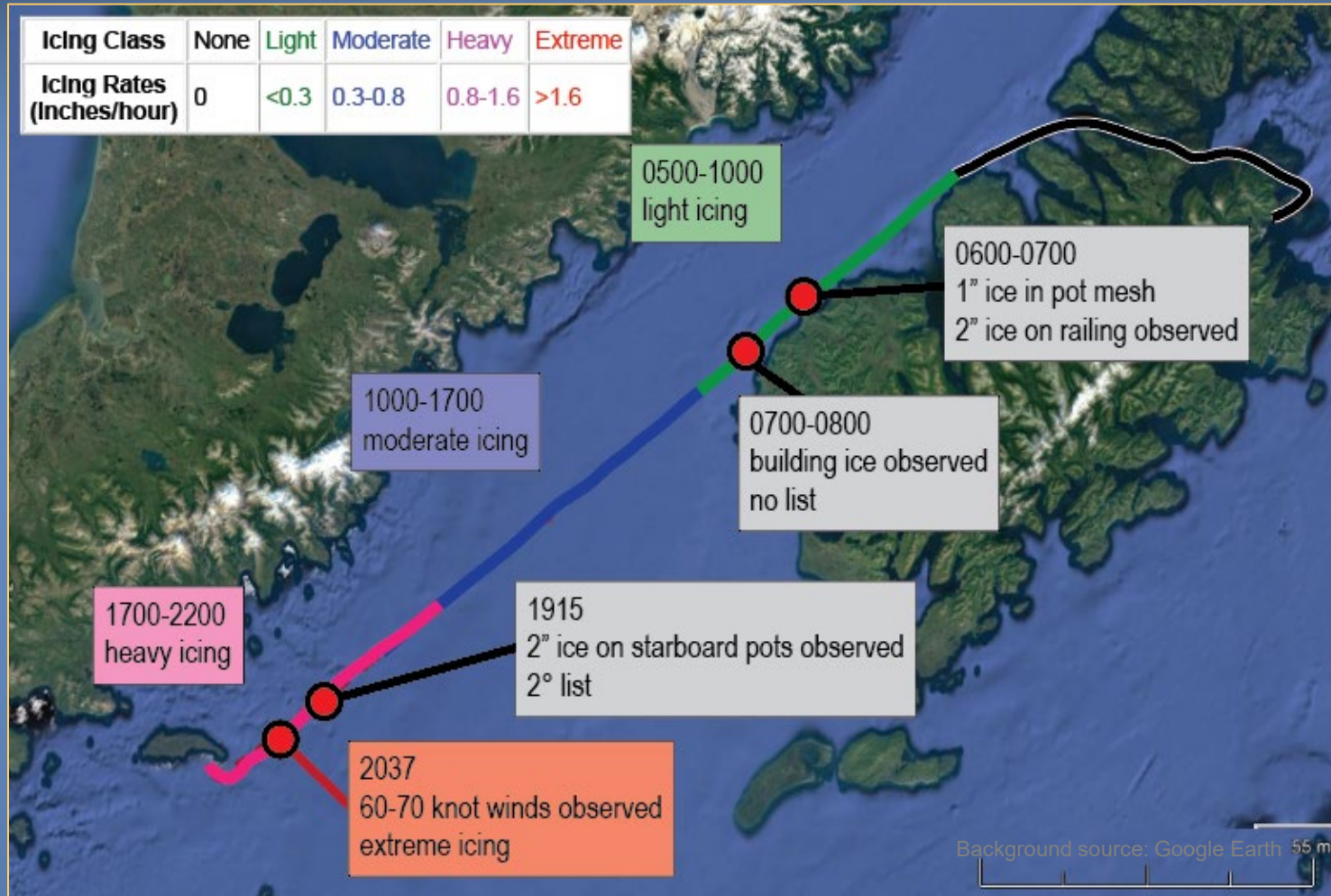
Bart Barnum, IIC



# Safety Issues

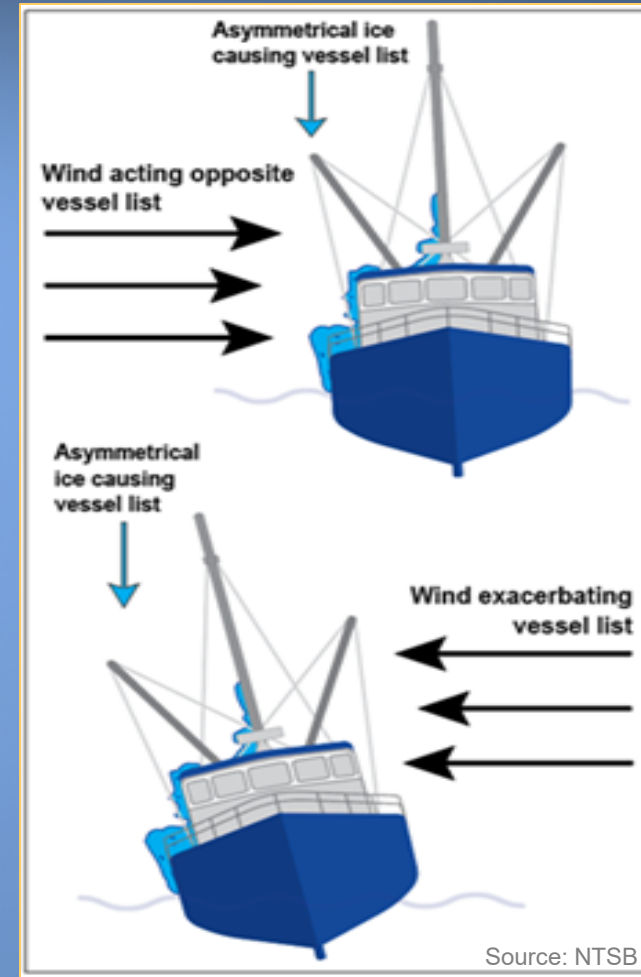
- Effects of extreme icing on vessel stability
- Inaccurate stability instructions
- Regulatory guidelines on calculating icing
- Regulatory stability oversight and training
- The lack of requirements for Personal Locator Beacons (PLBs)

# Effects of Extreme Icing on Vessel Stability



# Asymmetric Ice Accumulation

- Starboard list created by ice accumulation
- Initially wind and waves counteracted list
- Following vessel heading change, wind and waves exacerbated list



# Vessel's Stability Instructions

- Vessel loaded in accordance with stability instructions
- Coast Guard's Marine Safety Center (MSC)
  - Stability analysis

## INSTRUCTIONS TO MASTER

### F/V SCANDIES ROSE

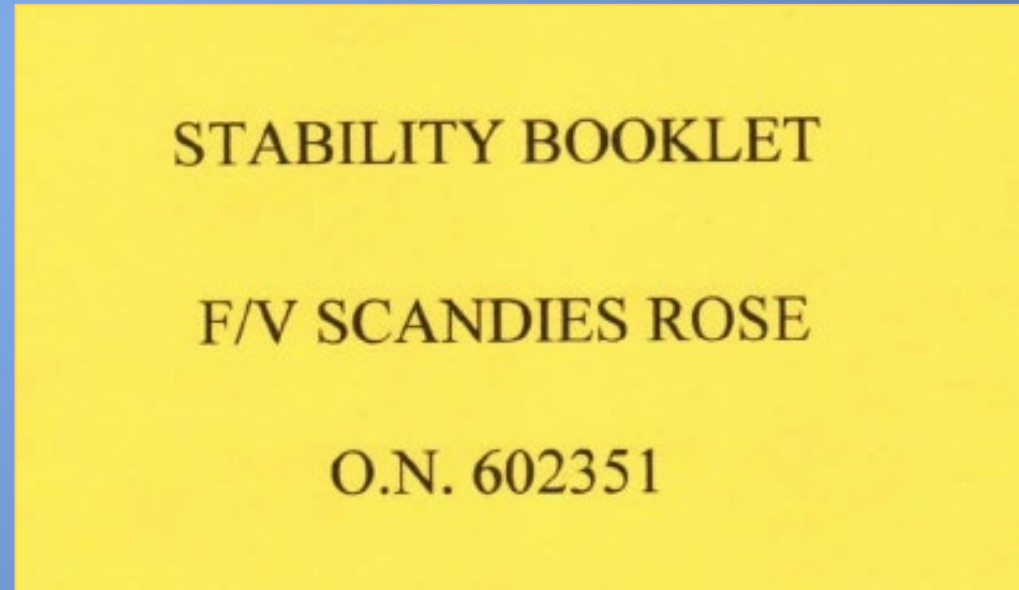
1. Stability characteristics of this vessel are evaluated for compliance with 46CFR Subchapter C, paragraph 28
2. A total of (208) 835 pound crab pots can be carried on deck, The first tier on edge and the rest flat, Do not obscure vision from the pilothouse. This applies in icing or non-icing conditions. If all three Holds are flooded (168) pots can be carried, and forward wing tanks are to be empty.
3. Flooded holds must be filled or emptied. In a sheltered location or in port. Do not operate with a slack . Do not operate with a slack (partially filled) hold.
4. Freeboard is not to be less than six inches at any point.
5. Always determine the cause of any list before taking corrective action.
6. All gear carried on deck or in a hold must be firmly secured against shifting.
7. All doors, hatches, manholes, scuttles, etc., must be kept securely closed while at sea except when Actually in use.
8. Bilges must be kept pumped to minimum content at all times subject to pollution regulations.
9. Freeing ports must be kept clear and operable at all times.
10. Avoid accumulation of unnecessary weights such as spare parts, tools, gear and stores.
11. No modifications to the vessel, such as adding or removing ballast or other weights is to be performed without first determining their effect on stability.
12. The master of the vessel is responsible for maintaining watertight integrity at all times and to exercise prudent seamanship, giving consideration to the season of the year, weather, sea and ice conditions.

May 28, 2019

Source: *Scandies Rose* Stability Instructions

# Reliance on Flawed Stability Instructions

- Regulatory stability criteria not met
- Captain unaware vessel did not meet margin of safety



# Regulatory Guidelines for Calculating Icing

- Current guidance on icing
- Pot stack – “shoebox” icing calculation
- Regulations negate internal icing



# Icing Accumulation Amounts

- Industry use of stability instructions
- Regulations
  - 1.3 inches on horizontal surfaces
  - 0.65 of an inch on vertical surface
- Industry knowledge and common practice



# Stability Training

- No training requirement
- Coast Guard supported
- Industry supported



# Stability Instructions Oversight

- *F/V Destination* and *F/V Scandies Rose*
  - Both stability instructions completed by qualified individuals
  - No technical review or oversight
  - Coast Guard post casualty stability assessments
  - Failed to meet regulatory criteria

# Personal Locator Beacons (PLBs)

- Provide continuously updated location
- Redundancy for Emergency Position Indicating Radio Beacon
- Assist in eliminating communication errors



Source: ACR Electronics, Inc.



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