



# Hypothetical Scenario Collision in San Francisco Bay

Joint Meeting of the  
Autonomous Ships and Smart Marine Technology, Government Counsel, and  
Marine Torts & Casualties Committees

Thursday, October 19, 2023

8:45-10:15 am

# Chatham House Rule

- When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed.



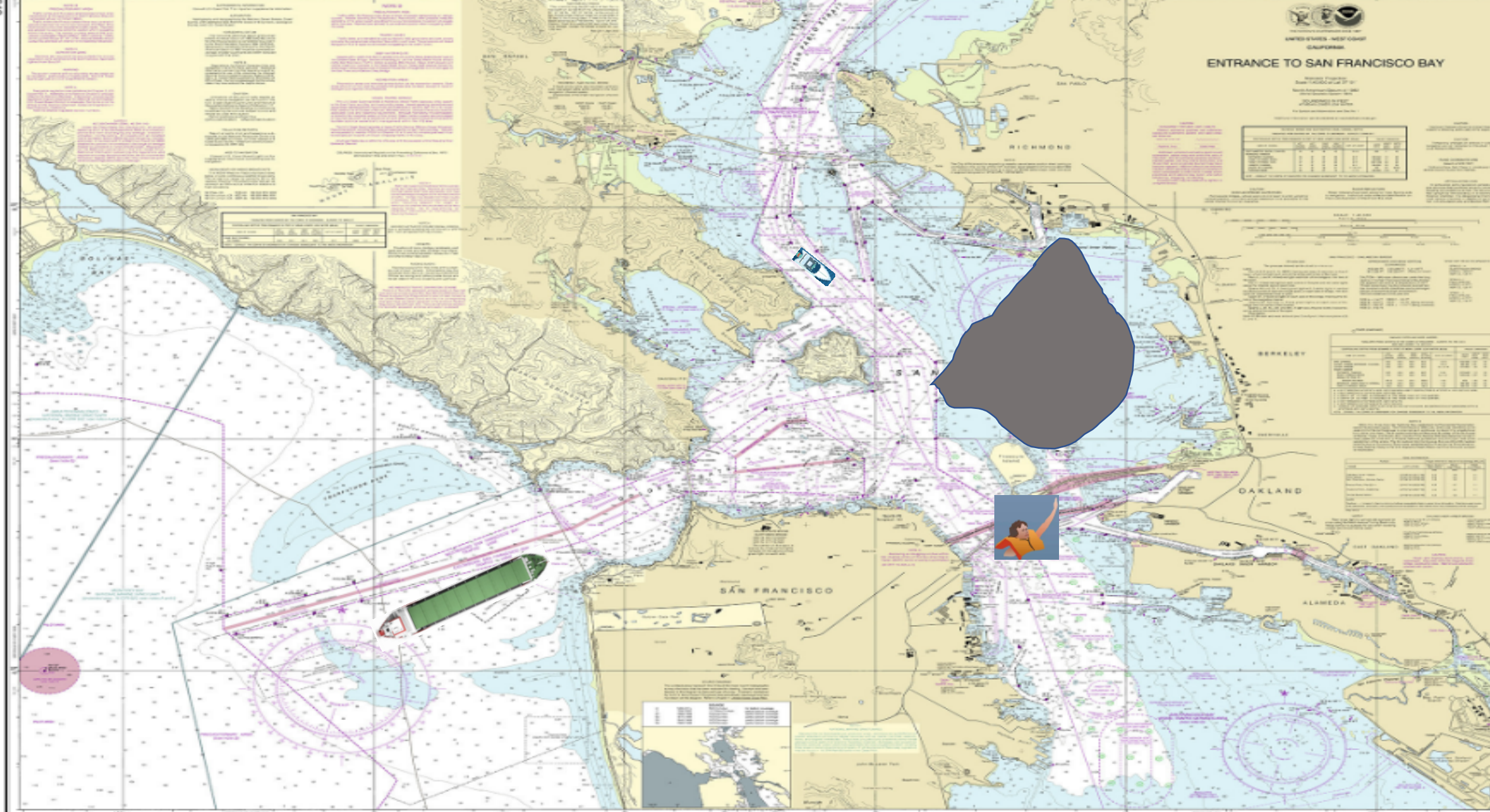


PUBLIC DOMAIN: credit Defense Visual Information Distribution Service (DVIDS):  
<https://www.dvidshub.net/image/7041938/imx-ce-2022-saildrone-explorer>



# ENTRANCE TO SAN FRANCISCO BAY

SOUNDINGS IN FEET	
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# Hypothetical Collision in San Francisco Bay - Background

- Around sunset on Friday, October 13, the Liberian-flagged M/T *Golden Bay* was inbound San Francisco Bay at 12 knots. The Vessel was fully laden with 400,000 MT of crude oil cargo.
- The Vessel is an Aframax tanker, 100,000 DWT length 245 m, beam 34 m, built in China. It is owned by a Norwegian company, with a separate commercial/technical operator based in Denmark, and managed by a UK manager, and entered with a Norwegian P&I Club for both P&I and H&M risks. The vessel was chartered by a Singapore charterer.
- The Vessel has a crew of 24 with a Ukrainian Master and Russian Chief Engineer. The crew and officers are all Filipino.
- It is registered with DNV classification society and has designated a local ship agency, Calship.

# Hypothetical Collision in San Francisco Bay - Background

- Also underway in San Francisco Bay was the autonomous uncrewed surface vehicle (USV) *Snaildrone 1* (“S1”) southbound from at a speed of 7 knots conducting seafloor survey activities
- S1 was being remotely controlled from a Remote Operations Center (ROC) in San Diego by an operator holding a USCG-issued Master license.
- S1 is 100 feet long, solar, sail, and methanol powered.
- S1 is owned by a company in Dubai with a US office in San Diego
- S1 has marine insurance coverage through a speciality carrier located in London
- S1 is valued at US\$ 50 mil

- At 2030 the MT Golden Bay is passing south of Alcatraz when he sees a vessel off its port bow.
- As the stand on vessel Golden Bay continues to monitor the approaching vessel, which has a constant bearing but decreasing range, and showing one white light but no running lights, with an AIS showing “underway” but no name
- In the ROC in San Diego, the remote operator “on watch” gets an error on his system that the navigation system on S1 needs to install an update and restart, and the operator’s screen goes dark as does the VHF connectivity
- The Golden Bay attempts to hail the unidentified vessel on VHF 16 but does not receive a response



- The S1 continues on its track and does not alter course to starboard.
- At 2048, the S1 collides with the port side of the Golden Bay
- The remote operator in San Diego regains the view of the system only to see the bow of S1 inside the pierced hull of the Golden Bay
- The collision punctures a cargo tank and crude oil begins to spill into the bay; it also causes the methane fuel on the S1 to spill as well
- A crewmember that was on the bow for lookout falls overboard when the collision occurs...he does not know how to swim and drowns within minutes

# Issues for Scenario

# Vessels/Vehicles/Systems



## **RULE 3 General Definitions**

For the purpose of these Rules, except where the context otherwise requires:

(a) The word “vessel” includes every description of water craft, including nondisplacement craft, WIG craft and seaplanes, used or capable of being used as a means of transportation on water.

Q: Is “data” a thing that is transported on water?

Q: How are manning requirements waived?



USCGC Charles Moulthrop (WPC 1141) and USCGC John Scheuerman (WPC 1146) transit the Strait of Hormuz with an L3 Harris Arabian Fox MAST-13 unmanned surface vessel, April 19, 2023.

# Search & Rescue coordination and Duty to Render Aid

- How can the S1 conform to this duty?

# Oil/Hazardous Material Spill Response

- How does the S1 support the spill response?
- What are spill response requirements for methane fuel?

# Reporting Requirements and CG-2692; Federal, State, and Local Agencies; Drug/Alcohol Testing

DEPARTMENT OF HOMELAND SECURITY U.S. Coast Guard				OMB No: 1625-0001 Exp. Date: 07/31/2022	
REPORT of MARINE CASUALTY, COMMERCIAL DIVING CASUALTY, or OCS-RELATED CASUALTY					
Section I - Reporting Vessel/Facility Information					
1. Vessel or Facility Name		2. Vessel Official Number or IMO Number		3. Vessel Flag	
4. Vessel Length <input type="checkbox"/> Feet <input type="checkbox"/> Meters		5. Vessel Gross Tons		6. Vessel Propulsion Type	
7. Vessel or Facility Type		8. Vessel or Facility Service or Occupation			
9. FOR TOWING ONLY	9a. Arrangement:	9b. Number of Vessels Towed:		9c. Maximum Size of Tow/Tow-Boat(s):	
	<input type="checkbox"/> Pushing Ahead <input type="checkbox"/> Towing Astern <input type="checkbox"/> Towing Alongside	Empty <input type="text"/> Loaded <input type="text"/> Total <input type="text"/>	Length <input type="text"/> feet Width <input type="text"/> feet		9d. Did one or more of the barges in the tow cause or sustain damage in the marine casualty? <input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If Yes complete and attach one or more CG-2692A forms to this report)</i>
Section II - Reason for Submitting this Report (Check all that apply)					
10. The above vessel was involved in a Marine Casualty consisting in (46 CFR 4.05-1 and 4.05-10):					
<input type="checkbox"/> 1. Unintended grounding or an unintended strike of (allision with) a bridge					
<input type="checkbox"/> 2. Intended grounding or intended strike of a bridge that created a hazard to navigation, the environment or the safety of the vessel, or that meets any of the criteria in 3 through 8 below					
<input type="checkbox"/> 3. Loss of main propulsion, primary steering, or any associated component or control system that reduces the maneuverability of the vessel					
<input type="checkbox"/> 4. Occurrence materially and adversely affected the vessel's seaworthiness or fitness for service or route					
<input type="checkbox"/> 5. Loss of life					
<input type="checkbox"/> 6. Injury that requires professional medical treatment (treatment beyond first aid) and, if the person is engaged or employed on board a vessel in commercial service, that renders the individual unfit to perform his or her routine duties					
<input type="checkbox"/> 7. Occurrence causing property damage in excess of \$75,000					
<input type="checkbox"/> 8. Occurrence involving significant harm to the environment					
11. The above facility or vessel was involved in a Commercial Diving Casualty involving (46 CFR 197.484):					
<input type="checkbox"/> 1. Loss of life					
<input type="checkbox"/> 2. Diving-related injury to any person causing incapacitation for more than 72 hours					
<input type="checkbox"/> 3. Diving-related injury to any person requiring hospitalization for more than 24 hours					
12. The above facility or vessel was involved in an OCS Facility Casualty Resulting in (33 CFR 146.30 and 146.35):					
<input type="checkbox"/> 1. Death					
<input type="checkbox"/> 2. Injury to 5 or more persons in a single incident					
<input type="checkbox"/> 3. Injury causing any person to be incapacitated for more than 72 hours					
<input type="checkbox"/> 4. OCS Facility only - Damage affecting the usefulness of primary lifesaving or firefighting equipment					
<input type="checkbox"/> 5. OCS Facility only - Damage to the facility exceeding \$25,000 resulting from a collision by a vessel with the facility					
<input type="checkbox"/> 6. OCS Facility only - Damage to a floating OCS facility exceeding \$25,000					

# Personal Injury & Death (Civil Claims and Seaman's Manslaughter 18 U.S.C. § 1115)

- Every captain, engineer, pilot, or other person employed on any steamboat or vessel, by whose misconduct, negligence, or inattention to his duties on such vessel the life of any person is destroyed, and every owner, charterer, inspector, or other public officer, through whose fraud, neglect, connivance, misconduct, or violation of law the life of any person is destroyed, shall be fined under this title or imprisoned not more than ten years, or both.
- When the owner or charterer of any steamboat or vessel is a corporation, any executive officer of such corporation, for the time being actually charged with the control and management of the operation, equipment, or navigation of such steamboat or vessel, who has knowingly and willfully caused or allowed such fraud, neglect, connivance, misconduct, or violation of law, by which the life of any person is destroyed, shall be fined under this title or imprisoned not more than ten years, or both.

# Products Liability



# S&R, Civil Penalty, Criminal Exposure, Jurisdiction

- Remote Operator - What if located in Manila?



# Limitation of Liability/Privity and Knowledge

- Is it a vessel for purposes of limitation?
- What is needed for privity and knowledge?
- A vessel owner is entitled to limit its liability after a maritime incident or casualty to the post casualty value of the vessel and the pending freight, except when the loss occurred due to its “privity or knowledge.”