TCT Training Video
Narrative
TOC

1. MLB Grounding - HWX
Adaptability/Flexibility/Leadership/Situational Awareness

Narrative:

On 23 May 2005, at 2050Q local time, the operator of the 45 foot sailing vessel (S/V) ROMANCE, contacted Station South Portland, ME. The operator of the vessel called requesting assistance to prevent the vessel from further dragging its mooring and colliding with another vessel or grounding.

At 2059Q, the Group South Portland Duty Officer, briefed the case to BM3, the Station Officer of the Day and duty coxswain, and directed Station to launch a resource to assess the situation and provide assistance to the ROMANCE as necessary. BM3 acknowledged the mission and based on the weather conditions, requested a waiver from the Operational Commander (Group Portland) to conduct the mission in weather conditions (Heavy Weather) that exceeded those under which he was certified to operate as a coxswain. The ROMANCE was believed to be in danger of grounding on the rocky shoreline or drifting into other nearby vessels. There was one person on board.

The crew of CG 47214 gathered on the dock and discussed the case. They focused on the challenges of towing a sailboat and the complications posed by the weather. The winds and seas were associated with a frontal system that passed through the Portland area shortly before the call from the ROMANCE was received. The weather was rainy with East-Northeast winds from 25-35kts and 6-foot choppy seas. CG Motor Lifeboat 47214 was underway from Station South Portland at 2114 local time.

The senior crewman, a BM3, on CG 47214 took station in the pilothouse and entered the navigation plan for the mission; his navigation plan entailed navigating from waypoint to waypoint. At 2132Q, the coxswain called Station South Portland via cellular phone and reported the MLB had an estimated time of arrival to Potts Harbor, the location of the sailing vessel, of 40 minutes, and was "getting pounded" in destroyer channel. At approximately the same time, he made the decision to bring the crew into the pilothouse to protect them from the weather and preserve their readiness for the challenging towing evolution he anticipated. The senior crewman was in the starboard seat, the coxswain in the port seat, the junior crewman, a SN, and the engineer were seated in the port and starboard bolster seats.

At approximately 2142Q, CG 47214 passed Hope Island Buoy 2 (LLNR 7010) to port and the coxswain turned northeast into Lucksee Sound. The chart plotter set up in the split screen mode, (radar on one side, GPS plotter on the other) and adjusted the scale to 4NM to check his track and for traffic in Lucksee Sound. When the route appeared clear and he noted his position in good water slightly to the right of his track, he advised the senior crewman, currently acting as helmsman, to increase speed. The helmsman increased the throttles to 1,950 shaft RPM.

At approximately 2146, the coxswain moved to scale down the chart plotter. Almost

simultaneously, CG 47214 ran aground on Rouges Island (43-42.47N, 070-06.62W), two of the crew received minor bumps and bruises from the impact of the grounding and during damage control efforts. At 2152, the ROMANCE reported assistance would be provided by a friend using a boat from the fisherman's Co-Op located in Potts Harbor. The MLB subsequently broke free of Rogues Island and came to rest on the Eastern side of Hope Island. The crew was recovered by the Maine Marine Patrol, and the MLB was salvaged by Station and Group personnel the following day. CG 47214 was extensively damaged and removed from service for repair.

Meteorological information:

The weather for the evolution is as follows: Overcast /heavy rain, winds: 070T at 35-45 kts. Seas 6-8, period between swells: n/a. Tidal currents: 010T at 1.3 kts. Air Temp: 42F. Sea Temp: 45F.

2. WLM Toxic Gas
Adaptability/Flexibility/Mission Analysis

Narrative:

On 11 July 2006, the USCGC conducted a Main Space Fire Drill. During the drill, the fire pump was energized; water went through the CHT tank flushing valve and began filling the sewage holding tank. Since the sewage vent line was blanked off by a CASREP, the fire main water filled and over pressurized the CHT tank. This led to the release of hydrogen sulfide (H2S) gas and CHT tank contents being ejected from around the blank flange and ruptured tank.

Two crew members acting as investigators for the drill and a crew member (who was asleep due to the midwatch) suffered acute inhalation exposure to hydrogen sulfide during this incident. The three exposed crew members received emergency medical treatment on-site and were taken to the hospital for evaluation. All three members were discharged on the same day. They all recovered fully without any residual symptoms. Since it was a drill, the crew did not realize that they had a hydrogen release.

The primary factor leading to this mishap was failure to secure the CHT tank flushing valve. However, the hydrogen sulfide release was ultimately caused by the removal of the sewage vent line for repair; previous vent line was of mild steel construction and had pinhole leaks. One recommendation is that an engineering change be generated to replace the mild steel sewage vent line with appropriate material such as copper nickel (CuNi) pipe on all Keeper class buoy tenders. This should be considered a class wide issue.

The conduct of the crew during the actual emergency led to the discovery of discrepancies in the ship's training program, particularly in regard to the use of respiratory protection in a toxic gas environment and during evacuations. The ship's force was fortunate to escape with only minor injuries given the breakdown of the implementation of the Toxic Gas Bill and general damage control training. Drills should be treated as if they are real which includes breathing air.

Meteorological information:

The weather for the evolution was not a factor.

3. MLB Grounding - Night
Assertiveness/Decision Making

Narrative:

On 17 July 2004, at approximately 2054Q (all times local), Group Cape Hatteras OPCEN received a call via cell phone from a National Park Ranger who was passing on a second hand report of a possible person in the water (PIW) off the old lighthouse site at Cape Hatteras. The report was specifically of an orange object, about the size of a person's chest with a black or brown center approximately 200-300 yards offshore. The reporting source initially made his report to a campground manager, who subsequently relayed it to the park ranger, resulting in a delay of approximately 50 minutes notifying the CG.

The Group Operations Duty Officer (ODO) took the original report from the park ranger; partially filled out a SAR incident check sheet and initiated a Marine Information Broadcast. After consulting with the Command Duty Officer (CDO), the Group Commander, and the D5 Command Center SAR Controller, an MLB from Station Hatteras Inlet (H/I) was directed to get underway to search for the possible PIW.

Station H/I was notified of the case and the possibility the MLB would be launched at 2105Q. The coxswain made it clear to the Group ODO that the crew would be "going in the bag", or exceeding fatigue limits. The order to launch came from the Group at 2120Q via a phone call. At approximately 2200Q, MLB 47244 got underway from CG Station H/I with a four-person crew. Station H/I retained the MLB's radio guard.

The ODO created a search plan utilizing C2PC which covered the area where the object would most likely drift. The search pattern was evaluated by a D5 Command Center SAR Controller, resulting in the reduction of the track spacing from 2/10 nautical mile to 1/10.

At approximately 0030Q on 18 July, Group Cape Hatteras attempted to pass the search pattern to MLB 47244 through the Station H/I watchstander by describing the corner points and major axis of the pattern. This was ineffective and the coxswain requested and received the latitude and longitude of the Commence Search Point (CSP) and 43 turn points of the search pattern via a cellular phone conversation with the ODO. The coxswain directed two crewmembers to plot CSP and turn to chart 11555, the positions were also entered into the boats GPS. The search pattern was difficult to plot due to the scale of the chart and was not completed.

At 0109Q, MLB 47244 arrived at CSP, launched a single M127A1 parachute flare, and began to search for the object with all crew on the open bridge. At approximately 0200Q, the engineer and a crewmember went to the enclosed bridge to rest out of the weather and maintain a lookout watch. At 0327Q, after completing approximately 70% of the pattern, MLB 47244 made a 90-degree turn to port in order to start an outbound leg of the search pattern. A few seconds later, MLB 47244 struck the center of three narrow steel groins (jetties) extending approximately 450' from the beach in the vicinity of Coast Guard Group Cape Hatteras, in position 35-15.42N, 075-31.00 W. MLB 47244 became stuck on top of the groin, taking repeated 90 to 120 degree

rolls as the vessel was struck by 4 to 6 foot seas on the beam.

After attempting to free the MLB, the coxswain directed the crew to abandon the vessel. After the entire crew was in the water, the coxswain realized that the MLB's port engine was running at an extremely high RPM. Fearing that the MLB would come off the groin and injure himself or his crew, the coxswain re-boarded the vessel and secured the engines.

The coxswain then swam to the beach to meet the other members of his crew. MLB 47244 floated free of the groin and arrived at the beach at about the same time as the coxswain. Once the coxswain was sure that the entire crew was safe on the beach in front of Group Cape Hatteras, he dispatched one crewmember to notify the Group OPCEN of the mishap and another to notify the Station H/I OinC. At 0524Q, Group Cape Hatteras suspended active searching based on the MLB's search efforts prior to the mishap.

Meteorological information:

The weather for the evolution is as follows: Winds SW at approximately 15 knots, thunderstorms with scattered showers, seas 2-4 ft, visibility occasionally reduced by rain squalls/showers.

4. WMEC Collision
Assertiveness/Situational Awareness

Glossary:
Soo Locks – Navigational locks maintained by the Army Corps of Engineers
Soo Traffic – Vessel Traffic Service St. Marys River

Narrative:

On 24 March 2004, at 0000, the shipping season started in the St. Mary's River with the reopening of the Soo Locks. 0112 CGC HOLLYHOCK made a report to Soo Traffic that they had stopped (hove-to) at the Northern end of the anchorage area, and shortly thereafter, secured the engines for the night.

0530 CGC HOLLYHOCK advised Soo Traffic of their intent to get underway in 30 minutes and head down the Middle Neebish Channel for track maintenance. The vessel proceeded with the appropriate checklists and machinery tests prior to getting underway. 0557 CGC HOLLYHOCK was underway with the Modified Navigation Detail from the anchorage area.

CGC HOLLYHOCK reported to Soo Traffic that they were underway and proceeding down bound for Lime Island via the up bound Middle Neebish Channel. Soo Traffic advised CGC HOLLYHOCK that the MN CSL LAURENTIAN is still in the ice just above Johnson Point. The M/V STEWART J. CORT asked Soo Traffic for the name of the vessel coming down bound. Soo Traffic advised M/V STEWART J. CORT the vessel is the CGC HOLLYHOCK coming down from Nine Mile and will freshen up the upper part of the Middle Neebish Channel. M/V STEWART J. CORT acknowledged.

At approximately 0745, CO CGC HOLLYHOCK, called Soo Traffic (cell phone). He reported visibility during his transit from Lake Nicolet to his current position above Johnson Point was approximately 150 yards or less throughout the transit, and he concurred with the VTS decision to close the river. At his current position in vicinity of the M/V CSL LAURENTIAN, he reported ice was not a hindrance but visibility is the issue – nobody can see. There was an established track of lighter brash and open water. He could see the track left behind from the last up bound vessel.

0806 CGC HOLLYHOCK hailed MN ATLANTIC HURON on channel 12. The MN ATLANTIC HURON reported three vessels hove-to below the Mud Lake Junction Buoy (MLJB). The M/V STEWART J. CORT was identified as the vessel closest to the buoy. No specific information regarding the position of the vessels was passed. CO, DECK, CONN, XO and JOOD believe M/V STEWART J. CORT to be 1000 yards beyond the MLJB.

CO, DECK, CONN, and XO agreed to a plan of turning before the MLJB in a cut-out track they had used several times prior to the morning of March 25. Their plan did not include a discussion of the position of the cutout track relative to the MLJB. The CO's understanding is that the cutout track is ten to twenty yards above the buoy. His intent is to stay in the established

track to avoid breaking the fast ice outside the track.

At approximately 0832, the DECK Officer reports from the master ECPINS console to the CO and CONN standing next to the starboard side CO chair, the M/V STEWART J. CORT is at a range of 1000 yards; range to the cutout track is reported as 600 yards. The deck officer then, using UHF radio, reports to the BOW LOOKOUT to keep a lookout forward as the M/V STEWART J. CORT is at a range of 1000 yards. The DECK requests the LOOKKOUT to report immediately when he sees the CORT.

08:34:45 CGC HOLLYHOCK speed as logged by ECPINS was 9.5 KTS. Using UHF radio, the BOW LOOKOUT reports a large ship dead ahead at 800 yards. The entire bridge watch sees the M/V SEWART J. CORT immediately after the report.

08:35:35 CGC HOLLYHOCK struck the M/V STEWART J. CORT

Meteorological information:

The weather for the evolution is as follows: Dense Fog.

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5. WMEC Dropped MSB
Assertiveness/Leadership

Narrative:

On 19 June 2006, the CGC Valiant was moored to the pier at ISC Miami, Miami Beach Florida, which is the cutters' homeport. The MSB aboard VALIANT was located starboard side to, cradled, and secured for sea using both the gripes and the falls. At approximately 1255 the BMC "X" approached BM1 "A" and informed him that the MSB was going to be off-loaded to a civilian contractor "Zero Tolerance" in order to be repaired.

While in deck berthing, BM1 "A" and BM1 "B" directed the SNBM "Q", SN "1", and SN "2" to retrieve their personal flotation devices (PFDs) and hard hats in order to lay topside to the MSB boat deck. BM1 "A" also instructed SN "3" to retrieve the crane bridle and bring it topside. Per the normal in port workday schedule, liberty was to be granted at 1300 for all hands not in the duty section or on duty, at department heads discretion. At approximately 1300, when BM1 "A" and BM1 "B" arrived on the boat deck, two SNs were on the boat deck near the MSB, a SN and a SR were on the pier, and two SNs were already in the MSB.

Neither of the two SNs in the MSB were qualified as a line handler. The line handler qualification includes knowledge of the equipment and standard operating procedures of the MSB.

The remaining personnel involved in the evolution included BM1 "A", an SNBM, four SNs, a SA and an SR. From this group, BM1 "A", SNBM, and two SNs were line handler qualified. The remaining personnel involved in the evolution were break-ins. BMC "X" was on the pier, with a SN and SR, talking to representatives from the civilian contractor. The BMC was also checking the contractor's trailer for fit and mechanical integrity.

Once at the boat deck, both BM1 "A" and BM1 "B" ascended the ladder to the catwalk directly above the MSB. Although BM1 "A" was wearing a white hard hat which signifies that he was the safety supervisor for the evolution, this was never explicitly announced. A deck supervisor for the evolution was never formally established. The BMC, on the pier, was not wearing a hard hat or PFD during the evolution. BMC was acting as the First Lieutenant, but was not part of the lowering evolution because he was working with the civilian contractor.

At approximately 1304, with the boat detail in their assigned positions, SNBM noticed a SN beginning to take off the aft inboard gripe. SNBM stopped the SN and had him stand fast while he verbally confirmed this action with BM1. SNBM asked BM1 if the gripes should be taken off. BM1 responded affirmatively and under the direction of SNBM the SN removed the aft outboard gripe. The SN then proceeded to take off the aft inboard gripe. SNBM instructed the SA on how to remove the forward outboard gripe. The SA then removed the forward inboard gripe.

The disconnected forward gripe and the disconnected aft gripe were then placed on the

catwalk next to BM1 “A” and BM1 “B”. At approximately 1307, BM1 “A” directed both SN to offload items from the MSB that did not need to go to the shop. These items included fire extinguishers, fenders, a toolkit, and a boat hook. All items were placed on the catwalk when unloaded. With the gear offloaded, the forward falls and the aft falls were disconnected. The falls needed to be removed in order to attach the crane bridle. Neither SN received a command to do so. One SN asked for and received assistance from another SN to retrieve the crane bridle from the sail loft, and handed the crane bridle up to two SN in the MSB once the falls were clear.

The crane bridle was connected forward but could not be successfully connected aft. Both SN noticed that the crane was still involved in moving hatches from the pier to the fantail. Both SN moved to the outboard side of the MSB to wait for the crane to move into position. At approximately 1309, the MSB dropped sharply about six inches. Within seconds after this movement, the port (inboard) side of the MSB flipped up sharply and the MSB rolled over the starboard side and off VALIANT.

As the MSB began to roll, one SN jumped from the aft portion of the MSB and was struck in the left leg by the MSB as he reached for the monkey line. The monkey line was camel backed, and the SN initially pulled the slack out of the line before it became taut. Once the line did become taut, the SN swung back into the side of VALIANT before he was pulled to safety on the boat deck. The other SN in the MSB was thrown out of the MSB onto the pier and landed on his back.

When looking at the stern of the MSB, it completed a 200 degree clockwise rotation before having the starboard gunwale strike the 18” high combing on the pier. This impact caused severe fiberglass damage to the port bow and also caused the engine cover to fall into the water between VALIANT and the pier. After the initial impact with the pier, the MSB slid approximately two feet before coming to rest upside down on top of the SN who had fallen to the pier. The SN was pinned with his left side down between the MSB port gunwale and the pier. Many VALIANT crewmembers lay to the pier and lifted the MSB off the pinned SN. Once the SN was moved to a safe location, the MSB was rolled upright.

Meteorological information:

The weather for the evolution was not a factor.

6. Line in Shaft/Dive Mishap
Assertiveness/Decision Making

Narrative:

An 87' WPB was mooring at the pier when a line handler mishandled the mooring line allowing it to be sucked onto the propeller shaft. The crew was unable to disentangle the mooring line from the shaft and contacted the District for assistance.

A local dive company was contracted to remove the mooring line. The divers discussed the problem with the cutter. However, they did not have a dive plan to present to the cutter.

One diver entered the water on a SCUBA dive to inspect the shaft and start the disentanglement process. The absence of visible bubbles alerted the dive supervisor that his partner may be in trouble. The dive supervisor, who was also acting as the standby diver, enters the water.

The dive supervisor found the diver entangled and unconscious. The dive supervisor brought the unconscious diver to the surface and requested that the cutter contact 911.

Meteorological information:

The weather for the evolution is as not a factor.

7. TPSB Collision
Communication/Mission Analysis

Note: The video is a hybrid of the two below mishaps.
Note: Although not depicted in the video personnel were ejected during both mishaps.

Narrative 1:

Coast Guard (CG) Station New Orleans (STA NOLA) had seven members attend Response Boat Tactics, Techniques and Procedures (RB-TTP) training on 10 JUN 04, conducted by Boat Forces Center TRACEN Yorktown, and receive certificates of completion. The command issued letters of Qualification and Certification as RB-S coxswains. Three of those certified coxswains were providing RB-TTP training to STA NOLA personnel on 23 and 24 MAR 05.

Training involved classroom instruction on the 23rd and tactical maneuvers training on the 24th. Three small boats, (RB-S) 25518, 25519, and 18' skiff (CG 181131) were utilized. The skiff (CG 181131) acting as opposing force (OPFOR), and two RB-S enforcing a limited access area (LAA). The tactical maneuver training was set to take place adjacent to the Lake Pontchartrain bridge/causeway, with the causeway acting as the High Value Asset (HVA).

Prior to getting underway, a pre-brief was held. A GAR (Green, Amber, Red) risk assessment was completed for each vessel (CG 25518 - #29, CG25519 - #27, CG 181131 - #27), these values facilitated a low amber condition across the board. A light chop of less than two feet made the Lake Pontchartrain location unfavorable for the skiff (CG 181131). A determination was made to move the training to the area outside the STA New Orleans boat basin, with a landside HVA identified.

Afternoon training consisted of "RB Drill Sets," basic maneuvers (slalom, figure eights, object avoidance/advance and transfer, and stopping distance) to familiarize certified boat crewmembers with the handling and response characteristics of the RB-S. Information diagramming drill sets are available from the Boat Forces Center website. Trainees were run through the drill sets at incremental speeds, gradually increasing, until successfully completing the exercise at full throttle.

The shore based HVA (located to the south) had a waterside security zone established; a semi circular zone set at 500 yards with a 200-yard outer intercept zone and a 100-yard inner reaction zone. To the east of the HVA's location was the rock jetty forming an "L" creating STA NOLA's fore bay. The security zone was then split down the middle with CG 25519 patrolling the east quarter and CG 25518 patrolling the west quarter.

The final tactical maneuver was being run before lunch, on MAR 24th. OPFOR (CG-181131) called "in play" and commenced a high speed run towards HVA. CG 25518 was in pursuit to intercept; on a course of constant bearing decreasing range (CBDR) CG 25519 was out of play. As the boats entered into extremis, OPFOR turned to starboard and throttled back, at which time, CG 25518 also turned hard to starboard, colliding with and riding up and over the port quarter running over the skiff (CG 181131) from port to starboard.

Narrative 2:

On 10 Feb 2007, at approximately 1500 hours, MSST 91103 Defender Class Boat CG 255020 and PSU 311 TPSB CG 25143 were conducting level two tactical coxswain training in the vicinity of pier 400 within the Los Angeles inner harbor area. The weather was clear, with a visibility of seven miles, winds were 10-15 knots from the west northwest, and the sea state was calm in the inner harbor area. During the course of the training evolution PSU 311- CG 25143 acting as the intercept boat for security zone alpha, proceeded to engage and deter the MSST 91103 CG 255020, acting as opposing forces from entering zone alpha. In an attempt to maintain security zone alpha, CG 25143 maintained standard operating procedures operating necessary to secure zone alpha while CG 255020 tried to enter the zone. Both vessels maintained course of action consistent with a real time scenario and upon determination that the time and closing distances were approaching a critical moment, both vessels took immediate corrective action to avoid colliding, but momentum carried both vessels into each other. Visual inspection of PSU 311 CG 25143 revealed damage to the starboard side, approximately three feet from the bow, and a portion of the rub rail was distorted upward along with a seven inch section where the gel coat was devoid and fiberglass core was smashed in approximately one quarter of an inch. The second area of damage is located approximately three feet below the first damaged area and included a one foot long by one inch wide area that was devoid of gel coat and displayed smashed and peeling Fiberglas along the strake surface. The only other damage noted was that of the minor scratches to the gel coat in between the two points of contact. A statement from the coxswain of MSST 91103 CG 255020 noted the damages to that boat as being limited to broken port aft side window and bent sliding window

Meteorological information:

The weather for the evolution is as follows: As depicted in the video.

8. BUSL Injury
Communication/Leadership

Narrative:

On 22 May 04, at approximately 0800, a navigation brief and GAR risk assessment was conducted. The GAR Model result was 18 (Green) indicating a low risk operation. Although required, no formal buoy deck safety brief was held. At 0810, CG 49413 got underway from ACOE. Onboard were BM1 (Buoy Deck Supervisor), BM2 (Coxswain), MK1 (Engineer/Hydraulic Operator), MK3 (Buoy Position Computer Operator), EM3 (Crewman), FNMK (Crewman), SN1 (Crewman), and SN2 (Crewman). The four buoy deck crewmembers were divided into two groups of two. One team was to work the deck in the morning, the other in the afternoon. The morning team consisted of EM3 and FNMK, the afternoon team consisted of SN1 and SN2. The team order was determined by a game of "Rock, Paper, and Scissors".

At 1137, CG 49413 was on scene Tonawanda Channel temporary buoy 29. At 1148, temporary buoy 29 was on deck. While pulling chain to recover the buoy mooring, only one whip and no horse collar was used. This resulted in a near miss, when the chain jumped out of the stopper and narrowly missed FNMK. At approximately 1150, FNMK removed himself from the buoy deck stating "My head is not in the game." SN1 relieved FNMK for the remainder of work on buoy 29.

At about 1430, CG 49413 was underway in the Upper Niagara River conducting seasonal commissioning in the Strawberry Island area. After working three buoys in the morning and reloading the deck for afternoon operations, CG 49413 was on station at Strawberry Island buoy #20 conducting a seasonal commissioning of the lighted buoy.

After bringing the winter marker, a fifth class nun ice buoy (5NI), onboard the mooring chain was placed in the chain stopper, the pelican hook was set, and the buoy was griped on deck. The buoy mooring was then unshackled and CG 49413 was riding the chain. The bottom of the 5NI was in between the port and starboard A-frames and needed to be moved forward and port in order to allow safe movement of the lighted buoy, a 5x11 LB, which was to be set on station.

Prior to moving the buoy, the crew was located in the following positions: BM1 (BDS) amidships on buoy deck forward of the 5NI, EM3 starboard side aft of the deck box (Crewman), FNMK (Crewman) on a sinker forward of the BDS, SN1 (Crewman) on the center line between the A-frame legs aft of the 5NI, and SN2 (Crewman) sitting on the aft port-side vent. BM2 (Coxswain), MK1 (Engineer/Hydraulic Operator), MK3 (Buoy Position Computer Operator) were in the pilot house.

With the Buoy Deck Supervisor (BDS) positioned at the top and a crewmember positioned at the bottom of the buoy they attempted to move the buoy by hand. BM 1 and SN1 were unable to move the buoy. BM 1 then directed EM3 to assist moving the buoy. EM3 repositioned himself to center line, aft between the 5X11 LB and 5NI placing his feet on the 5N1

just below the weld on the bottom 1/3 of the buoy.

SN1 remained at the bottom of the buoy with left hand on the bail and right hand on the buoy bottom. However, SN1 was not ready to move the buoy. BM1 remained at the top of the buoy. EM3 pushed the 5N1 with his feet, while bracing his back against the 5X11 LB. This sudden movement caused the left hand of the crewmember positioned on the bottom of the buoy to be crushed between the buoy mooring bail and the port A-frame.

Unit personnel administered first aid to the injured crewmember and requested assistance from Group Buffalo. A small boat from CG Station Buffalo was dispatched to evacuate the injured crewmember to an awaiting ambulance. The crewmember was transported to Kenmore Mercy Hospital and subsequently transferred to Erie County Medical Center (ECMC). At ECMC the decision was made to surgically amputate approximately one and one-quarter inches of the crewmember's left ring finger.

Meteorological information:

The weather for the evolution is as follows: Cloudy, winds calm, visibility greater than 3 miles, seas calm. Air Temperature: 68F. Water Temperature: <60.

9. Defender Class Ejection
Communication/Situational Awareness

Narrative:

CG 25701 was launched from the station to enforce security zone. One member of the crew stepped outside the cabin while preparing for the impending boarding. The CG25701 hailed the vessel to stop and turned on the boats siren.

As the CG25701 came along side; the vessel did not slow or stop and then attempted to evade the CG25701.

The coxswain yelled turning to port and immediately turned hard to port. The abrupt turn to port caused the crewmember on the aft deck to lose grip of the hand rail. Member was ejected off the boats starboard quarter. Crewmember was recovered in less than a minute and found to have no injuries. The coxswain reported the incident to the station.

Meteorological information:

The weather for the evolution is as follows: Overcast, 1-2 foot seas, Winds 5-10 knots.

10. Defender Class Capsize
Decision Making/Leadership

Narrative:

On 19 September 2005, CG-25501 got underway at approximately 1200 hours, for an eight hour patrol of a security zone in Valdez, Alaska. The security zone was a rectangle encompassing the Valdez Marine Terminal on the south side of the Port of Valdez. The crew consisted of a coxswain and two crewmen. All members were wearing dry-suits, SAR vests, and type-V PFD's. At approximately 1915, CG-25501 met with CG-25502, also on patrol in the security zone. CG 25502 transferred one break-in crewmember to CG-25501.

CG-25501 departed the center of the security zone, leaving CG-25502, proceeding east planning to meet CG-25500 at Buoy "B" in the northeast corner of the security zone. The northeast corner of the security zone is where the security boats routinely converged in order to pass on information and execute the relief process.

At 1927, the CG-25501 was heading down wind with throttles full ahead and seas on the port quarter. The engines were trimmed up between one half and three quarters. All four crewmembers were seated unbuckled within the cabin. The rear door was open and all windows were closed. The coxswain called out his intention to make a power turn to the port side. The crew braced themselves for the turn.

At 1928 the boat began the port turn. The port chine dug into the water as the coxswain turned on top of a small wave and turned harder to port (about 60 degrees). The vessel suddenly flipped violently onto its starboard side, coming to rest in an inverted position. The aft starboard window shattered and water began flooding into the cabin. All four crewmembers safely egressed through the aft door, surfacing and inflating their type-5 PFDs. With no noticeable fuel in the water the crew launched four pencil flares to notify the other units in the area.

CG-25500, the relief RBS, saw the flares and notified CG-25502, which was also patrolling the area. Both vessels responded to the scene and recovered all four persons in the water (PIW). The crew was taken to the local emergency room where they were treated and released without significant injuries. The CG-25501 was towed to the pier and righted the following day by crane.

Meteorological information:

The weather for the evolution is as follows: winds 10-15 knot and slight seas of 1-2 foot chop; both were out of the west.

11. CB-OTH Collision
Decision Making/Situational Awareness

Narrative:

On 20 October 2006, the CGC Northland was moored to the pier in Mayport, FL. At 0930 the Northland's CB-OTH (NOR-1, CG23127) was underway to test communications equipment. The crew of the NOR-1 was composed of the following members: 1- Ensign (trainee/ senior member on board), 1- BM2 (Coxswain), 1- ET2 (Communications Technician), 1- FN (Boat Engineer), and 1- SN (Boat Crewman/ Navigator). All members of the crew were qualified in their respective positions. A risk calculation worksheet was completed prior to the evolution. The results of the worksheet indicated a low risk for the evolution.

The NOR-1 was operating in the vicinity of the St. Johns River entrance Buoy "STJ" (N 30° 23.58' - W 81° 19.13'), while conducting communications equipment testing. The crew of the boat was aware of the location of the buoy in the operating area. As part of the evolution the boat was operating at various course headings and speeds while testing the communications equipment. At approximately 1027, the coxswain made an approach on the STJ Buoy. The NOR-1 was traveling at approximately 15-20 knots in the direction of the buoy. As the boat approached the buoy the coxswain played a game to see how close he could get to the buoy but instead collided with the STJ Buoy. Immediately after the impact the coxswain stopped the boat and checked for personnel casualties and boat damages.

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Meteorological information:

The weather for the evolution is as follows: Winds 5 kts. Seas: 1-3 ft. Visibility 10NM, Air Temp 80 Degrees Fahrenheit.

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12. UTL Collision
Mission Analysis/Situational Awareness

Narrative:

On 12 JAN 02, at approximately 1930 hrs EST, BM2 requested MK3 to serve as his engineer/crewmember/BTM on a patrol of Biscayne Bay, north of Station Miami Beach to conduct RBS hoardings/inspections. BM2 stated that he had received information that there might be some personal watercraft operating illegally (after dark) in the area. In addition, BM2 stated that he had just returned from seven days leave and wanted to conduct some area familiarization at night.

Earlier in the day, BM2 had received an invitation to have dinner at a residence on the south side of Palm Island, by another CG member who was visiting friends at that location. Prior to getting underway for the evening patrol, BM2 requested and received permission to have dinner at the Palm Island residence by Station Miami Beach's Officer of the Day.

On 12 JAN 02, at 2005 hrs, CG 242513 got underway out of Station Miami Beach with a crew of two to conduct Recreational Boating Safety (RBS) in Biscayne Bay. BM2 and MK3 boarded CG 242513 at Station Miami Beach and got underway at 2005, as per the Station Miami Beach's Radio Log. Statements from both crewmembers indicate that a crew brief was not conducted prior to getting underway.

Just after getting underway from Station Miami Beach, BM2 reported that he was radioed by another CG member and informed that his port running light was not operating. BM2 stated that he brought the throttles to neutral, unclipped the kill switch lanyard from his belt loop keeper and tapped the light, which then turned on. He returned to the helm re-clipped the kill switch lanyard and proceeded underway.

The CG 242513 transited through the MacArthur Causeway and proceeded north and west around Star Island, paralleling the shoreline of Hibiscus Island. The boat crew saw no vessels of interest in the vicinity of Hibiscus Island. At which time the coxswain reversed course to the east and transited along the northern shore of Hibiscus Island and subsequently south around the end of Hibiscus Island toward the MacArthur Causeway. The estimated speed throughout this transit was 33-38 knots.

As the coxswain transited around the south end of Hibiscus Island, he identified an anchored vessel off his port bow just to the west of Star Island. After contemplating conducting a boarding of the anchored vessel, the coxswain realized he had entered into a Manatee Zone and began throttling back on both engines. At the same time, both crewmembers saw a silhouette of a dark object in their path. The coxswain took immediate evasive action in an attempt to avoid a collision, by turning the steering wheel hard to port (to the lock position) and applying starboard throttle. The CG 242513 made broadside contact with the vessel (which was later identified as the MN Bayside Blaster). Both Coast Guard boat crewmembers were involuntarily ejected over the starboard side of the CG 242513. While in the water the crew became aware that the CG

242513 was still operating and the engines had not cut off.

The crew heard a second impact (CG 242513 struck its bow on the MN Bayside Blaster's starboard amidships). No passengers or crew of the M/V Bayside Blaster were ejected during either strike. The CG 242513 continued to run and turn in counter-clockwise circles. The CG 242513 continued to operate as it edged closer to the shore of Palm Island (lying parallel and to the South of Hibiscus Island) and struck a privately owned vessel twice, later identified as the MN Fandango, docked behind the owner's home. CG242513 then continued to circle and work its way north two houses, finally becoming trapped in pilings and the engines were secured.

During the period of time that the CG 242513 was operating with no one onboard, both boat crewmembers were making their way to Palm Island. After entering the water, both crewmembers made the decision to remove their life vest to enable them to better monitor the location of the CG 242513 to make swimming easier and to avoid the CG 242513 from hitting them. Two civilians who entered the water from a Palm Island residence assisted both crewmembers to shore.

After the second impact the MN Bayside Blaster continued underway to nearby Monument Island, were it was intentionally beached and all passengers were offloaded. The captain and the crew checked the MN Bayside Blaster for watertight integrity and called for assistance. Local police authorities and CG units assisted with the passenger checks and evacuation from the island to another vessel. Nine passengers were brought to the station, four were taken to the local emergency room and released after treatment of minor injuries.

Both Coast Guard boat crewmembers were taken to a local hospital where they were evaluated, treated for minor injuries, and then released the same day. The coxswain turned over his weapon and belt to another CG member prior to departing for the emergency room. The weapon belt had a synthetic loop with a plastic keeper to which the coxswain had attached the metal clip of the coiled kill switch lanyard cord. The plastic keeper on the synthetic loop was broken. The CG 242513 was recovered and hauled by trailer to Station Miami Beach. The MN Bayside Blaster returned under its own power to its mooring.

Meteorological information:

The weather for the evolution is as follows: Clear, winds 7-10 knots, seas calm, visibility 10 nm, reported as lightly cloudy by engineer. Lighting conditions: dark, marina with surrounding lights from MacArthur Causeway, Port of Miami, and house lights on Star Island, Palm Island, and Hibiscus Island; multiple colors and intensities of lights; multiple patterns of light configuration.

13. UTL Ejection
Situational Awareness

Narrative:

On 01 October 2000, at about 1115Q, the 21FT Rigid Hull Inflatable (RHIB), non-standard small boat, CG 212522 proceeded underway from USCG Station Islamorada to conduct recreational boating safety boardings and underway training. The RHIB transited along the reef line between Davis and Crocker reefs in the Atlantic Ocean seaward of Hawks Channel. On board the RHIB was a regular qualified crew consisting of one coxswain, one crewmember, and one break-in coxswain. The RHIB and all personnel are permanently assigned to the station under the OPCON of Commander, Coast Guard Group Key West, FL. The RHIB crew departed the station wearing their working blue uniform, Coast Guard Type III Personal Flotation devices and law enforcement belts with 9mm weapons. They elected to leave behind their SAR vests with pyro and personal body armor

Upon completion of two CG-4100 safety boardings and two spot checks for life jackets and fire extinguishers, the crew decided it was too hot to continue the mission and elected to return to the station. They all reported feeling dehydrated. The crew had not taken any additional fluids for the trip or prior to departure.

The crew had just finished answering a citizen's questions about spear fishing when the decision to head home was made. The RHIB was maneuvering at idle away from the recreational vessel when the break-in coxswain asked for a turn at the helm. He took a position behind the wheel and took control of the throttle (a single 175hp outboard engine). The relieved coxswain still had the outboard engine kill switch attached to his person. The RHIB came up on a plane. The break-in coxswain, now helmsman, was instructed to steer towards a prominent tower ashore. This required a small 5-10 degree course change to starboard. The kill switch was removed by the first coxswain and left hanging for the break-in to grab. The break-in coxswain reached down for the kill switch lanyard and clip to attach it to his person, but before he could complete that act the entire crew was suddenly ejected from the boat via the port side, while the boat veered hard to starboard. The kill switch remained intact, attached at the console, allowing the RHIB to continue to run at 3100 rpm (approximately 30 knots) on a plane with no one at the helm.

The RHIB proceeded to encircle the three uninjured crewmen. The direction of the RHIB was predominantly clockwise (turns to the right) indicating a hard over helm position facilitating the turns to starboard. The qualified coxswain who had been in this situation before as a civilian instructed the two crewmembers to remove their lifejackets, hold on to them, and be prepared to dive under if the RHIB headed their way. The RHIB on at least two occasions (as it circled and hit its own wake, changed course and headed directly for the three crewmen. They all dove under to avoid the RHIB hull, skeg, and outboard engine prop.

The coxswain instructed the two crewmembers to fire their 9mm as a distress signal in a safe direction to attract help and assistance. He then gave his gear to his two shipmates and

swam towards a position outside the circling RHIB to an approaching recreational vessel. The crewman had to again dive under to avoid the circling RHIB to reach the approaching "Good Samaritan" this was the third time he had avoided the unmanned small boat.

A "Good Samaritan" who had noticed the situation approached the swimming coxswain and recovered him from the water. The two remaining crewmembers were still inside the circling (on a plane) RHIB. The coxswain once onboard took control of the civilian 20ft pleasure craft, drove it inside the circling RHIB and retrieved the two crewmen. Then safely left the danger zone and stood by as a Florida Wildlife Conservation Commission (FWCC) vessel with one officer aboard approached.

The crew called the STA watchstander using the civilians' cell phone to report the ejection and run-a-way RHIB. The OOD advised the coxswain to "stay put" as he was on his way to the scene on a CG 41ft UTB, with an ETA of 10 minutes.

The coxswain, after talking to the station OOD, re-donned his lifejacket and boarded the FWCC vessel, FL-0253-GW, a 25ft Mako, with twin 200hp outboard motors. The coxswain and FWCC officer fearing for the safety of nearby boaters tried to approach the RHIB to disembark the coxswain. They soon discontinued the attempts to board as the approaches and maneuvers were not safe. They next tried to foul the RHIB's prop with a polypropylene line. Several attempts failed. They then tried to come along side with the coxswain trying to use a 6ft boat hook to reach into the RHIB to pull the throttle back. This maneuver also failed. The FWCC vessel came to a stop while the Coast Guard member went forward to get a larger polypropylene line from under a forward deck stowage bin.

The FWCC officer and coxswain planned to drop a larger line to foul the prop. A second FWCC small boat was on-scene by this time and was instructed to stay back and keep passerby clear of the area. The FWCC officer and coxswain simultaneously looked up and saw the RHIB had changed course and was about to collide with them. There was no time to maneuver or throttle out of the way. The RHIB struck solidly at or near the bow, perpendicular to the FWCC vessel. Although the coxswain had crouched the force of the collision immediately ejected him over the starboard side, forward of amidships.

The RHIB came off a plane upon colliding with the larger and heavier FWCC vessel. The FWCC officer had yelled at the last second a warning to the Coast Guard crewman, as he himself ducked behind his console and seat milliseconds before the collision. When he stood back up the CG member was nowhere to be found. After the RHIB hit the FWCC vessel at/near the bow, it likely continued down the port bow placing the RHIB's port side hard against the FWCC's Port bow/side. The RHIB, still at full or near full throttle, was attempting to regain speed and a plane now in a very tight right hand turn. The RHIB turned right, cleared the port bow and side, continued hard right tightly and then bow-on ran close down the starboard bow and side of the FWCC vessel.

The Coast Guard member found himself in the water and uninjured from the collision. He immediately saw the RHIB almost upon him. As the coxswain was still in his lifejacket he was unable to dive to avoid the boat. He tried desperately to reach and hold the trailer eyebolt

ring as the RHIB bow was now upon him. He missed the ring which he intended to hold to keep from being run over.

He pushed hard on the fiberglass hull as the RHIB passed over him he saw and reached for the bullet and skeg of the engine's lower unit, knowing the danger he was in. He felt the prop strike his left shoulder and remembers being hit in the head.

The RHIB cleared him. He saw the FWCC vessel and officer close aboard, called to him, reached for him and tried to climb back into the FWCC boat. The FWCC officer saw the Coast Guard member and immediately recognized he was badly injured; he approached, grabbed him at the rail, pulled him aft and helped the still conscious Coast Guard member into his boat. The FWCC officer and a fellow FWCC officer called in the injured man report to FWCC dispatch as they proceeded towards the approaching UTB. The FWCC officer was directed by the UTB coxswain (the u/w station OOD) to proceed at best possible speed to Station Islamorada where a local EMS ambulance would be awaiting their arrival. The FWCC officer had the conscious injured crewmember hold a compress bandage to his head to stem the bleeding. The FWCC officer also directed the injured Coast Guard crewman to remain seated aft.

A third vessel from NOAA with an FWCC officer aboard arrived on-scene. The officer had a piece of gill netting kept just for this purpose aboard his boat. He maneuvered ahead of the RHIB and deployed the net immediately fouling the prop and stopping the engine.

The injured coxswain was transferred to the fire department EMS ambulance upon arrival at the station, taken to the local hospital and subsequently evacuated by EMS helicopter to a major city trauma center. The injured coxswain underwent immediate surgery upon arrival at hospital. His injuries were life threatening and he was initially listed in critical condition. The injured coxswain has since been released from the hospital and is on convalescent leave recovering from his injuries.

The UTB took the disabled RHIB in stern tow and returned the RHIB to STA where it was secured and placed on a trailer awaiting group and MAB investigators. The RHIB had suffered significant damages to the forward sponson, forward towing bit, forward storage box, mounting bolts, hinges, and hull fiberglass. Replacement of the sponson and repair of equipment and deck fittings located at the bow are required.

Meteorological information:

The weather for the evolution is as follows: As depicted in the video.