



Supplemental (September 2015) Analysis of Auxiliary Surface Mishaps Summary

This Supplemental Mishap Analysis Report continues the analysis of Coast Guard Auxiliary Surface Operations mishaps reported to this Directorate through the chain of leadership. The current supplemental analysis was conducted for the period of winter 2013 through September of 2015. The patterns and trends identified during this period were viewed separately from the initial analysis issued in May of 2014, but the current findings for the supplemental report period will be compared to the initial report to illuminate changing patterns, if any, or to reinforce patterns identified in the original analysis that covered years 2010, through early 2014.

It should be noted that the sampling of reports for this supplemental report is relatively small (a total of 16 mishaps). This illustrates the critical need to achieve a much higher rate of reporting mishaps throughout the fleet. The validity and reliability of this analysis depends on high rates of mishap reporting.

Findings:

The following surface mishap patterns and trends are based on data received from February 2014 through September 2015.

1. 32 percent of all reported mishaps occurred either before or after underway patrol time. The non-underway mishaps include trailering problems and problems at the marina while crews were preparing to get underway or when securing after the underway portion of the patrol. These problems include those caused by loading and un-loading of equipment, and slips and falls at docks, ramps, etc.

This percentage represents a reduction from the 51% figure for pre and post underway mishaps reported in May Of 2014. In either case, it seems mishaps occurring during the period of pre and post underway activity is problematic.

2. Approximately 12 percent of all reported mishaps were directly caused by line handling problems at the dock or underway during towing evolutions or training.

The May 2014 report reflected a 16% line handling figure; statistically not a significant change.

3. No reported mishaps involved mechanical failures of equipment.

The May 2014 report contained a .5% rate of mechanical mishaps; this is consistent with the new findings in the October 2015 report.

4. 32 percent of all reported mishaps resulted in injury. Most injuries were minor however one mishap resulted in serious injuries to multiple crew members while another fall resulted in serious back injuries.

This seems at odds with the 2% injury rate reported in May of 2014. This difference may be due to the emphasis this Division has placed on accurate reporting of even minor scrapes and bruises at our web conferences, newsletter articles and workshops. It may not necessarily indicate an actual increase in injuries.

5. 37 percent of all reported mishaps involved slips and falls at the dock prior to getting underway or at the conclusion of the underway portion of the patrol.

This is the exact percentage reported in May of 2014.

6. 25% of reported mishaps occurred at night.
7. 37 percent of all mishaps were grounding incidents; while submerged objects were struck in 3 additional mishap incidents.

Conclusions/Recommendations

1. Mechanical/Equipment Failure Versus Human Caused Mishaps:

The findings reported in this report reinforce the findings of the initial analysis, that the vast majority of mishaps involve human error, lapses or failures in following appropriate procedures and best practices. The human caused mishaps include lapses and failures that, although not always thought to be “serious”, still represent issues that need to be addressed. Complacency, crew fatigue, and lack of specialized training for specific tasks such as line handling, should be considered likely causes of human error.

As reported in the initial analytical report of May 2014, we must continue to emphasize the pre-underway checklist of equipment and facility mechanics/seaworthiness. But it is also increasingly clear that reported mishaps due to mechanical and/or equipment failures are relatively rare. To reduce dockside, underway and line handling mishaps, we must be proficient in basic seamanship skills including line handling, pilotage, watch standing, crewmember balance/dexterity techniques, etc. Although our training and qualification standards currently address most of these elements, based on the mishap data, it is possible that if more emphasis is placed on a few specific areas of seamanship and routine dockside practices, then mishaps and injuries can be reduced.

For example, some skills, such as marlinspike, are explained thoroughly in our BCTM and are comprehensively addressed in the qualification guide. Other skills, such as how to load or unload equipment safely, proper line handling techniques during tows, etc., how to safely launch from docks or beaches, or how to trailer/de-trailer, are not consistently addressed or taught.

Although crewmembers may be trained to be alert for, say, a chafed towline, we cannot assume that they know how to safely correct such a condition unless they are taught the right way to do so. Likewise, watch standing techniques, such as use of hand holds, balancing the vessel by crew positioning, ensuring that all crew members are aware of what their shipmates are doing, etc., should be covered during training.

2. Dockside Mishaps

The focus on getting underway can contribute to a lack of attention to dockside hazards. This lack of attention may also exist when the patrol is nearing an end and crews begin to look beyond their duties as they prepare to dock and unload equipment. Shortcuts in preparation and mission analysis, especially when beginning a “routine” patrol with crewmembers we are

“comfortable” with, may exacerbate this. Crew fatigue and complacency may be factors in post underway mishaps, as well.

Recommendations:

As stated in the initial Mishap Analysis report of May 2014, we recommend that extra attention and emphasis be given to preventing “pre” and “post” underway mishaps in training sessions, best practices, workshops, re-qualification check rides, etc. Specific skills related to dockside, beach and marina tasks, such as loading and unloading, crew balance, using hand holds while boarding and exiting vessels, lifting/balance techniques on vessels, and specific line handling techniques, should be incorporated into initial and re-qualification dockside & underway check ride evolutions, for both crew and coxswains.

The higher percentage of underway mishaps encountered in this supplemental report may be a statistical anomaly due to the small sampling (16 mishaps) noted previously. However, if this increase in underway mishaps (mostly groundings) continues in future reports, then our training focus may need to be shifted even more affirmatively towards risk analysis and TCT principles, as well as more detailed PQS items that measure specific and more detailed tasks in areas where mishaps seem to be increasing.

Periodic Analysis Reports- Use for Training and Qualifications/Standards Review:

The Surface Operations Division has utilized the results of the initial May 2014 analysis report, and the current supplemental report to identify some of the hazards common to mishaps that were examined during the analytical process. Based on the findings and also input from the quarterly DSO-OP teleconferences, the Surface Division has developed and disseminated best practices guides that are designed to address some of the hazards and risks identified in the initial report and while conducting the analysis for the Supplemental report. Specifically:

A “Night Operations Guide” was developed, disseminated, and posted on the Response Directorate web site. This guide reviews and recommends safe practices to be adhered to during night or limited visibility operations such as speed management, etc.

A “HELO OPS Guide” was developed, disseminated and posted on the Response site that provides basic “how to” safety practices while performing training or SAR operations with Coast Guard air assets.

The division is currently developing a “RADAR Usage Guide” to provide basic best practices for crews on surface facilities equipped with RADAR for navigation and collision avoidance purposes.

3. Mishap Reporting Issues

All the findings and recommendations reported in this supplemental report are subject to the relative accuracy of mishap reporting. This analysis is to some extent hampered by the lack of comprehensive, summary based mishap reporting from the fleet although reporting seems to have improved somewhat during the past year.

Great efforts have been taken to ensure that all crews understand that the response Directorate does not capture any personal information of any kind to conduct this analysis. No

one's name, address, flotilla or division is requested or maintained. No medical privacy issues exist that precludes capturing summary data on the aggregate number of various types of injuries.

We encourage all levels of the Chain of Leadership and Management to actively support and encourage mishap reporting at every level in a manner consistent with established policy. Our intention is to issue supplemental reports each year, as long as we receive a sufficient number of mishap reports to analyze that give us confidence in the findings.