**EXECUTIVE SUMMARY**

**TITLE:** Commander, Naval Air Forces Mishap Analysis

**Bottom Line Up Front:**

**AVIATION MISHAPS**

- There has been no significant change in class A, B, or C mishap rates during the FY2004 to 2009 time period.
- Aircrew error was the most common "What" factor in mishaps, specifically aircrew coordination, improper flight preparation, and improper flight control inputs.
- Decision/Judgment errors and miscommunication were the most common "Why" factors.
- Analysis of aviation mishap incident type shows the prevalence of preventable ground mishaps. Leading incidents include damage during maintenance, aircraft ground handling and collisions with objects ashore/afloat.
- The leading system failure component involved landing gear malfunctions.
- There is no statistically significant difference between Navy and Marine Corps F/A-18 mishap rates since FY2000.
- AIRFOR midair collisions occur at a statistically significant higher rate than USAF midair collisions since FY2000.

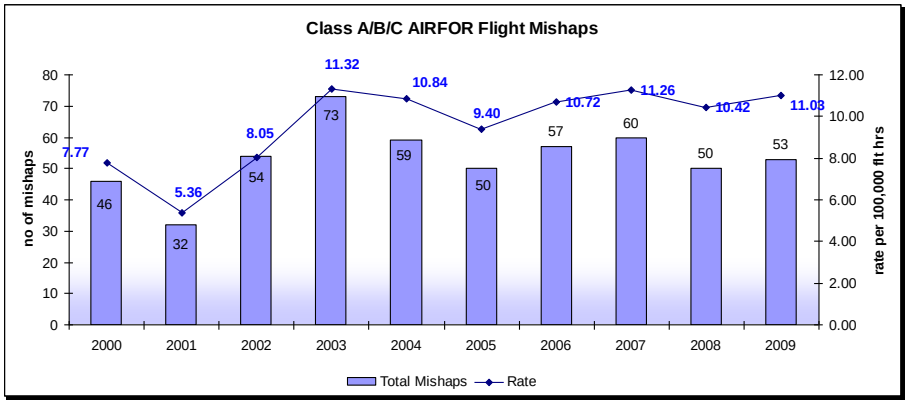
**GROUND MISHAPS**

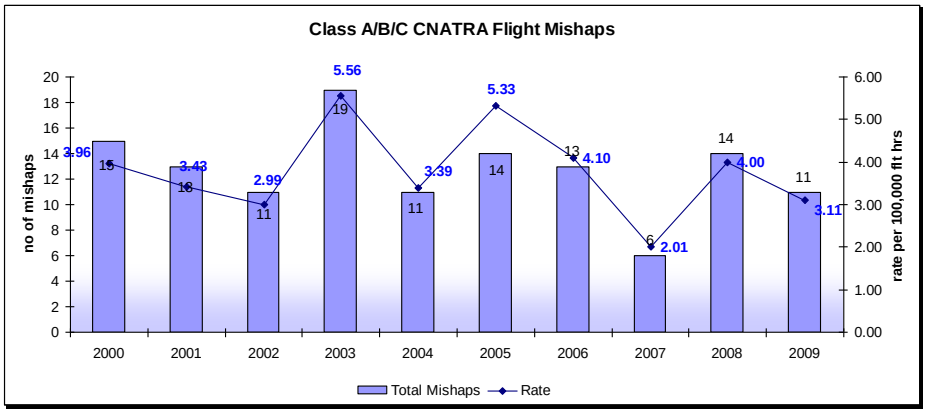
- There has been no significant change in class A, B, or C on-duty aircraft carrier mishap rates during the FY2004 to 2009 time period.
- Non-carrier AIRFOR units have had an increase in on-duty mishaps. The increase most likely is a result of the implementation of WESS.
- Falls from ladders and injuries from hatches/scuttles/ doors were the most common on-duty injuries.
- Sports and off-road vehicles were the leading cause of off-duty injury.

**SUMMARY:** This study answers the following questions about with respect to Naval Air Force mishaps:

1. What are the Class A/B/C flight mishap rates for current aircraft models?
2. What are the most common involved factors in aviation mishaps?
3. What are the Class A/B/C on-duty mishap rates for AIRFOR and CNATRA?
4. What are the most common Class A/B/C on-duty mishaps for AIRFOR and CNATRA?
5. What are the most common Class A/B/C on/off duty injuries for AIRFOR and CNATRA?
6. How much lost work time can be attributed to recreational activities for AIRFOR and CNATRA?

Aviation class A/B/C flight mishap rates for AIRFOR and CNATRA are displayed below. There was no statistically significant change in the rates.




Generally the flight mishap rates for individual aircraft have also not changed significantly.

Aviation involved factors continue to be heavily attributed to human error. The study analyzed involved factors separately for fighter/attack, helo, trainer and surveillance aircraft. There were no substantial differences in factors for each aircraft group. Aircrew coordination, flight preparation, and judgment/decision making were frequently occurring factors in mishaps for each grouping.

The most common on-duty mishaps involved falls from ladders or injuries from scuttles/hatches/doors. This was also true for non-ship's company AIRFOR personnel. More squadron personnel were injured by ladders and hatches than were injured working on aircraft.

For off-duty mishaps sports, slips/trips/falls and off-road motor vehicles were the leading lost work days activities.

**RECOMMENDATIONS**

- Continue to emphasize the importance of aircrew coordination training.
- Review shore and afloat aircraft movement procedures for ways to reduce the amount of aircraft collisions into objects, aircraft and people.
- Emphasize the importance of strictly following written procedures during aircraft maintenance and aircraft operation.
- Provide training on the safe operation of off-road vehicles.