



The

Safety

Wire

May 2015

**Boilerplate SMS** has been one of the leading requests I have received from ALEA members. I would love to be able to sit down and type out a document that anyone could download, add their agency name to, and place on the shelf as their new Safety Management System.

I would love it because I honestly believe that using an SMS will allow an agency to fly more and reduce the number of accidents in our industry. Unfortunately, the aspects that make SMS effective are the same elements that make it impossible to create a single boilerplate document that everyone can use.

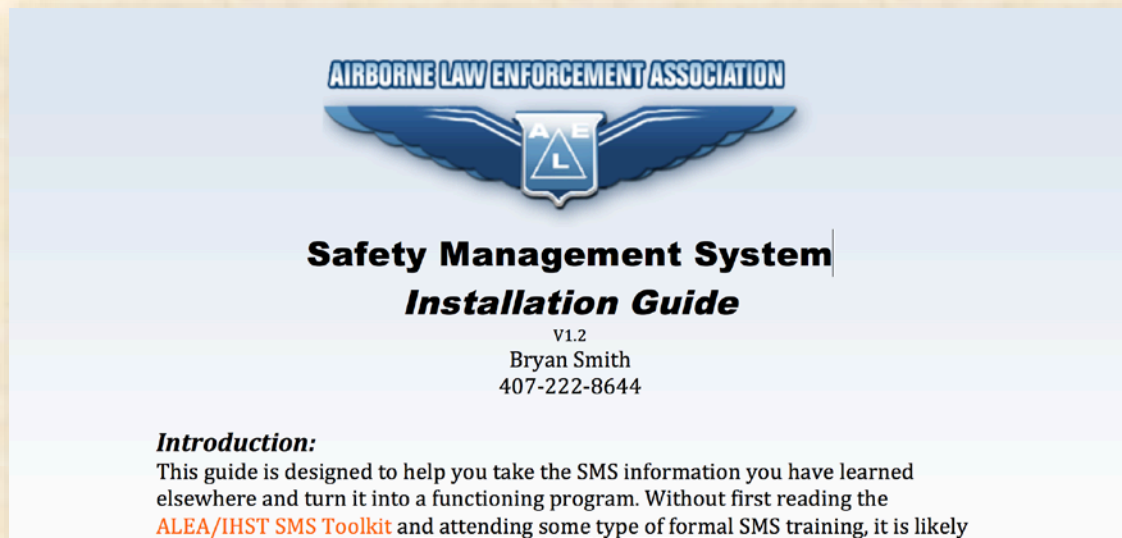


The most recent SMS Toolkit was published in 2009 and covers the basic theory of Safety Management Systems. Since then, we have been expanding our training opportunities and resources for safety officers who are attempting to utilize the most effective safety techniques available. Over the past few months, members of the safety officer group that meets online have been trying out a new resource, the SMS Installation Guide.

The guide expands on the SMS Toolkit and other resources to provide a step-by-step process for a safety officer to follow when implementing SMS. There are sample documents and resources included in the kit. In the coming months, we will be adding to the kit and posting webinars with more detailed instructions and examples.

The Aviation Safety Officer (ASO) course offered during ALEA EXPO this July in Houston, TX will focus heavily on the practical application and administration of an SMS. This new Installation Guide will be a significant part of that class.

For those of you looking at obtaining accreditation with the Public Safety Aviation Accreditation Commission (PSAAC), there are references to those standards in the kit. While the kit does not guarantee accreditation approval, they will help guide you through the process of setting up the safety portion of your program when seeking compliance with those standards.



The kit and associated resources are available on the ALEA website. I recognize that it is not perfect, and invite your feedback so the kit can be the best resource possible.

INSERT LINK HERE

*Make your mistakes on the ground*

*~ Kyle Evans  
Fort Bend Air Support*

# Practical SMS

## Emergency Response Planning

Creating an effective Emergency Response Plan (ERP) in the event of an incident or accident is a critical part of an effective SMS. The SMS kit mentioned above has a



sample ERP that has been used to develop plans that were actually utilized in law enforcement aviation incidents. Setting up the plan is just one step in the process. No matter how great your plan, without running it through a few exercises, it will not likely be effective if needed. One of the major issues to be addressed is communications. The story below is a common example of how something as simple as radio communication can turn a great

plan into a useless binder. In addition to communication devices, the language used in an aviation response plan will always have items that non-aviation folks do not understand as well as you think they should.

Have a tabletop exercise first and then set up a live exercise with as many involved agencies as possible. Remember, the goal of an ERP is to make sure someone knows immediately when an aircrew needs help and that there is an effective means of locating that crew and delivering help within the first ‘Golden Hour’.

<http://www.paysonroundup.com/news/2015/may/01/emergency-communications-confusion/>

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## Safety Resources

Updated HEMS Weather Tool from NOAA:

<http://www.aviationweather.gov/hemst>

<http://aviationweather.gov/news/#243>

Department of the Interior Aviation Lessons Learned:  
[http://www.doi.gov/aviation/safety/lessons\\_learned.cfm](http://www.doi.gov/aviation/safety/lessons_learned.cfm)

FAA Safety Briefing:  
[http://www.faa.gov/news/safety\\_briefing/](http://www.faa.gov/news/safety_briefing/)

NASA Callback Safety Newsletter (Maintenance Issue):  
[http://asrs.arc.nasa.gov/publications/callback/cb\\_424.html](http://asrs.arc.nasa.gov/publications/callback/cb_424.html)

*"The safety of the operator is more important than any other point. Greater prudence is needed rather than greater skill."*

*~ Wilbur Wright*

## *From the Trenches*

Last month, we covered bird strikes. I received an email from an ALEA member adding a very interesting aspect of bird strikes that I had not considered. It is worth passing on:

One thing not mentioned in the article was the affect of the smells from the disemboweled fowl. Buzzards eat rotten meat, and add to that the feces all blown into your face... and you will have a hard time not adding vomit to the aroma. Very hard to fly while vomiting.

*Sgt. Dennis Mack (retired)  
Lakeland Florida PD*



I always appreciate input from ALEA members. Please contact me 24/7 if you have something you'd like to share.

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## Reality Check...

**Note:** The following reports are taken directly from the reporting source and edited for length. The grammatical format and writing style of the reporting source has been retained. My comments are added in red where appropriate. The goal of publishing these reports is to learn from these tragic events and not to pass judgment on the persons involved.

**Aircraft: Gulfstream G IV**

**Injuries: 7 Fatal**

**NTSB Identification: ERA14MA271**

[http://www.nts.gov/\\_layouts/ntsb.aviation/brief.aspx?ev\\_id=20140531X32035&key=1](http://www.nts.gov/_layouts/ntsb.aviation/brief.aspx?ev_id=20140531X32035&key=1)

A Gulfstream Aerospace Corporation G-IV was destroyed after a rejected takeoff and runway excursion. The two pilots, a flight attendant, and four passengers were fatally injured.

The airplane was subsequently cleared for takeoff from runway 11, a 7,011-foot-long, 150-foot wide, grooved, asphalt runway. A witness observed the airplane on the takeoff roll at a "high speed" with "little to no altitude gained." The airplane subsequently rolled off the end of the runway, on to a runway safety area, and then on to grass. The airplane continued on the grass, where it struck approach lighting and a localizer antenna assembly, before coming to rest in a gully, on about runway heading, about 1,850 feet from the end of the runway.

The CVR captured callouts of 80 knots, V1, and rotate. After the rotate callout, the CVR captured comments concerning aircraft control. FDR data indicated the airplane reached a maximum speed of 165 knots during the takeoff roll and did not lift off the runway. FDR data further indicated thrust reversers were deployed and wheel brake pressures increased as the airplane decelerated.

The airplane was equipped with a mechanical gust lock system, which could be utilized to lock the ailerons and rudder in the neutral position, and the elevator in the down position to protect the control surfaces from wind gusts while parked. A mechanical interlock was

incorporated in the gust lock handle mechanism to restrict the movement of the throttle levers to a minimal amount (6-percent) when the gust lock handle was engaged.

The FDR data revealed the elevator control surface position during the taxi and takeoff was consistent with its position if the gust lock was engaged. The gust lock handle, located on the right side of the control pedestal, was found in the forward (OFF) position, and the elevator gust lock latch was found not engaged.

The certificated airplane transport pilot, who was seated in the right seat, reported 18,500 hours of total flight experience

*From the docket:*

A quick access recorder installed in the airplane involved in the accident revealed that out of 176 takeoffs, only two complete and 16 partial control checks were identified. There was none identified for the accident flight.

According to the cockpit voice recorder transcript, during takeoff roll the copilot reported the “rudder limit” advisory message. The captain asked whether the copilot was using the rudders, to which the copilot responded, “No.” A sound similar to a power increase followed, then the copilot reported “V1” and “rotate.” Within a second the captain repeatedly reported, “Lock is on,” and then, “I can’t stop it.” The aircraft reached 165 knots on takeoff roll but did not lift off the runway.

The contract pilot also reported that the captain conducted complete flight control checklists before each of their flights but did not use a formal item-by-item checklist.

*Additional info:*

<http://www.ainonline.com/aviation-news/business-aviation/2015-04-08/ntsb-docket-reveals-cockpit-warning-giv-crash>

<http://dms.nts.gov/pubdms/search/hitlist.cfm?docketID=57175&CFID=517157&CFTOKEN=93838911>

**Aircraft: Hughes 369D**

**Injuries: 1 Fatal**

**NTSB Identification: ERA15FA178**

[http://www.nts.gov/layouts/nts.aviation/brief.aspx?ev\\_id=20150407X12857&key=1](http://www.nts.gov/layouts/nts.aviation/brief.aspx?ev_id=20150407X12857&key=1)

A Hughes 369D was substantially damaged when it impacted the Tennessee River adjacent the Natchez Trace Bridge, near Cherokee, Alabama. The commercial pilot was fatally injured. Low ceilings and fog prevailed. The **positioning flight** was conducted under the provisions of 14 Code of Federal Regulations Part 91.

According to a witness, a former private pilot, he heard the helicopter land in a National Park Service field contiguous to his property, about 3,900 feet from the 1-mile-long, north-south Natchez Trace Parkway Bridge. He couldn't see the bridge at the time due to fog and light mist.

The helicopter remained on the ground for about 45 seconds, still powered with rotors turning; then power increased and it took off smoothly, clearing trees by about 30 feet. The helicopter subsequently headed toward the bridge, and after about 10 to 15 seconds, the witness lost sight of it in the fog. As the helicopter flew, the witness heard no anomalies, and the engine sounded "healthy." He subsequently heard the helicopter hit the water with no change in sound until impact.

According to another witness, he was fishing under the south end of the bridge when the accident occurred. The weather was foggy with low visibility and rain.

The witness heard the helicopter for about 10 to 15 minutes before seeing it coming toward him, paralleling the west side of the bridge. When he first saw the helicopter through the fog, it was level with the top of the bridge. It began a gradual descent, then about 10 seconds before water impact, dropped (nose-dived) to about 25 feet above the water. It subsequently descended at a 10- to 15-degree angle, and impacted the water near the center of the river, about 50 to 100 feet east of a green buoy (about 100 yards west of the bridge.)

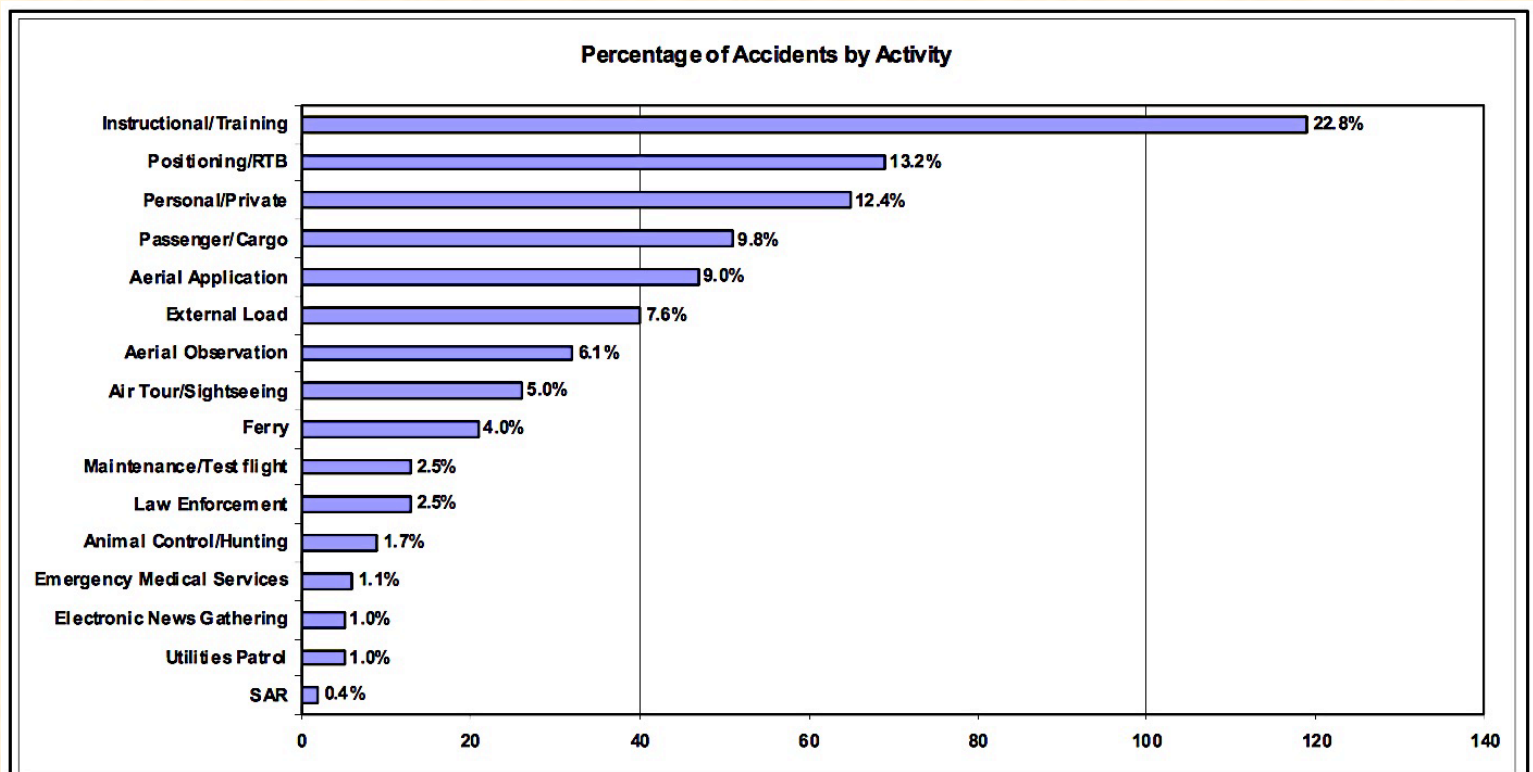


Figure 7. Percentage of Accidents by Activity

*Taken from a 2011 IHST report. Note the second highest number of accidents occurred during Positioning and RTB activities.*

[http://www.ihst.org/portals/54/US\\_JSHAT\\_Compndium\\_Report1.pdf](http://www.ihst.org/portals/54/US_JSHAT_Compndium_Report1.pdf)

**Aircraft: Air Tractor AT-400**  
**Injuries: 1 Fatal**  
**NTSB Identification: CEN13FA465**

[http://www.nts.gov/\\_layouts/ntsb.aviation/brief.aspx?ev\\_id=20130807X14838&key=1&queryId=3d7b8655-958e-4532-8786-dba21657e9c4&pgno=2&pgsize=200](http://www.nts.gov/_layouts/ntsb.aviation/brief.aspx?ev_id=20130807X14838&key=1&queryId=3d7b8655-958e-4532-8786-dba21657e9c4&pgno=2&pgsize=200)

The commercial pilot was en route from a private airstrip to a nearby field to apply herbicide and flying about 150 feet AGL, when the airplane struck a 197-foot [temporary] meteorological tower (MET) about 35 feet from its top. A survey of the accident scene revealed that the sun was ahead of and to the right of the airplane's flight path and likely obstructed the pilot's ability to see the tower. An examination of the airplane did not reveal any preimpact anomalies.

The NTSB recently concluded that, due to their rapid construction and lack of conspicuity, METs pose a threat to pilots who conduct low-altitude operations and recommended required registration, marking, and—where feasible—lighting of these structures in order to aid pilots in avoiding them.

*Note: To date, only four states in the US and a few countries have regulations requiring marking and notification of METs. They are otherwise unlit, uncharted and unmanned.*

*...and then there is this guy...*

**Aircraft: Cessna 172**  
**Injuries: 2 Fatal**  
**NTSB Identification: LAX93FA154**

[http://www.nts.gov/\\_layouts/ntsb.aviation/brief.aspx?ev\\_id=20001211X11998&key=1&queryId=3d7b8655-958e-4532-8786-dba21657e9c4&pgno=2&pgsize=200](http://www.nts.gov/_layouts/ntsb.aviation/brief.aspx?ev_id=20001211X11998&key=1&queryId=3d7b8655-958e-4532-8786-dba21657e9c4&pgno=2&pgsize=200)

The airplane collided with a 199-ft meteorological tower and the right wing separated. The airplane had just been stolen from a flight school. The pilot's toxicology results were positive for amphetamine and methamphetamine. In addition, phenylpropanolamine, nicotine metabolite, and nicotine were all detected in the urine.

*There are no new ways to crash an aircraft...*

*...but there are new ways to keep them from crashing.*

Safe hunting,

**Bryan 'MuGu' Smith**

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