



National Transportation Safety Board

Washington, D.C. 20594

Safety Recommendation

Date: November 13, 2009

In reply refer to: A-09-137

Mr. Jack B. Johnson
County Executive
Prince George's County
County Administration Building
14741 Governor Oden Bowie Drive
Upper Marlboro, Maryland 20772-3050

The National Transportation Safety Board (NTSB) is an independent federal agency charged by Congress with investigating transportation accidents, determining their probable cause, and making recommendations to prevent similar accidents from occurring. We are providing the following information to urge your organization to take action on the safety recommendation in this letter. The NTSB is vitally interested in this recommendation because it is designed to prevent accidents and save lives.

This recommendation addresses the need for your dispatchers to receive additional training on cell phone "pinging." The recommendation is derived from the NTSB's investigation of the crash during approach to landing of a Maryland State Police (MSP) helicopter in District Heights, Maryland, on September 27, 2008. As a result of this investigation, the NTSB has issued nine safety recommendations and reiterated three previous recommendations. One of the new recommendations is addressed to Prince George's (PG) County, Maryland. Information supporting this recommendation is provided below. The NTSB would appreciate a response from you within 90 days describing the actions you have taken or intend to take to implement this recommendation.

The NTSB also issued safety recommendations to the Federal Aviation Administration (FAA), the MSP, 40 public helicopter emergency medical services operators, and six organizations whose members are involved in search and rescue operations.

On September 27, 2008, about 2358 eastern daylight time, an Aerospatiale (Eurocopter) SA365N1, N92MD, call sign Trooper 2, registered to and operated by MSP as a public medical evacuation flight, impacted terrain about 3.2 miles north of the runway 19R threshold at Andrews Air Force Base (ADW), Camp Springs, Maryland, during an instrument landing system (ILS)

approach.¹ The commercial pilot, one flight paramedic, one field provider, and one of two automobile accident patients being transported were killed. The other patient being transported survived with serious injuries from the helicopter accident and was taken to a local hospital. The helicopter was substantially damaged when it collided with trees and terrain in Walker Mill Regional Park, District Heights, Maryland. The flight originated from a landing zone at Wade Elementary School, Waldorf, Maryland, about 2337, destined for Prince George's Hospital Center, Cheverly, Maryland. Night visual meteorological conditions prevailed for the departure; however, Trooper 2 encountered instrument meteorological conditions en route to the hospital and diverted to ADW. No flight plan was filed with the FAA, and none was required.

When the pilot was unable to reach Prince George's Hospital Center due to deteriorating weather conditions, he appropriately made the decision to divert to ADW and request ground transport for the patients. When the pilot contacted ADW tower, he reported to the controller that he was "on the localizer for runway 19R." At this time, the helicopter was about 6 nautical miles from the runway and tracking the localizer course at an altitude of 1,900 feet mean sea level (msl). Approximately 1 minute and 20 seconds after his initial call to ADW tower, the pilot reported that he was "not picking up the glideslope." The controller responded that her ILS equipment status display was indicating no anomalies with the equipment. There were no further communications with Trooper 2. The last radar target for Trooper 2 was detected about 2357:50, at 800 feet msl over Walker Mill Regional Park. The helicopter impacted terrain about 3.2 miles from the threshold of runway 19R and along the extended runway centerline in a heavily wooded area of Walker Mill Regional Park at an elevation of about 200 feet msl.

The NTSB determined that the probable cause of this accident was the pilot's attempt to regain visual conditions by performing a rapid descent and his failure to arrest the descent at the minimum descent altitude during a nonprecision approach. Contributing to the accident were (1) the pilot's limited recent instrument flight experience, (2) the lack of adherence to effective risk management procedures by the MSP, (3) the pilot's inadequate assessment of the weather, which led to his decision to accept the flight, (4) the failure of the Potomac Consolidated Terminal Radar Approach Control (PCT) controller to provide the current ADW weather observation to the pilot, and (5) the increased workload on the pilot due to inadequate FAA air traffic control handling by the Ronald Reagan National Airport Tower and PCT controllers.

The search for the helicopter began almost immediately after radar contact was lost. The MSP System Communications Center (SYSCOM) was tracking the flight using global positioning system data transmitted with an experimental automatic dependent surveillance-broadcast (ADS-B) communications link.² About 0021:45, the SYSCOM duty officer (DO) provided PG County dispatchers with Trooper 2's last ADS-B coordinates by reading a string of numbers, "three eight five two one seven, north was seven six five two two six." The DO did not indicate that the numbers were in the form of degrees, minutes, seconds.

¹ The National Transportation Safety Board's full report, *Crash During Approach to Landing of Maryland State Police Aerospatiale SA365N1, N92MD, District Heights, Maryland, September 27, 2008* (NTSB/AAR-09/07), will be available online at <http://www.nts.gov/publicn/A_Acc1.htm>.

² ADS-B is a surveillance system in which an aircraft is fitted with cooperative equipment in the form of a data link transmitter. The aircraft periodically broadcasts its global positioning system-derived position and other information, such as velocity, over the data link, which is received by a ground-based transceiver for use by air traffic control and other users.

PG County dispatchers plotted the coordinates using an online mapping program, but the dispatchers assumed the coordinates were in the form of degrees, decimal minutes because that is the form to which they were accustomed. They entered the coordinates in that format. The location returned by the software program was near Calvert Cliffs, Maryland, located about 30 miles southeast of the accident site. This location caused confusion among PG County personnel.

As the search for the helicopter continued, PG County personnel offered to “ping” the troopers’ cell phones and possibly provide a better location to search. MSP SYSCOM accepted the offer, and PG County personnel contacted the cellular service provider, who “pinged” the cell phones and provided the street address of the closest cell phone tower. The cellular provider did not initially give a distance or bearing from the tower to the cell phone, and instead gave just the street address of the tower. That street address was immediately provided to PG County officers and MSP Forestville barrack troopers, and numerous officers responded to that location. Releasing the street address of the cell phone tower to all units without a distance and bearing only served to distract and confuse units.

The NTSB concludes that neither PG County nor MSP dispatchers fully understood the importance of obtaining distance and bearing information, as well as the cell tower location, before releasing a location obtained from cell phone “pinging;” this lack of understanding led dispatchers to provide the cell phone tower’s simple street address without context to all units involved in the search. This distracted and confused units already searching a more likely location.

Therefore, the National Transportation Safety Board recommends the following to Prince George’s County, Maryland:

Provide additional training to your dispatchers on the use of cell phone “pinging” and include instruction about how to integrate the data obtained from cell phone “pinging” into an overall search and rescue plan. (A-09-137)

In response to the recommendation in this letter, please refer to Safety Recommendation A-09-137. If you would like to submit your response electronically rather than in hard copy, you may send it to the following e-mail address: correspondence@ntsb.gov. If your response includes attachments that exceed 5 megabytes, please e-mail us asking for instructions on how to use our secure mailbox. To avoid confusion, please use only one method of submission (that is, do not submit both an electronic copy and a hard copy of the same response letter).

Chairman HERSMAN, Vice Chairman HART, and Member SUMWALT concurred in this recommendation.

[Original Signed]

By: Deborah A.P. Hersman
Chairman