

Special Report

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**Department of State Police  
Aviation Command Mission Data**

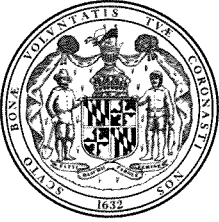
October 2014

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**OFFICE OF LEGISLATIVE AUDITS**  
**DEPARTMENT OF LEGISLATIVE SERVICES**  
**MARYLAND GENERAL ASSEMBLY**

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DEPARTMENT OF LEGISLATIVE SERVICES  
OFFICE OF LEGISLATIVE AUDITS  
MARYLAND GENERAL ASSEMBLY

Karl S. Aro  
Executive Director

October 21, 2014

Thomas J. Barnickel III, CPA  
Legislative Auditor

Senator Edward J. Kasemeyer, Chairman  
Senate Budget and Taxation Committee  
Miller Senate Office Building, 3 West Wing  
11 Bladen Street  
Annapolis, MD 21401

Delegate Norman H. Conway, Chairman  
House Appropriations Committee  
House Office Building, Room 121  
6 Bladen Street  
Annapolis, MD 21401

Dear Senator Kasemeyer and Delegate Conway:

In the April 2014 *Joint Chairmen's Report* (page 92), the committees requested the Office of Legislative Audits (OLA) to review and report actual Department of State Police Aviation Command (hereinafter referred to as the Aviation Command) mission data for fiscal years 2006 to 2013. The Report also requested OLA to review the collection methodology used by the Aviation Command to record and report mission data to determine its effectiveness in collecting and providing accurate data. Finally, the Report requested that the results of our review be submitted to the budget committees by January 1, 2015.

In Exhibit 1, OLA presents the number and types of missions flown by the Aviation Command helicopters for fiscal years 2006 to 2013 based on an extraction of the mission data from the applicable information system. The data, such as total missions, does not agree with mission data provided annually by the Aviation Command for budget presentation purposes. The precise reasons for the differences could not be determined because the Aviation Command did not

maintain historical records showing how mission data was compiled for reporting purposes. However, our review identified certain procedural weaknesses with the data collection and reporting methodologies that may have impacted the Aviation Command's ability to report accurate data and provide the necessary clarity regarding certain assumptions used to compile the data.

I trust this information is responsive to your request.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom J. Barnickel III". The signature is fluid and cursive, with a stylized "T" and "B".

Thomas J. Barnickel III, CPA  
Legislative Auditor

## **Background and Scope of Review**

The Department of State Police Aviation Command's (hereinafter referred to as the Aviation Command) primary mission is to provide emergency medical transportation (medevac) with helicopters located in seven bases throughout Maryland. The helicopters are also used for aerial law enforcement, search and rescue, homeland security, and disaster assessment services. All requests for medevac or other services are made to a central dispatch facility known as the System Communications Center (SYSCOM). Upon receipt of a call for a helicopter, SYSCOM personnel record the request in a computer-aided dispatch system and contact the appropriate helicopter base to dispatch the aircraft. Information from this system is the source for the Aviation Command's reported mission data, which was the subject of the OLA's review.

According to the Department of Legislative Services, since fiscal year 2003, the Aviation Command has received approximately 80 percent of its funding from the Maryland Emergency Medical System Operations Fund (MEMSOF) and 20 percent funding from the General Fund based on the ratio of medically-oriented missions to nonmedically-oriented missions. MEMSOF is primarily funded by a surcharge levied on owners of motor vehicles registered in the State.

The scope of our work consisted of obtaining mission data extracts for fiscal years 2006 to 2013 from the computer-aided dispatch system maintained by SYSCOM, which is the underlying basis for the Aviation Command mission data annually reported in the Managing for Results (MFR) section of the State's budget books. We assessed the reliability of the data by comparing it to independent records, such as aircraft logs maintained by pilots. In accordance with the committees' request, we also reviewed SYSCOM and the Aviation Command procedures for accumulating and reporting helicopter mission data to assess if those procedures provided reasonable assurance as to the reliability of the reported data. The scope of our review was less than that of an audit conducted in accordance with generally accepted government auditing standards.



## **Results of Review**

Our review of the Department of State Police Aviation Command's mission data and collection methodology disclosed the following:

### **Mission Data**

OLA's tabulation of the Aviation Command helicopter mission data for fiscal years 2006 to 2013 is shown on Exhibit 1 in accordance with the eight mission types identified in the committees' request. We also separately included cancelled missions – when a helicopter was requested, but was cancelled before take-off. (According to the Aviation Command, mission cancellations were included in its reported mission data, such as medically-oriented and law enforcement activities.) Together, data for the eight mission types and the cancellations represent the Aviation Command's total mission activity.

### **Collection Methodology**

Our review of the collection methodology used to record and report helicopter mission data disclosed that the Aviation Command needs to address the following four issues to improve its effectiveness in providing accurate mission information:

- The Aviation Command had not developed comprehensive definitions for the mission data (such as Air Medical Activities) reported in the Managing for Results (MFR) section of its annual budget submission (see Exhibit 2). The Department of Budget and Management's *MFR Guidebook* requires agencies to develop definitions for the measures reported in the budget documents. Although, via footnote, the Aviation Command had identified certain activities included as Air Medical, the list was not all inclusive. For example, we were advised that the Aviation Command included all cancelled medical missions and deemed all support missions to be medically-oriented for reporting purposes. Thus, the reader may not have a clear understanding of how the Aviation Command determined the number of medically-oriented missions it reported, including how cancelled missions are counted.
- The Aviation Command lacked written procedures to document and ensure consistency in how MFR data is retrieved and reported. Furthermore, there was no documented supervisory review of the mission data reported in the MFR sections of the budget documents.
- The Aviation Command did not maintain a historical record showing how the reported mission data was compiled and was unable to recreate the reported information from the existing data. We noted certain differences between the mission data reported annually by the Aviation Command and those we present in Exhibit 1. For example, total actual missions (including mission

cancellations) reported for fiscal year 2013 (5,737) differed with OLA's total (6,097) by 360.

- There were no documented quality assurance reviews over the recordation of nonmedically-oriented missions (such as law enforcement missions) recorded in the computer-aided dispatch system. In comparison, the Maryland Institute for Emergency Medical Services Systems (MIEMSS) annually reconciles medical missions recorded in the SYSCOM dispatch system to a separate MIEMSS system that is used to document patient care.

We shared these results with the Department of State Police, which generally concurred with OLA's tabulation. The Department advised that it intends to take appropriate action to address the four bullet points above and thus improve its mission collection and reporting methodologies.



**EXHIBIT 1**  
**OLA Tabulation of Aviation Command Helicopter Data by Mission Type**  
**Fiscal Years 2006 to 2013**

Mission Type	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Scene Medevac	5,327	4,927	4,504	2,626	2,241	2,455	2,677	2,428
Interfacility Medevac	278	126	124	89	78	73	63	78
Search and Rescue	393	385	359	316	359	484	507	363
Support	1,155	1,055	721	1,002	1,781	1,284	1,034	1,160
Law Enforcement	1,880	1,114	702	416	380	527	863	870
Homeland Security	54	219	120	5	6	25	107	254
Disaster Assessment	-	-	1	2	11	2	18	7
Natural Resource Police	-	-	-	-	5	4	55	27
<b>Total Missions With Flight Time</b>	<b>9,087</b>	<b>7,826</b>	<b>6,531</b>	<b>4,456</b>	<b>4,861</b>	<b>4,854</b>	<b>5,324</b>	<b>5,187</b>
Cancelled Medically-Oriented Missions	704	586	578	502	341	447	739	727
Cancelled Support Missions	10	12	3	8	31	27	31	39
Cancelled Other Missions	54	56	64	64	67	87	144	144
<b>Total Cancelled Missions*</b>	<b>768</b>	<b>654</b>	<b>645</b>	<b>574</b>	<b>439</b>	<b>561</b>	<b>914</b>	<b>910</b>

Source: SYSCOM

\* OLA separately identified cancelled missions, since the *Joint Chairmen's Report* requested information for the eight mission types. According to the Aviation Command, mission cancellations were included in its reported mission data in other categories as medically-oriented or law enforcement activities.

**EXHIBIT 2**  
**Helicopter MFR Data – Fiscal Years 2012 and 2013 Actual**  
**DEPARTMENT OF STATE POLICE**

**W00A01.02 FIELD OPERATIONS BUREAU (Continued)**

**Goal 3.** Provide qualified and skilled Aviation Command personnel to provide timely and quality air medical (EMS) and airborne law enforcement services throughout the State of Maryland and conduct homeland security flights to protect against foreign and domestic threats of critical infrastructures.

**Objective 3.1** Provide an effective Aviation Command that safely and efficiently delivers patients to appropriate care facilities while providing advanced life support services.

	2012	2013	2014 <sup>1</sup>	2015 <sup>1</sup>
<b>Performance Measures (Helicopter Only)</b>	<b>Actual</b>	<b>Actual</b>	<b>Estimated</b>	<b>Estimated</b>
<b>Output:</b> Number of Air Medical activities (EMS) <sup>2</sup>	5,538	4,652	5,300	5,363
Percent of total operational activities	85.0%	81.1%	83.3%	83.6%

**Objective 3.2** Provide reliable airborne law enforcement and homeland security services to the citizens of Maryland.

	2012	2013	2014 <sup>1</sup>	2015 <sup>1</sup>
<b>Performance Measures</b>	<b>Actual</b>	<b>Actual</b>	<b>Estimated</b>	<b>Estimated</b>
<b>Output:</b> Number of law enforcement activities	896	695	700	677
Percent of total operational activities	13.7%	12.1%	11.0%	10.6%
Homeland security activities (not Air Medical related)	66	381	350	360
Percent of total operational activities	1.0%	6.6%	5.5%	5.6%
Disaster Assessment Activities	19	9	13	15
Percent of total operational activities	0.29%	0.16%	0.20%	0.23%
Number of Incidental Critical Infrastructure Checks (Homeland Security) returning from Air Medical missions <sup>3</sup>	1,347	1,267	1,318	1,375
Total Aviation Command operational activities <sup>4</sup>	6,519	5,737	6,363	6,415

**Objective 3.3** Maintain or exceed the 2002 rate of 92.9 percent of patients delivered to the appropriate care facility within the Aviation Command's "Request to Hospital" 60 minute threshold to 95 percent. (Excludes inter-facility transports.)<sup>5</sup>

	2012	2013	2014 <sup>5</sup>	2015 <sup>5</sup>
<b>Performance Measures</b>	<b>Actual</b>	<b>Actual</b>	<b>Estimated</b>	<b>Estimated</b>
<b>Outcome:</b> Percent of patients delivered from a scene (non- hospital environment) to a destination hospital within 60 minutes of the time SYSCO receives the request for the Medevac transport.	89.7%	84.4%	89.0%	90.0%

<sup>1</sup> The delivery of new helicopters and the associated training and the aging of the current helicopters introduce many uncontrolled variables that reduce estimated performance measures for fiscal year 2014 and fiscal year 2015.

<sup>2</sup> Includes patient transports, medical relays, air medical safety orientations, search and rescues, and medical related support missions.

<sup>3</sup> These Homeland Security missions (Critical Infrastructure Checks) are not included in the overall total number of air medical activities due to the fact they were conducted on the return leg from other air medical missions.

<sup>4</sup> Includes maintenance and training flights.

<sup>5</sup> Factors that are beyond the control of the Aviation Command include the location of the incident (distance to respond to scene and/or distance to return to appropriate medical receiving center) and the entrapment/extrication of the victim. Anticipated aircraft maintenance cycles have also increased the number of calls where the next closest aircraft was utilized, sometimes slightly increasing the "Request to Hospital" 60 minute threshold.

Source: Fiscal Year 2015 Proposed Operating Budget

AUDIT TEAM

**Stephen C. Pease, CPA**  
Audit Manager

**Brian S. Han, CPA**  
Senior Auditor

**Samuel Hur**  
Staff Auditor