

State of Arizona  
Office  
of the  
Auditor General

**PERFORMANCE AUDIT**

**DEPARTMENT  
OF  
PUBLIC SAFETY  
AVIATION SECTION**

**Report to the Arizona Legislature  
By Debra K. Davenport  
Auditor General**

**June 2000  
Report No. 00-7**

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DEBRA K. DAVENPORT, CPA  
AUDITOR GENERAL

STATE OF ARIZONA  
OFFICE OF THE  
AUDITOR GENERAL

June 2, 2000

Members of the Legislature

The Honorable Jane Dee Hull, Governor

Mr. Dennis Garrett, Director  
Department of Public Safety

Transmitted herewith is a report of the Auditor General, A Performance Audit of the Department of Public Safety's Aviation Section. This report is in response to a June 16, 1999, resolution of the Joint Legislative Audit Committee. The performance audit was conducted as part of the Sunset review set forth in A.R.S. §41-2951 et seq. I am also transmitting a copy of the Report Highlights to provide a quick summary for your convenience.

This is the first in a series of reports to be issued on the Department of Public Safety.

As outlined in its response, the agency agrees with most of the findings and will implement, or implement using a different method, nine of the ten recommendations. However, it disagrees with the recommendation that the Aviation Section rewrite its mission statement to change its role in the air ambulance industry to that of a backup provider.

My staff and I will be pleased to discuss or clarify items in the report.

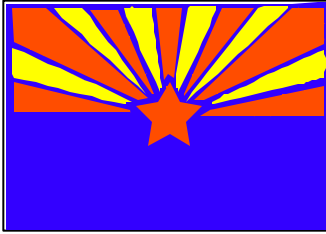
This report will be released to the public on June 5, 2000.

Sincerely,

A handwritten signature in black ink that reads "Debbie Davenport".

Debbie Davenport  
Auditor General

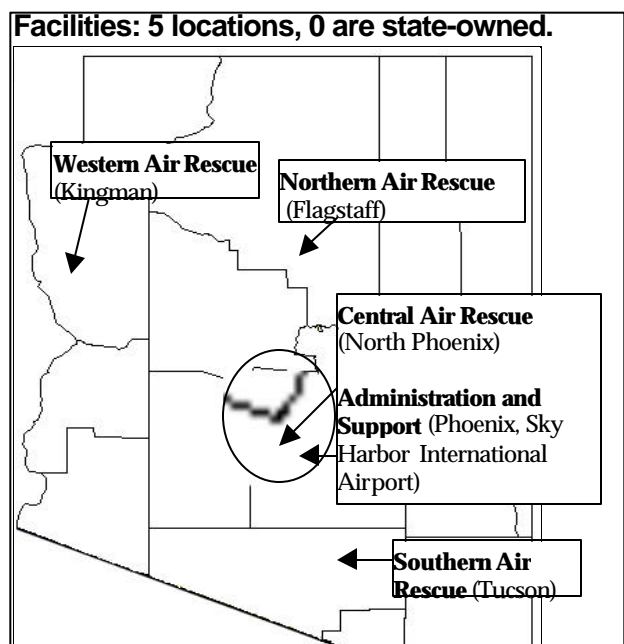
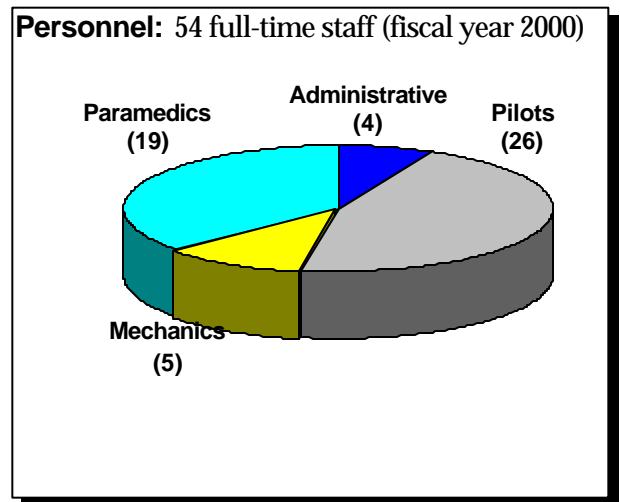
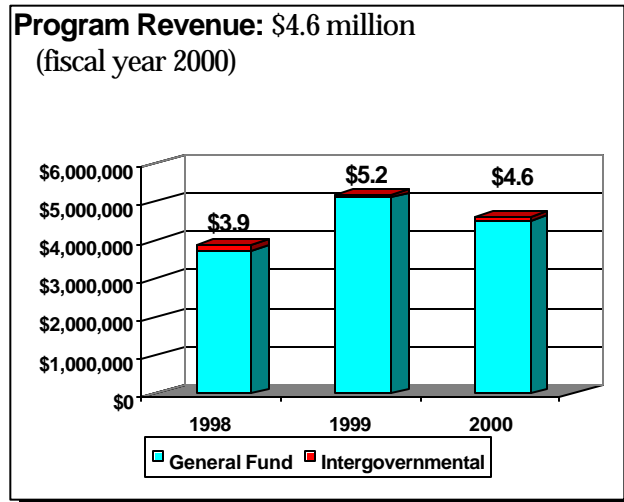
Enclosure



**Program Fact Sheet**

**Department of Public Safety  
Aviation Section (DPSA)**

**Services:** DPSA is one of 23 programs within DPS. It offers the following aviation services: 1) **Air transport**—DPSA provides transportation and protection to the Governor and transportation to Department staff and other state agency staff; 2) **Air ambulance**—DPSA provides emergency medical services and air medical transport; 3) **Search and rescue**—DPSA performs technical rescue and search-and-rescue support service operations for overdue, lost, or injured parties; and 4) **Law enforcement**—DPSA supports federal, state, and local law enforcement agencies with activities such as aerial pursuits and surveillance.



**Program Goals (Fiscal Year 1999-2001):**

1. To enhance public safety in Arizona through enhanced air rescue operations and improved first-responder emergency medical services.
2. To improve support to the Department and to other criminal justice agencies through enhanced air support aerial surveillance operations.
3. To improve the subprogram's effectiveness through replacement of obsolete equipment and acquisition and allocation of appropriate staffing resources.
4. To improve the subprogram's administrative effectiveness through automation.

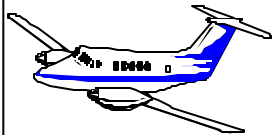
**Equipment: 9 aircraft**



5 single-engine helicopters, configured as air ambulances. Estimated replacement value is \$2 million each.



2 single-engine airplanes, seating 3 to 4 passengers each. Estimated replacement value is \$170,000 to \$280,000 each.



2 twin-engine airplanes, seating 9 to 10 passengers each. Estimated replacement value is \$2 to \$4 million each.

**Adequacy of Performance Measures:**

DPSA's four goals (see the front of this page) appear reasonably aligned with its mission. To help it accomplish these goals, DPSA has established 7 objectives and 33 performance measures. However, our review of its performance measures identified the following problems.

- DPSA's performance measures primarily focus on short-term, often one-time activities rather than focusing on its ongoing services. For example, DPSA has established performance measures to develop legislative proposals for additional employees and aircraft.
- DPSA has not developed performance measures to cover all four of its key service areas (air transport, air ambulance, search and rescue, and law enforcement).
- DPSA's measures are not well defined. DPSA has incorrectly categorized several measures as outcome measures. These measures do not address the program's impacts or benefits. In addition, DPSA's quality measures do not assess customers' and stakeholders' satisfaction with services.
- DPSA's measures do not include efficiency measures. Efficiency measures assess productivity and the cost of providing products and services such as the cost-per-aircraft service provided.

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## SUMMARY

The Office of the Auditor General has conducted a performance audit of the Department of Public Safety's Aviation Section (DPSA) as part of a Sunset review of the agency. This audit was conducted pursuant to a June 16, 1999, resolution of the Joint Legislative Audit Committee. This audit was conducted under the authority vested in the Auditor General by Arizona Revised Statutes §41-2951 et seq. This is the first of several audits of the Department of Public Safety.

The Department of Public Safety's Aviation Section (DPSA) is part of the Highway Patrol Division. DPSA employs 52 full-time staff and provides a variety of airplane and helicopter services from several locations across the State. The Aviation Section's administrative office and airplane (or fixed-wing) services are located in Phoenix at the Sky Harbor International Airport. Using four fixed-wing airplanes, DPSA primarily provides transportation and protection for the Governor and transportation to Department staff and other state agency staff, and it also assists in law enforcement activities when needed. DPSA's helicopter services are provided from four regional Air Rescue Units: Central Air Rescue in Phoenix, Northern Air Rescue in Flagstaff, Southern Air Rescue in Tucson, and Western Air Rescue in Kingman. A pilot and paramedic are always on duty at each of the four units to provide air ambulance (highway automobile accidents), search-and-rescue (missing hikers), or law enforcement services (aerial pursuits, surveillance, and tactical support).

### **DPSA Should Serve As Backup Air Ambulance Provider to the Private Sector (See pages 9 through 17)**

The expansion of the private air ambulance industry has reduced the need for DPSA to provide air ambulance services. Although

DPSA was initially the sole provider of air ambulance services, today there are also 12 private providers, operating 28 helicopter air ambulances in the State, and several additional private providers from California, Nevada, and New Mexico who respond to calls along Arizona's borders. The private sector not only offers air ambulance services similar to DPSA's, but, in many cases, it can provide more enhanced services than DPSA can. For example, 75 percent of private providers in Arizona use helicopters that are more powerful than DPSA's helicopters, allowing them to carry greater patient loads. Private providers also regularly staff their ambulance crews with two medical personnel, usually a paramedic and flight nurse. Only two of DPSA's four air rescue units regularly staff their crews with two medical personnel, and only one of those two units utilizes a flight nurse.

Despite private air ambulance industry growth, DPSA continues to operate as a primary provider, offering costly services that private air ambulance providers could provide. Several factors encourage DPSA to continue operating as a primary provider.

- **First**, although DPSA has a policy intended to discourage competition with the private sector, the policy does not effectively discourage DPSA from taking calls the private sector could take.
- **Second**, emergency-response dispatching practices favor DPSA.
- **Finally**, DPSA has the ability to respond to an accident without being formally dispatched or without confirming the need for an air ambulance. When utilized, this practice gives DPSA a competitive advantage over private providers because when an air ambulance is needed, DPSA is more likely to be closer to the scene. However, this practice can be costly when an air ambulance is not needed. During fiscal year 1999, 43 percent of DPSA's emergency medical missions ended in cancellation because an air ambulance was not needed. Other states' police agencies and private air ambulance providers generally do not proceed to an accident without formal dispatch and consequently reported much lower cancellation rates.

Although DPSA defends its continued provision of air ambulance services as a primary provider, its services are costly. The Air Rescue Units cost about \$1,081 per flight hour to operate and maintain. Last year, DPSA flew 678 hours on medical missions, costing the State about \$733,000. Further, DPSA does not recuperate any of these costs because, unlike the private sector, DPSA does not charge for its air ambulance services.

To ensure DPSA's resources are used where needed most, DPSA should act as a backup air ambulance provider, providing services only when the private sector is unavailable or unable to respond in a timely manner. By serving as backup provider, DPSA can focus its efforts on providing search-and-rescue and law enforcement services because many entities, such as county sheriff's offices, rely on DPSA to provide aerial support for these services.

### **DPSA Needs More Powerful Helicopters to Conduct Some Missions (See pages 19 through 24)**

DPSA uses helicopters primarily to conduct air ambulance, search-and-rescue, and law enforcement missions. Its fiscal year 1999 fleet consisted of four single-engine Bell 206 helicopters. Historically, these helicopters have not been powerful enough to conduct some of DPSA's missions safely and efficiently. As early as 1989, an aviation consultant found DPSA's helicopters to be underpowered. DPSA continues to struggle with these power limitations by sometimes leaving behind equipment, staff, and fuel to accommodate patient loads. However, other entities, such as the Maryland State Police and private sector companies, which offer similar services, use more powerful helicopters. In fact, 75 percent of Arizona's private air ambulance providers use helicopters that are more powerful than DPSA's helicopters.

To make its fleet of helicopters safe and efficient, DPSA will need additional funding to purchase up to three more powerful helicopters. Although DPSA recently purchased or is in the process of purchasing two new, more powerful single-engine helicopters (Bell 407s) to replace some of its current fleet, additional replacement helicopters will be needed. Because the cost of replacing and



upgrading its helicopters will be significant, DPSA will need to seek an increase in its General Fund appropriation to address any equipment replacement needs.

However, DPSA should continue to research the feasibility of using other monies to help offset a portion of its helicopter replacement costs. For example, DPSA used Racketeering Influenced Corrupt Organization (RICO) monies to offset the costs of an airplane in the past. The Department is eligible to receive RICO monies when it participates in investigations of state or federal racketeering crimes that result in forfeitures. However, relying on RICO monies as a primary funding source would be difficult since there are restrictive guidelines for their use and the amount of monies available from year to year varies.

**DPSA Not Charging Enough  
to Support Air Transport Activities  
(See pages 25 through 30)**

DPSA does not charge enough for its air transport services to cover the cost of providing this service to other governmental entities. DPSA's cost-recovery model—its method for determining what to charge for the air transport services it provides—captures only a small percentage of the costs associated with providing this service. DPSA's model includes only the costs for pilot overtime, maintenance (labor and parts) and fuel. In contrast, the cost-recovery model that federal agencies use includes many more categories, such as crew costs (salaries, benefits, training, etc.), insurance, and depreciation. If DPSA were to compute its rates using the federal model developed by the United States Office of Management and Budget (OMB), its rates would be much higher and its reimbursements would almost triple. Specifically, in fiscal year 1999, using full-cost rates, DPSA would have received \$111,085 instead of only \$37,261.

Although problems with DPSA's cost model were identified as early as 1992, DPSA has not significantly altered its model to more fully recover costs. To ensure that it charges sufficiently to cover its air transport expenses, DPSA should adopt a more comprehensive cost model that includes all the elements in the OMB's full cost-recovery model.

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# INTRODUCTION AND BACKGROUND

The Office of the Auditor General has conducted a performance audit of the Department of Public Safety's Aviation Section as part of a Sunset review of the agency. This audit was conducted pursuant to a June 16, 1999, resolution of the Joint Legislative Audit Committee. This audit was conducted under the authority vested in the Auditor General by Arizona Revised Statutes §§41-2951 through 41-2958. This is the first of several audits of the Department of Public Safety.

## Aviation Section Provides a Variety of Services

The Department of Public Safety Aviation Section (DPSA) is part of the Highway Patrol Division, which enforces Arizona's traffic and criminal laws and federal commercial vehicle regulations on state and federal highways.<sup>1</sup> DPSA provides a variety of services using both airplanes and helicopters. These services include the following:

- **Air transport**—The Aviation Section uses its airplanes to help the Department fulfill its statutory mandate to provide transportation and protection for the Governor. DPSA also transports Department staff and makes its planes available to other state agencies through intergovernmental agreements for air charter services.
- **Air ambulance**—Once the only air ambulance service in the State, DPSA still provides this service, administering on-site medical help and using its helicopters to transport sick or injured people for treatment.

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<sup>1</sup> The Aviation Section was transferred from the Criminal Justice Support Division to the Highway Patrol Division effective April 1, 2000.

**Photo 1: DPSA's Twin-engine King Air E-90**



DPSA uses this King Air for executive air transport.

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- **Search and rescue**—These activities involve searching for downed airplanes, assisting stranded boaters, or rescuing injured hikers. Numerous first-responder agencies such as fire departments and county sheriff's offices rely on DPSA for technical rescue and search-and-rescue assistance.
- **Law enforcement**—DPSA supports federal, state, and local law enforcement agencies with activities such as aerial pursuits and surveillance.

### **Organization, Equipment, and Staffing**

DPSA employs 54 full-time staff and provides its airplane and helicopter services from several locations across the State.

- **Administration and airplane services (9 FTEs)**—The Aviation Section's administrative office and airplane services are located in Phoenix at the Sky Harbor International Airport. A commander, assisted by two support staff, administers the program. Airplane services includes three pilots, two mechanics, and a supply specialist (vacant). They operate and maintain four airplanes—two single-engine planes capable of carrying a pilot and three or four passengers, and two twin-engine aircraft capable of carrying nine to ten pas-

sengers in addition to the pilots. During fiscal year 1999, the airplane crew flew 368 flights. The majority of these flights (57 percent) provided transportation to the Governor and her staff, Department of Public Safety officials, or other state agency personnel. The airplane crew also participated in some law enforcement missions, such as aerial surveillance of Arizona's highways and transporting investigators to crime scenes.

- **Helicopter services (45 FTEs)**—DPSA's helicopter services are provided from four regional Air Rescue Units: Central Air Rescue in Phoenix, Northern Air Rescue in Flagstaff, Southern Air Rescue in Tucson, and Western Air Rescue in Kingman. The Air Rescue Units include 23 pilots, 19 paramedics, and 3 mechanics. A pilot and paramedic are always on duty at each of the four units to provide air ambulance, search-and-rescue, or law enforcement services. DPSA has one single-engine helicopter stationed at each of the four air rescue units. When a unit's helicopter is undergoing maintenance or repair work, another unit will cover its missions. DPSA's fifth helicopter is being completed with the necessary equipment. When completed, it will allow one of the existing helicopters to serve as a spare for use when a unit's helicopter is undergoing maintenance. The four rescue units flew 3,284 missions during fiscal year 1999.<sup>1</sup>

Figure 1 (see page 4) depicts the top three helicopter mission categories (air ambulance, law enforcement, and search and rescue) by regional unit. These missions account for about two-thirds (or 2,260) of DPSA's 3,284 helicopter missions flown in fiscal year 1999. The remaining missions encompass flights for training, maintenance, public education, and other miscellaneous duties. As illustrated in this chart, the number and type of missions performed varies by regional unit. For example, the Central Air Rescue unit performed the most law enforcement missions (300 of 848) and the Western Air Rescue has the most air ambulance missions (436 of 990) during fiscal year 1999.

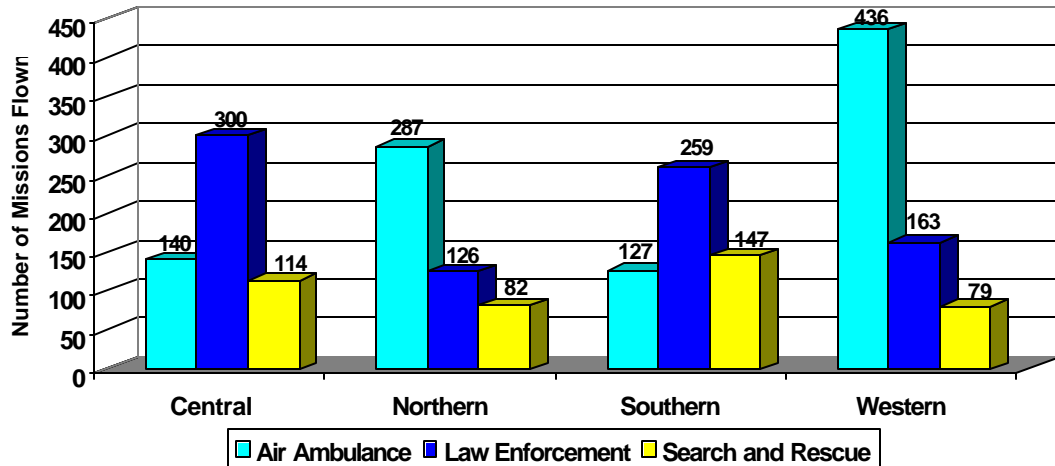
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<sup>1</sup> Although DPSA helicopter mission logs show that 3,673 missions were requested, only 3,284 of these missions have flight time because some were canceled before departure.



**Figure 1**

**Department of Public Safety—Aviation Section  
Comparison of Primary Helicopter Missions Flown by Type and Regional Unit  
Year Ended June 30, 1999**



Source: Auditor General staff analysis of mission data from the Aviation Section’s Alpha IV rotary-wing database for the year ended June 30, 1999.

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## **Budget**

DPSA received \$5.1 million in General Fund monies for fiscal year 1999 (see Table 1, page 5). The program expends the majority of its monies on salaries. During fiscal year 1999, the program received \$1,050,000 toward the purchase of a new helicopter, and during fiscal year 2000, the program received \$600,000 for the first of three lease payments on a second new helicopter. Both helicopters cost approximately \$1.5 million after DPSA was credited about \$500,000 each for trade-in helicopters.

DPSA also bills other state agencies for air charter services (see Finding III, pages 25 through 30), and is eligible to receive reimbursement for search-and-rescue operations. During fiscal year 1999, the Department received \$94,828 for its air charter and search-and-rescue services.

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**Table 1****Department of Public Safety—Aviation Section  
Statement of Revenues, Expenditures, and Changes in Fund Balance <sup>1</sup>  
Years Ended or Ending June 30, 1998, 1999, and 2000  
(Unaudited)**

	1998 (Actual)	1999 (Actual)	2000 (Estimated)
Revenues:			
State General Fund appropriations <sup>2</sup>	\$3,740,200	\$5,114,100	\$4,514,300
Intergovernmental	<u>149,388</u>	<u>95,671</u>	<u>100,000</u>
Total revenues	<u>3,889,588</u>	<u>5,209,771</u>	<u>4,614,300</u>
Expenditures:			
Personal services	2,431,778	2,452,387	2,533,200
Employee related	460,053	476,899	506,600
Professional and outside services	45,010	29,623	18,500
Travel, in-state	19,993	20,846	17,500
Travel, out-of-state	14,377	38,037	8,500
Aid to organizations	180		
Other operating	909,439	835,732	930,000
Equipment <sup>2</sup>	<u>8,204</u>	<u>1,017,297</u>	<u>820,000</u>
Total expenditures	<u>3,889,034</u>	<u>4,870,821</u>	<u>4,834,300</u>
Excess of revenues over (under) expenditures	554	338,950	(220,000)
Reversions to the State General Fund	<u>13</u>	<u>118,950</u>	
Excess of revenues over (under) expenditures and reversions to the State General Fund	541	220,000	(220,000)
Fund balance (deficit), beginning of year	<u>(541)</u>		<u>220,000</u>
Fund balance, end of year	<u>\$ 0</u>	<u>\$ 220,000</u>	<u>\$ 0</u>

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<sup>1</sup> The Department calculated the Aviation Section's revenues and expenditures by allocating revenues and expenditures recorded in the Department's Joint Account. The Joint Account is a commingled account primarily funded from State General Fund appropriations and other appropriated monies, such as Criminal Justice Enhancement monies.

<sup>2</sup> The Department received appropriations of \$1,050,000 in 1999 and \$600,000 in 2000 toward the purchase of additional helicopters, including necessary modifications. The helicopter payments are included in the equipment expenditures. In addition, the estimated equipment expenditures in 2000 include \$220,000 to complete necessary modifications to one of the new helicopters.

Source: Auditor General staff analysis of financial information provided by the Department of Public Safety.

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## **Audit Scope and Methodology**

The audit focused on DPSA's need to provide air ambulance services and its ability to perform its missions safely and efficiently. Competition with private-sector air ambulance operators

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## ***Introduction and Background***

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has been noted in previous reports discussing the Aviation Section.<sup>1</sup> However, audit work was completed to assess the ongoing need for DPSA to provide air ambulance services and included such steps as the following:

- Interviewing private air ambulance providers and emergency response agencies such as fire departments to assess DPSA's current role and the need for DPSA's continued involvement.
- Contacting private providers to determine the stability of the industry, future availability of their services, and coverage throughout the State.
- Reviewing helicopter mission logs from DPSA's Central and Northern Air Rescue Units and the State's four major private providers to determine whether the private sector could have responded to the air ambulance calls taken by these two DPSA units during August and September 1999.<sup>2</sup>
- Surveying 22 other states to determine if their state police agencies provided aviation services similar to DPSA's.<sup>3</sup>

Audit work conducted to assess the safety and efficiency of DPSA's missions included the following:

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<sup>1</sup> Office of the Auditor General (Report No. 91-2), April 1991 and the State of Arizona's *Project S.L.I.M. Report on the Department of Public Safety*, July 1992.

<sup>2</sup> The analysis excluded two DPSA air ambulance missions because these missions were not included in its database even though they were recorded on its mission logs.

<sup>3</sup> Eighteen states were selected because, similar to Arizona, they have large amounts of public lands or natural areas over which services must be provided: Alaska, California, Colorado, Florida, Idaho, Illinois, Maine, Maryland, Montana, Nevada, New Mexico, North Carolina, Oregon, Tennessee, Texas, Utah, Washington, and Wyoming. Four additional states were selected based on referrals from interview sources because they had state police agencies that provided air ambulance services: Delaware, New Jersey, New York, and Virginia.

## ***Introduction and Background***

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- Reviewing regulations promulgated by the Federal Aviation Administration (FAA) and interviewing FAA personnel to determine the safety and operating standards that apply to DPSA.
- Reviewing complaints and insurance claims against DPSA.
- Comparing DPSA's method for setting reimbursement rates for its air charter services with a cost model developed by the U.S. Office of Management and Budget and used by federal agencies to determine what costs to recover.
- Surveying county officials to assess their use of DPSA for search-and-rescue missions.
- Reviewing the type of helicopters used by other agencies providing similar services to obtain a range of equipment and costs associated with emergency missions.

This report presents findings and recommendations in three areas:

- The need for DPSA to serve as a backup provider for air ambulance services, providing services only when private air ambulance companies are unavailable or unable to provide timely service.
- The need for DPSA to replace some of its helicopter fleet to ensure that it can safely and efficiently perform its missions.
- The need for DPSA to improve its cost model for its air transport services.

The audit was conducted in accordance with government auditing standards.

The Auditor General and staff express appreciation to the Director and staff of the Arizona Department of Public Safety for their cooperation and assistance during the course of the audit.

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**FINDING I****DPSA SHOULD SERVE AS  
BACKUP AIR AMBULANCE  
PROVIDER TO THE  
PRIVATE SECTOR**

DPSA is no longer needed as a primary air ambulance provider in many parts of the State. Because the private air ambulance industry has grown steadily in recent years, the need for DPSA to provide air ambulance services has decreased. Currently, the private sector could handle many of the air ambulance missions DPSA takes. To ensure that DPSA meets the State's current needs, it should serve as a backup to private air ambulance providers, providing service only when the private sector is unavailable or unable to respond timely. By providing backup air ambulance services only, DPSA will be able to expand its search-and-rescue and law enforcement services.

**The Need for DPSA  
Air Ambulance Services  
Has Decreased**

Although DPSA was initially the sole provider of air ambulance services in the State, the need for its services has decreased as the private air ambulance industry has expanded. Air ambulance services are considered to be a vital part of Arizona's emergency response system. They can improve the chances of survival, especially in rural or remote areas, by providing patients with rapid advanced medical treatment and transport. In 1972, when DPSA began offering air ambulance services, it was the sole provider of these services and had only two helicopters to cover the State. Today, however, in addition to DPSA, there are 12 private air ambulance providers, operating 28 helicopter air ambulances. In addition, several private providers from California, Nevada, and New Mexico respond to calls in Arizona along state borders. Together, these services cover most parts of the State. In addition, industry growth in recent years has been particularly significant.

For example, among the four major private providers alone, the number of helicopter air ambulances in operation has grown 47 percent since 1997.

The private sector not only offers air ambulance services similar to DPSA's; in many cases, it can also provide more enhanced services than DPSA can. For example, 75 percent of private providers in Arizona use helicopters that are more powerful than DPSA's helicopters. Typically, more powerful aircraft are better equipped to handle heavy patient loads and high altitudes, such as those in northern Arizona. Private providers also regularly staff their ambulance crews with two medical personnel, usually a paramedic and flight nurse. Two medical crewmembers can more easily handle the multiple tasks involved in providing emergency medical care, especially if there are two patients on board. Furthermore, while both paramedics and flight nurses are capable of providing advanced life support, flight nurses are authorized to perform a broader range of medical procedures, including administering certain medications. Only two of DPSA's four air rescue units regularly staff their crews with two medical personnel, and only one of those two units utilizes a flight nurse.

### **Despite Industry Growth, DPSA Continues As a Primary Provider**

Although DPSA has reduced some services in response to private sector expansion, it continues to serve as a primary provider offering services that private air ambulance companies could provide. Several factors, including internal practices and ambulance dispatching practices, encourage DPSA to continue operating as a primary provider. This continued service is costly for the State.

#### ***Private sector could take many calls DPSA currently takes—***

Although DPSA has reduced its interfacility transport services (the transport of sick or injured patients between care facilities) in response to private sector expansion, DPSA continues to respond to many medical emergencies the private sector could handle. For example, auditors reviewed the helicopter mission logs from

DPSA's Central and Northern Air Rescue Units and the State's four major private providers to determine whether the private sector could have responded to the air ambulance calls taken by these two DPSA units during August and September 1999. The review revealed that private providers could have taken many of the medical calls DPSA took during this time. For example, the private sector was available and could have responded to 100 percent of the 26 medical missions taken by DPSA's Central Air Rescue (located in metropolitan Phoenix). In many cases, more than one private provider was available. In Flagstaff, the private sector was available to respond to 64 percent of DPSA's Northern Air Rescue's 79 medical missions.<sup>1</sup>

**Several factors encourage DPSA to continue operating as a primary provider**—DPSA continues to operate as a primary provider for several reasons.

- **Crew response policy**—Although a DPS official indicated that its crew response policy is intended to discourage competition with the private sector, auditors found that the policy does not effectively prevent DPSA from taking calls the private sector could take.<sup>2</sup> For example, the policy states that when an Air Rescue crew is committed to a previous or ongoing mission, it should defer the call first to other DPSA Air Rescue Units before deferring the call to other service providers. Furthermore, the policy requires that private providers be not only available but also airborne before DPSA can defer a call to them. Yet, because private providers await formal dispatching, they are less likely than DPSA to be airborne when a request is made, reducing the chances that DPSA will defer a call to them when it receives a request for service.

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<sup>1</sup> The Southern and Western Air Rescue Units, located in Tucson and Kingman, were not included in the analysis. Including these units would not have allowed for a comparable analysis. The Southern Air Rescue Unit is on a rotational dispatching list and, therefore, is less likely to take calls the private sector could handle. Furthermore, the Western Air Rescue Unit's closest private provider is in another city, which makes a difference in who is dispatched since response time is a determining factor.

<sup>2</sup> DPSA can provide air ambulance services even though private sector companies exist because DPSA is exempt from state regulation prohibiting public-private competition.



- **Emergency response dispatching practices**—Emergency response dispatching practices favor DPSA. When Arizona’s Emergency Medical Services Communication System (EMSCOM)<sup>1</sup> receives a call about an emergency, it sends the closest available helicopter, be it public or private. However, if a DPSA helicopter is specifically requested, EMSCOM will often comply with the request even when a private provider is available to respond. Although not formally tracked, specific requests for DPSA are common, especially from DPS Highway Patrol. Other requesting agencies, such as some sheriff’s offices and fire departments, also commonly request DPSA. The preference for DPSA appears to be due, in part, to the feeling of affiliation between law enforcement and other civil agencies and DPSA.
  
- **Response practices**—DPSA has the ability to respond to calls, even when the need for an air ambulance is uncertain at the time of launching. In some cases, this can result in DPSA initiating a response to medical emergencies even when it has not been formally dispatched. This practice, called “launching off the scanner,” occurs when DPSA Air Rescue crews hear of emergencies on the radio and initiate a response without waiting for a formal request or knowing for certain that an air ambulance will be needed. The ability to launch at will gives DPSA an advantage over private providers since the prevailing dispatching standard is to utilize the closest medical help available. Although private providers may be available at their bases, DPSA is more likely to be utilized because it is already airborne and closer to the scene.

***DPSA’s provision of air ambulance services is expensive***—Although DPSA defends its continued provision of air ambulance services, its services are costly to the State. DPSA justifies its ongoing provision of air ambulance services and specifically, its response practices by arguing that its Air Rescue crews, as both law enforcement and air ambulance providers, can assist in other capacities if not needed for emergency medical services. DPSA further argues that it would rather respond and turn back if not

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<sup>1</sup> The Department of Public Safety, Operational Communications Section operates the Emergency Medical Services Communication System.

needed than delay response until the need is confirmed. However, DPSA's services are expensive to provide. The Air Rescue Units cost about \$1,081 per flight hour to operate and maintain.<sup>1</sup> Last year, DPSA flew 678 hours on medical missions, costing the State about \$733,000. This expenditure is considerable given that DPSA does not recuperate any costs because its services are free to the public. The private sector charges between \$2,000 to \$4,000 for an air ambulance mission.

DPSA's response practices are also costly. The costs associated with launching off the scanner can be significant when many responses result in cancellation. In fiscal year 1999, for instance, 43 percent of DPSA responses to emergency medical calls ended in cancellations while en route or at the scene because an air ambulance was not needed. These canceled air ambulance missions cost the State about \$179,000 in operating costs. Other states' police agencies providing air ambulances reported that they usually do not launch off the scanner. Furthermore, private providers do not regularly launch off the scanner because they receive no payment if a flight is canceled. In contrast to DPSA, the private sector has cancellation rates of around 5 percent.

### **Serving as a Backup Provider Would Free up Resources for Other Missions**

Because the need for DPSA's air ambulance services has decreased and its services are costly, DPSA should act as a backup air ambulance provider only. By providing backup services only, DPSA will be more available to respond to search-and-rescue and law enforcement calls.

***DPSA should provide backup air ambulance service only***—Because the need for DPSA as a primary air ambulance provider

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<sup>1</sup> Operating costs for the Air Rescue Units were determined by totaling all costs including crew and mechanic salaries, maintenance parts, fuel, operations overhead, rent, and insurance, and dividing by the number of hours flown annually. Depreciation was not included because the helicopters it operated during fiscal year 1999 would be fully depreciated due to their age.

## ***Finding I***

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has decreased in many parts of the State, DPSA should act as a backup provider only. In fact, very few state police agencies provide air ambulance services. In a review of 22 other states, auditors found only 6 states whose police agency regularly provides air ambulance services.<sup>1</sup> Furthermore, unlike DPSA, the 6 police agencies operate as either the sole air ambulance provider (Delaware, Maryland, and New Jersey) or as a limited provider filling gaps in coverage or sharing service according to specific coordination agreements with the private sector (California, New York, Virginia).

DPSA is needed as a backup air ambulance provider because the private sector alone may not currently be able to provide full coverage for the State or may need help when multiple-injury accidents occur. Rural areas of the State, such as those in north-western Arizona, still rely heavily on DPSA. The remoteness of these areas makes air medical transport a necessity. Yet, because these areas have resident populations that are less likely to have health insurance or be able to afford private air ambulance service, private providers operate less frequently in these areas. Even in urban areas with a greater number of providers, DPSA may still be needed to fill gaps in coverage when private providers are unavailable. Furthermore, DPSA may be needed temporarily in other areas if a private provider leaves the industry.

DPSA management has expressed concern that if DPSA is a backup air ambulance provider only, its Air Rescue medical crews will lose their proficiency due to the reduction in the medical missions they will handle. However, several factors can minimize any loss in skills. As backup providers, crewmembers will continue to respond to medical missions, albeit less frequently. In addition, they can utilize their skills on search-and-rescue and law enforcement missions as needed. Finally, continuing education courses, which they are already required to take to keep their medical certifications current, can help maintain skills.

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<sup>1</sup> The 22 states reviewed include Alaska, California, Colorado, Delaware, Florida, Idaho, Illinois, Maine, Maryland, Montana, Nevada, New Jersey, New Mexico, New York, North Carolina, Oregon, Tennessee, Texas, Utah, Virginia, Washington, and Wyoming.

***DPSA should expand its search-and-rescue and law enforcement services***—By providing backup air ambulance services only, DPSA will be able to increase its search-and-rescue and law enforcement services. Search-and-rescue services include activities such as searching for downed airplanes, assisting stranded boaters, or rescuing injured hikers from steep canyons. Numerous first-responder agencies, such as fire departments and county sheriff's offices, depend on DPSA for aerial support in search-and-rescue activities. Specifically, 14 of Arizona's 15 counties rely on DPSA for search-and-rescue assistance.<sup>1</sup> Although all counties are statutorily responsible for search-and-rescue activities, only 4 have some aviation resources.<sup>2</sup> In Arizona, DPSA is a primary search-and-rescue provider because it is one of the few with aerial capability and the only entity that consistently offers emergency medical services (paramedics) simultaneously. Furthermore, DPSA has special search tools that other agencies do not have, including Forward-Looking Infra Red (FLIR) equipment, which helps locate ground objects by identifying heat sources, and night vision goggles, which improve visibility during night searches. Because DPSA handles many air ambulance calls, it may not always be available for search-and-rescue missions. Although DPSA does not track missions declined due to unavailability, several counties reported that DPSA has sometimes been unavailable and that they have had to rely on alternate providers with fewer resources.

In addition to expanding its search-and-rescue services, DPSA could increase its law enforcement missions to help meet the demand for aerial law enforcement support. Law enforcement is DPSA's second most common mission type, comprising approximately one-fifth of all its missions in fiscal year 1999, and may include aerial pursuits, traffic observation, and personnel transport (transporting a tactical team, such as a SWAT team, to a crime scene). In providing aerial law enforcement services, DPSA supports the efforts of other DPS sections and other law enforcement agencies, few of which, particularly in rural areas, have their own aviation resources. Even those that do, such as the Maricopa

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<sup>1</sup> Yuma County does not utilize DPSA's search-and-rescue services. It utilizes the Marine Corps Air Station, which is closer to Yuma than DPSA is.

<sup>2</sup> La Paz, Maricopa, Mohave, and Yuma.

County Sheriff's Office, sometimes rely on DPSA for backup assistance. Furthermore, few agencies have some of the specialized tools that DPSA has. DPSA's FLIR equipment and night vision goggles, for instance, may also be used on law enforcement missions, such as aerial pursuits. Due to its enhanced capability, DPSA frequently receives calls for assistance from other law enforcement agencies. In fact, in fiscal year 1999, 53 percent of DPSA's law enforcement missions supported other agencies' efforts.

***Changes are needed to ensure DPSA meets the State's current needs***—To ensure that DPSA's limited resources are directed to where they are needed most, DPSA will have to make some changes.

- First, DPSA should rewrite its mission statement to change its role in air ambulance services to that of a backup provider. DPSA should provide air ambulance services only when the private sector is unavailable or unable to provide timely service.
- Second, DPS should work to eliminate dispatching practices that favor DPSA. Specifically, DPS should establish a policy or written directive to be used by EMSCOM that states that DPSA serves as a backup air ambulance provider. The policy or directive should further indicate that private providers are contacted first and DPSA is contacted only if private providers are unavailable or unable to provide timely service. Requesting agencies (fire departments, ground ambulance companies, and sheriff's offices) should be provided a copy of this new policy.
- Finally, DPSA should ensure that its Air Rescue Units do not launch off the scanner. Specifically, DPSA should establish a written policy that states that Air Rescue Units should initiate flights only when they are formally dispatched. All Air Rescue Units should be provided a copy of this policy.

Once DPSA redirects its efforts to search and rescue and law enforcement, further assessment of its resources may be needed. Although DPSA plays an important role in these two areas, the level of resources needed will not be clear until it readjusts its role

in air ambulance to that of a backup provider. Therefore, after making the recommended changes, DPSA should assess whether its services are sufficiently utilized to warrant the present level of resources.

### **Recommendations**

1. DPSA should rewrite its mission statement to change its role in air ambulance services to that of a backup provider unless the private sector is unavailable or unable to respond in a timely manner..
2. DPSA should work to eliminate dispatching practices that favor DPSA. Specifically, DPS should establish a written policy to be used by EMSCOM that states that private providers are to be contacted first and that DPSA is to be contacted only if private providers are unavailable or unable to provide timely service. Requesting agencies (fire departments, ground ambulances and sheriff's offices, etc.) should be provided a copy of this new policy.
3. DPSA should seek to ensure that the practice of "launching off the scanner" does not occur. Specifically, DPSA should establish a written policy stating that this practice is not appropriate and that staff should not initiate a flight without first verifying the need for an emergency helicopter. All air units should be provided a copy of this policy.
4. After implementing the other recommendations, DPSA should assess whether its services are used enough to warrant the present level of resources, and if not, how to reduce unwarranted expenditures.

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## FINDING II

# DPSA NEEDS MORE POWERFUL HELICOPTERS TO CONDUCT SOME MISSIONS

DPSA needs more powerful helicopters to perform some of its missions adequately. DPSA uses helicopters primarily to conduct air ambulance, search-and-rescue, and law enforcement missions. However, for more than ten years, DPSA's helicopters have not been powerful enough to conduct some of these missions safely and efficiently. For example, DPSA's crews sometimes must leave behind equipment, staff, and fuel to accommodate greater patient loads. Although DPSA recently purchased two more powerful helicopters, additional resources will be needed to address the replacement of the remaining underpowered helicopters.

### **Underpowered Helicopters a Continual Problem for DPSA**

DPSA has been using underpowered helicopters for many years. As early as 1989, a consultant found DPSA's helicopters inadequate for performing some missions safely. Specifically, using underpowered aircraft can result in delayed medical treatment and unsafe flights. In contrast, other entities use more powerful helicopters to complete similar missions.

***DPSA continues to use underpowered helicopters***—DPSA has historically used helicopters that are not powerful enough to conduct some of its air ambulance and air search-and-rescue missions safely or efficiently. DPSA's fiscal year 1999 helicopter fleet consisted of five single-engine Bell 206 helicopters. These helicopters were found to be underpowered as early as 1989 by a private aviation consulting firm. Specifically, this firm determined that DPSA's helicopters do "not have the power and capability to safely land, takeoff and perform its primary mission over much of the terrain in which it operates. High density altitudes, high desert temperatures, gusty winds, heavy payloads



**Photo 2: Single-engine Bell 206 helicopter in maintenance hangar**



The Bell 206 helicopter is underpowered for some of DPSA's missions.

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and a variety of conditions places the aircrews and aircraft in jeopardy on many flights."<sup>1</sup> A 1991 Auditor General Report (No. 91-2) also identified similar aircraft deficiencies.

- ***Underpowered helicopters can result in unsafe and inefficient flights***—Because of its aircraft's limitations, DPSA cannot always carry the equipment, staff, and fuel needed to complete some of its missions safely and in a timely manner. To compensate for the lack of power, DPSA sometimes leaves equipment, staff, or fuel behind to accommodate greater patient loads. For example, the Central Air Rescue unit, located in Phoenix, regularly uses only about half of its fuel capacity so that it can adequately carry the weight of patients, medical equipment, and crew. However, sometimes even these actions do not help. For example, even with reduced loads, sometimes DPSA must decline missions that require transporting patient loads weighing over 350 lbs.,

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<sup>1</sup> The higher the density altitude, the thinner the air becomes. As such, the aircraft's engine, propeller, and wings must work harder to produce an equal amount of power and lift.

even with reduced loads. Further, operating with reduced fuel can cause a need for more frequent refuelings, which in turn can lengthen missions and delay patient care.

***Other entities use more powerful helicopters for similar missions***—Other entities surveyed for this audit use more powerful aircraft to conduct similar missions. Few states’ police agencies are involved in providing air ambulance services. However, the Maryland State Police, who conduct similar missions, use more powerful helicopters. After three fatal crashes, Maryland sought safer helicopters that were more appropriate for the type of missions it conducts. It switched from single-engine Bell helicopters to twin-engine helicopters in the mid-1980’s.

The private sector also uses more powerful helicopters to provide similar services. Seventy-five percent of Arizona’s private air ambulance providers use more powerful helicopters than DPSA. In addition, if private providers conduct “external load” operations, federal aviation regulations require them to use powerful twin-engine aircraft to increase the safety margin of these high-risk flights. External load operations are sometimes necessary when DPSA conducts air rescue flights (for example, rescuing a stranded mountain climber). During these operations, DPSA removes the doors of the helicopter and attaches a long rope to the aircraft. The victim is then attached to the end of the rope and remains swinging below until the helicopter arrives at a safe place to set the victim down. While DPSA will not perform any operations it feels are unsafe, federal aviation regulations require twin-engine aircraft for similar operations if performed by commercial operations.<sup>1</sup>

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<sup>1</sup> DPSA is exempt from most federal aviation regulations applicable to private and commercial aircraft because it operates publicly owned aircraft.

**Additional Resources  
Needed to Replace Old,  
Underpowered Helicopters**

To make its fleet of helicopters safe and efficient, DPSA will need additional funding to purchase up to three more powerful helicopters. Even though DPSA will have received two newer, more powerful helicopters by the end of fiscal year 2000, it will still have three remaining Bell 206 helicopters. Because DPSA is supported by the General Fund, it will need to seek an increase in its appropriation to cover the cost of any new helicopters. However, because the cost for replacing and upgrading its helicopters is so significant, the DPSA should also research the feasibility of using other monies to help offset the costs.

***Further upgrades needed***—Although the DPSA has long acknowledged the need for better helicopters, due to state and Department budget constraints over the past several years, it has only recently begun to upgrade its fleet. DPSA has purchased a more powerful Bell 407 single-engine helicopter, and is in the process of purchasing another to replace some of its older, less powerful Bell 206 helicopters. It placed one of these new helicopters at the Northern Air Rescue Unit in Flagstaff in October 1999. The second new helicopter is being completed with the necessary equipment to make it operational, and DPSA expects it to be ready for use by May 2000. When ready, this helicopter will replace the Central Air Rescue Unit's helicopter, allowing the older, existing aircraft to serve as a spare when the other helicopters are undergoing maintenance. These new 407 helicopters represent an increase in horsepower from 450 to 675 and an increase in weight capacity from 4,150 to 5,250 lbs. The Bell 407 or its equivalent is also commonly used in the private sector for air ambulance missions.

While these new helicopters provide DPSA with two more powerful aircraft, the three remaining Bell 206 helicopters will reach the end of their service lives over the next three years. One standard for replacing helicopters is 10,000 flight hours, or 10 years. However, according to DPSA maintenance staff and other public safety entities, the type of flight hours should also be considered when determining aircraft replacement. For example, if the flight hours consist primarily of air transport, re-

placement could safely be extended beyond the 10-year, 10,000 hours standard. On the other hand, if the flight hours consisted primarily of more demanding missions, such as search-and-rescue flights, replacement should occur earlier. Based on the 10,000 flight hour standard, as demonstrated in Table 2, DPSA's remaining Bell 206 helicopters will be due for replacement within the next three years if flight hours remain relatively constant.

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**Table 2**

**Department of Public Safety—Aviation Section  
Summary of Age and Flight Hours for Bell 206 Helicopters  
As of December 1, 1999**

<b>Year Manufactured/Year Purchased</b>	<b>Cumulative Flight Hours</b>	<b>Hours Flown in Fiscal Year 1999</b>	<b>Year Cumulative Flight Hours Expected to Exceed 10,000<sup>1</sup></b>
1982/1982	10,403	648	1999
1982/1987	8,777	818	2001
1984/1987	7,952	756	2002

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<sup>1</sup> Date calculated using cumulative flight hours and assuming the hours flown in fiscal year 1999 are representative of the hours flown each year.

Source: Auditor General staff analysis of helicopter flight data from the Aviation Section's Alpha IV database. Base location information was provided by Aviation Section Administrative staff, and cumulative flight hours, and year of manufacture and purchase were provided by Aviation Section mechanics.

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**Additional resources needed**—Because General Fund monies support the DPSA program, the Department will need to seek an increase in its General Fund appropriation to cover any equipment replacement needs. DPSA indicates that it needs two additional Bell 407 helicopters and one powerful twin-engine helicopter to increase the safety of its higher-risk rescue flights, such as external load operations that carry crew and victims on the outside of the aircraft. Twin engines allow the aircraft to continue to hover or fly if one of the helicopter's engines fail. As noted earlier, Maryland State Police replaced its entire fleet of single-engine helicopters with twin-engine ones.

While DPSA needs to conduct more research to determine the specific twin-engine helicopter it needs, the cost to purchase any remaining equipment will be significant. For example, cost estimates for twin-engine helicopters range from \$3.8 to \$5.9 million. In addition, one Bell 407 single-engine helicopter costs approximately \$1.5 million.<sup>1</sup> Because the cost for replacing helicopters is so significant, the DPSA should continue to research the feasibility of using other funding sources to help offset a portion of these costs. For example, the DPSA has used Racketeering Influenced Corrupt Organization (RICO) monies in the past to help offset the cost of replacing an airplane. The Department is eligible to receive RICO monies when it participates in investigations of state or federal racketeering crimes that result in forfeitures. However, relying on these monies as a primary funding source would be difficult since there are restrictive guidelines for their use and the amount of money available varies from year to year.

### **Recommendations**

1. DPSA should seek an increase in its General Fund appropriation to help cover the costs of replacing any of its three remaining Bell 206 helicopters.
2. DPSA should also continue to research the feasibility of using other funding sources such as RICO to help offset the costs of replacing helicopters.

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<sup>1</sup> This figure represents the cost after the trade-in value of one Bell 206 helicopter (approximately \$500,000.)

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## FINDING III

# DPSA NOT CHARGING ENOUGH TO SUPPORT AIR TRANSPORT ACTIVITIES

DPSA does not charge enough to cover the cost of the air transport services it provides to other governmental entities. Although DPSA has authority to seek reimbursement for many of the air transport sources it provides, the cost-recovery model DPSA uses does not reflect the actual costs of providing these services. By charging full cost, DPSA would almost triple the reimbursement amount it receives, based on fiscal year 1999 records.

### **DPSA Can Charge for Many Air Transport Services**

DPSA has authority to seek reimbursement for many of the air transport services it provides. In all, DPSA provides air transport services to the Governor's Office, its own internal staff, and 24 other state agencies for which it has intergovernmental service agreements (ISAs) and has authority to seek reimbursement.<sup>1</sup>

### **DPSA Cost-Recovery Model Does Not Reflect True Costs**

DPSA's cost-recovery model—its method for determining what to charge for the air transport services it provides—captures only a small percentage of the costs associated with providing these services. DPSA's model includes only three elements: pilot over-

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<sup>1</sup> DPSA does not charge the Governor for flights as DPS is statutorily required to provide her with transportation. It also does not charge itself or other DPS sections for air transport services.

**Photo 3: Cessna 210 sometimes used for air transport flights**



DPSA's cost-recovery model for this Cessna, used for air transport, does not reflect the true costs of operation.

time pay, maintenance (labor and parts), and fuel. In contrast, the cost-recovery model used by federal agencies to fully recover such costs includes many more categories, such as crew costs (salaries, benefits, training, etc.), insurance, and depreciation. The rates that would be computed under this federal model are several times higher than the rates under DPSA's model. Based on air transport services provided during fiscal year 1999, DPSA could triple its air transport revenue by using these full-cost rates.

***Federal cost-recovery model is more comprehensive than DPSA's***—The United States Office of Management and Budget (OMB) has developed a comprehensive cost-recovery model to help federal agencies capture the full cost of providing aviation services. Federal agencies are required to justify the need to purchase or use internal aircraft as well as recover operating costs when providing services to other agencies. Table 3 (see page 27) lists the various categories contained in the OMB's full cost-recovery model and explains the elements included in those categories.

**Table 3**

**Department of Public Safety—Aviation Section  
The United States Office of Management and Budget's  
Full Cost-Recovery Model  
As of May 22, 1992**

<b>Cost Category</b>	<b>Elements</b>
Crew	Salaries, benefits, training, per diem expenses, equipment, charts, uniforms, overtime charges, and wages of crew members hired on an hourly or part-time basis
Maintenance	Maintenance labor (salaries, benefits, travel, and training), parts, contracted maintenance assistance, engine overhaul, and aircraft refurbishment
Fuel and other fluids	Gasoline, oil, and other fluids consumed by the aircraft
Operations overhead	All costs associated with direct management and support of the aircraft program, such as personnel costs for management and administrative personnel directly responsible for the aircraft program, and rental costs for hangars and office space
Administrative overhead	A pro-rated share of salaries, office supplies, and other expenses of fiscal, accounting, management, and similar common services performed outside of the aircraft program but which support the program
Insurance	Self-insurance or private insurance to cover casualty losses and liability claims
Leases	The aircrafts' associated lease or rental costs
Landing and tie down fees	The landing and/or tie down fees associated with aircraft usage
Depreciation	The reduction of an aircraft's value (purchase price less residual value) over its useful life

Source: Auditor General staff analysis of Office of Management and Budget Circular No. A-126, *Accounting for Aircraft Costs*.

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***Under more comprehensive model, DPSA's rates and reimbursements would be much higher***—If DPSA were to compute its air transport rates using the OMB cost-recovery model, its rates would be much higher and its air transport revenue would almost triple. Figure 2 (see page 28) compares the hourly rates charged by DPSA for its air transport services to the rates that would be charged using the OMB's full cost-recovery model.<sup>1</sup> As

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<sup>1</sup> The full-cost hourly rates for the DPSA's airplanes do not include administrative overhead costs. The OMB model states "agencies should exercise their own judgment as to the extent to which aircraft users should bear the administrative overhead costs." Also, depreciation costs are included for only one airplane because, based on their ages, the remaining three would have been fully depreciated.



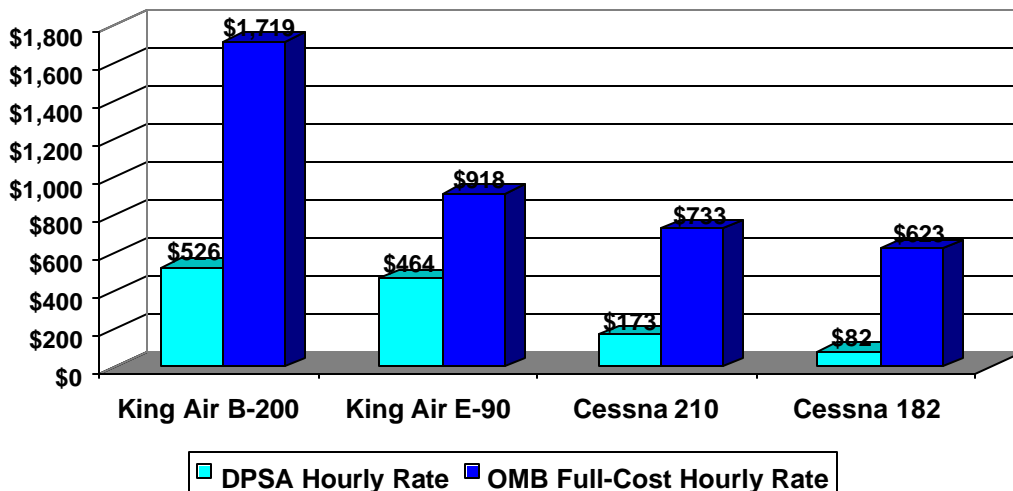
**Finding III**

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the figure shows, the hourly rates for airplanes under the OMB model are two to seven times higher than DPSA's rates. Using the OMB's rates, DPSA's reimbursements would almost triple. Specifically, DPSA received \$37,261 in air transport reimbursements for fiscal year 1999 and it could have received \$111,085 using full-cost rates.

**Figure 2**

**Department of Public Safety—Aviation Section  
Comparison of Department's Hourly Aircraft Rates  
to Full-Cost Hourly Rates  
Year Ended June 30, 1999**



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<sup>1</sup> Full-cost rates were calculated using Aviation Section Expenditure data for fiscal year 1999 and the Office of Management and Budget's full cost-recovery model described in Table 3 (see page 27). The full-cost rates do not include administrative overhead costs. The OMB model states, "agencies should exercise their own judgment as to the extent to which aircraft users should bear the administrative overhead costs." In addition, depreciation costs are included only for the King Air B-200 as the three other aircraft have been fully depreciated based on their age.

Source: Auditor General staff analysis of financial information provided by the Department of Public Safety.

Problems with DPSA's cost model were identified as early as 1992. In that year, the Governor's State Long-Term Improved Management (SLIM) project recommended that DPSA charge sufficiently to cover the operating costs of air transport services provided to other agencies. In response, DPSA indicated that it would increase its rates to include direct operating costs, rent, insurance, and replacement costs as well as the cost of one pilot. While DPSA increased most of its rates slightly from its 1992 rates, it did not implement the rates it proposed in response to the SLIM report, and it did not change its model to include the elements it stated it would. DPSA indicated it did not implement full-cost rates because it believes many of these costs, such as insurance, would exist whether or not it provided air transport services to other agencies. However, since DPSA is not mandated to provide air transport services (except for the Governor), it is not clear that all of these costs would exist or exist at current levels if it did not provide these services for other agencies.

### **DPSA Needs to Adopt Better Model**

To ensure that charges are sufficient to cover the expenses of its air transport activities, DPSA should adopt a more comprehensive cost model that includes all of the elements in OMB's full cost-recovery model.

To make these changes, however, DPSA would need to update its cost information and develop a method for capturing the necessary costs.

- **Cost information needs to be more current**—DPSA used annual costs for maintenance and fuel over a three-year period to set its airplane and helicopter rates. However, its current rates are obsolete as they are based on expenditures from fiscal years 1994 through 1996.
- **Additional cost categories needed**—The budget reports used to develop the existing rates do not separate all costs by aircraft or capture the expenditures by the categories included in the OMB's full cost model. Therefore, DPSA will need to implement an accounting system or software pro-

gram that captures all the necessary costs by aircraft. These costs can then be used to update its air charter rates when its intergovernmental service agreements expire.

The new, higher rates may impact the extent to which other agencies use DPSA's air transport services. Specifically, the large increase in rates may reduce demand, as it will likely cause users to compare the cost of using DPSA services to a commercial or charter airline service. While presumably one aircraft is needed to fulfill DPS' statutory mandate to transport the Governor, the remaining aircraft should be self-supporting, because they are not used to fulfill the agency's mandate. Consequently, if demand is reduced, DPSA should consider disposing of aircraft that are not self-supporting in an appropriate and legal manner.

### **Recommendations**

1. DPSA should expand its existing cost-recovery model to include all elements suggested by OMB's full cost-recovery model.
2. DPSA should establish an accounting mechanism to capture all costs included in the OMB model for each of its airplanes.
3. DPSA should review these costs and use this information as the basis for establishing new rates for its intergovernmental service agreements with the agencies that utilize its air transport services when the agreements expire.
4. If demand is reduced as a result of increasing rates, DPSA should dispose of any aircraft that are not used to fulfill its mandate and that are not self-supporting.

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## Agency Response

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May 12, 2000

Ms. Debra K. Davenport, CPA  
Auditor General  
State of Arizona  
Office of the Auditor General  
2910 N. 44<sup>th</sup> Street  
Phoenix, Arizona 85018

Dear Ms. Davenport:

Enclosed you will find my written comments in response to the revised preliminary report draft of the performance audit of the Department of Public Safety's Aviation Section (DPSA).

Please feel free to contact my office at (602) 223-2464 if you have any questions.

Sincerely,

Dennis A. Garrett, Colonel  
Director

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Enclosures: Response  
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**RESPONSE TO THE PRELIMINARY REPORT OF THE  
OFFICE OF THE AUDITOR GENERAL'S PERFORMANCE AUDIT OF THE  
DEPARTMENT OF PUBLIC SAFETY - AVIATION SECTION**

**FINDING I:           DPSA should serve as backup air ambulance provider to the private sector.**

***Recommendation 1: DPSA should rewrite its mission statement to change its role in air ambulance services to that of a backup provider unless the private sector is unavailable or unable to respond in a timely manner.***

**Response:**       The finding of the Auditor General is not agreed to and the recommendation will not be implemented.

**Title 41, Chapter 12.1, Article 1, Paragraph 41-1834:**

A. For the primary purpose of providing the most timely, efficient and comprehensive emergency medical services possible, the director may, subject to the availability of funds, purchase, equip, staff and be responsible for maintaining aircraft, including helicopters, or may lease or contract for such equipment and services. Aircraft and helicopters shall also be used in law enforcement activities. The aircraft provided by this section may be made available for emergency services at any time there is a medical emergency requiring the use of evacuation aircraft, as determined by a law enforcement agency or a physician. Emergency medical air evacuation shall normally take precedence over routine law enforcement missions. The director shall make the final decision relative to such aircraft utilization.

B. Each medical evacuation aircraft or helicopter shall be capable of carrying two litter patients and one paramedic in addition to the ambulance pilot.

C. The director may contract with a private firm, a corporation, or an individual for the maintenance of the aircraft, including helicopters.

D. The director may enter into contracts with private firms or individuals for emergency surface or air ambulance services when no other such services are readily available or when deemed to be in the best interests of the state.

E. Medical evacuation aircraft, including helicopters, operated by the department shall not be used to provide transportation for officials of the state or any of its political subdivisions. This does not preclude the use of medical evacuation aircraft by such officials when required in the course of a law enforcement function or emergency or when such official is the victim of an emergency medical situation.

F. Notwithstanding subsection E, the director may enter into interagency service agreements with other state agencies for the use of helicopters and other aircraft that the department will operate to provide aviation services on an availability basis when the department deems that these services are in the best interests of this state. These services may be in addition to the services the department provides pursuant to this chapter but shall not preclude the delivery of emergency evacuation services provided for under this chapter. The amount of monies collected from state agencies for aviation services shall not exceed the operational costs of the aircraft.

**Comments:**       The Department of Public Safety's long-standing interpretation of the above statutory reference, continually reinforced by the legislature, is that DPS is statutorily mandated to provide the most timely, efficient and comprehensive emergency medical air evacuation services possible, and secondly, that emergency medical air evacuation services normally take priority over law enforcement missions. In this regard, the authority to change this aspect of DPSA's mission rests solely with the legislature which must effect changes to enabling statutes.

**Recommendation 2:** *DPS should work to eliminate dispatching practices that favor DPSA. Specifically, DPS should establish a written policy to be used by EMSCOM that states that private providers are to be contacted first and that DPSA is to be contacted only if private providers are unavailable or unable to provide timely service. Requesting agencies (fire departments, ground ambulances and sheriff's offices, etc.) should be provided a copy of this new policy.*

Response: The finding of the Auditor General is agreed to and a different method of dealing with the finding will be implemented.

Comments: DPSA is unaware of any existing policy or practice which is specifically designed to favor the dispatch of a DPSA helicopter, rather than a private sector air ambulance, to the scene of a medical emergency. Existing dispatch practices are intended to ensure the most rapid emergency medical response available. Dispatching the closest available appropriate emergency medical helicopter, public or private, is the only reasonable and medically defensible procedure.

DPSA will work with DPS Operational Communications managers to develop a policy and procedure designed to ensure the dispatch of the closest available appropriate emergency medical helicopter, be it public or private, when a request for emergency medical air evacuation services is received by DPS. In cases where a private sector air ambulance and a DPSA helicopter have the same estimated time of arrival (ETA) at a scene, policy will require that the call for service be deferred to the private sector provider.

**Recommendation 3:** *DPSA should seek to ensure that the practice of “launching off the scanner” does not occur. Specifically, DPSA should establish a written policy stating that this practice is not appropriate and that staff should not initiate a flight without first verifying the need for an emergency helicopter. All air units should be provided a copy of this policy.*

Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

Comments: DPSA will develop a written standard operating procedure establishing appropriate criterion for responding to medical emergencies.

**Recommendation 4:** *After implementing the other recommendations, DPSA should assess whether its services are used enough to warrant the present level of resources, and if not, how to reduce unwarranted expenditures.*



Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

Comments: DPSA is engaged in a continuous effort to maximize the use of available resources and reduce unwarranted expenditures.

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**FINDING II: DPSA needs more powerful helicopters to conduct some missions.**

***Recommendation 1: DPSA should seek an increase in its General Fund appropriation to help cover the costs of replacing any of its three remaining Bell 206 helicopters.***

Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

Comments: DPS is currently working with the State Legislature to replace DPSA's three remaining Bell 206L helicopters. Optimally, DPSA would like to complete its fleet replacement program by July 2002, in accordance with the Auditor's recommendation.

It should be noted that, while the limited performance capabilities of DPSA's remaining Bell 206L helicopters adversely effect DPSA's ability to perform some missions efficiently and effectively, DPSA Air Rescue crews will not engage in missions that are inherently unsafe.

***Recommendation 2: DPSA should also continue to research the feasibility of using other funding sources such as RICO to help offset the costs of replacing helicopters.***

Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

Comments: DPSA will continue to seek out every available appropriate funding source to supplement the cost of helicopters.

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**FINDING III: DPSA is not charging enough to support air transport activities.**

***Recommendation 1: DPSA should expand its existing cost-recovery model to include all elements suggested by OMB's full cost-recovery model.***

Response: The finding of the Auditor General is agreed to and a different method of dealing with the finding will be implemented.

Comments: DPSA will reevaluate its existing cost-recovery model for air transport services and will expand it as necessary to include all appropriate elements suggested by the OMB's full cost-recovery model.

**Recommendation 2: *DPSA should establish an accounting mechanism to capture all costs included in the OMB model for each of its airplanes.***

Response: The finding of the Auditor General is agreed to and a different method of dealing with the finding will be implemented.

Comments: DPSA is in the process of making improvements in automated data collection; replacing its current data collection system with Microsoft Access. Anticipated delivery date is in late June 2000. The new system will be designed to capture all appropriate costs included in the OMB model for each of its airplanes.

**Recommendation 3: *DPSA should review these costs annually and use this information as the basis for establishing new rates for its intergovernmental service agreements with the agencies that utilize its air transport services when they expire.***

Response: The finding of the Auditor General is agreed to and the audit recommendation will be implemented.

**Recommendation 4: *If demand is reduced as a result of increasing rates, DPSA should dispose of any aircraft that are not used to fulfill its mandate and that are not self-supporting.***

Response: The finding of the Auditor General is agreed to and the recommendation will be implemented.

Comments: All DPSA aircraft are currently used to fulfill the DPS mandate. If aircraft become excess to the Agency's needs in the future, DPSA will dispose of them.

## Other Performance Audit Reports Issued Within the Last 12 Months

99-7	Arizona Drug and Gang Policy Council	99-18	Department of Health Services— Bureau of Epidemiology and Disease Control Services
99-8	Department of Water Resources	99-19	Department of Health Services— Sunset Factors
99-9	Department of Health Services— Arizona State Hospital	99-20	Arizona State Board of Accountancy
99-10	Residential Utility Consumer Office/Residential Utility Consumer Board	99-21	Department of Environmental Quality—Aquifer Protection Permit Program, Water Quality Assurance Revolving Fund Program, and Underground Storage Tank Program
99-11	Department of Economic Security— Child Support Enforcement	99-22	Arizona Department of Transportation A+B Bidding
99-12	Department of Health Services— Division of Behavioral Health Services		
99-13	Board of Psychologist Examiners		
99-14	Arizona Council for the Hearing Impaired	00-1	Healthy Families Program
99-15	Arizona Board of Dental Examiners	00-2	Behavioral Health Services— Interagency Coordination of Services
99-16	Department of Building and Fire Safety	00-3	Arizona's Family Literacy Program
		00-4	Family Builders Pilot Program
		00-5	Department of Agriculture— Licensing Functions
99-17	Department of Health Services' Tobacco Education and Prevention Program	00-6	Board of Medical Student Loans

## Future Performance Audit Reports

Department of Agriculture's  
Animal Disease, Ownership and Welfare Protection Program

Department of Agriculture's  
Food Safety and Quality Assurance Program