

# LEGISLATIVE AUDIT COMMISSION



Management Audit  
Illinois Department of Transportation's  
Aeronautics Operations  
January 2007

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**MANAGEMENT AUDIT**  
**Illinois Department of Transportation's**  
**Aeronautics Operations**  
**January 2007**

**Recommendations**  
**Department of Transportation - 6**

**Accepted - 4**  
**Implemented - 1**  
**Under Study - 1**

**Introduction and Background**

The Illinois Department of Transportation's Division of Aeronautics is responsible for operating an air transportation services program. IDOT operates a Springfield-Chicago and Chicago-Springfield shuttle service and also provides additional flight services upon request. The shuttle operates on weekdays and offers three round trips daily, flying between the Abraham Lincoln Capital Airport in Springfield and Midway Airport in Chicago. In addition to the shuttle service and specially requested flights, IDOT provides aerial assistance to law enforcement and disaster response agencies, aerial photography, and engineering services.

On August 10, 2005, the Legislative Audit Commission adopted LAC Resolution Number 135, which directs the Auditor General to conduct a management audit of the Illinois Department of Transportation's (IDOT's) aeronautics operations. The resolution specified that the audit be completed by January 2007. The resolution directs that the audit include, but not be limited to, the following determinations for fiscal years 2003 through 2006:

- All direct and indirect costs associated with operating the State planes;
- A categorization of the users of the State planes by flight destination, time of day and agency;
- The total reimbursements paid by State agencies for flights taken by their respective employees and a determination of whether those reimbursements were sufficient to cover costs associated with operating the State's fleet;
- A comparison of the cost paid by State employees for flights on the State plane to amounts charged by commercial airlines operating out of the same cities;
- To the extent that information is available, a determination of whether any flights were for a personal or non-official purpose; and
- Whether IDOT has analyzed the cost-effectiveness of its air operation and examined whether alternative means exist to fulfill the travel needs of State employees.

**Conclusions**

The management audit of the Illinois Department of Transportation's (IDOT's) aeronautics operations concluded the following:

- The amounts billed by IDOT to users of the State's aircraft were not sufficient to cover

## Management Audit

### IDOT's Aeronautics Operations

- the cost of operating the State's aircraft for fiscal years 2003 – 2006. On average the amounts billed covered only 14.3 percent of the cost of operating the State's aircraft over the four-year period.
- The business rate charged to users of the State's aircraft has not been increased since 1981. If IDOT's goal was to recover its cost, IDOT would need to raise the rate charged for the executive aircraft from \$0.41 per seat-mile to \$1.85 per seat-mile. For the executive helicopters, IDOT would need to increase the amount charged from \$84.00 per seat-hour to \$1,861.50 per seat-hour.
- IDOT currently charges \$59.86 for a one-way shuttle flight between Springfield and Chicago Midway. Based on the average cost per passenger seat-mile for the four-year period, IDOT would need to charge \$270.10 for a one-way shuttle flight to cover the cost of operating the State's aircraft.
- IDOT did not include all costs of operating the State's aircraft in its cost reports.
- IDOT has not fully analyzed the cost effectiveness of its air operations and has also not analyzed the optimum fleet size needed.
- Flight requests from State agencies are not made in writing as required by statute. Passengers also are not attesting to the purpose of the flight when signing the flight manifest as required in IDOT's Air Transportation Guidelines.
- IDOT does not charge business users for any positioning legs associated with a requested flight.
- Rates charged by commercial airlines are higher than the rates charged by IDOT, but lower than the actual cost incurred by IDOT to provide the service.
- The shuttle flights represented 73 percent of all executive aircraft flights during fiscal years 2003 – 2006 and averaged 5.6 passengers per flight. Special flight requests represented 25 percent of executive aircraft flights and averaged 4.0 passengers per flight.

### Recommendations

Condensed below are the six findings and recommendations presented in the management and program audit report. The following recommendations are classified on the basis of updated information provided on July 10, 2007 by Ron McKeachan, Chief of Audits, Illinois Department of Transportation.

- 1. Include all direct and indirect costs when assessing the cost of the State's aircraft program. Use the costs defined in Federal OMB Circular No. A-126 as a starting point in determining all of the costs of operating the State's aircraft program.**

**Findings:** IDOT did not include all costs of operating the State's aircraft in its cost reports. IDOT included direct costs such as fuel, parts, outside repairs, maintenance costs, and pilot costs, but did not include other direct costs such as training for pilots and

## **Management Audit IDOT's Aeronautics Operations**

mechanics, travel costs, insurance, airport fees, and depreciation. IDOT also did not include administrative costs such as management salaries, utilities, and other building costs.

Federal OMB Circular No. A-126 defines cost elements that should be included when accounting for the cost of aircraft. Although the Circular's requirements apply specifically to federal executive agencies, the cost methodology is relevant to IDOT's aeronautics operations.

In addition to the cost definitions, federal OMB Circular No. A-126 also contains many requirements that federal agencies must follow related to the use and management of government aircraft. Some of the requirements include:

- Conducting cost comparisons to justify use prior to authorizing use for a proposed trip;
- Periodically reviewing the continuing need for all of their aircraft and the cost effectiveness of their aircraft operations;
- Operating aircraft only for official purposes; and
- Approving use of aircraft in advance and in writing.

The first determination of Legislative Audit Commission Resolution Number 135 asked the auditors to determine all direct and indirect costs associated with operating the State planes. The auditors requested this cost information from IDOT. IDOT provided Cost Analysis Summary reports for fiscal years 2003 through 2006. The cost reports detail the cost of operating each of the State's aircraft. For each aircraft, the reports break out the costs as follows:

- Direct Operating Costs which include:
  - Outside repairs – repairs and engine/component overhauls conducted by outside vendors.
  - In-house aircraft parts – parts purchased for IDOT's aircraft and installed/maintained by IDOT maintenance staff.
  - Fuel – both fuel purchased and pumped at the Capital Airport facility and fuel purchased by credit card away from the facility.
- Allocated Maintenance Costs – the expense of the maintenance personnel allocated to each aircraft based on man-hours.
- Allocated Pilot Costs – the expense of the aircraft pilots allocated to each aircraft based on flight hours.

IDOT did not include any additional costs such as administrative costs in its Cost Analysis Summary reports, so the auditors requested and IDOT provided additional costs based on the elements defined in federal OMB Circular No. A-126. These costs included:

- Training costs for both pilots and mechanics;
- Travel costs;
- Liability insurance;
- Airport fees;
- Management salaries for employees directly responsible for the aircraft program;

## Management Audit

### IDOT's Aeronautics Operations

- Salaries for employees not directly responsible but that provide services that support the aircraft program;
- Building costs including utilities, janitorial services, building lease payments, trash disposal, pest control, and guard service;
- Office supplies; and
- Depreciation.

The exhibit below shows the costs of operating the State's aircraft program. The first part of the exhibit shows the costs that IDOT included in its Cost Analysis Summary reports. The second part of the exhibit shows additional costs of the program that, according to federal OMB Circular A-126, should be included, and also the cost of charter flights. IDOT has started to look at incorporating these additional costs into its cost analysis.

<b>COSTS OF OPERATING THE STATE'S AIRCRAFT PROGRAM</b> Fiscal Years 2003 – 2006 (in Thousands)				
<b>IDOT's Costs in Cost Analysis Summary Reports</b>				
<u>Cost Description</u>	<u>FY03</u>	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>
Outside Repairs	\$263.6	\$610.3	\$548.3	\$517.2
In-House Aircraft Parts	571.9	426.9	404.2	447.0
Fuel	413.8	536.1	665.7	789.0
Allocated Maintenance Cost	808.6	915.7	980.5	877.0
Allocated Pilot Costs	<u>1,272.7</u>	<u>1,101.6</u>	<u>1,111.2</u>	<u>961.6</u>
Total	<u>\$3,330.7</u>	<u>\$3,590.5</u>	<u>\$3,709.8</u>	<u>\$3,591.8</u>
<b>Additional Costs Not Included by IDOT</b>				
<u>Cost Description</u>	<u>FY03</u>	<u>FY04</u>	<u>FY05</u>	<u>FY06</u>
Training: Pilots and Mechanics	\$ 179.1	\$ 232.4	\$ 218.9	\$ 324.9
Travel	38.4	37.2	33.3	40.6
Liability Insurance	159.2	167.2	167.2	103.1
Airport Fees	134.2	91.6	81.1	21.7
First Class Flight Physicals	2.5	2.8	2.2	3.2
Management Salaries	444.2	375.7	445.4	449.8
Support Salaries	7.1	7.2	7.5	6.3
Building Costs	69.8	66.0	54.5	110.0
Office Supplies	3.2	3.2	2.1	2.3
Charter Flights	130.6	57.2	2.5	0.0
Depreciation	<u>365.2</u>	<u>365.2</u>	<u>365.2</u>	<u>365.2</u>
Total Additional Costs	<u>\$ 1,533.5</u>	<u>\$ 1,405.6</u>	<u>\$ 1,379.8</u>	<u>\$ 1,427.1</u>
<b>Total Cost of Operating the State's Aircraft</b>	<b><u>\$ 4,864.2</u></b>	<b><u>\$ 4,996.1</u></b>	<b><u>\$ 5,089.6</u></b>	<b><u>\$ 5,018.9</u></b>
Source: OAG analysis of IDOT Cost Analysis Summary reports and cost data.				

## **Management Audit**

### **IDOT's Aeronautics Operations**

**Updated Response:** Implemented. The Department agrees to use OMB Circular No. A-126 as a guide in determining all of the costs of operating the State's aircraft program. FY06 was completed in accordance with the OAG's recommended methodology in December 2006. The methodology has been accepted by the Department for future cost reporting. The Department will assess the State's aircraft program annually at the end of each Fiscal Year.

- 2. Develop a written policy that requires a periodic review of its rates charged to users of the State's aircraft. The Department should also develop a methodology to set the rates charged to users and determine the costs that should be recovered. If IDOT develops a rate that does not recover the full cost of operating the State's aircraft, the full cost information should be made available so that it will make transparent the amount of subsidy involved in providing aircraft services.**

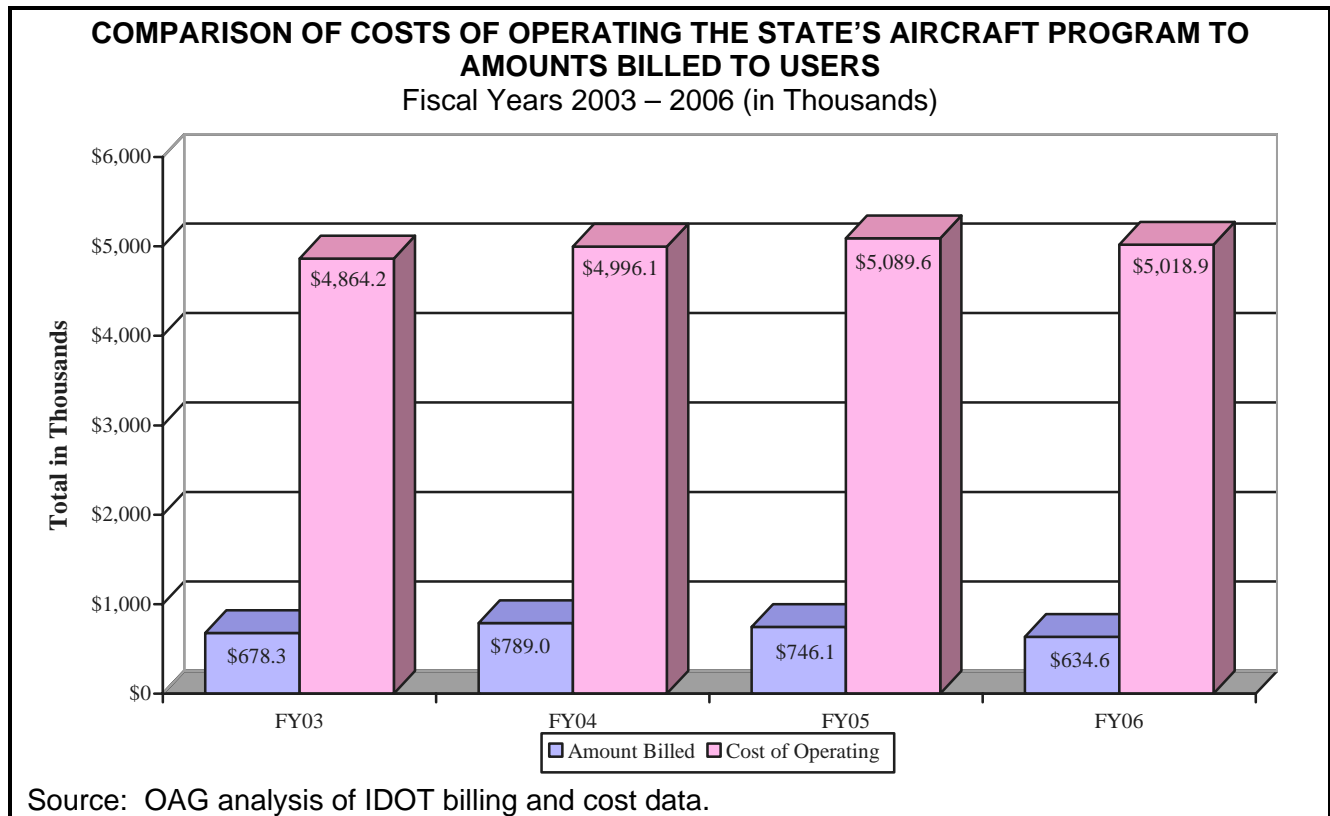
**Findings:** The amounts billed by IDOT to users of the State's aircraft were not sufficient to cover the cost of operating the State's aircraft for fiscal years 2003 – 2006. On average the amounts billed covered only 14.3 percent of the cost of operating the State's aircraft over the four-year period. Since amounts billed to users do not cover costs, money from other sources such as the Road Fund and the General Revenue Fund are being used to subsidize the cost of air transportation services.

The third determination of Legislative Audit Commission Resolution Number 135 asked the auditors to determine whether reimbursements paid by State agencies were sufficient to cover the costs associated with operating the State's fleet. The exhibit on the next page shows the amounts billed to users were not sufficient to cover the cost of operating the State's aircraft. Although the costs of operating the State's aircraft totaled \$19.97 million, users were only billed a total of \$2.85 million over the four-year period.

The business rate charged to users of the State's aircraft has not been increased since 1981 and remains at \$0.41 per nautical seat-mile. The rate for personal and political users was last increased in 1995 to \$0.75 per seat mile. IDOT lacks a system or methodology to set the rates that are charged to users. IDOT also lacks a written policy that would require a periodic examination of the rate structure to determine if rates need to be adjusted.

The statute indicates that IDOT is not to profit from its charges but is unclear as to whether it intended that IDOT recover all of its costs of operating air transportation services. A 1975 report titled "Investigation of the Use and Control of State-Owned Transport Aircraft" issued by the Legislative Audit Commission stated, "It is clear from the reading of the statutory authority, that the General Assembly intended that at best the function be self-supporting. However, there is no duty imposed to be self-supporting."

**Management Audit  
IDOT's Aeronautics Operations**



**Response:** Accepted. The Department has developed a policy to annually review the cost of operating the state's aircraft and review the rates charged to the users of state aircraft. Results will be forwarded to the Secretary of Transportation for review.

**3. Periodically examine the cost effectiveness of air operations. The analysis should also determine the optimum fleet size and whether all current aircraft are needed.**

**Findings:** IDOT officials have stated that their goal is not to recover the cost of operating the State's aircraft. However, if the goal was to recover the cost, IDOT would need to raise the rate charged for the executive aircraft from \$0.41 per seat-mile to \$1.85 per seat-mile. Based on the costs and passenger miles flown over the previous four fiscal years, IDOT's average cost for the four Beechcraft King Air aircraft is \$9.81 per mile. The Beechcraft King Air's seating capacity is nine passengers. Based on nine passengers, the average cost per seat-mile is \$1.09. However, since the average number of passengers carried per flight is 5.3, to recoup the total cost, an average cost per seat-mile of \$1.85 would need to be charged.

To recover the cost of operating the executive helicopter fleet, IDOT would need to increase the amount charged from \$84.00 per seat-hour to \$1,861.50 per seat-hour. Based on the costs and passenger hours flown over the previous four fiscal years, IDOT's average cost for the two Sikorsky helicopters is \$6,701.42 per hour.

## **Management Audit**

### **IDOT's Aeronautics Operations**

IDOT has not fully analyzed the cost effectiveness of its air operations and has not examined whether alternative means exist to fulfill the travel needs of State employees. In addition, IDOT has not analyzed the optimum fleet size needed. Periodically examining its cost effectiveness and optimal fleet size is critical in identifying opportunities to reduce aircraft costs and in identifying inefficiencies.

The sixth determination of Resolution Number 135 asked the auditors to determine whether IDOT has analyzed the cost-effectiveness of its air operation and examined whether alternative means exist to fulfill the travel needs of State employees. The auditors asked IDOT to provide any reports or analysis completed on the cost effectiveness of its air operations. Initially, IDOT was only able to provide two dated reports conducted in the 1970s.

In October 2006, IDOT provided a more recent analysis of the costs of operating the executive aircraft. The analysis, which was limited to the four Beechcraft King Air airplanes, was a three-year cost analysis covering fiscal years 2003 – 2005. The analysis included pilot costs, maintenance costs, fuel, parts, depreciation, insurance, administration and support costs, and building costs. Based on a cost per hour calculation, the analysis concluded that the average cost per seat for the Springfield to Midway shuttle service would be \$200.72 for a one-way flight. IDOT currently charges \$59.86 per seat for a one-way flight.

IDOT has also not conducted an analysis of the optimal size of its fleet, but the audit shows that for the four Beechcraft airplanes, there were 82 days where none were used, 90 days when one aircraft was used, 108 days when two of the aircraft were used, 74 days when three of the aircraft were used, and 11 days when all four aircraft were used. For the two Sikorsky helicopters, in FY06, there were 288 days when neither helicopter was used, 74 days when one helicopter was used, and 3 days when both helicopters were used.

**Response:** Accepted. The Department has developed a policy to annually review the cost of operating the state's aircraft and review the rates charged to the users of state aircraft. The department will periodically review optimal fleet size and appropriateness for the state's Aeronautical missions. Results will be forwarded to the Secretary of Transportation for review.

#### **4. Ensure that all flight requests are made in writing as required by statute or seek legislative change to alter the requirement.**

**Findings:** Flight requests from State agencies are not made in writing as required by statute. State statute specifies that "*All requests for air transportation shall be made in writing and shall be signed by the executive officer or employee of the office, department, or agency*". Contrary to State statute, all flight requests are made by calling the Illinois Department of Transportation (IDOT).

## **Management Audit**

### **IDOT's Aeronautics Operations**

**Response:** Accepted. The Department will seek a change in legislation to remove the requirement of flight requests made in writing. Expected date of completion is December 31, 2007.

#### **5. Ensure that all passengers sign the flight manifest and attest to the purpose of the flight when signing the flight manifest, as required in the Air Transportation Guidelines.**

**Findings:** A flight manifest listing all of the passengers is prepared prior to each flight. IDOT's Air Transportation Guidelines require each passenger to sign the flight manifest. During testing, the auditors reviewed 120 flight manifests from fiscal years 2003 through 2006. One flight manifest from our sample could not be located by IDOT officials. Not all of the passengers listed on a manifest signed the flight manifest in for nine of 119 of the flights tested. This included manifests where there was no signature, manifests where the signature was initialed indicating someone else had signed for the passenger, and manifests where another passenger signed their own name next to another passenger. In addition to these nine manifests, there were other manifests where it appeared that a passenger signed the manifest for another passenger, but did not put their initials after the signature.

Passengers are not attesting to the purpose of the flight when signing the flight manifest as required in IDOT's Air Transportation Guidelines. The use of the State's aircraft for personal or political business can only be scheduled by the elected constitutional officers of the executive branch and the leaders of the General Assembly. Personal and political users are charged a higher rate than business users.

For 95% (113 of 119) of flights tested, the passengers did not designate whether the flight was for business, personal, or political purposes. These manifests did not include a section on the form for designating the purpose of the flight. A different manifest form was used for Bell helicopters. This manifest form included sections to designate whether the purpose of the flight was for EMS, Emergency, Law Enforcement, or Business. These manifests accounted for most (4 of 6) of those in the sample that attested to the purpose of the flight. The other two flights in the sample where the passengers attested to the purpose of the flight were part of the same manifest that distinguished one political flight leg and one business flight leg.

Currently, IDOT presumes all flights to be for business purposes unless otherwise indicated by the using entity. According to IDOT officials, most users indicate the purpose of the flight at the time of scheduling. However, one agency would often indicate a flight was for personal or political purposes after the fact. An examination of billing records confirmed that after receiving its monthly bill, the agency would notify IDOT of any flights or passengers that should have been billed at the personal or political rate instead of the business rate. IDOT would then prepare a new bill to send to the agency.

**Response:** Accepted. The Department will change the Air Transportation Guidelines to have each scheduler attest to the passenger's purpose of trip when requesting the flight.

## **Management Audit**

### **IDOT's Aeronautics Operations**

The Department will hold two mandatory training sessions for agency directors or designee and/or schedulers, one in Chicago and one in Springfield, on an annual basis to convey the significance of the scheduler's role in the state aircraft operations. Expected date of completion is August 2007.

**Updated Response:** Accepted. The Department has added a statement to the passenger manifest stating that "unless otherwise noted, your signature attests to travel on official State business". The Department is working to add a check box to the manifest for the traveler to check if the travel is for personal or political business.

#### **6. Consider charging business users for positioning legs required to accommodate flight requests.**

**Findings:** IDOT does not charge business users for any positioning legs associated with a requested flight. For some flight requests, the aircraft must be flown to the requested location and then returned to its home base at the end of the flight. These positioning legs are also referred to as "dead-head" legs, meaning that there are no passengers on board.

Positioning legs add costs that are not recovered through billing the users of the State's aircraft. For instance, if a special flight is requested to fly passengers from Chicago to Springfield and the aircraft is located in Springfield, passengers are not billed for the mileage associated with flying the empty aircraft to Chicago to pick them up.

According to IDOT's Air Transportation Guidelines, business users are only charged for the air mileage of the requested routing which would not include positioning legs. Conversely, if an aircraft is used entirely for personal or political purposes, the user is charged for the entire round trip, including any positioning legs.

In FY06, the Beechcraft planes flew 487 positioning legs for a total 64,151 miles. This represented 20% of the legs and 19% of the miles flown. The Sikorsky helicopters flew 138 positioning legs for 12,194 miles. This represented 47% of the legs and 51% of the miles flown.

**Response:** Accepted. The Department will change the Air Transportation Guidelines to have each scheduler attest to the passenger's purpose of trip when requesting the flight. The department will hold two mandatory training sessions for agency directors or designee and/or schedulers, one in Chicago and one in Springfield, on an annual basis to convey the significance of the scheduler's role in the state aircraft operations. The expected date of completion is August 2007.

**Updated Response:** Under study. The Department agrees to consider and is working with Agency Schedulers to optimize aircraft utilization and maximize aircraft usage on all flight leg segments.

## Management Audit IDOT's Aeronautics Operations

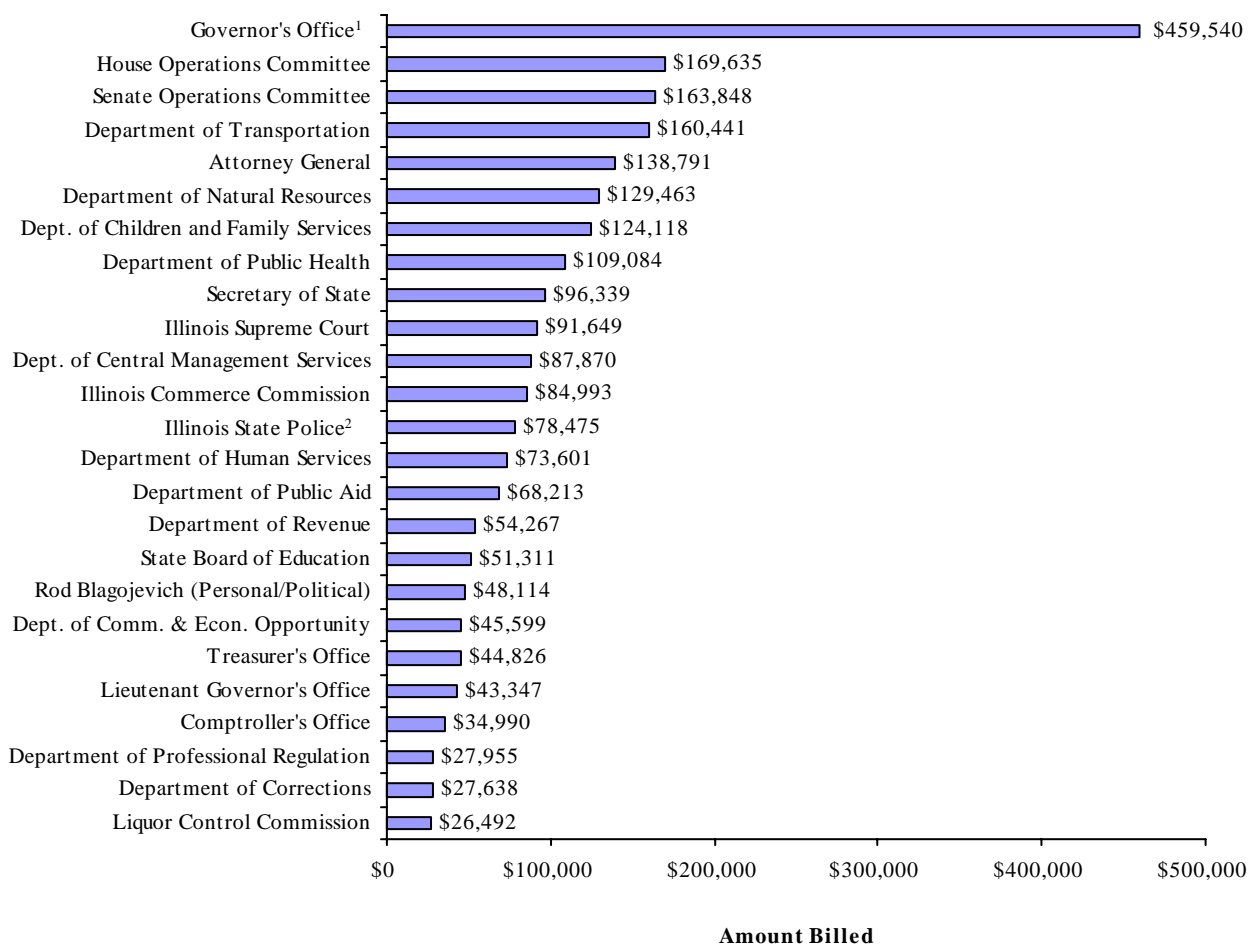
### Other Information

The second determination of Legislative Audit Commission Resolution Number 135 asked for a categorization of the users of the State planes by flight destination, time of day, and

agency. The following sections also discuss: the categorization of users by the purpose of the flight, flights with only one or two passengers, and out-of-state flights.

The exhibit below lists the top 25 users of the State's aircraft based on billings for fiscal years 2003 – 2006. These 25 entities represented 86 percent of all amounts billed for the four-year period. The Governor's Office was the top user representing 16.1% of the total amount billed which was more than twice the amount of the second highest entity.

#### TOP 25 USERS OF THE STATE'S AIRCRAFT BASED ON TOTAL BILLINGS Fiscal Years 2003 – 2006



Notes: <sup>1</sup>The Governor's Office includes the Governor's Office of Management and Budget (\$104,219).

<sup>2</sup>Illinois State Police includes the Executive Security Detail (\$76,173).

Source: OAG analysis of IDOT billings.

## Management Audit

### IDOT's Aeronautics Operations

IDOT's Air Transportation Guidelines define three categories of aircraft utilization: official State business, personal business, and political business. The exhibit below shows a categorization of users of the State's aircraft for fiscal years 2003 – 2006. The 'Other' category consisted mainly of EMS helicopter flights which have since been discontinued.

<b>FLIGHT CATEGORIES OF INDIVIDUAL USERS OF THE STATE'S AIRCRAFT</b>					
Fiscal Years 2003 – 2006					
<b>Category</b>	<b>FY03</b>	<b>FY04</b>	<b>FY05</b>	<b>FY06</b>	<b>Total</b>
Official State Business	10,846	12,131	11,599	10,195	44,771
Political Business	33	64	41	20	158
Personal Business	37	23	64	19	143
Other <sup>1</sup>	105	3	-	-	108
<b>Total</b>	<b>11,021</b>	<b>12,221</b>	<b>11,704</b>	<b>10,234</b>	<b>45,180</b>
Note: <sup>1</sup> Consisted mainly of EMS helicopter flights which have since been discontinued. Source: OAG analysis of IDOT flight data.					

The fourth audit determination of Resolution Number 135 asked for a comparison of the cost paid by State employees for flights on the State plane to amounts charged by commercial airlines operating out of the same cities.

Rates charged by commercial airlines are higher than the rates charged by the Illinois Department of Transportation (IDOT) but lower than the actual cost incurred by IDOT to provide the service. At the time the audit was released, there were two commercial airlines that fly between Springfield and Chicago. United Airlines continues to fly between Springfield and Chicago O'Hare with a State rate of \$140 for a one-way capacity controlled fare and a \$204 one-way rate that is always available if seats are available. For a few months, Big Sky Airlines flew between Springfield and Chicago Midway with an introductory one-way rate of \$79 which was set to rise to \$109.

IDOT currently charges \$59.86 for a one-way shuttle flight between Springfield and Chicago Midway. Based on the average cost per passenger seat-mile for the four-year period, IDOT would need to charge \$270.10 for a one-way shuttle flight to cover the cost of operating the State's aircraft.

The vast majority of flights (87%) for the executive aircraft are between Chicago and Springfield. Shuttle flights represented 73 percent (5,900 of 8,106) of all flights during fiscal years 2003 – 2006. Other special flights between Chicago and Springfield accounted for an additional 14 percent (1,157 of 8,106) of flights over the same time period. Flights to other cities that offer commercial flights accounted for only 1 percent (87 of 8,106) of all flights over the four-year period.