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State Auditor

A Follow-up Audit Report on

**Flight Services Provided by the
Department of Transportation's
Aviation Division Flight Services
Section**

October 2008
Report No. 09-011



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Overall Conclusion

The Department of Transportation (Department) has substantially implemented four of five recommendations the State Auditor's Office made in 2006 regarding flights provided by the Department's Aviation Division Flight Services Section. The Department's implementation of the remaining recommendation is in progress. For example, the Department has:

- Increased the hourly rates charged for flights twice since the 2006 audit.
- Increased the number of passengers per flight.

While the Department has made progress, it is still incurring a financial loss in providing flights. In September 2006, the State Auditor's Office reported that the Department incurred a loss of \$972,441 on flights in fiscal year 2006. During the current audit:

- When all applicable direct and indirect costs are considered, auditors estimated that the Department incurred a loss of \$1.4 million on flights only from May 1, 2007, through May 31, 2008 (see Table 3 in Chapter 1 for additional details).
- Based on a comparison of revenues and expenditures, the Department's entire Flight Services Section (including flights, maintenance, fuel, and hangar services) incurred a total loss of \$527,983 from May 1, 2007, through May 31, 2008.

Background Information

Auditors determined the implementation status for all five recommendations the State Auditor's Office made in *An Audit Report on Flight Services Provided by the Department of Transportation's Aviation Division Flight Services Section* (State Auditor's Office Report No. 07-001, September 2006).

Auditors also reviewed the implementation status of selected recommendations that Deloitte Consulting made during a comprehensive review it completed in December 2006.

The Flight Services Section has two major functions:

- Aircraft operation, which includes providing air transportation to state officials and employees traveling on official state business.
- Ground services, which includes supplies, maintenance, and repair services for all state-owned aircraft and providing fuel and hangar storage services for all Austin-based state aircraft.

This audit was conducted as a portion of a previous State Auditor's Office audit (see An Audit Report on the Department of Transportation's Financial Forecasting and Fund Allocation, State Auditor's Office Report No. 08-045, August 2008).

For more information regarding this report, please contact Kelly Linder, Audit Manager, or John Keel, State Auditor, at (512) 936-9500.

Auditors also noted the following:

- The Flight Services Section still does not consistently ensure that flight log forms and passenger affidavits are completed for each flight.
- The Flight Services Section has drafted a fleet replacement plan, but that plan has not been approved or incorporated into the Department's strategic plan as required by Texas Government Code, Section 2205.032 (see Appendix 2).

The Department obtained a comprehensive review of its flight services by Deloitte Consulting (Deloitte) after the 2006 State Auditor's Office audit. The Deloitte report, completed in December 2006, made 23 recommendations. The State Auditor's Office reviewed 8 recommendations and the Department has fully implemented three recommendations and substantially implemented two recommendations. The Department's implementation of three recommendations from that review is in progress. See Appendix 3 for the Executive Summary of the Deloitte report.

Summary of Management's Response

The Department agreed with the recommendations in this report, and it provided the following summary of its responses:

The Texas Department of Transportation appreciates the opportunity to respond to recommendations contained in the audit report. The Texas Department of Transportation is committed to providing the highest level of professional aviation services to the Governor, the Lieutenant Governor, the Speaker of the House, members of the Texas Legislature, elected officials, and governmental agencies in the safest and most cost effective manner possible. We believe that this audit shows substantial improvement toward reaching our goals. However, we are committed to continuous improvement of our Flight Services.

Summary of Objective, Scope, and Methodology

The objective of this audit was to determine whether the Department's Aviation Division Flight Services Section has made progress in implementing selected recommendations to correct deficiencies identified in the following reports:

- *An Audit Report on Flight Services Provided by the Department of Transportation's Aviation Division Flight Services Section* (State Auditor's Office Report No. 07-001, September 2006).
- *A Comprehensive Review of TxDOT Aviation Division, Flight Services Section (FSS)*, Deloitte Consulting, December 2006.

*A Follow-up Audit Report on
Flight Services Provided by the Department of Transportation's
Aviation Division Flight Services Section
SAO Report No. 09-011*

This audit was conducted as a portion of a previous State Auditor's Office audit (see *An Audit Report on the Department of Transportation's Financial Forecasting and Fund Allocation*, State Auditor's Office Report No. 08-045, August 2008).

The audit scope covered activities within the Department's Flight Services Section from September 1, 2006, to June 30, 2008.

The audit methodology included reviewing flight log forms, passenger affidavits, cost data, billing information, and flight rates for the Department's Flight Services Section and analyzing data in the Department's Flight Billing database.

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Detailed Results

Chapter 1

The Department Has Increased Flight Rates and Occupancy, But Its Flight Services Still Are Not Recovering All Costs

The Department of Transportation (Department) has made progress in implementing the recommendations to address financial losses on flights that were detailed in *An Audit Report on Flight Services Provided by the Department of Transportation's Aviation Division Flight Services Section* (State Auditor's Office Report No. 07-001, September 2006).

The 2006 State Auditor's Office audit report listed five options that the Department should consider implementing to address the financial losses on its flights. The Department has substantially implemented the overall recommendation by increasing the hourly rates charged for flights twice since the 2006 audit and increasing the number of passengers per flight (see Table 1 for additional details). However, the Department is still not recovering all costs it incurs on providing flights.

Definitions of Implementation Status

- **Fully Implemented:** Successful development and use of a process, system, or policy to implement a prior recommendation.
- **Substantially Implemented:** Successful development but inconsistent use of a process, system, or policy to implement a prior recommendation.
- **In Progress:** Ongoing development of a process, system, or policy to address a prior recommendation.
- **Not Implemented:** Lack of a formal process, system, or policy to address a prior recommendation.

Table 1

Status of Implementation of State Auditor's Office Recommendations Related to Financial Losses on Flight Services		
Recommendation	Implementation Status	Auditor Comments
<p>1 The Department should consider implementing one or more of the following options:</p> <ul style="list-style-type: none"> ▪ Increase the rates it charges for providing flight services. ▪ Increase the volume of high occupancy flights. ▪ Seek appropriations from the Legislature to cover the indirect costs of providing flight services. ▪ Discontinue state-operated flights for certain purposes (such as aerial photography) and outsourcing flights for those purposes to the private sector. ▪ Discontinue providing state aircraft flight services. 	Substantially implemented	<p>The Department has worked to implement two of the five options; it did not implement the other three options. Specifically:</p> <ul style="list-style-type: none"> ▪ The Department increased the rates charged for providing flights in May 2007 and again in June 2008. However, the increased rates still do not cover the costs that the Department incurs for providing flights (see the information below this table for additional details). ▪ The Department presented the benefits of using the Department's flight services to several state agencies to increase their knowledge of and demand for these services. Flights with four or more passengers have increased from 35 percent of all flights to 53 percent of all flights. Flights with fewer than four passengers have decreased from 65 percent of all flights to 47 percent of all flights. ▪ The Department indicated that it did not seek appropriations from the Legislature to cover the indirect costs associated with flights. ▪ Although the 2006 State Auditor's Office report recommended that the Department consider

**Status of Implementation of State Auditor's Office Recommendations Related to
Financial Losses on Flight Services**

Recommendation	Implementation Status	Auditor Comments
		<p>discontinuing state-operated flights for certain purposes, the Department continues providing flights for those purposes.</p> <p>From September 1, 2006, through June 30, 2008, the Department provided 17 flights (1.8 percent of all flights) for the purposes of aerial photography, aerial survey, aerial mapping, or aerial surveillance. All of those flights were billed at the correct rate in effect at the time of the flight.</p>

The rates that the Department charges for flights still do not cover direct and indirect costs.

The Department has made progress by increasing the hourly rates it charges for flights since the 2006 audit (see Table 2).

Table 2

Rate Changes for Flights			
Time Period	Hourly Rates		
	Aircraft Type		
	King Air B200	Cessna 425	Single Engine Aircraft
Before May 1, 2007	\$850.00	\$625.00	\$225.00
May 1, 2007, to May 31, 2008	\$977.50	\$718.75	\$258.75
June 1, 2008, and after	\$1,122.00	\$826.00	\$285.00

Source: Department of Transportation.

However, the Department is still incurring a financial loss in providing flights. In September 2006, the State Auditor's Office reported that the Department incurred a loss of \$972,441 on flights in fiscal year 2006. During the current audit, auditors calculated that the Department incurred an estimated loss of \$1.4 million (considering both direct and indirect costs) on flights only from May 1, 2007, through May 31, 2008 (see Table 3 on the next page).

Table 3

State-Operated Flights Comparison of Hourly Rates with Cost Estimates May 1, 2007, to May 31, 2008			
Rates and Cost Estimates	Aircraft Type		
	King Air B200	Cessna 425	Single Engine Aircraft
Flight hourly rates from May 1, 2007, to May 31, 2008 ^a	\$ 977.50	\$ 718.75	\$ 258.75
State Auditor's Office's estimate of direct costs	\$ 1,468.63	\$ 1,716.27	\$ 1,128.90
State Auditor's Office's estimate of indirect costs	<u>631.50</u>	<u>55.40</u>	<u>49.67</u>
Total State Auditor's Office's estimate of direct and indirect costs	\$ 2,100.13	\$ 1,771.67	\$ 1,178.57
State Auditor's Office's estimate of loss including only direct costs	\$ 456,108.06	\$226,037.45	\$157,062.08
State Auditor's Office's estimate of loss including both direct and indirect costs	\$1,042,586.27	\$238,592.18	\$166,027.89
State Auditor's Office's estimate of total loss including both direct and indirect costs ^{b c}	\$1,447,206.34		
<p>^a The flight hourly rates changed as of June 1, 2008; therefore, auditors used the prior hourly rates that were in effect from May 1, 2007, to May 31, 2008.</p> <p>^b The State Auditor's Office's estimate of loss was calculated using the State Auditor's Office's estimate of direct and indirect costs, current flight hourly rates, and the Department's estimated revenue flight hours.</p> <p>^c The above estimates do not include one-time revenues and expenditures. In June 2007, the Flight Services Section sold an aircraft for \$707,982.44. Of that amount, \$648,552.98 was used to refurbish the existing aircraft.</p>			

The Department bases its hourly rates for flights on a cost model that does not include (1) certain direct costs, such as facilities expenses and benefits for employees working directly on flights, and (2) indirect costs, such as depreciation and certain salaries and employee benefits of employees not working directly on flights. Texas Government Code, Section 2205.040, requires the Department to charge rates that are sufficient to recover direct costs (see Appendix 2 for additional details). In addition, not all the information in the Department's cost model is based on recent, actual expenditure data. The General Appropriations Act (80th Legislature) requires that the amounts the Department charges for flights cover certain expenses such as facility leases (see Appendix 2 for additional details).

The State Auditor's Office's estimate of direct and indirect costs for flights includes the actual costs for the factors the Department used (such as parts and fuel), but auditors made adjustments to include depreciation, additional

salaries and employee benefits, and facilities expenses that were not included in the Department's estimate.

The Department's Flight Services Section provides other services in addition to flights. Those other services include conducting aircraft maintenance for other agencies, selling fuel to other agencies, and providing hangar services. When all services that the Flight Services Section provides are factored in, a comparison of revenues to expenditures from the Flight Services Section as a whole shows a loss of \$527,983 from May 1, 2007, to May 31, 2008 (see Table 4).

Table 4

Revenues and Expenditures for the Entire Flight Services Section ^a	
May 1, 2007, to May 31, 2008	
Category	Amount
Revenues	\$4,548,495
Expenditures	\$5,076,478
Loss	\$(527,983)
^a This includes revenue and expenditures for <u>all</u> services that the Flight Services Section provides, including flight services, aircraft maintenance for other agencies, fuel sales to other agencies, and hangar services.	

Recommendations

The Department should:

- Develop a full cost model, based on actual costs, to determine the hourly rate it charges for flights.
- Ensure that the full cost model includes other revenue sources, such as revenue from maintenance services and aircraft sales, when determining rates that will enable the Department to provide flights on a cost-neutral basis.

Management's Response

Agree. The Department agrees that the flight services provided by TxDOT should operate on a cost-neutral basis. TxDOT Flight Services currently utilizes a cost model, based on direct operating costs, as required by statute, to determine passenger flight rates. A full cost model is currently under development to include hourly rates for aircraft maintenance services, fuel, and hangar rental to ensure that Flight Services, as an entity, operates on a cost-neutral basis. We plan to complete this cost model by the end of FY 2009.

While the report period utilized by the auditors of May 2007 through May 2008 showed a loss of \$ 527,983, TxDOT budget reports show that Flight Services closed the FY 2008 year with revenues (\$5,754,055) exceeding expenditures (\$5,670,656) by \$83,399.

Included within the SAO calculations is a \$541,666 expense toward aircraft depreciation. The depreciation expense was based on 100% amortization over a 10 year period. Aviation industry standards provide for depreciation of aircraft at 50%, 20 year amortization.

The Comptroller's Office depreciation model utilized by the auditors does not reflect standard aviation industry practice for aircraft depreciation as stated above. The Department will work with the Comptroller to adjust and correct their current depreciation model to that utilized by the industry. Additionally, depreciation of an aircraft that will appreciate in value should be carefully considered when billing other agencies for flights. Depreciation expense may not be appropriate for rate setting and reimbursement from the user agencies when the asset in all likelihood will be sold for more than purchase cost.

The Department's Implementation of Recommendations Related to the Flight Log Form, Passenger Affidavit, and Flight Plan Is Ongoing

Definitions of Implementation Status

- **Fully Implemented:** Successful development and use of a process, system, or policy to implement a prior recommendation.
- **Substantially Implemented:** Successful development but inconsistent use of a process, system, or policy to implement a prior recommendation.
- **In Progress:** Ongoing development of a process, system, or policy to address a prior recommendation.
- **Not Implemented:** Lack of a formal process, system, or policy to address a prior recommendation.

The Department has made progress in implementing the recommendations to address issues related to the flight log form, passenger affidavit, and flight plan in *An Audit Report on Flight Services Provided by the Department of Transportation's Aviation Division Flight Services Section* (State Auditor's Office Report No. 07-001, September 2006).

The Department has substantially implemented three (75 percent) of the four recommendations auditors reviewed. The Department's implementation of the remaining recommendation is in progress (see Table 5 for additional details).

Table 5

Status of Implementation of State Auditor's Office Recommendations Related to The Flight Log Form, Passenger Affidavit, and Flight Plan		
Recommendation	Implementation Status	Auditor Comments
1 The Department should require passengers to complete its flight log form and passenger affidavit.	Substantially Implemented	The flight log forms tested during this audit did not always contain required information such as the mission code, purpose, and passenger list. In addition, not all passengers had a current affidavit for the flights they took (see the information below this table for additional details).
2 The Department should modify its flight log form to require passengers to specify whether they are flying for reasons that comply with statutory requirements, and state the specific purpose for travel.	Substantially Implemented	The Department modified its flight log form to add two mission codes for aerial mapping and aerial survey. The statutory requirements are listed on the back of the form, along with an affirmation that specifies that, by signing the form, the passenger agrees that his or her reason for flying is permissible within those statutes.
3 The Department should develop a long-range flight plan with the required elements, and make that plan part of the Department's overall strategic plan.	In Progress	The Department has drafted a fleet replacement plan that contains estimates of the future aircraft replacement needs and estimates about other fleet management needs, including the need to increase or decrease the number of aircraft in the pool. However, the draft plan is not a part of the Department's overall strategic plan as required by the Texas Government Code, Section 2205.032 (see Appendix 2 for that statute).
4 The Department should continue to consider the options offered by the Department's internal audit office.	Substantially Implemented	The Department's internal audit office followed up on its recommendations in May 2007 and determined that the Department's Flight Services Section had implemented three of five recommendations. The internal audit office recommended that the Flight Services Section make additional improvements to its purchasing process and continue working on programming for an interface between the Flight Services Management System and the Material and Supply Management System.

The Department does not consistently receive complete flight documentation.

The Department still does not always receive adequate information from the state agencies and higher education institutions that use its services, as was noted in the State Auditor's Office's 2006 audit report. Not consistently receiving this information impairs the Flight Services Section's ability to comply with applicable statutes, state rules and regulations, and policies and procedures.

The Department's Flight Services Section asks all passengers to complete a flight log form that requests information such as passenger names, dates of travel, destinations, specific purposes of travel, and mission codes¹ as required by Texas Government Code, Section 2205.039 (see Appendix 2 for that statute). However, the passengers who complete this form do not always provide all required information. The Flight Services Section also tracks flight information by using a database that includes information from the flight log forms that passengers complete.

During the current audit, auditors reviewed flight log forms and passenger affidavits and identified the following issues:

- Passengers do not always complete the mission code and/or purpose sections of the flight log form. Of 36 flight log forms tested, 21 (64 percent) did not specify a mission code or specified a mission code that did not match information in the Department's database. In addition, 5 (14 percent) of the 36 flight log forms did not specify the flight's purpose or specified a purpose that did not match information in the Department's database.
- Four (11 percent) of 35 passengers tested did not complete passenger affidavits required by Section 8.02, Chapter 281, Acts of the 79th Legislature, Regular Session (see Appendix 2 for that statute).

Recommendations

The Department should:

- Ensure that passengers consistently and fully complete flight log forms and passenger affidavits before the flight occurs as required by Texas Government Code, Section 2205.039.
- Finalize its draft fleet replacement plan and include that plan as part of its overall strategic plan as required by Texas Government Code, Section 2205.032.

¹ The "mission code" on the flight log form is a general category of travel defined by the Department's Flight Services Section (see Figure 5 in Chapter 4 for the specific mission codes used).

Management's Response

Agree. Although substantial improvement in flight log compliance has been made since the previous audit, a new procedure has already been implemented which will assist Flight Services in reaching the goal of 100% compliance.

The Flight Services Fleet Replacement Plan is completed and needs to only be incorporated in the edition of TxDOT's Strategic Plan when it is updated. TxDOT will integrate the fleet plan at that time.

The Department Has Made Progress in Implementing Recommendations in a Deloitte Consulting Comprehensive Review

The Department contracted with Deloitte Consulting to conduct a comprehensive review of all management components of the Department's Flight Services Section. That review focused on increasing efficiency and identifying areas for operational improvement. The report from that review—*Comprehensive Review of TxDOT Aviation Division Flight Services Section (FSS)*—was published in December 2006 and included 23 recommendations (see Appendix 3 for the executive summary from that report).

Definitions of Implementation Status

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The State Auditor's Office reviewed the Department's implementation of eight recommendations made in the Deloitte Consulting review. The Department has fully implemented three recommendations and substantially implemented two recommendations. The Department's implementation of the remaining three recommendations is in progress (see Table 6 for additional details).

Table 6

Status of Implementation of Recommendations from the 2006 Deloitte Consulting Comprehensive Review		
Recommendation	Implementation Status	Auditor Comments
1 Flight Services Section should identify key performance indicators for the organization and for individual units within Flight Services.	In Progress	The Flight Services Section is currently using only one key performance indicator: the number of hours flown. It has identified additional indicators for the Maintenance Unit and for Fuel Sales. It is developing reporting tools to monitor the additional indicators, with a goal of having the tools available within the next few months.
2 Flight Services Section training should include continued flight safety training for pilots.	Fully Implemented	Training requirements for pilots are identified in the Flight Services Section's <i>Flight Operations Manual</i> . Based on audit testing, pilots meet the requirements for continued flight safety training, and the Flight Services Section keeps an up-to-date file on pilot training and certifications.
3 Flight Services Section needs to maintain a fleet composition that is responsive to varying demands, but which is streamlined to avoid excessive capital and maintenance costs.	Substantially implemented	Between September 1, 2006, and June 30, 2008, the Department reduced the fleet of aircraft from ten to eight aircraft. The reduction came from the sale of a King Air 200 and a Cessna 425 aircraft (see Table 7 in Chapter 4 for a list of aircraft).
4 Flight Services Section should review flight volume and demand statistics to develop a fleet replacement schedule based on key operational and financial data. If demand and flight volume do not increase from 2004-2006, fleet size should be reduced.	Fully Implemented	As noted in Chapter 2, the Department has drafted a fleet replacement plan. Total flight hours have increased from fiscal year 2004 to fiscal year 2008 (see Figure 1 in Chapter 4).

Status of Implementation of Recommendations from the 2006 Deloitte Consulting Comprehensive Review			
Recommendation	Implementation Status	Auditor Comments	
5	Based on the average age of the existing fleet, technological requirements, and performance concerns, an entire fleet rationalization will be necessary in the next four-five years.	Fully Implemented	(See recommendation 4 above regarding the fleet replacement plan.)
6	Refine cost model: Current charges are not based on a formalized cost model. Such a model is vital for Flight Services Section to demonstrate from a sound operational perspective which costs are recovered and which are not recovered.	In Progress	The Department bases its hourly rates on an informal cost model, but that model does not include certain elements, such as depreciation, facilities expenses, and some salaries. In addition, not all the information in the Department's model is based on recent, actual expenditure data (see Chapter 1 for additional details).
7	Flight Services Section should prioritize completion of all paperwork related to flight activity in order to stress compliance in the area of flight operations, flight purpose affidavits, and passenger manifests.	In Progress	As noted in Chapter 2, the Department does not consistently ensure that flight log forms and passenger affidavits are fully completed for each flight.
8	Manager should make the Aircraft Operations Coordinator accountable for ensuring proper documentation is maintained in a timely manner.	Substantially Implemented	The Aircraft Operations Coordinator is responsible for maintaining flight documentation. However, documentation is not consistently completed (see recommendation 7 above).

Recommendations

The Department should:

- Develop key performance indicators for the Flight Services Section and report these indicators to management for use as a monitoring tool.
- Consider working with the Legislative Budget Board and the Governor's Office of Budget and Planning to develop performance measures for the Flight Services Section.
- Continue to implement all recommendations from the Deloitte Consulting report.

Management's Response

Agree. The Department will develop key performance indicators to monitor the flight and maintenance operations and will consult with the LBB and Governor's Budget Office regarding inclusion of those measures in the Department's measure report. The recommendations from the Deloitte report will continue to be implemented as they make best business sense to allow for optimal operations.

Flight Services Section Activity

History of the Flight Services Section's Activity

The Legislature created the former State Aircraft Pooling Board (Board) in 1979. House Bill 2702 (79th Legislature, Regular Session) abolished the Board in June 2005 and transferred the Board's responsibilities to the Department of Transportation's Aviation Division Flight Services Section.

In addition to providing passenger flight services to state agencies and higher education institutions, the Flight Services Section provides maintenance services to other state agencies.

Fleet of Aircraft

During the scope of this audit, the Flight Services Section had 10 active planes: five King Air B200, three Cessna 425, and two single engine aircraft (see Table 7). During fiscal year 2007, the Flight Services Section reduced the fleet from ten aircraft to eight aircraft. In addition, at the end of this audit, the Department reported that it had put the two remaining Cessna 425 aircraft into surplus and those aircraft would no longer be available for flights; this left the Department with four passenger aircraft and two single engine (utility) aircraft.

Table 7

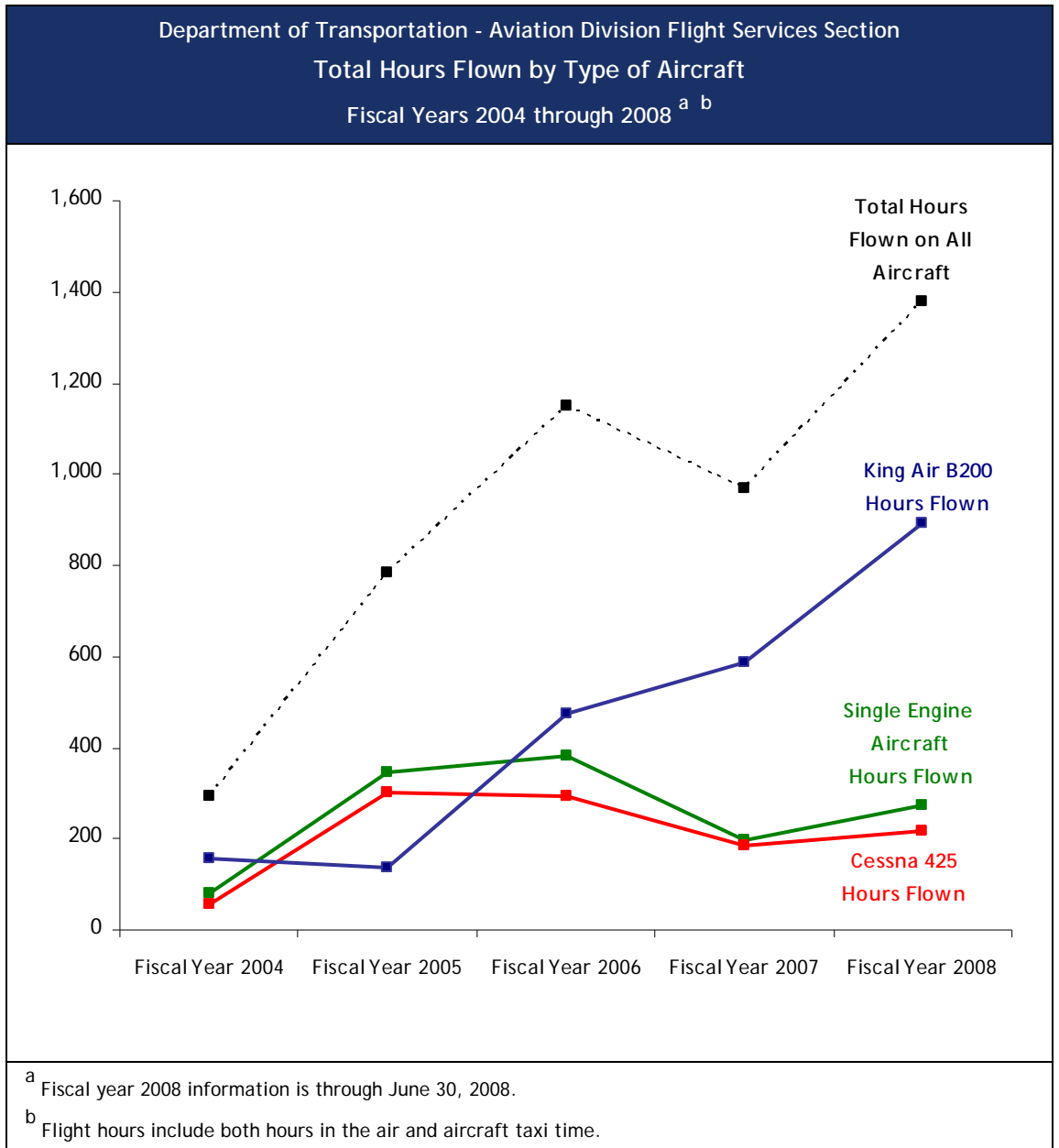
Aircraft Operated by the Flight Services Section Between September 1, 2006, and June 30, 2008				
Type of Aircraft	Year	Make	Model	Aircraft Tail Number
Single Engine (utility) Aircraft	1978	Cessna	TU206	147TX (formerly N4589U)
Single Engine (utility) Aircraft	1980	Cessna	182Q	148TX (formerly N4979N)
Passenger Aircraft	1982	Beechcraft	King Air B200	N62569
Passenger Aircraft	1981	Beechcraft	King Air B200	1TX
Passenger Aircraft	1985	Beechcraft	King Air B200	N7256K
Passenger Aircraft	2000	Raytheon	King Air B200	116TX (formerly 808WD)
Passenger Aircraft	1982	Beechcraft	King Air B200	N6308F ^a
Passenger Aircraft	1983	Cessna	425	N68865 ^a
Passenger Aircraft	1983	Cessna	425	N101CA ^b
Passenger Aircraft	1983	Cessna	425	N6885S ^b
^a Aircraft N6308F was sold in October 2006 and aircraft N68865 was sold in June 2007. ^b At the end of this audit, the Department reported that it had put these aircraft into surplus, and these aircraft would no longer be available for flights.				

Source: Department of Transportation.

Analysis of Flight Services

Auditors analyzed aircraft use, the number of flights for which the Department's Flight Services Section billed, and other statewide activity associated with flight services. As Figure 1 shows, the number of total hours flown generally increased from September 1, 2004, to June 30, 2008. The greatest increase in hours flown by type of aircraft was associated with the King Air B200.

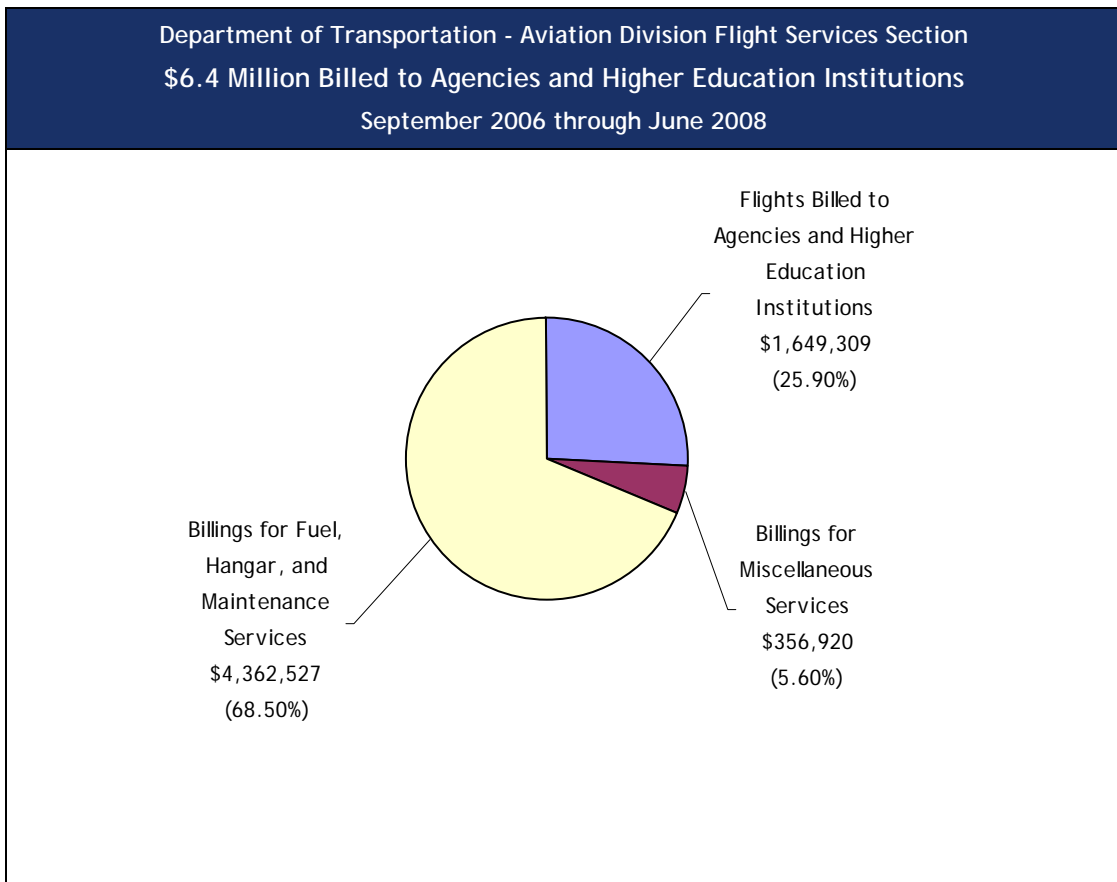
Figure 1



Source: Department of Transportation.

The Department's Flight Services Section billed agencies and higher education institutions for \$6.4 million from September 1, 2006, through June 30, 2008, for providing flights, maintaining aircraft, fuel, and aircraft hanger rentals (see Figure 2). The Flight Services Section in Austin conducts maintenance on aircraft owned by the State (specifically, by the Department of Public Safety, the Parks and Wildlife Department, the Department of Criminal Justice, and the University of Texas at Austin). It also sells fuel to those agencies and higher education institutions for their flights.

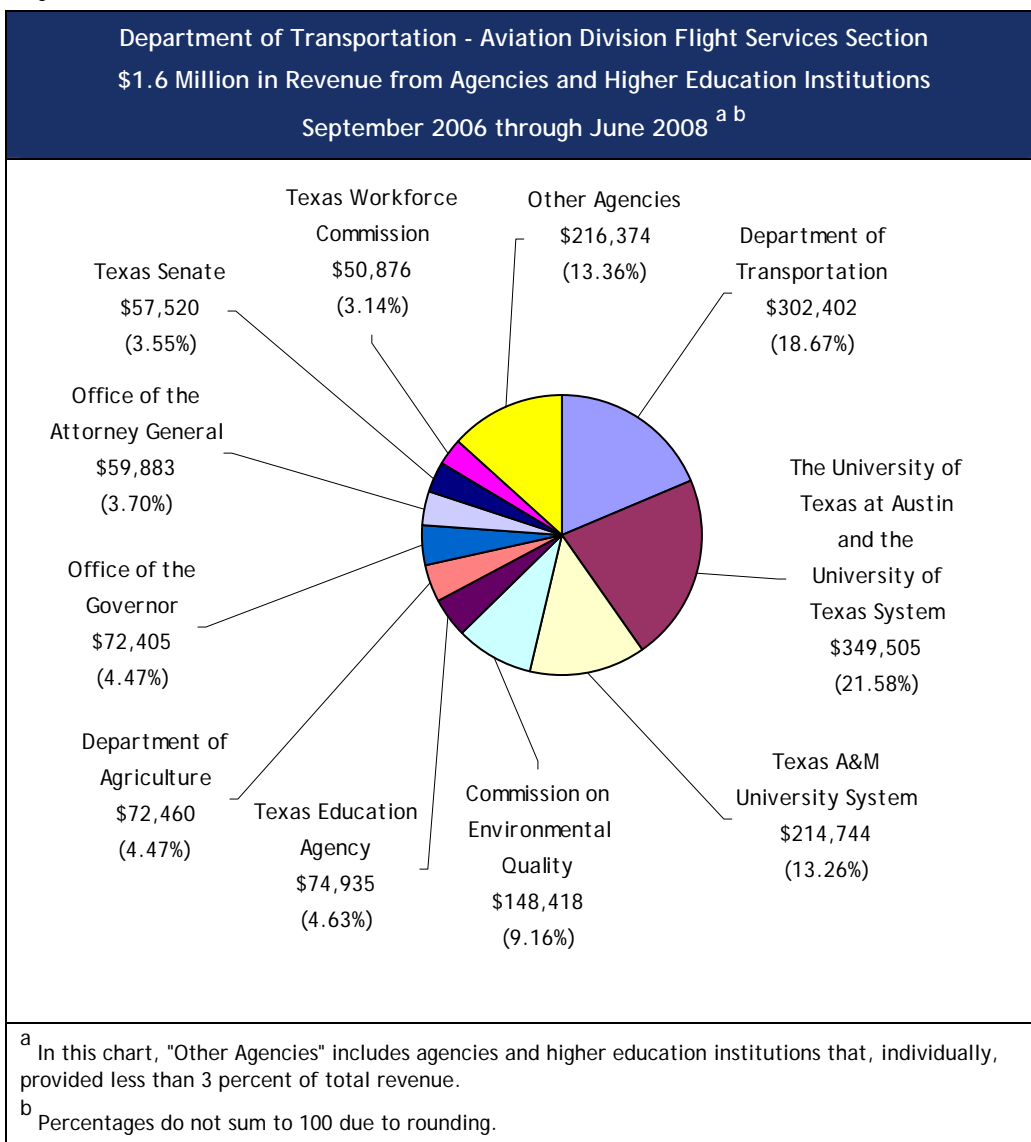
Figure 2



Source: Department of Transportation.

From September 1, 2006, through June 30, 2008, state agencies and higher education institutions paid approximately \$1.6 million in state funds for flights that the Department's Flight Services Section provided (see Figure 3). The University of Texas at Austin (15.33 percent) and the University of Texas System (6.25 percent) combined provided the largest amount of revenue at \$349,505 (21.58 percent).

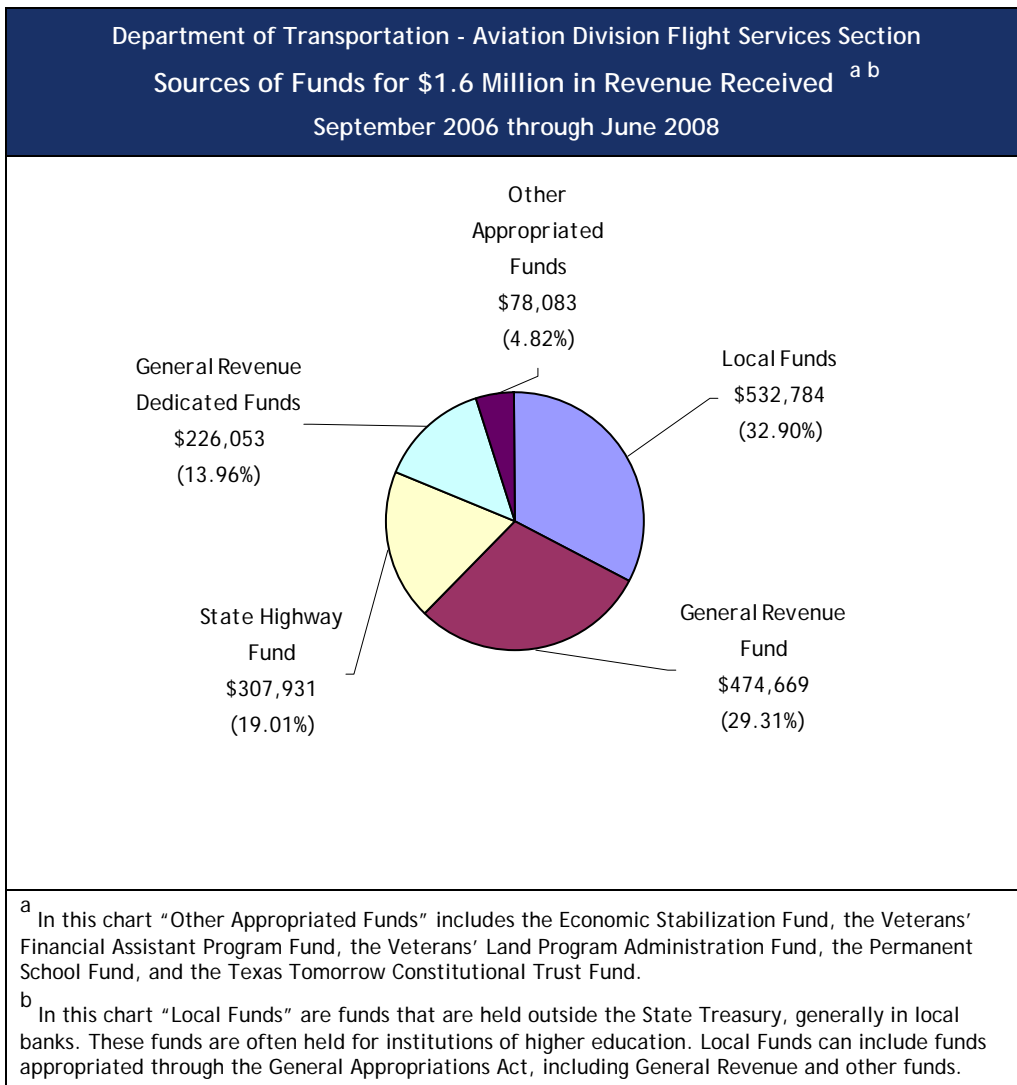
Figure 3



Sources: Department of Transportation and the Uniform Statewide Accounting System.

Figure 4 shows the sources of funds for the revenue that the Department’s Flight Services Section received from September 2006 through June 2008. Figure 4 includes information from (1) funding sources verified in the Uniform Statewide Accounting System and (2) flight billing information provided by the Department.

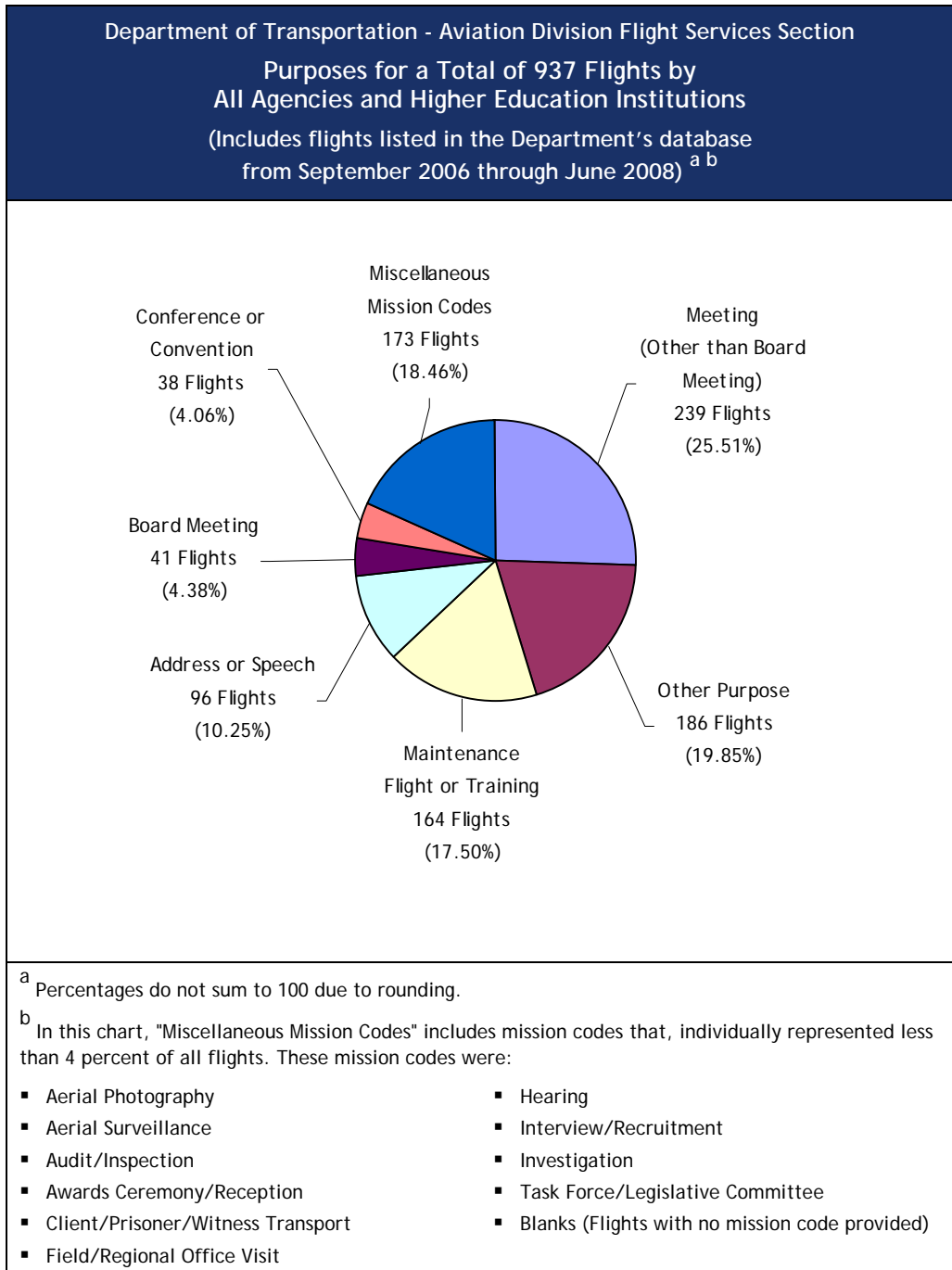
Figure 4



Sources: Department of Transportation and the Uniform Statewide Accounting System.

From September 1, 2006, to June 30, 2008, agencies and higher education institutions flew 937 flights using the Department's Flight Services Section. As Figure 5 shows, the most common purposes (or "mission codes") recorded for these flights were "Meeting" (25.51 percent of total flights) and "Other Purpose" (19.85 percent of total flights). The "Other Purpose" mission codes include flights for which no purpose was given or flights to reposition an aircraft (those flights have no passengers).

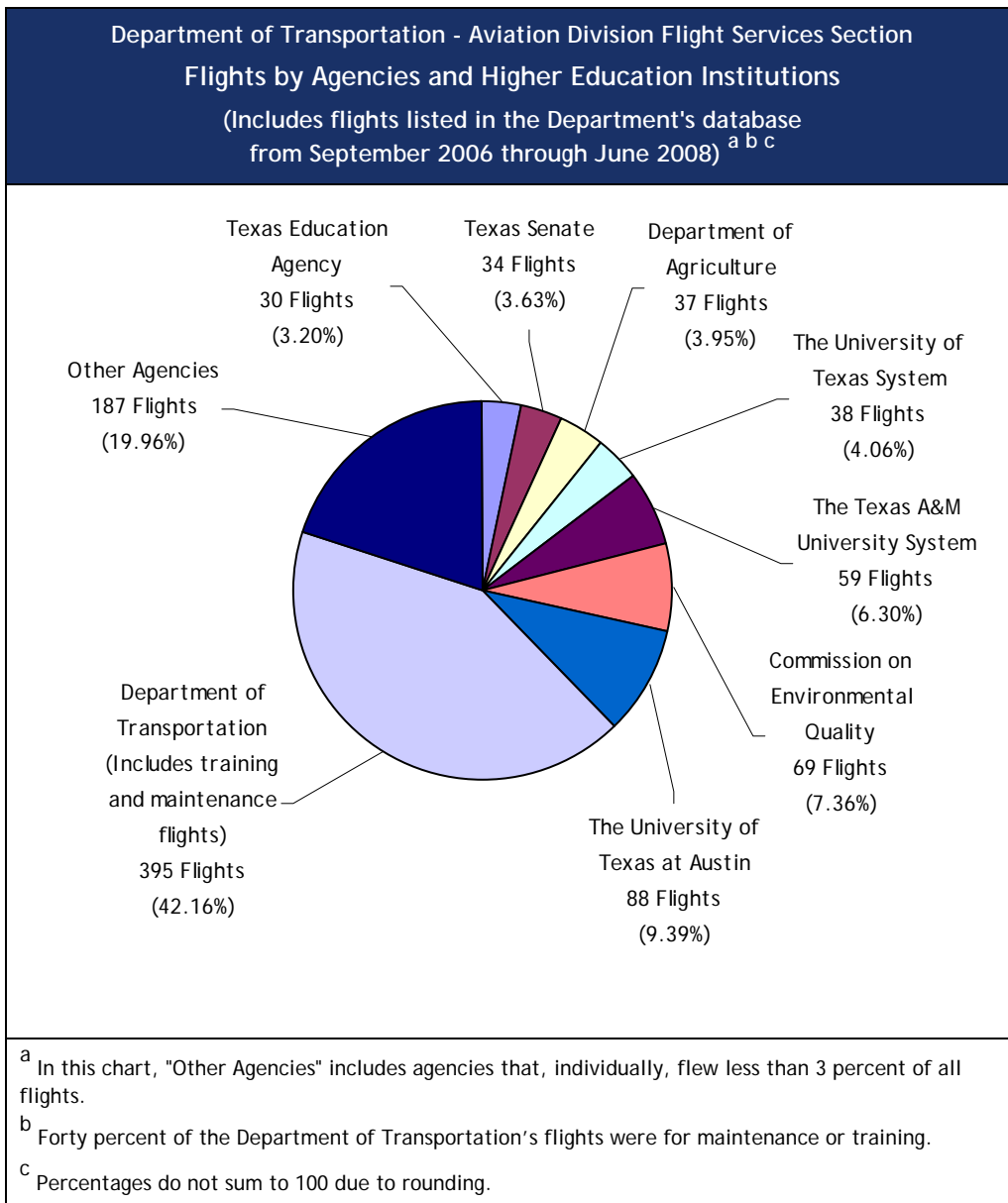
Figure 5



Source: Department of Transportation.

From September 1, 2006, through June 30, 2008, the Flight Services Section provided flight services to 27 agencies and higher education institutions. The Department was the primary user, with 395 flights or 42.16 percent of the total. However, 40 percent of those 395 flights were for maintenance or training. The University of Texas at Austin was the next highest user with 88 flights or 9.39 percent of the total (see Figure 6).

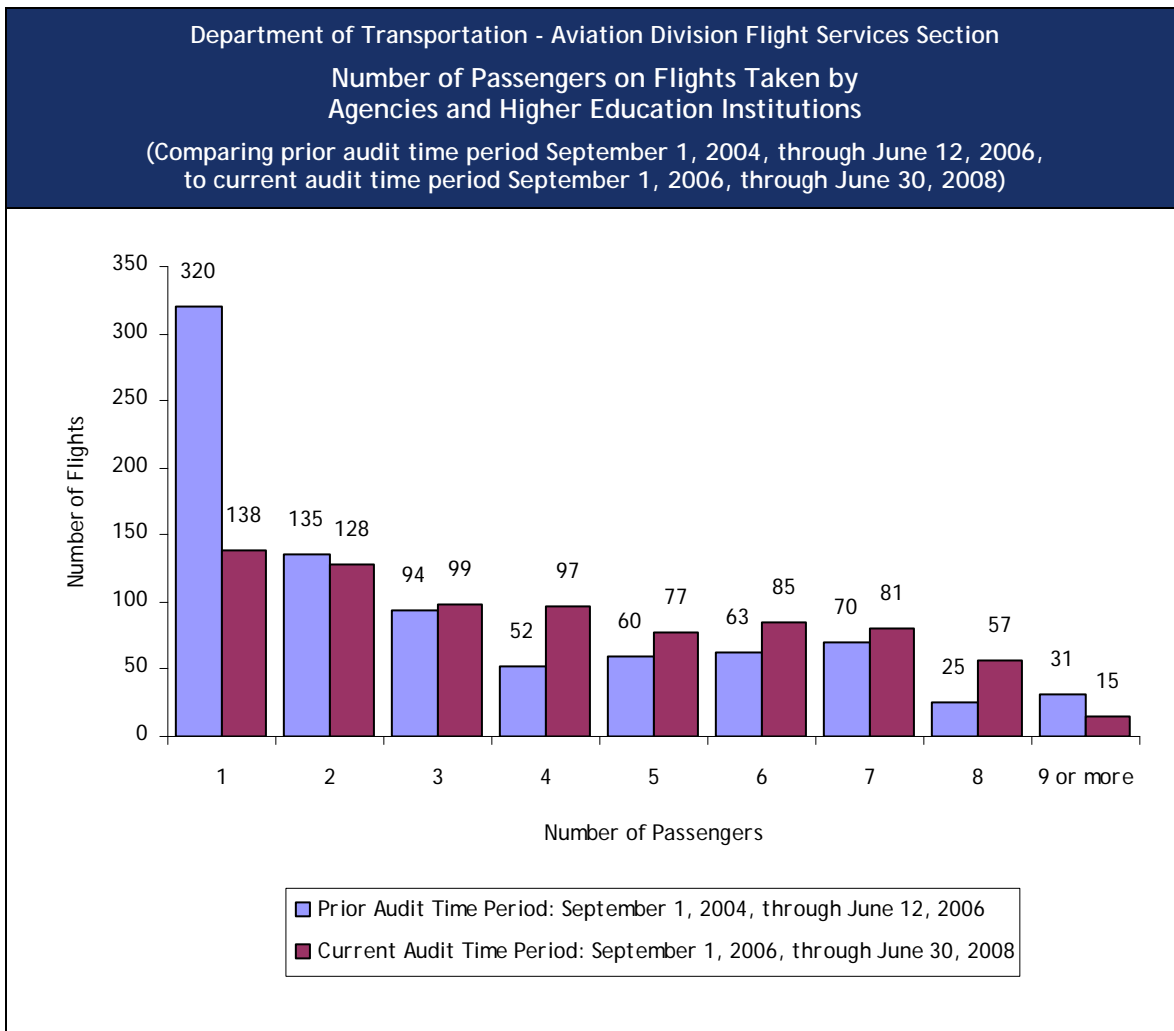
Figure 6



Source: Department of Transportation.

The State Auditor's Office's 2006 audit report recommended increasing the number of passengers per flight (see Chapter 1 of this report for additional details). During the current audit, auditors determined that the number of flights with four or more passengers had increased from 301 flights (35 percent of total flights) during the 2006 audit time period to 412 flights (53 percent of total flights) during the current audit time period (see Figure 7 for additional details). In addition, the number of flights with fewer than four passengers decreased from 65 percent of all flights to 47 percent of all flights.

Figure 7

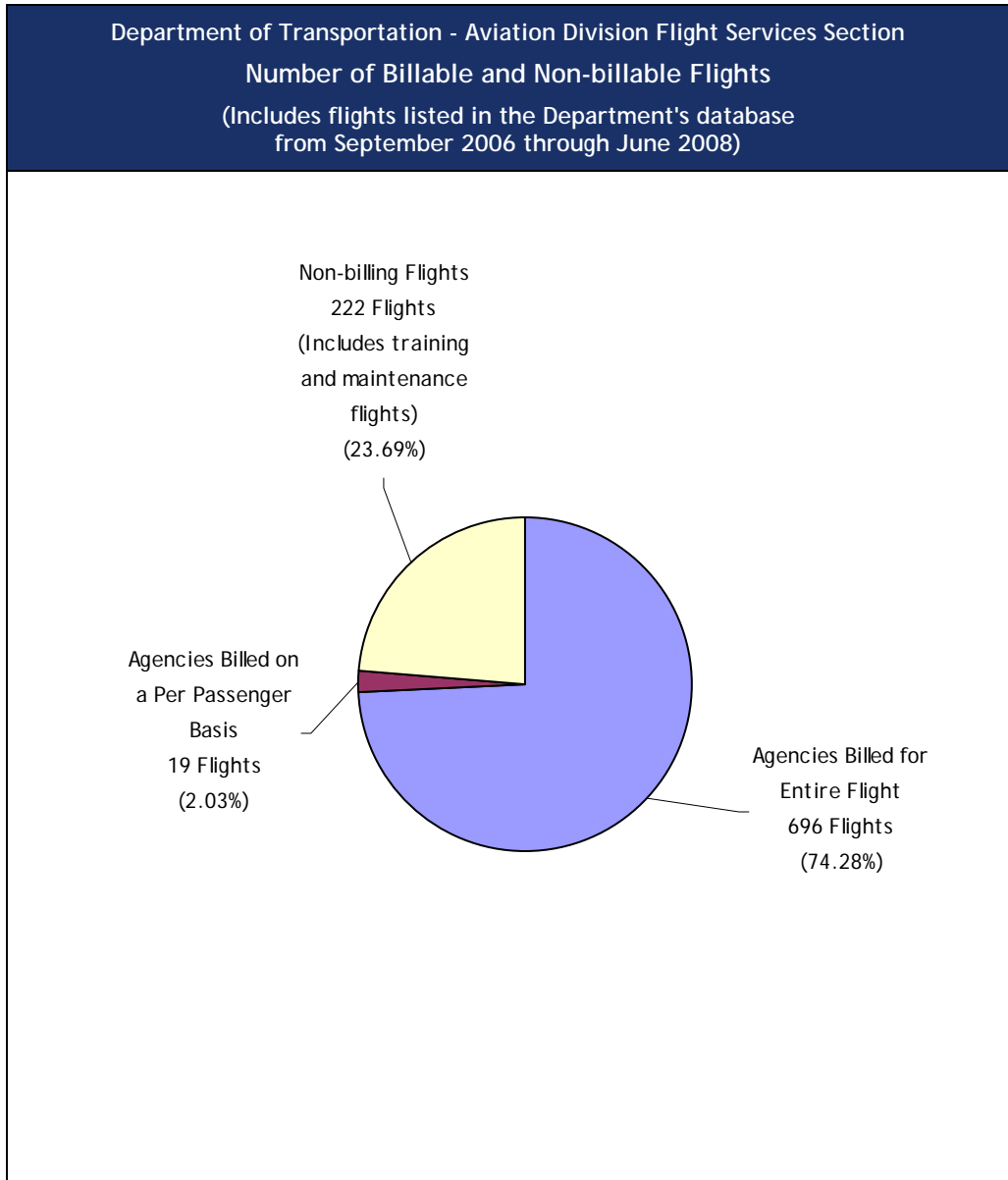


Source: Department of Transportation.

From September 1, 2006, to June 30, 2008, the Department's Flight Services Section billed agencies and higher education institutions for 76.31 percent of flights (see Figure 8). Of the 222 flights (23.69 percent of total flights) for which the Flight Services Section did not bill, 154 (70 percent) were for maintenance or training by the Department.

Another reason the Flight Services Section would not bill for a flight involves situations in which flights drop off passengers on one day and then pick them up more than a day later. In this situation, the aircraft would fly back to Austin during the interim time period, and then it would subsequently fly back to the passengers' location to retrieve the passengers. In these cases, the Flight Services Section does not always bill for the flights to and from Austin.

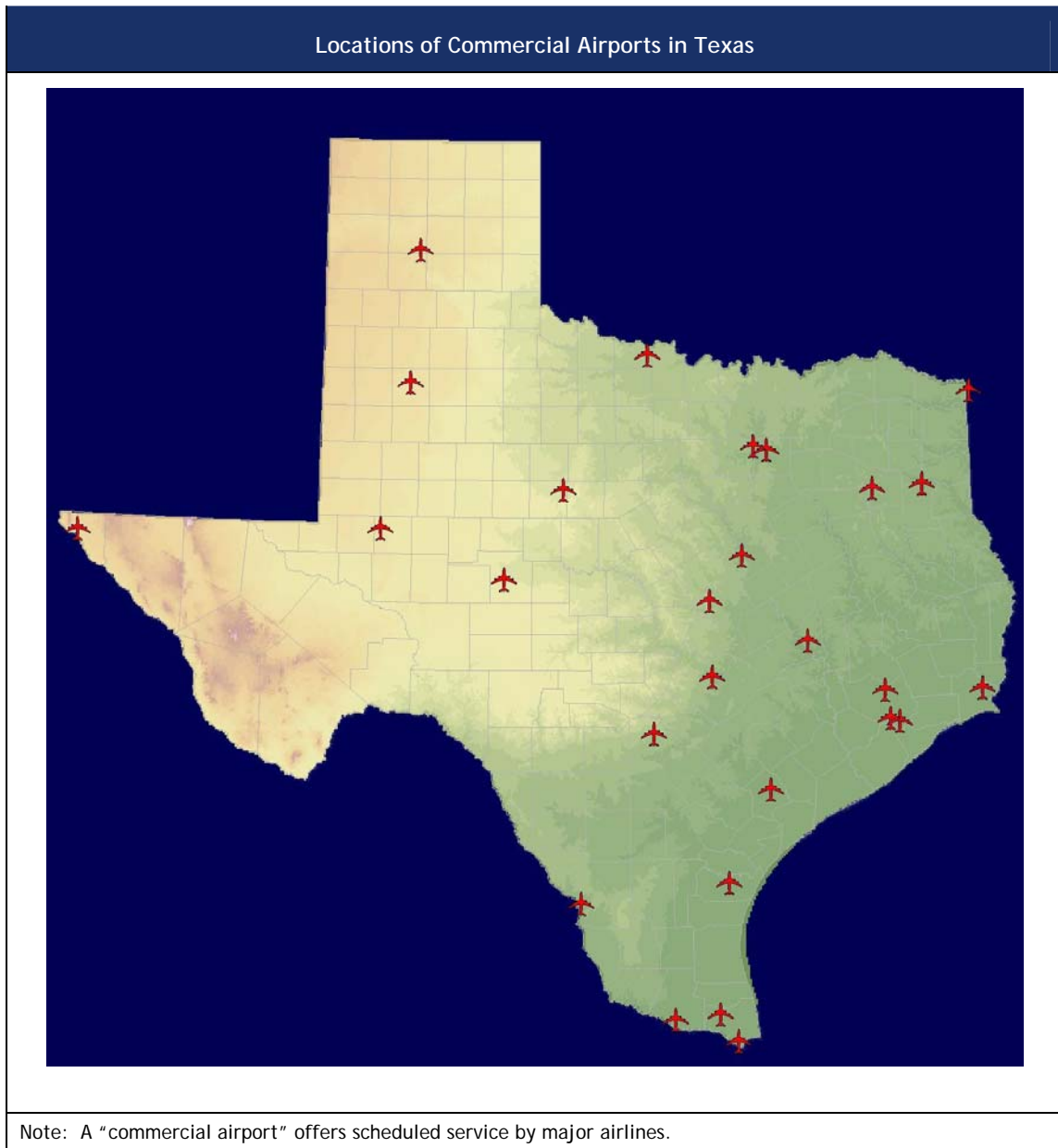
Figure 8



Source: Department of Transportation.

According to the Department, there are 27 commercial airports in Texas (see Figure 9).

Figure 9

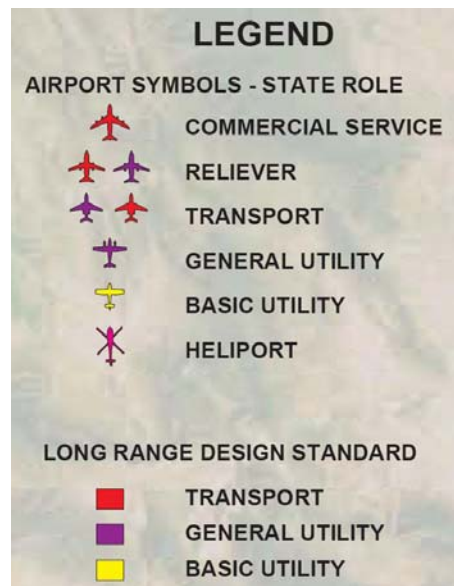
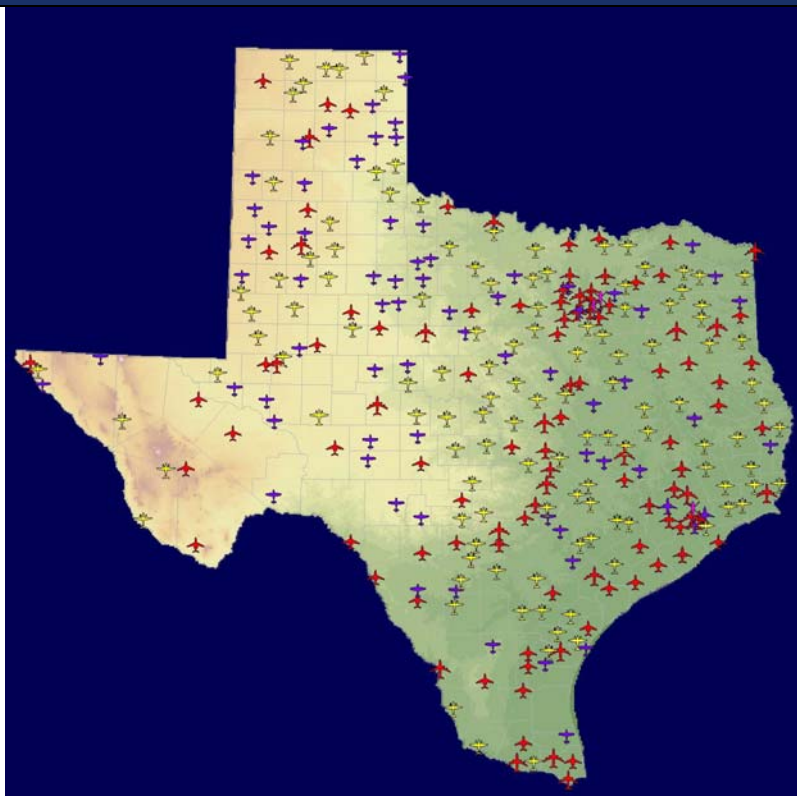


Source: Department of Transportation.

The Department's Flight Services Section has the ability to fly to 389 Texas airports (see Figure 10). Between September 1, 2006, and June 30, 2008, the Flight Services Section flew to 159 non-commercial airports in Texas (75 percent of total destinations). Flights to 25 commercial airports comprised 12 percent of total flights. Thirteen percent of flights were made to 29 airports outside of Texas.

Figure 10

Locations of All Airports in Texas



Notes:

- A "commercial airport" offers scheduled service by major airlines
- A "reliever airport" is located within a major metropolitan area and is designated by the Federal Aviation Administration to relieve congestion at large commercial service airports and increase access to general aviation.
- A "transport airport" provides access to turboprop and turbojet business aircraft and is located where there is sufficient population or economic activity to support a moderate-to-high level of business jet activity and/or to provide capacity to metropolitan areas.
- A "general utility airport" provides primary business access to smaller communities, capacity in many metropolitan areas, access to the state's agricultural and mineral production, and access to important recreational resources.
- A "basic utility airport" is a low-use airport located within the service area of a commercial service, reliever, general aviation transport, or general utility airport. These airports provide additional convenience for clear weather flying and training operations. Some of these airports represent the only public landing site for many miles.
- A "heliport" accommodates helicopters only and is used by individuals, corporations, and helicopter taxi services.

Source: Department of Transportation.

The State Auditor's Office's State Classification Team recommended changes to the salaries of Aircraft Pilots and Aircraft Mechanics starting in the 2008-2009 biennium, and the Legislature enacted those recommendations. Detailed information on the salaries and number of employees is provided in Table 8.

Table 8

Changes Made to Aircraft Pilot and Aircraft Mechanic Salaries							
Classification	2006 - 2007 Biennium			2008 - 2009 Biennium			Percent Change in Average Pay
	Fiscal Year 2006 Salary Range	Average Salary, First Quarter Fiscal Year 2006	Number of Employees, First Quarter Fiscal Year 2006	Fiscal Year 2008 Salary Range	Average Salary, Third Quarter Fiscal Year 2008	Number of Employees, Third Quarter Fiscal Year 2008	
Aircraft Pilot I	\$38,825-\$59,005	(No employees)	0	\$40,790-\$61,991	(No employees)	0	(No employees)
Aircraft Pilot II	\$43,905-\$66,743	\$47,996	6	\$46,126-\$70,120	\$64,549	5	34.5%
Aircraft Pilot III	(The classification "Aircraft Pilot III" was added to the State Classification Plan in the 2008-2009 biennium)			\$52,249-\$84,241	(No employees)	0	(No employees)
Aircraft Mechanic	\$36,504-\$55,499	\$43,619	4	\$43,386-\$65,951	\$49,929	7	14.5%

Source: State Auditor's Office's State Classification Team.

Appendices

Appendix 1

Objective, Scope, and Methodology

Objective

The objective of this audit was to determine whether the Department of Transportation's (Department) Aviation Division Flight Services Section has made progress in implementing selected recommendations to correct deficiencies identified in the following reports:

- An Audit Report on Flight Services Provided by the Department of Transportation's Aviation Division Flight Services Section (State Auditor's Office Report No. 07-001, September 2006).
- A Comprehensive Review of TxDOT Aviation Division, Flight Services Section (FSS), Deloitte Consulting, December 2006.

This audit was conducted as a portion of a previous State Auditor's Office audit (see *An Audit Report on the Department of Transportation's Financial Forecasting and Fund Allocation*, State Auditor's Office Report No. 08-045, August 2008). Specifically, one of the objectives of that audit was to review other comprehensive financial processes and information of the Department to determine whether they produce transparent, complete, and accurate financial information; the audit of the Department's Flight Services Section was conducted to partially fulfill that specific objective.

Scope

The scope of this audit covered activities within the Department's Flight Services Section from September 1, 2006, through June 30, 2008.

Methodology

The audit methodology included reviewing flight log forms, passenger affidavits, cost data, billing information, and flight rates for the Department's Flight Services Section and analyzing data in the Department's Flight Billing database.

Information collected and reviewed included the following:

- Flight log forms.
- Passenger affidavits.
- Cost information prepared by the Department.
- Facilities cost information provided by the Texas Facilities Commission.
- State personnel salary information.

- Billing information for flight services provided.
- Current rates for flight services posted on the Department's Web site.
- Payments made to the Department for interagency flight services.
- Amounts billed by the Department for interagency flight services.

Procedures and tests conducted included the following:

- Interviewed Department division management and staff.
- Tested flight log forms, affidavits, and database information for compliance with statute, policy, and procedure.
- Analyzed the Department's flight information.
- Performed an analysis of payments to the Department for interagency flight services.
- Performed an analysis of costs incurred by the Flight Services Section.

Criteria used included the following:

- Texas Government Code, Chapter 2205.
- Texas Government Code, Chapter 612.
- Section 8.02, Chapter 281, Acts of the 79th Legislature, Regular Session.
- General Appropriations Act (79th and 80th Legislatures).
- The Department's Flight Operations Manual.
- The Department's flight service rates.

Project Information

Audit fieldwork was conducted from July 2008 through September 2008. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

The following members of the State Auditor's staff performed the audit:

- Ann E. Karnes, CPA (Project Manager)
- Ishani Baxi
- Michele Pheeney, MBA
- Tony White, CFE
- Dennis Ray Bushnell, CPA (Quality Control Reviewer)
- Kelly Furgeson Linder, CIA, CGAP (Audit Manager)

Excerpts from the General Appropriations Act and Texas Statutes

The following excerpts specify certain General Appropriations Act and statutory requirements for flight services provided by the Department of Transportation's Aviation Division Flight Services Section.

General Appropriations Act (80th Legislature)

Rider 47, page VII-32. **Aircraft Pooling Board² Services.** The Texas Department of Transportation shall charge an amount at or above market prices for the provision of services formerly provided by the State Aircraft Pooling Board. The amount charged must cover the costs of pilot services, scheduling services, the lease of necessary facilities in Austin, and any other reasonable expense.

Texas Government Code, Section 2205.040, specifies the following requirements for rates and billing:

(a) The board³ shall adopt rates for interagency aircraft services that are sufficient to recover, in the aggregate and to the extent possible, all direct costs for the services provided, including a state agency's pro rata share of major maintenance, overhauls of equipment and facilities, and pilots' salaries.

Texas Government Code, Section 2205.039, specifies the following requirements for flight log forms:

(b) The travel log form must request the following information about a state-operated aircraft each time the aircraft is flown:

(1) a mission statement, which may appear as a selection to be identified from general categories appearing on the form;

(2) the name, state agency represented, destination, and signature of each person who is a passenger or crew member of the aircraft;

(3) the date of each flight;

(4) a detailed and specific description of the official business purpose of each flight; and

(5) other information determined by the Legislative Budget Board and the board to be necessary to monitor the proper use of the aircraft.

² House Bill 2702 (79th Legislature, Regular Session) abolished the State Aircraft Pooling Board in June 2005 and transferred that agency's responsibilities to the Department of Transportation's Aviation Division Flight Services Section.

³ In this case, the term "board" refers to the former State Aircraft Pooling Board. House Bill 2702 (79th Legislature, Regular Session) abolished the State Aircraft Pooling Board in June 2005 and transferred that agency's responsibilities to the Department of Transportation's Aviation Division Flight Services Section.

Texas Government Code, Section 2205.036, specifies the following requirements for state flights:

(b) The statute states that the passengers that use the aircraft transportation may use it only for official state business and prohibits the Flight Services Section from providing aircraft transportation to passengers who:

- (1) Will make or has made a speech not related to official state business;
- (2) Will attend or has attended an event sponsored by a political party;
- (3) Will perform a service or has performed a service for which the passenger is to receive an honorarium, unless the passenger reimburses the board for the cost of transportation;
- (4) Will attend or has attended an event at which money is raised for private or political purposes; or
- (5) Will attend or has attended an event at which an audience was charged an admission fee to see or hear the passenger.

Section 8.02, Chapter 281, Acts of the 79th Legislature, Regular Session, specifies the following requirements for passenger affidavits:

Before the executive director of the Texas Department of Transportation or the director's designee may authorize a person to use a state-operated aircraft, the person must sign an affidavit stating that the person is traveling on official state business. On filing of the affidavit, the person may be authorized to use state-operated aircraft for official state business for a period of one year. A member of the legislature is not required to receive any other additional authorization to use a state-operated aircraft.

Texas Government Code, Section 2205.032, specifies the following requirements for a long-range plan for the pool of aircraft:

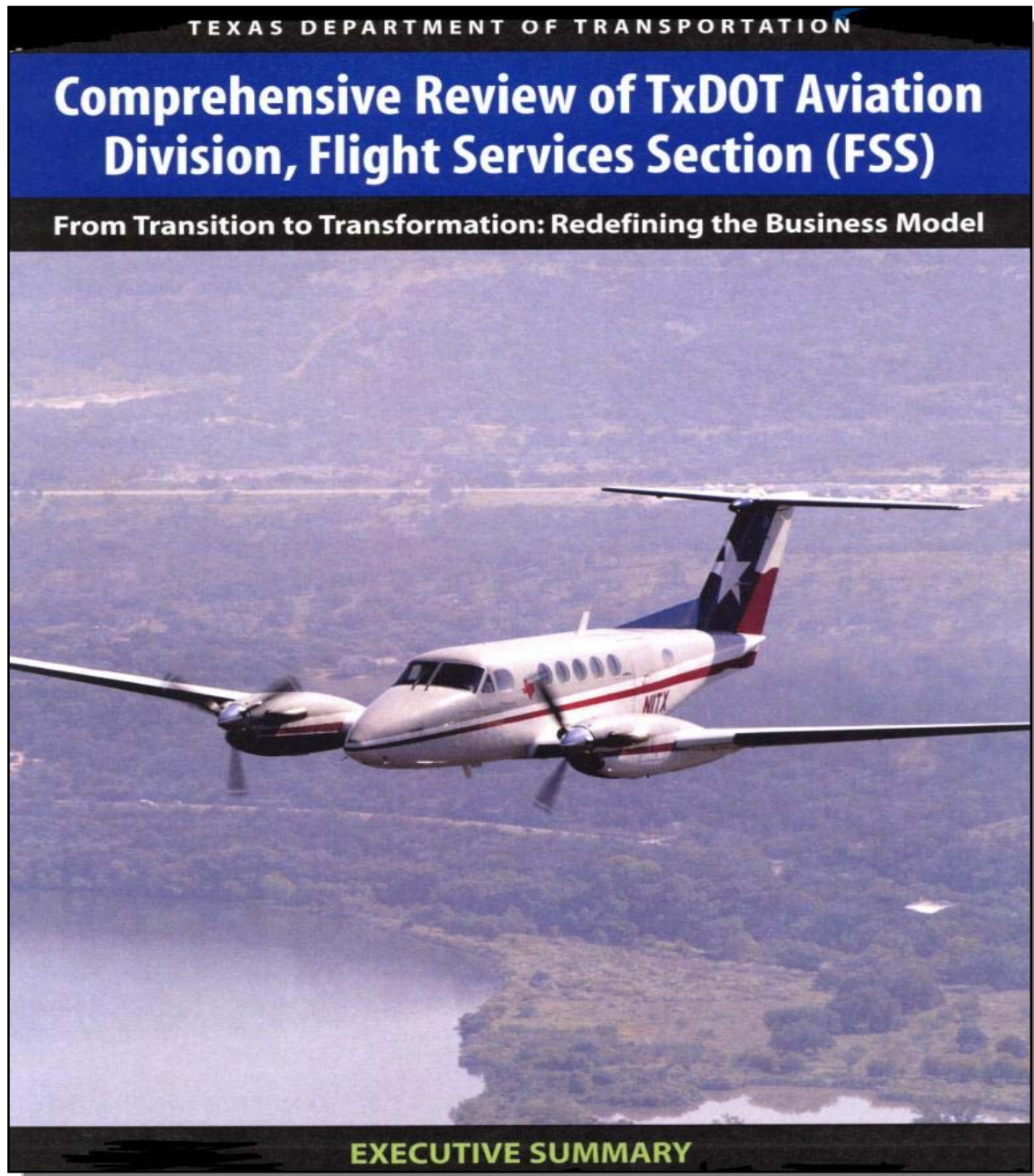
(c) As part of the strategic plan that the board⁴ develops and submits under Chapter 2056, the board shall develop a long-range plan for its pool of aircraft. The board shall include appropriate portions of the long-range plan in its legislative appropriations request. The long-range plan must include estimates of future aircraft replacement needs and other fleet management needs, including any projected need to increase or decrease the number of aircraft in the pool. In developing the long-range plan, the board shall consider at a minimum for each aircraft in the pool:

⁴ In this case, the term "board" refers to the former State Aircraft Pooling Board. House Bill 2702 (79th Legislature, Regular Session) abolished the State Aircraft Pooling Board in June 2005 and transferred that agency's responsibilities to the Department of Transportation's Aviation Division Flight Services Section.

- (1) how much the aircraft is used and the purposes for which it is used;
- (2) the cost of operating the aircraft and the revenue generated by the aircraft; and
- (3) the demand for the aircraft or for that type of aircraft.

Executive Summary from Deloitte Consulting's Comprehensive Review of TxDOT Aviation Division, Flight Services Section (FSS)

The executive summary from Deloitte Consulting's December 2006 *Comprehensive Review of TxDOT Aviation Division, Flight Services Section (FSS)* is presented below. To see the full report, click [here](#).





REDEFINING THE BUSINESS MODEL

EXECUTIVE SUMMARY

TxDOT contracted with Deloitte Consulting to provide a review of all management components of the Flight Services Section, with a focus on increasing efficiency and identifying areas for operational improvement. The project scope included conducting interviews with staff, onsite observation, data analysis and organizational/staffing reviews.

Flight Services provides a viable transportation alternative and service to Texas state agencies, including:

- A dedicated fleet of aircraft that allows state agencies and elected officials to reach the geographically diverse regions of Texas not served by commercial airlines
- Fleet maintenance services for a range of state agencies' aircraft, including fixed wing and helicopters, allowing these agencies to maintain their aircraft with a dedicated repair/maintenance service managed by TxDOT

Our review indicated the following:

- Flight Services has a history of providing responsive service to state agencies, with a safety record that exceeds typical performance of private charter operations.
- Flight Services provides a service at a cost that is currently less expensive than private charter services, based on quotes obtained from various charter services in Texas and an assumption of 800 hours flown annually.
 - As flight hours increase, Flight Services' cost per hour will decrease further as fixed costs are spread over more hours.
- Flight Services maintenance services provide a cost-effective alternative to private maintenance contractors, both internally (for TxDOT aircraft) and to other state agencies.
- Flight Services workforce has remained dedicated to its mission throughout the transition period from independent agency to an organizational unit within TxDOT.
- Management is taking a proactive approach to business development, developing an outreach program to state agencies to ensure that customers are aware of the services provided and cost-effectiveness of travel through Flight Services.

The functions performed by the Flight Services Section provide the following key benefits to the agencies and elected officials of the State of Texas:

- On-demand aircraft fleet allows state officials and employees to reach remote locations that otherwise could be accessed only by ground transportation.
 - A key objective is to attain cost-savings by reducing down-time that could result from extended drive times and/or overnight stays.
 - Other objectives include improved service delivery through outreach to citizens across the state and transportation that does not create a reliance on private charter services, which may not be cost-effective.
 - This service is available for the discretionary use by agencies/officials who are responsible for determining the cost-effectiveness of this service.



- State aircraft organized and managed as a central fleet can allow for greater flexibility and cost reduction due to the elimination of duplicate services and assets.
 - The investment in a central fleet of state aircraft may allow for usage by multiple agencies. Dedicating passenger aircraft to specific departments reduces the flexibility of use for the state as a whole.
 - Aircraft may be utilized to support economic development, transporting companies potentially seeking to relocate.
- Historically, Flight Services has provided a safe alternative to private charter services.
 - According to Flight Services management, no reportable accidents have occurred in over 50,000 hours flown.
 - By comparison, charter carriers operating under Part 135 recorded 2.025 accidents per 100,000 hours flown in 2005.
 - Flight Services Section has mandated two pilot staffing for all multi-engine aircraft. This protocol mirrors those requirements of CFR 14 FAR 121 and 135 operations.
 - Based on the experience of the TxDOT pilot staffing, the average cockpit crew brings over 20,000 flight hours of experience to every flight. This level of expertise exceeds that of a typical air carrier or on-demand service provider.
- Maintenance services provided by Flight Services Section support operations of other agencies' aircraft.
 - Agencies such as the University of Texas, Department of Public Safety, and Parks & Wildlife rely on Flight Services to maintain their specialized aircraft, as well as to supplement available pilots.
 - These services are provided in a manner that appears to be cost-effective, yet also supports Flight Services mandate to recover its direct costs for services provided.

Deloitte. Recommendations

Flight Services management has initiated steps to increase the cost-effectiveness of operations, including a strategic initiative to increase revenue-based flights provided to State agencies. While this initiative may result in positive results for Flight Services' operations, our review indicated a number of improvement opportunities. We recommend the following:

- Focus on managing costs and pricing in order to continue to provide services that are cost-effective, while also recovering all direct costs. Specific recommendations include:
 - Adopting a cost model that meets legislative requirements related to recovery of direct costs, which is appropriate for a service agency. This model should be updated on a scheduled basis to reflect changes in key variables, including cost drivers and flight volume.
 - Basing staffing decisions on operational requirements and ability to recover costs for services provided. Staffing levels should be adjusted accordingly to reflect changes in demand, and non-recoverable staff costs should be minimized.
 - Modifying the fleet size and/or composition to provide a fleet that meets variable customer demands, while minimizing sunk costs. Fixed costs related to aircraft ownership and maintenance represent the greatest component of Flight Services costs.
- Incorporate operational best practices and maximize management effectiveness by:
 - Completing technology upgrades to the Flight Services Management System and integrate it within daily operations.
 - Using data and information to drive management by establishing a set of key performance measures to be tracked by management. These measures should be used to determine reporting requirements from the Flight Services Management System.
 - Formalizing training and safety programs for all employees to maintain a strong safety record and to provide employee incentives related to professional development.

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Other State Auditor's Office Work

Other SAO Work		
Number	Product Name	Release Date
08-045	An Audit Report on the Department of Transportation's Financial Forecasting and Fund Allocation	August 2008
08-018	A Report on the Audit of the Department of Transportation's Texas Mobility Fund Financial Statements for the Fiscal Year Ended August 31, 2007	December 2007
08-017	A Report on the Audit of the Department of Transportation's Central Texas Turnpike System Financial Statements for the Fiscal Year Ended August 31, 2007	December 2007
08-007	An Audit Report on the Department of Transportation's Oversight of Regional Mobility Authorities	October 2007
08-006	An Audit Report on the Medical Transportation Program at the Texas Department of Transportation	October 2007
07-031	An Audit Report on the Department of Transportation's Reported Funding Gap and Tax Gap Information	April 2007
07-018	An Audit Report on the Department of Transportation's Aviation and Metropolitan Transportation Planning Grant Programs	March 2007
07-015	An Audit Report on the Department of Transportation and the Trans-Texas Corridor	February 2007
07-007	A Report on the Audit of the Department of Transportation's Texas Mobility Fund Financial Statements for the Fiscal Year Ended August 31, 2006	December 2006
07-005	An Audit Report on Performance Measures at Five State Agencies	December 2006
07-001	An Audit Report on Flight Services Provided by the Department of Transportation's Aviation Division Flight Services Section	September 2006

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