PERFORMANCE AUDIT
STATE AIRCRAFT OPERATIONS

NOVEMBER 2003

OFFICE OF THE STATE AUDITOR
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STATE AUDITOR

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November 23, 2003

The Honorable Michael F. Easley, Governor
Members of the North Carolina General Assembly
The Honorable Roy A. Cooper, III, Attorney General
Secretary Jim Fain, Department of Commerce
Secretary Lindo Tippett, Department of Transportation
Secretary Bryan Beatty, Department of
Crime Control and Public Safety
Secretary William G. Ross, Jr., Department of
Environment and Natural Resources
Mr. Charles Fullwood, Executive Director,
Wildlife Resources Commission
Dr. James C. Moeser, Chancellor, University of
North Carolina at Chapel Hill

Ladies and Gentlemen:

We are pleased to submit this performance audit of ***State Aircraft Operations*** found in the general government agencies and UNC-Chapel Hill's Area Health Education Centers Program.

This report consists of an executive summary and findings and recommendations that contain program overview information. The objectives of the audit were to: 1) identify the State agencies and programs with aircraft operations, and 2) determine the total operational costs for each aircraft per agency and program. Attorney General Cooper, Secretary Fain, Secretary Tippett, Secretary Beatty, Secretary Ross, Mr. Fullwood, and Dr. Moeser have reviewed a draft copy of this report. Their written comments are included as Appendix C, page 55.

We wish to express our appreciation to Attorney General Cooper, Secretary Fain, Secretary Tippett, Secretary Beatty, Secretary Ross, Mr. Fullwood, Dr. Moeser, and their staffs for the courtesy, cooperation, and assistance provided us during this effort.

Respectfully submitted,

Ralph Campbell, Jr.
State Auditor

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Program Description

Six general government State agencies maintain legislatively approved aircraft operations for use by State employees in the pursuit of their jobs. Agencies identified for inclusion in this audit were: the Department of Commerce, the Department of Transportation, the Department of Crime Control and Public Safety-State Highway Patrol, the Department of Justice-State Bureau of Investigation (SBI), the Department of Environment and Natural Resources, and the Wildlife Resources Commission. Aircraft used by the University of North Carolina-Area Health Education Centers (AHEC) program were also included since they are state supported and state maintained.

The majority (43) of the 68 aircraft operated by these agencies and programs are owned by the State. Of the remaining 25 aircraft, 19 are owned by the U.S. Forest Service on loan to the State for fire control and prevention and 6 are owned by Medical Air, Inc., a non-profit entity associated with the UNC-AHEC program. The agency estimated current value of these aircraft is $27 million; however, some agencies do not have cost data for all aircraft. (See Table 1, page 13). Based on available cost data, the operational costs per year are in excess of $8.2 million. Two of the agencies, the Departments of Commerce and Transportation, and Medical Air, Inc., provide air transportation, at set rates, for other State employees on official business.

Neither the Civil Air Patrol nor the North Carolina Air National Guard fleets were included in this audit. The Civil Air Patrol fleet is owned by a non-profit organization and the National Guard fleet is owned by the federal government.

Audit Scope and Methodology

This performance audit of State aircraft operations was undertaken at the discretion of the State Auditor. The scope of the audit included aircraft operations in the identified agencies and programs. The audit focused on determining the costs of aircraft operations and how each agency or program captured costs and computed chargeable rates, if applicable.

Conclusions in Brief

Objective 1: Ownership

As of June 30, 2003, the State owns 43 aircraft and operates another 19 federally owned aircraft to fight forest fires. The average **flight time** per aircraft is 15.9 hours per month for these aircraft, ranging from a high of 30 hours to a low of 7.5 hours per month. Medical Air, Inc., a component of the UNC-AHEC program, owns a fleet of six aircraft that are maintained and supported by State AHEC funds. The average per month flight time for each of these aircraft is 36.5 hours per month. The average age of the aircraft operated by State agencies and programs is 27.7 years, with 70.6% of the fleet over 20 years old, thereby necessitating increased maintenance.

The Departments of Commerce and Transportation and Medical Air offer passenger service, for set rates, to other state and university employees on official business. The average **elapsed flight time** for the passenger services, which includes waiting time between flight segments, is 81.8 hours per month per aircraft. The State may be able to realize efficiencies in its passenger aircraft operations and overall maintenance functions by consolidating the passenger and mechanical portions of those functions now within the six general government State agencies and Medical Air.

There are no statewide policies and procedures for use of State aircraft. Most of the agencies and programs have their own administrative, operational, and/or maintenance personnel for their respective flight operations, as well as their own policies and procedures for use of the aircraft. At the time of the audit, no comprehensive study of the operational condition and the number of aircraft and maintenance personnel needed has been performed. Lastly, the Highway Patrol's ability to perform rescues is limited because it does not have helicopters large enough to transport persons other than the pilots.

Objective 2: Costs and Reimburse-ments

We are unable to determine the total operational costs for all aircraft owned and operated by the State since each agency and program has a different system and methodology for capturing operational and financial data on aircraft operations. However, based on available cost data, the annual operational cost is in excess of $8.2 million. Most of the agencies do not capture cost data by aircraft or separate aircraft costs from other divisional costs. Several of the agencies and programs have established billing rates for use of their aircraft; however, there is no consistent method for computing billable rates for State aircraft usage. Most of the agencies were not able to document the methodology used to arrive at their rates, with charges changing according to user without documentation to explain why. Some flights that should have been billed according to individual agency policies and procedures were not. North Carolina needs to determine which costs should be recovered for use of State aircraft. Research showed that other states vary in their methods of recovering State aircraft costs, with some recovering only the variable costs associated with the flights, not the full cost of operation. Lastly, we noted that the pilots for the Departments of Commerce and Transportation have only flight duties. While they are on call for a 40-hour week, they do not report to work unless they have a flight scheduled. This is in contrast with the pilots for the other agencies who have additional duties assigned when not flying.

Specific Findings

Page

Objective 1: Ownership

Objective 2: Costs and Reimbursements

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AUDIT OBJECTIVES, SCOPE AND METHODOLOGY

North Carolina General Statute 147-64.6 empowers the State Auditor with authority to conduct performance audits of any State agency or program. Performance audits are reviews of activities and operations to determine whether resources are being used economically, efficiently, and effectively.

This performance audit of the **State Aircraft Operations** in the Departments of Commerce, Transportation, Crime Control and Public Safety-State Highway Patrol, Justice-State Bureau of Investigation, Environment and Natural Resources, and Wildlife Resources Commission was undertaken at the discretion of the State Auditor. Aircraft owned by Medical Air, Inc., used mainly by the University of North Carolina-Area Health Education Centers (AHEC) program, were also included. The State Auditor believed a review of rates charged for aircraft use to determine effectiveness of operations and compliance with applicable regulations was appropriate. Specific objectives were:

- *Objective 1—Ownership*: To identify the State agencies and programs with aircraft operations, whether aircraft are purchased or leased, the original purchase cost or annual cost of the lease, and the current value of the aircraft or lease, and to review the maintenance logs.

- *Objective 2—Costs and Reimbursements*: To determine the total operational costs for each aircraft per agency and program, determine and analyze the hourly rate for aircraft operations, and identify the agency's aircraft billable reimbursement rates and how the rates are computed.

The scope of the audit included aircraft operations in the general government Departments of Commerce, Transportation, Crime Control and Public Safety-State Highway Patrol, Justice-State Bureau of Investigation (SBI), Environment and Natural Resources, and Wildlife Resources Commission, and the aircraft used by the University of North Carolina-Area Health Education Centers program. The focus of the audit was on a determination of the costs of aircraft operations and how each agency captured costs and computed chargeable rates, if applicable.

We conducted the fieldwork during the period May 2003 through September 2003. To achieve the audit objectives, we employed various auditing techniques that adhere to the generally accepted auditing standards as promulgated in *Government Auditing Standards* issued by the Comptroller General of the United States. These techniques included:

- Review of existing General Statutes and the North Carolina Administrative Code as they related to aircraft operations in each agency.
- Review of aircraft policies and procedures for each agency.
- Examination of organizational charts at each agency to identify aircraft operations personnel.
- Interviews with agency staff responsible for aircraft operations.
- Compilation of funding and expenditure data for aircraft operations in each agency as contained in the North Carolina Accounting System (NCAS).
- Review of internal and external reports on aircraft operations including flight logs, invoices, and maintenance records for each agency.
- Site visits to agency aircraft operation locations.

AUDIT OBJECTIVES, SCOPE AND METHODOLOGY

This report contains the results of the audit as well as specific recommendations aimed at improving State aircraft operations in terms of economy, efficiency, and effectiveness. Because of the test nature and other inherent limitations of an audit, together with the limitations of any system of internal and management controls, this audit would not necessarily disclose all weaknesses in the systems or lack of compliance. Also, projection of any of the results contained in this report to future periods is subject to the risk that procedures may become inadequate due to changes in conditions and/or personnel, or that the effectiveness of the design and operation of policies and procedures may deteriorate.

Program Overview: There are a number of State agencies and programs that operate aircraft for use by State employees in the pursuit of their jobs[1]. This audit sought to answer the following questions relative to those aircraft.

1. *What state agencies house aircraft operations?*
2. *Are these aircraft leased or purchased?*
3. *What was the original purchase cost or annual cost of the lease?*
4. *What is the current value of the aircraft or lease?*
5. *What are the total operating costs for each aircraft?*
6. *Does the agency bill either internally or externally for use of its aircraft?*
7. *How are reimbursement rates for usage computed?*
8. *Is aircraft maintenance properly documented?*

Agencies identified for inclusion in this audit were: the Department of Commerce, the Department of Transportation, the Department of Crime Control and Public Safety-State Highway Patrol, the Department of Justice-State Bureau of Investigation (SBI), the Department of Environment and Natural Resources, and the Wildlife Resources Commission. Aircraft used by the University of North Carolina-Area Health Education Centers (AHEC) program were also included.

Department of Commerce: The Executive Aircraft Operations Division maintains a fleet of three aircraft (two fixed-wing planes and one helicopter) stationed in Raleigh. The purpose of these aircraft is two-fold: (1) economic development, and (2) providing air transportation to State government officials and employees. Commerce's policies and procedures spell out specific priorities for use of these aircraft.

> *The first priority shall be to meet the requirements of the Department of Commerce for economic development as determined by the Secretary. The second priority shall be to provide air transportation for the Governor. The third priority shall be to provide air transportation for the Lieutenant Governor, the President Pro Tempore of the Senate, and the Speaker of the House in performance of their official duties. The fourth priority shall be to provide air transportation to members of the Executive Cabinet and Council of State not involved in economic development functions. The fifth priority shall be to provide air transportation to other state officials on a first-come, first served basis as may be deemed appropriate and necessary by the Cabinet Secretary, Council of State members, or other Department heads of the agencies from which the requests originates. The sixth priority shall be to provide use of aircraft for drug interdiction duties. Emergency and disaster assistance will take precedence over all other uses in the event of eminent danger to life or property.*[2]

The Secretary of Commerce or his designee make judgments on priorities and may schedule and reschedule all flights in accordance with the above priorities. All flights scheduled must be for official State business.

[1] The Federal government owns the North Carolina Air National Guard fleet. The Civil Air Patrol Corporation, a 501(c)3 non-profit organization, owns the Civil Air Patrol fleet. Therefore, neither of these aircraft operations was included in this audit.

[2] North Carolina Department of Commerce, Policy # EA 1

Department Of Transportation: The Division of Aviation maintains three fixed-wing aircraft stationed in Raleigh. Their purposes are to provide photogrammetry and aerial survey services for the Department and other governmental agencies, and to provide air transportation services in support of the Department's management, programs, and missions. Two of these aircraft, like those of the Department of Commerce, may be used by other State personnel for official State business. In addition to the State-owned aircraft, the Department has a contract with a private firm to rent aircraft at an hourly rate as needed.

Department of Crime Control and Public Safety: The State Highway Patrol maintains a fleet of eleven Ranger helicopters, stationed in Raleigh, Kinston, Salisbury, and Asheville. The purpose of the fleet is to ensure the safety of the citizens of North Carolina, reduce crime, and respond to natural and man-made disasters through airborne law enforcement operations. These aircraft are not used by any other agency or by any personnel other than law enforcement officers.

Department of Justice: The State Bureau of Investigation, Airwing Unit maintains a fleet of four fixed-wing aircraft stationed in Erwin. Their mission is to support the SBI, local, and federal law enforcement operations. Duties include marijuana eradication, reconnaissance, surveillance, photo missions, search for missing persons, vehicle searches, pilot training, and administrative transportation. These aircraft are not used by any other agency unless in support of law enforcement activities. Therefore, the SBI does not bill for use of these aircraft.

Department of Environment and Natural Resources: Three divisions within DENR operate aircraft to fulfill their statutory responsibilities.

1) The ***Division of Forest Resources- Forestry Air Operations*** maintains 33 aircraft (27 fixed-wing airplanes, 6 helicopters) based in Kinston, Rockingham, and Hickory. The U.S. Forest Service owns 19 of the 33 aircraft, which are on loan to the Division specifically for fire control and prevention. Federal law restricts the use of these aircraft to no more than 10% for non-fire control and prevention. The 14 State-owned aircraft provide initial attack and support in fighting forest fires. Forestry Air Operations supports the Division in forest fire detection and suppression throughout the State, including federal forestlands in national parks and forests and military installations. Additionally, the aircraft are used by the Department for monitoring water quality and pest control in forestlands. The aircraft may also be used for emergency management, coastal and land management, and administrative travel.

2) The ***Division of Marine Fisheries-Marine Patrol*** maintains four aircraft (two fixed-wing airplanes and two helicopters) stationed in Morehead City, Beaufort, and Wilmington. The mission of the Marine Patrol is to ensure sustainable marine and estuarine fisheries for the benefit of the people of North Carolina. The Marine Patrol uses the four aircraft to ensure commercial and recreational fishermen comply with federal and State laws and regulations that regulate and protect the harvest of State fisheries. Duties include monitoring the activities of fishermen, patrolling waterways, piers, and beaches in coastal areas, and monitoring polluted water areas. Additionally, the aircraft are used for search and rescue, surveillance for drug trafficking, and general law enforcement assistance to other agencies (i.e., aerial

surveillance for missing persons or manhunts, bank robbery suspects, lost or stolen vessels, and aerial infrared photography). The Patrol's jurisdiction includes all coastal waters, extending to three miles offshore, and extends up to 200 miles offshore for some federally regulated species. Enforcement officers for the Patrol monitor 2.5 million acres of water and over 4,000 miles of coastline. The aircraft are not used for any other purposes.

3) The ***Division of Coastal Management*** purchases flight time from a private company for use by its district field office staff in Elizabeth City, Washington, Morehead City, and Wilmington. The aircraft are used for aerial surveillance of coastal areas to ensure compliance with State and federal statutes and regulations: the Coastal Area Management Act, the Dredge and Fill Laws, the Federal Coastal Zone Management Act, and the rules and policies of the North Carolina Coastal Resources Commission. Jurisdiction covers 20 coastal North Carolina counties.

North Carolina Wildlife Resources Commission: The Commission maintains a fleet of four fixed-wing aircraft, stationed in Burlington, Goldsboro, Kinston, and Lenoir. These aircraft are primarily used to enforce hunting, fishing, and boating laws and regulations. In addition, the Commission's aircraft may be utilized for other Wildlife Commission purposes including conservation education by assisting in tracking of endangered species. Occasionally, the Commission pilots will also assist local law enforcement agencies in criminal investigations.

University of North Carolina: Medical Air, Inc.[3], a component of the University of North Carolina-Area Health Education Centers (AHEC) program, maintains six fixed-wing airplanes based in Chapel Hill. These aircraft are used to transport health science faculty, medical residents, and health science students to all areas of the State to conduct continuing education classes or to see patients at a local consultation clinic. The AHEC program provides education and training to students and practitioners in health professions across North Carolina. In addition, Medical Air, Inc. flies university officials and other State employees as requested to conduct official university or State business.

Accomplishments

Realizing that they needed to better coordinate aircraft operations, the chief pilots from the state agencies and the UNC-AHEC program that own aircraft formed a committee in April 2002. The purpose of the committee was to increase the communication and rapport among the agency aviation divisions/units and to coordinate efforts in responding to North Carolina disasters. The committee's accomplishments include lowering aircraft fuel costs and establishing a web site that lists agency's specialized equipment that can be shared among aviation maintenance units.

[3] Medical Air, Inc. was established in 1997 as a 501(c)(3) tax-exempt organization as defined by the IRS.

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Objective 1—OWNERSHIP: *To identify the State agencies and programs with aircraft operations, whether aircraft are purchased or leased, the original purchase cost or annual cost of the lease, and the current value of the aircraft or lease, and to review the maintenance logs.*

Overview: Six general government[4] State agencies maintain legislatively approved aircraft operations in order to fulfill their respective missions. With the exception of the 19 federally owned Forest Resources aircraft, and the aircraft rented by the Department of Transportation and the Coastal Management Division, all other aircraft used by these agencies and included in this audit are owned by the State of North Carolina. Two of the agencies, Department of Commerce and Department of Transportation, provide air transportation to other State agencies for official State business. The user agencies are billed an established hourly rate for use of these aircraft. Additionally, several of the agencies bill federal, State, and local governmental entities for specific uses of the aircraft. We also reviewed State-maintained and State-supported aircraft operations of the University of North Carolina-Area Health Education Centers (AHEC) program. These aircraft are owned by Medical Air, Inc. and are also used by other state personnel for official State/University business. Medical Air, Inc. bills the users an established mileage rate for in-state flights and an established hourly rate for out-of-state flights.

Methodology: Working with budget personnel and/or aircraft operational personnel in each of the six agencies and the AHEC program, we determined relevant ownership and cost information about each aircraft from agency or program documentation and from information contained in the North Carolina Accounting System. Table 1, page 13, contains data on the type, location, ownership, and costs of the aircraft and/or lease.

Conclusions: As of June 30, 2003, the State owns 43 aircraft and operates another 19 federally owned aircraft for fighting forest fires. The average flight time per aircraft is 15.9 hours per month for these aircraft, ranging from a high of 30 hours to a low of 7.5 hours per month. In addition, both the Department of Transportation and the Division of Coastal Management rent aircraft for use by their employees in pursuit of their duties even though State aircraft are available. Medical Air, Inc., a component of the UNC-AHEC program, owns a fleet of six aircraft that are maintained and supported by State AHEC funds. The average per month flight time for each of these aircraft is 36.5 hours per month.

[4] "General government" refers to State agencies that are not a part of the University, Community College, or Judicial systems.

The Departments of Commerce and Transportation and Medical Air also offer passenger service, for set rates, to other state and university employees on official business. The average elapsed flight time for the passenger services, which includes waiting time between flight segments, is 81.8 hours per month per aircraft. The State may be able to realize efficiencies in its passenger aircraft operations and overall maintenance functions by consolidating portions of those functions now within the six general government State agencies and Medical Air.

There are no statewide policies and procedures for use of State aircraft. Most of the agencies and programs have their own administrative, operational, and/or maintenance personnel for their respective flight operations, as well as their own policies and procedures for use of the aircraft. The average age of the aircraft operated by State agencies and programs is 27.7 years, with 70.6% of the fleet over 20 years old. Much of the fleet consists of used aircraft purchased from federal agencies. As the aircraft age, the need for more frequent and extensive maintenance is increased. At the time of the audit, no comprehensive study of the operational condition and the number of aircraft and maintenance personnel needed has been performed. Lastly, the Highway Patrol's ability to perform rescues is limited because it does not have helicopters large enough to transport persons other than the pilots.

FINDINGS- OWNERSHIP:

STATE AIRCRAFT ARE USED A LIMITED NUMBER OF HOURS EACH MONTH.

As of June 3, 2003, the State owns 43 aircraft and operates another 19 federally owned aircraft to fight forest fires. Additionally, Medical Air, Inc. (MedAir), a component of the UNC-AHEC program, owns a fleet of six aircraft that are maintained and supported by State AHEC funds. The agency-estimated current value is $27 million. (See Table 1, page 13). In many cases, these agencies have their own administrative, operational, and maintenance personnel for their respective flight operations, as well as their own policies and procedures for use of the aircraft. The State Bureau of Investigation (SBI), the State Highway Patrol, and to a large extent, Marine Fisheries, Forest Resources, and the Wildlife Commission have specialized law enforcement missions which preclude general use of their aircraft and require policies and procedures specific to their respective functions. In fact, use of the SBI aircraft for other than law enforcement activities would result in temporary or permanent loss of federal forfeiture funds. However, the Departments of Commerce and Transportation, when their aircraft are not needed for other purposes, do provide air transportation to employees in other State agencies for a set fee, as does MedAir.

TABLE 1
Aircraft Information by State General Government Agency as of 6/30/2003

Aircraft Description	Tail #	Location	Age Yrs	Condition 1=Lowest 5=Highest	Ownership	Original Cost	Current Value	Total Operating Cost	Operating Cost per Hour	Billable Rate	
										Internal	External
Department of Commerce:											
Executive Aircraft Division											
Beechcraft King Air B-200	N125NC	Raleigh	21	3	State-Owned	$ 1,222,992	$1,000,000	$ 106,183	$ 1,667	$ 250	$ 400
Cessna Citation Bravo 550	N122NC	Raleigh	5	4.5	State-Owned	4,600,300	3,200,000	855,401	1,902	350	550
Sikorsky Helicopter S-76C	N121NC	Raleigh	5	4.5	State-Owned	6,222,992	5,000,000	1,163,017	2,960	550	550
Total						$12,046,284	$9,200,000	$2,124,601			
Department of Justice:											
State Bureau of Investigation											
Beechcraft King Air C-90	N500KR	Erwin	27	3	State-Owned	591,500	600,000	175,449	1,168	None	None
Cessna Stationair 206F	N8305Q	Erwin	27	1.5	State-Owned	53,000	85,000	39,931	307	None	None
Cessna Centurion 210N	N5458C	Erwin	23	1	State-Owned	95,071	65,000	76,726	307	None	None
Cessna Centurion 210R	N9057S	Erwin	17	3	State-Owned	229,670	250,000	69,225	307	None	None
Total						$969,241	$1,000,000	$361,331			
Department of Transportation:											
Aviation Division											
Cessna Conquest II	N33DE	Raleigh	20	4	State Owned	1,582,300	1,328,295	391,355	3,229	402.75/292.88	$ 400
Cessna Conquest II	N2NC	Raleigh	20	3	State Owned	1,248,092	1,195,609	830,822	3,229	402.75/292.88	$ 400
Cessna Conquest II	N3NC	Raleigh	21	4	State Owned	940,000	1,253,758	436,561	3,229	402.75/292.88	$ 400
Total						$3,770,392	$3,777,662	$1,658,738			
Department of Crime Control and Public Safety:											
Highway Patrol Division											
Bell Jetranger Helicopter	N123NC	Raleigh	32	4.5	State-Owned	unknown	100,000	86,392	1,513	None	None
Bell Jetranger Helicopter (OH58A+)	N303HP	Raleigh	33	4.5	State-Owned	Military Surplus	100,000	204,406	1,513	None	None
Bell Jetranger Helicopter (OH58A+)	N304HP	Raleigh	33	4.5	State-Owned	Military Surplus	100,000	232,246	1,513	None	None
Bell Jetranger Helicopter (OH58A+)	N305HP	Raleigh	32	4.5	State-Owned	Military Surplus	100,000	301,541	1,513	None	None
Bell Jetranger Helicopter (OH58A+)	N306HP	Raleigh	32	4.5	State-Owned	Military Surplus	100,000	188,369	1,513	None	None
Bell Jetranger Helicopter (OH58A+)	N307HP	Raleigh	32	4.5	State-Owned	Military Surplus	100,000	242,383	1,513	None	None
Bell Jetranger Helicopter (OH58A+)	N308HP	Raleigh	32	4.5	State-Owned	Military Surplus	150,000	296,699	1,513	None	None
Bell Jetranger Helicopter (OH58A+)	N309HP	Raleigh	32	4.5	State-Owned	Military Surplus	150,000	220,898	1,513	None	None
Bell Jetranger Helicopter (OH58A+)	N312HP	Raleigh	35	4.5	State-Owned	Military Surplus	150,000	268,255	1,513	None	None
Bell Jetranger Helicopter (OH58A+)	N313HP	Raleigh	31	1	State-Owned	Military Surplus	50,000	Not used	Not used	None	None
Bell Jetranger Helicopter (OH58A+)	N315HP	Raleigh	33	1	State-Owned	Military Surplus	50,000	Not used	Not used	None	None
Total						Not Available	$1,150,000	$2,041,189			

TABLE 1 (continued)
Aircraft Information by State General Government Agency

Aircraft Description	Tail #	Location	Age Yrs	Condition 1=Lowest 5=Highest	Ownership	Original Cost	Current Value	Total Operating Cost	Operating Cost per Hour	Billable Rate	
										Internal	External
Department of Environment and Natural Resources:											
Division of Forest Resources											
Cessna L-19	N150FS	Kinston-CO	51	2	FEPP	Not Available	Not Available	$ NC	$ NC	$ 144	$ 144
CL-215	N215NC	Kinston-CO	34	5	State-Owned	$ 4,000,000	$ 4,000,000	NC	NC	2,600	2,600
Piper PA-18	N41381Z	Kinston-CO	43	2	FEPP	Not Available	Not Available	NC	NC	109	109
Cessna 172-F	N5182F	Kinston-CO	48	2	FEPP	Not Available	Not Available	NC	NC	95	95
Piper PA-31-350	N7854Q	Kinston-CO	32	3	FEPP	Not Available	Not Available	NC	NC	307	307
Cessna L-19	N90835	Kinston-CO	51	2	FEPP	Not Available	Not Available	NC	NC	144	144
Bell UH-1H	N81785	Kinston-CO	40	3	FEPP	Not Available	Not Available	NC	NC	1,263	1,263
Cessna L-19	N1833	Kinston	52	2	FEPP	Not Available	Not Available	NC	NC	144	144
Melex M18-A	N21525	Kinston	9	4	State-Owned	159,000	165,000	NC	NC	525	525
Melex M18-A	N2152X	Kinston	9	4	State-Owned	159,000	165,000	NC	NC	525	525
Astar 350-B3	N350NC	Kinston	1	5	State-Owned	1,894,667	2,000,000	NC	NC	280	280
Cessna L-19	N3FS	Kinston	52	2	FEPP	Not Available	Not Available	NC	NC	144	144
Cessna 182-S	N42058	Kinston	5	5	State-Owned	219,100	231,000	NC	NC	143	143
Cessna L-19	N4FS	Kinston	52	2	FEPP	Not Available	Not Available	NC	NC	144	144
Melex M18-B	N40139	Kinston	7	4	State-Owned	173,400	187,000	NC	NC	525	525
Cessna L-19	N64835	Kinston	52	2	FEPP	Not Available	Not Available	NC	NC	144	144
Cessna 185-F	N735DN	Kinston	18	4	State-Owned	70,000	110,000	NC	NC	119	119
Beachcraft T-34-B	N800Z	Kinston	48	2	FEPP	Not Available	Not Available	NC	NC	191	191
Rockwell Commander	N8431V	Kinston	27	2	State-Owned	30,000	15,000	NC	NC	290	290
Beachcraft T-34-B	N8457	Kinston	48	2	FEPP	Not Available	Not Available	NC	NC	191	191
DeHavilan DHC-2	N90721	Kinston	47	2	FEPP	Not Available	Not Available	NC	NC	193	193
Beachcraft T-34-B	N93013	Kinston	48	2	FEPP	Not Available	Not Available	NC	NC	191	191
Cessna 182-S	N9542W	Kinston	5	5	State-Owned	201,400	217,900	NC	NC	143	143
Cessna L-19	N9623Q	Kinston	51	2	FEPP	Not Available	Not Available	NC	NC	144	144
Cessna 182-S	N103NC	Rockingham	4	5	State-Owned	225,150	241,650	NC	NC	143	143
Cessna 182-T	N3521K	Rockingham	1	5	State-Owned	294,000	294,000	NC	NC	143	143
Bell UH-1H	N382CJ	Rockingham	39	3	FEPP	Not Available	Not Available	NC	NC	1,263	1,263
Cessna 185-F	N735EK	Rockingham	18	4	State-Owned	70,000	110,000	NC	NC	119	119
Bell UH-1H	N60124	Hickory	40	3	FEPP	Not Available	Not Available	NC	NC	1,263	1,263
Bell UH-1H	N6132N	Hickory	37	3	FEPP	Not Available	Not Available	NC	NC	1,263	1,263
Bell UH-1H	N6132Z	Hickory	35	3	FEPP	Not Available	Not Available	NC	NC	1,263	1,263
Cessna 185-F	N735AX	Hickory	18	4	State-Owned	70,000	110,000	NC	NC	119	119
Cessna 182-S	N920NC	Hickory	2	5	State-Owned	225,150	243,150	NC	NC	143	143
Total						$7,790,867	$8,089,700	NC	NC		

TABLE 1 (continued)
Aircraft Information by State General Government Agency

Aircraft Description	Tail #	Location	Age Yrs	Condition 1=Lowest 5=Highest	Ownership	Original Cost	Current Value	Total Operating Cost	Operating Cost per Hour	Billable Rate	
										Internal	External
Department of Environment and Natural Resources:											
Division of Marine Fisheries											
Bell Helicopter OH-58C	N431MP	Morehead	34	2	State-Owned	$ Not Available	$ 250,000	$ NC	$ NC	$ None	$ None
Bell Helicopter OH-58C	N433MP	Morehead	33	2	State-Owned	Not Available	250,000	NC	NC	None	None
Cessna C185F	N735ED	Beaufort	18	3	State-Owned	127,650	240,000	NC	NC	None	None
Aviat Husky	N49372	Wilmington	8	4	State-Owned	123,544	144,000	NC	NC	None	None
Total						$ 251,194	$ 884,000	NC	NC		
Division of Wildlife Resources											
Maule MXY7-180	N3118K	Burlington	8	4	State-Owned	$ 104,946	$ 75,000	$ 102,654	$ 265	None	None
Piper Super Cub PA-18-150	N4181Z	Goldsboro	37	3	State-Owned	23,308	30,000	80,801	179	None	None
Maule MXT-7-180	N9232P	Kinston	12	4	State-Owned	72,640	50,000	80,387	256	None	None
Piper Super Cub PA-18-150	N4165Z	Lenoir	38	3	State-Owned	20,000	30,000	78,304	163	None	None
Total						$ 220,894	$ 185,000	$ 342,146			
University of North Carolina:											
Area Health Education Centers--Medical Air, Inc.											
Beechcraft 58 Baron	N210CH	Chapel Hill	24	4.5	Medical Air, Inc.	$ 119,000	$ 229,000	$ 199,587	$ 472	$0.80/mile/ passenger ($250/hour for out-of-state)	$0.80/mile/ passenger ($250/hour for out-of-state)
Beechcraft 58 Baron	N212CH	Chapel Hill	23	4.5	Medical Air, Inc.	145,000	245,000	217,665	529		
Beechcraft 55 Baron	N213CH	Chapel Hill	23	4.5	Medical Air, Inc.	76,000	198,000	240,733	602		
Beechcraft 58 Baron	N214CH	Chapel Hill	23	4.5	Medical Air, Inc.	110,000	245,000	223,015	597		
Beechcraft 55 Baron	N215CH	Chapel Hill	25	4.5	Medical Air, Inc.	135,000	177,000	234,053	584		
Beechcraft C90B King Air	N530CH	Chapel Hill	11	4.5	Medical Air, Inc.	$ 1,500,000	$ 1,600,000	$ 548,726	$ 1,630	$1.60/mile for 1 pax, $1.20/mile for 2 pax, $0.80/mile for 3 pax, $485/hour for out-of-state	$1.60/mile for 1 pax, $1.20/mile for 2 pax, $0.80/mile for 3 pax, $485/hour for out-of-state
Total						$ 2,085,000	$2,694,000	$1,663,779			
Grand Total						$27,133,872	$26,980,362	$8,191,784			

NC = not computed because costs are not captured by aircraft

FEPP = Federal Excess Personal Property

Source: Compiled by OSA from each agency's documentation and NCAS data

Table 2 summarizes the average monthly usage by agency by aircraft as reflected in the flight records for each aircraft. The average flight hours do not include time required for maintenance of the aircraft or waiting time between flight segments. Exhibits 1 through 8, pages 18 through 21, show average flight hours by month for each agency. Exhibits 6, 7 and 8 also show the total elapsed time for passenger flights, which reflects preparation time, flight time, and idle time between trip segments. The elapsed time, which is considerably more than the flight time, shows the total amount of time the aircraft is committed per trip.

TABLE 2
Average Monthly Usage Per Aircraft

AGENCY	NUMBER OF AIRCRAFT	AVERAGE FLIGHT HOURS PER MONTH PER AIRCRAFT	AVERAGE ELAPSED HOURS PER MONTH PER AIRCRAFT*	FISCAL YEARS
CCPS-HP	11	12.4		01-02 & 02-03
DENR: ▪ Forest Resources ▪ DMF ▪ Coastal Resources**	 33 4 -	 7.5 13.3 11.1		01-02 & 02-03
Wildlife	4	30		01-02 & 02-03
Justice-SBI	4 3	15 18		01-02 02-03
Commerce***	3	15	52.8	01-02 & 02-03
Transportation	3	15	37.6	01-02 & 02-03
UNC-AHEC-MedAir	6	36.5	154.9	01-02 & 02-03

*Elapsed time is relevant for passenger aircraft only.

**Aircraft leased as needed.

***Bell 206 helicopter information is not included in chart as it was used for only 6 passenger flights during fiscal years 2001-02 and 2002-03. Legislation passed in 2002 to sell helicopter. The sale was finalized March 2003. For FY2001-02 the helicopter had only 28.25 elapsed flight hours. Total flight hours were 68.58, with 40.33 hours being weekly run ups or maintenance checks. The average monthly elapsed flight hours per aircraft if this aircraft were included would be reduced to 41.70 hours for the four aircraft.

Source: Compiled by OSA from flight records.

Examination of flight records for the passenger aircraft for fiscal years 2001-02 and 2002-03 shows that each of the three Department of Commerce aircraft were committed on average 52.8 hours each month. Flight records for the same period for each of the three aircraft at the Department of Transportation show an average of 37.6 hours usage each month. Flight records for MedAir show that its six aircraft were used an average 154.9 hours each month per aircraft. Despite the limited usage for Department of Transportation aircraft, the Department rents aircraft from a private vendor located at the Burlington Airport. This contract is for an hourly rate on an as needed basis, not to exceed $16,850. As shown in Table 3, the Department of Transportation rented aircraft on dates when Commerce and Transportation aircraft were available.

TABLE 3
Transportation's Rental of Aircraft

Date	Hours	Rate/ HR	Cost	State owned Aircraft Available?
3/25/2003	1.9	$86.00	$ 163.40	YES
3/25/2003	1.5	89.00	133.50	YES
5/26/2003	1.4	89.00	124.60	YES
5/27/2003	1.5	89.00	133.50	YES
6/15/2003	6.6	94.00	620.40	YES
			$1,175.40	

Source: Department of Transportation

The State may be able to realize efficiencies in its passenger aircraft operations and maintenance functions by consolidating portions of those functions now within these six general government State agencies and MedAir. Consolidating passenger flight operations from Commerce, Transportation, and MedAir would allow the consolidated entity to function similarly to the State Motor Fleet Management operation for vehicles.

Further, a consolidated aircraft operation would require only one set of administrative and maintenance personnel. Savings could be realized by more efficient use of passenger aircraft, possibly by reducing the number of aircraft currently operating. The operational cost per hour for each aircraft should decrease with increased usage. Consolidation would permit sharing of non-law enforcement pilots for all the passenger flights.[5] Additionally, it would address the need

[5] The possibility of consolidating the Transportation and Commerce flight operations was previously explored by the Department of Transportation. No agreement was reached with Commerce, however.

for MedAir to relocate due to the pending closure of the Horace Williams Airport. A centralized maintenance operation would enable the State Highway Patrol and the SBI, which are based in the Raleigh vicinity, to take advantage of this maintenance function.

Lastly, consolidation would allow the State to explore the feasibility of building its own hangar to house its flight operations in the Raleigh area. The Raleigh-Durham Airport Authority built the hangar/office building currently used by Transportation and Commerce in 2000 at a cost of $2.5 million. This was $29.98 per square foot for 83,400 square feet (hangar, 14,400 sq. ft., office building, 12,000 sq. ft., and parking lot area, 57,000 sq. ft.). The current lease cost is $19,000 per month[6], which includes lease of vacant land adjacent to the hangar for future expansion. Ownership will revert to the Authority at the expiration of this 20-year lease agreement. Under the terms of the agreement, the State would bear the cost of an additional hangar and required parking on the vacant land and would continue to lease the land from the Authority. Based on the cost of the existing hangar, the cost to build an additional hangar would be approximately $982,595.

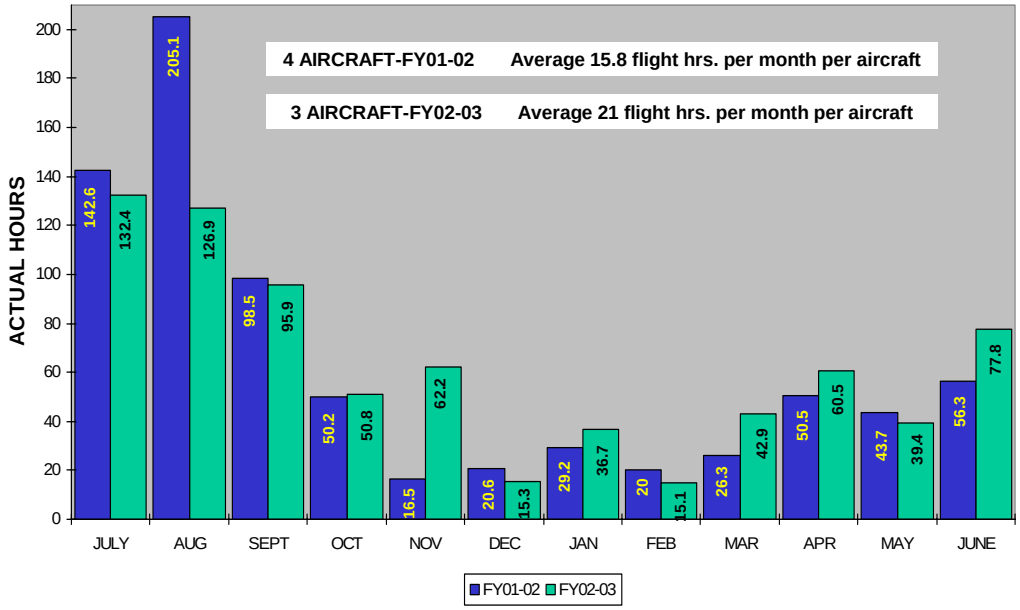
A second option that should be considered is constructing a new facility on land already owned by the State located close to the Raleigh-Durham International Airport (RDU). The Army National Guard currently uses a portion of this 35 acres and already has runways constructed. Based on the cost of the existing Transportation / Commerce facility at RDU, it would cost the State approximately $3.5 million to construct a new facility large enough to handle the consolidated aircraft operations. However, the annual lease amounts of $261,000 would be eliminated.

RECOMMENDATION

The General Assembly should consider establishing a centralized aircraft operations division within an existing agency for better coordination and to achieve efficiencies of passenger aircraft operations. The main aircraft functions that would comprise the passenger services are now located in the Departments of Commerce and Transportation and UNC-AHEC-MedAir. Commerce, Transportation, Highway Patrol, and MedAir have maintenance functions that would be consolidated. Because of the need for regional location of the Forest Resources aircraft, those mechanics would not be physically relocated. Rather, they would report administratively to the consolidated head mechanic. The Department of Transportation already has an established Aviation Division and would be the logical choice for the consolidated aircraft operations division. The other agencies would then purchase passenger flight time and maintenance services from the consolidated operation. The specialized law enforcement functions would continue to operate and house their respective aircraft at their current locations and have the option of using the consolidated maintenance operation.

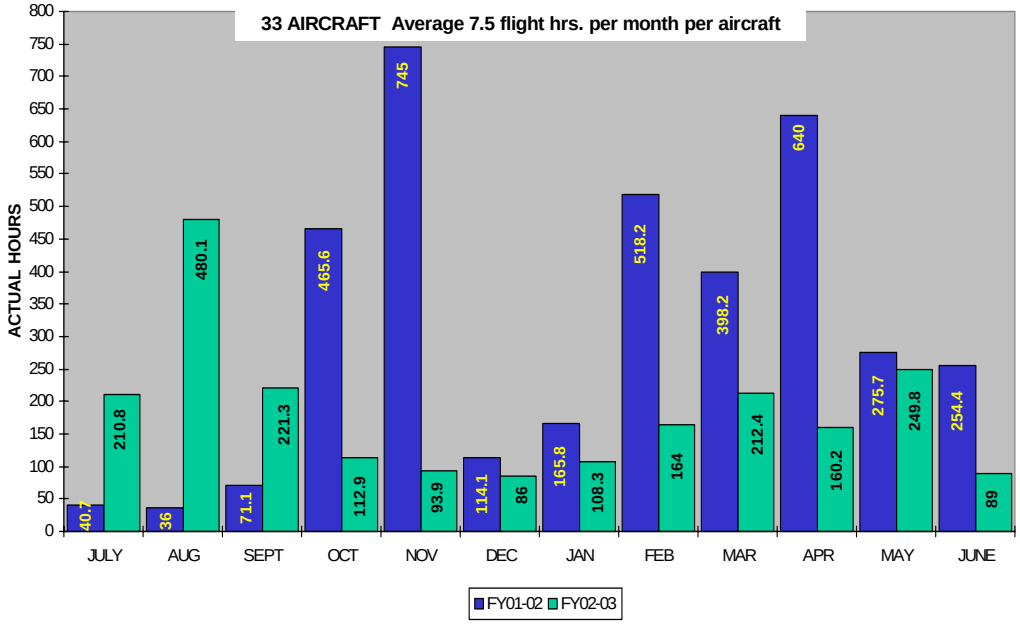
[6] UNC-AHEC-MedAir currently leases space at the Horace Williams Airport for $2,800 per month.

EXHIBIT 1
SBI Flights
Hours by Month – FY01-02 AND FY02-03



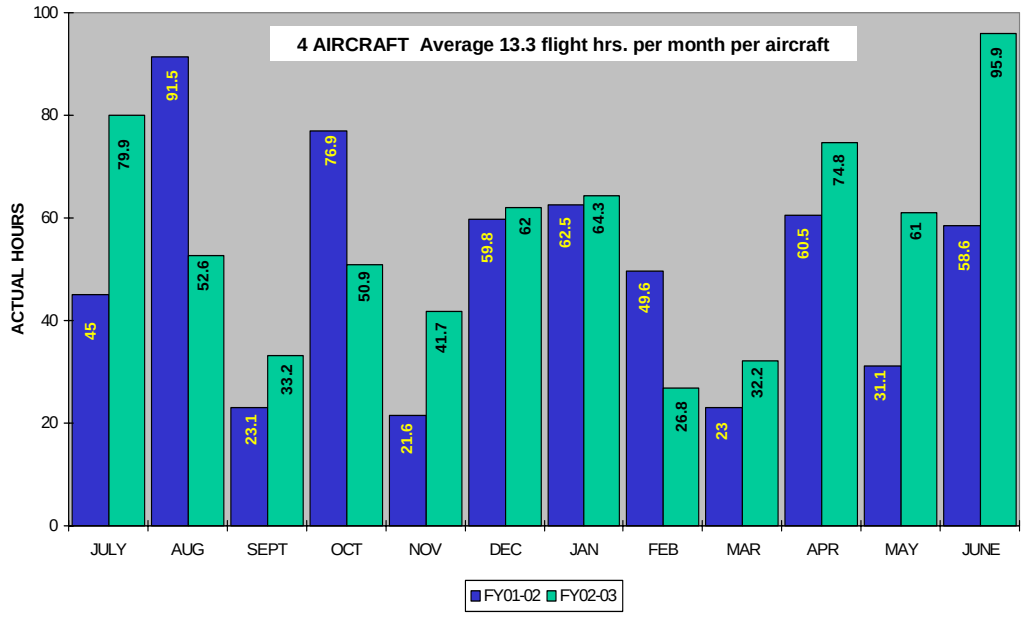
Source: SBI flight records

EXHIBIT 2
Forest Resources Flights
Hours by Month – FY01-02 and FY02-03



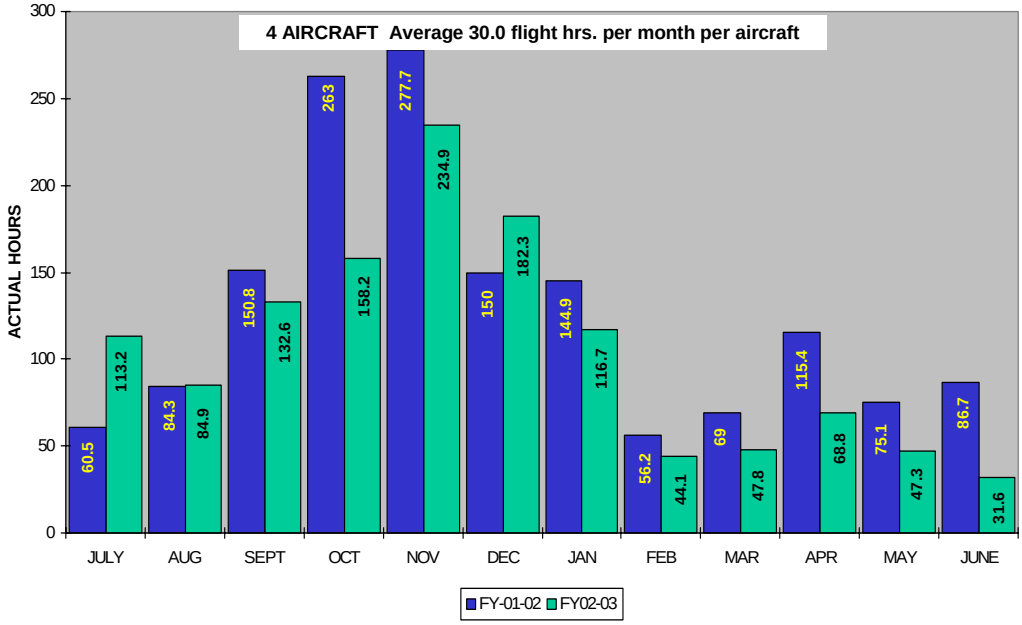
Source: Forest Resources flight records

EXHIBIT 3
Marine Fisheries Flights
Hours by Month –FY01-02 and FY02-03



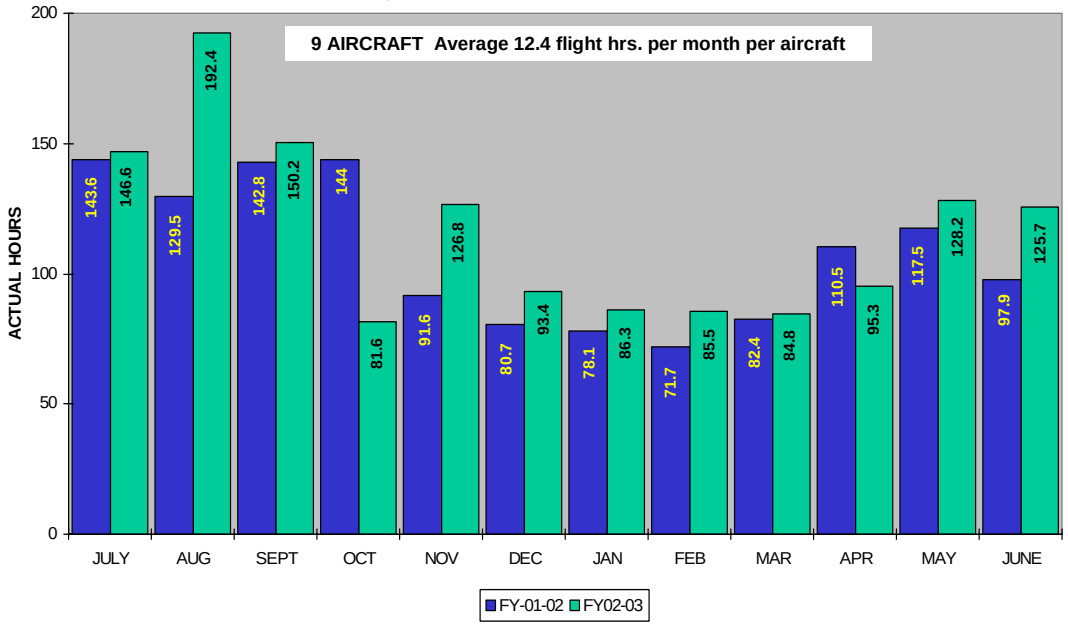
Source: DMF flight records

EXHIBIT 4
Wildlife Flights
Hours by Month – FY01-02 AND FY02-03



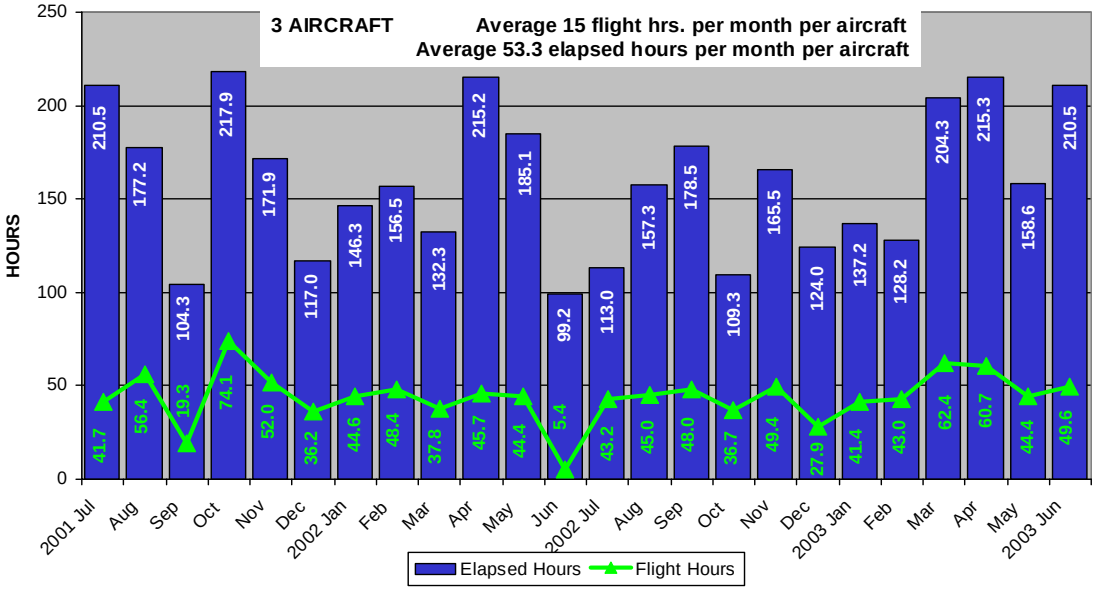
Source: Wildlife flight records

EXHIBIT 5
Highway Patrol Flights
Hours by Month – FY01-02 AND FY02-03



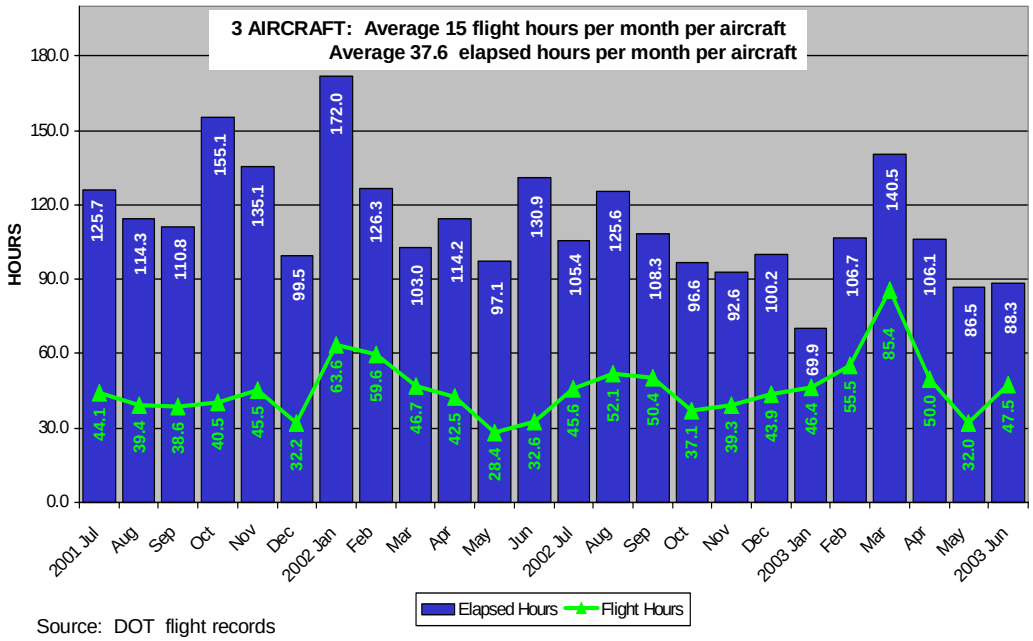
Source: Highway Patrol flight records

EXHIBIT 6
Commerce Flights
Includes Passenger Flights
Hours by Month – FY01-02 and FY02-03



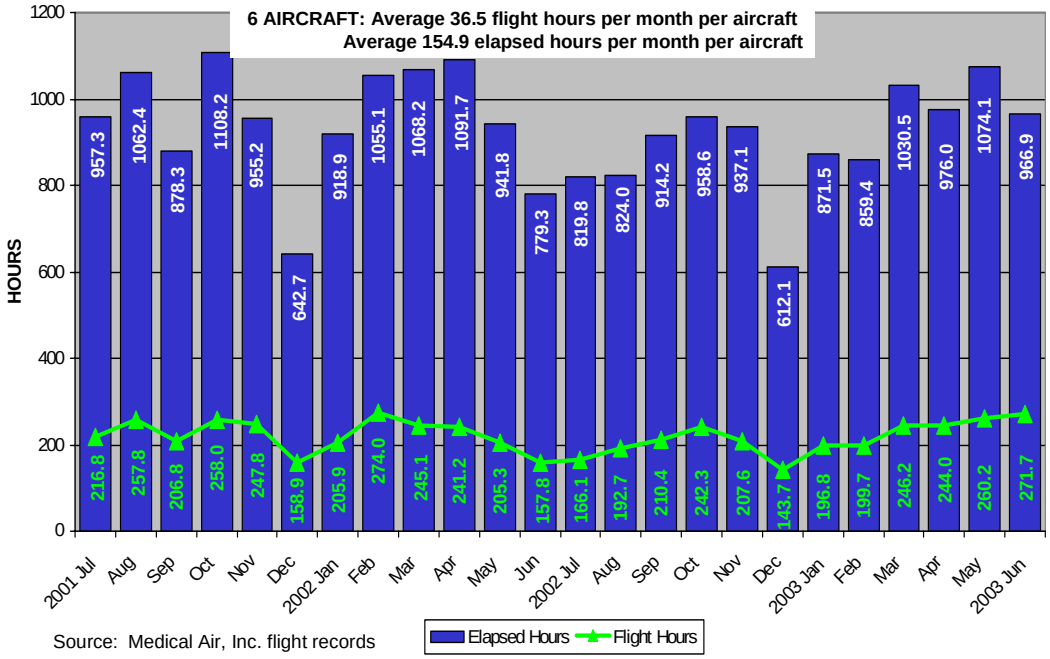
Source: Commerce Flight Records

EXHIBIT 7
Transportation Flights
Includes Passenger Flights
Hours by Month – FY01-02 AND FY02-03



Source: DOT flight records

EXHIBIT 8
UNC-Area Health Education Centers-Medical Air, Inc.
Includes Passenger Flight
Hours by Month – FY01-02 AND FY02-03



Source: Medical Air, Inc. flight records

THE AGE OF THE STATE'S AIR FLEET INCREASES THE NEED FOR MAINTENANCE.

Examination of the maintenance logs for the State aircraft operated by the six agencies and Medical Air, Inc. (MedAir) showed that scheduled maintenance has been performed. All of the agencies and programs contract for at least some aircraft maintenance. However, Commerce, Transportation, Forestry, State Highway Patrol, and MedAir have full-time mechanics on staff to perform much of the maintenance. The staffing of the maintenance sections varies by agency (Table 4). As shown in Table 1, page 13, the average age of the aircraft operated by State agencies is 27.7 years, with 70.6% of the fleet over 20 years old. Much of the fleet consists of used aircraft purchased from federal agencies. As the aircraft age, the need for more frequent and extensive maintenance is increased.

TABLE 4
Number of Aircraft to Mechanics by Agency

Agency	Number of Aircraft	Number of Mechanics
Department of Commerce	3	2
Department of Transportation	3	3
State Highway Patrol	11	2 [a]
State Bureau of Investigation	4	0
Division of Forest Resources	33	10
Division of Marine Fisheries	4	0
Wildlife Resource Commission	4	0
UNC-AHEC-MedAir	6	3

[a] Because one of the State Highway Patrol mechanics is on active duty with the Armed Forces, the mechanics from the Department of Transportation have assisted the remaining Highway Patrol mechanic.

Source: OSA prepared from Agency contacts.

During the audit, we noted that two of the SBI's four planes are in poor condition, with one grounded waiting to be either traded or sold, and another expected to be grounded within the next twelve months[7]. Additionally, two State Highway Patrol helicopters have not been up-fitted for use in the Patrol's law enforcement activities. The Patrol does not have the $40,000 - $50,000 that it will cost to up-fit these aircraft. However, Patrol personnel noted that, at this time, there is no urgent need for these helicopters. In fact, the Patrol has explored the possibility of donating them to another law enforcement agency since federal regulations prohibit the sale of military surplus aircraft prior to five years of ownership by the State.

RECOMMENDATION

The General Assembly should direct that an independent contractor perform a comprehensive study of the operational condition of all State-owned and supported aircraft. This study should include recommendations on when to replace the aircraft, the required number of maintenance staff, and the feasibility of contracting for all maintenance as a possible cost saving measure, as well as contracting for pilots. (See discussion on page 33). Additionally, the General Assembly should consider whether there is a need for all aircraft now owned and maintained by the State. The contractor developed plan should include a recommendation on how to divest the State's ownership of any aircraft deemed unnecessary. Pending the

[7] FY02-03 budget bill (S 1115, Section 6.10(a)) requires any aircraft not used within two years to be sold.

contractor's study, the agencies and programs should address the staffing levels for mechanics, determining how many mechanics are needed for effective operation.

THE STATE HAS NOT ESTABLISHED STATEWIDE POLICIES AND PROCEDURES FOR USE OF ITS AIRCRAFT.

Some of the six agencies that have aircraft operations and UNC-AHEC-MedAir have developed policies and procedures for administration, maintenance, and operation of state aircraft. However, no uniform policies exist. Neither the General Statutes nor the North Carolina Administrative Code address state aircraft operations. Thus, there are no procedures outlining what documents must be completed and kept to support purposes and reasons for use of state aircraft. Further, there are no statewide regulations regarding who may use aircraft or requiring that all passengers be identified. There is also a lack of guidance regarding what documentation is necessary to support use of aircraft including who may authorize use. In addition, no policies or procedures exist outlining how costs for use of aircraft are to be calculated or charged to agencies using the aircraft, or guidance on whether these agencies should seek to recoup full costs or only a portion of the costs. (See discussion on costs beginning on page 26.)

The lack of policies and procedures limits determinations relative to whether state aircraft were used appropriately. Without consistent, written policies and procedures, the risk of inappropriate use increases. Further, the lack of uniform policies increases the likelihood that agencies will handle the same circumstances differently.

RECOMMENDATION

The General Assembly should consider legislation that establishes statewide policies and procedures for administration and use of State aircraft. Such legislation should address, but not be limited to:

- **requiring documented purpose and justification for every flight,**
- **requiring signed authorization from public officials or agency heads for all flights,**
- **describing cost calculation for flights charged to agencies while acknowledging that some costs are subsidized by the aircraft operating agency,**
- **identifying all passengers on flights, and**
- **describing circumstances where family members are permitted to accompany state officials or agency heads.**

While aircraft operations remain separate, each agency maintaining and operating State aircraft should establish internal policies and procedures consistent with existing guidelines. If the General Assembly establishes a consolidated aircraft operations function, then

that entity should have the responsibility of developing and implementing statewide polices and procedures for aircraft use.

AIRCRAFT TYPE LIMITS THE HIGHWAY PATROL'S ABILITY TO PERFORM RESCUES.

As shown in Table 1, page 13, the Highway Patrol operates a fleet of Bell Jetranger helicopters, the majority of which were purchased from military surplus. Some of these aircraft are specially equipped to provide assistance in searches, traffic control, drug eradication, or surveillance using infrared technology and special lighting. Because of the small size of the helicopters and the added weight and room the equipment takes, the Patrol cannot execute rescue of persons once they are located. In the past, the Patrol has relied on military agencies, such as the National Guard and the Coast Guard, to provide rescue services in these situations. However, given the heightened concerns with terrorist attacks, the major functions of these agencies may not allow them to continue to respond on a timely basis. Therefore, the Patrol cannot continue to rely on these agencies as heavily to provide the rescue function. If the Patrol had a number of larger helicopters, which could accommodate the necessary equipment and allow room for passengers, the Patrol could perform rescues at the time it located persons in need, thereby increasing their chances of survival. These helicopters would need to be geographically stationed throughout the state to allow for a timely response.

RECOMMENDATION

Crime Control and Public Safety management should give consideration to purchasing larger aircraft for use by the Highway Patrol. A study should be conducted to identify the appropriate type and number of aircraft to allow the Patrol to execute rescues as well as conduct its primary law enforcement missions.

Objective 2—COSTS AND REIMBURSEMENTS: *To determine the total operational costs for each aircraft per agency and program, determine and analyze the hourly rate for aircraft operations, and identify the agency's aircraft billable reimbursement rates and how the rates are computed.*

Overview: Each of the six general government State agencies receives State appropriations to fund aircraft operations. UNC-AHEC also receives state funds to help support and maintain the MedAir aircraft. The Departments of Justice, Crime Control and Public Safety, and Transportation also receive federal funds that assist in supporting aircraft operations. The Departments of Transportation and Commerce, as does MedAir, allow other State agencies and outside entities to use their passenger aircraft for official State business and bill according to established rates for use. The four other agencies with aircraft may bill federal or other State agencies for use of aircraft, but the use is more limited and generally does not include passenger services. Each of the agencies and programs has its own system of accounting for costs associated with aircraft operations.

Methodology: To determine costs associated with aircraft operations, we reviewed each agency's financial records. We also obtained all costs associated with aircraft operations as identified by the agencies. We then compared data provided by each agency to information contained in the financial records to verify aircraft operational costs, asking the agencies to explain any variances. To verify that all billable flights were invoiced, we examined flight records for fiscal year 2001-2002, noting when other agencies used the aircraft. We then reviewed a sample[8] of invoices for these billable flights and traced reimbursements into the billing agency's accounts. Additionally, we contacted other states, aircraft manufacturers, and commercial charter companies to obtain aircraft operational information and costs. We also examined pilot time records for the Departments of Commerce and Transportation.

Conclusions: Each of the agencies and programs has a different system and methodology for capturing operational and financial data on aircraft operations. Most of the agencies do not capture cost data by aircraft. Many of them do not separate aircraft costs from other divisional costs. Therefore, we are unable to determine the total operational costs for all State aircraft operations. Several of the agencies have established billing rates for use of their aircraft. (Table 1, page 13). However, the agencies generally were not able to document the methodology used to

[8] A statistical sample of 60 items was tested for all agencies to achieve a 95% confidence level and a 5% upper error limit with an expected error rate of zero, based on the total number of flight records for the SBI, Highway Patrol, Transportation, Commerce, and MedAir. The one exception was that we reviewed 100% of the records for the Division of Forest Resources since the number of invoices was so small. No review of invoices was performed at the Wildlife Resources Commission, the Division of Marine Fisheries, or the SBI since these agencies do not allow other agencies to use their aircraft.

arrive at those rates. For several of the agencies, the rates charged varied according to user without documentation to explain why. Some flights that should have been billed according to individual agency policies and procedures were not. There is no single method used to compute billable rates. North Carolina needs to determine whether full costs, all variable costs, or some portion of the variable costs should be recovered for use of State aircraft. Other states vary in their methods of recovering State aircraft costs, with some recovering only the variable costs. Lastly, we noted that the pilots for the Departments of Commerce and Transportation have only flight duties. While they are on call for a 40-hour week, they do not report to work unless they have a flight scheduled. This is in contrast with the pilots for the other agencies who have additional duties assigned when not flying.

FINDINGS- COSTS AND REIMBURSEMENTS:

TOTAL OPERATIONAL COSTS FOR ALL STATE AIRCRAFT CANNOT BE DETERMINED.

Review of financial records and examination of data showed that each of the six agencies and MedAir has a different system and methodology for capturing operational and financial data on aircraft operations. The Department of Commerce's system allows capture of operational costs by aircraft. The Department of Transportation's Aviation Division rents its aircraft from the Department's Equipment Division. However, the Equipment Division does not break down or capture operational cost data by aircraft. The Department of Justice's system for the SBI aircraft accumulates the cost of all aircraft under the SBI aircraft cost center. The Department of Crime Control and Public Safety's State Highway Patrol helicopter operational costs are not segregated, but are accounted for in the Patrol's main cost center. The Department of Environment and Natural Resources' system for capturing aircraft operational costs varies by division. The Division of Marine Fisheries has cost centers for its two aircraft types—fixed wing and helicopter. The Division of Forest Resources captures the total operational costs for aircraft under its Forestry Air Operations cost center. Since the Division of Coastal Resources purchases flight time, costs are accounted for as a contract expense.[9] The Wildlife Resources Commission aircraft operational costs are not segregated but are accounted for within the Wildlife Law Enforcement cost center. However, each pilot completes monthly aircraft expense reports. UNC-AHEC-MedAir has a separate account for its aircraft operations, maintaining statistics by aircraft. Therefore, we are unable to determine the total operational costs for all State aircraft operations. However, based on available cost information, the annual operational cost is in excess of $8.2 million. (See Table 1, page 13.)

[9] Coastal Management staff flew a total of 174.5 hours for fiscal year 2002-03 at a total cost of $13,053 and 91.6 hours for fiscal year 2001-02 at a cost of $6,882.

RECOMMENDATION

Operational costs for all State operated aircraft should be captured by aircraft. This information would improve the administration of flight operations and would allow more informed decisions on the efficiencies of each aircraft. A consolidated flight operations division may enhance the State's ability to capture this data. (See discussion on page 12.)

THERE IS NO CONSISTENT METHOD FOR COMPUTING BILLABLE RATES FOR STATE AIRCRAFT USAGE.

Three of the six agencies with aircraft operations have established hourly billing rates for use of their aircraft. UNC-AHEC-MedAir charges each passenger a mileage rate for in-state trips and an hourly rate for out-of-state trips. Table 1, page 13, summarizes the established internal and external rates by agency. However, most of the agencies were not able to supply the methodology used to arrive at those rates. Nor did the agencies have documentation to support the current billing rates. Further, we noted that, for several of the agencies, the rates charged varied according to user without documentation to explain why. Lastly, we noted that some flights that should have been billed according to individual agency policies and procedures were not. (See findings that follow for individual agency issues.)

Review of methodologies used by other states in their aircraft operations revealed no single accepted method for computing costs or establishing reimbursement rates. However, most of those states seek to recover only the variable costs associated with the flights, not the full cost of operation. (See Appendix A, page 39.) Private air transportation services in the Raleigh area charge rates ranging from $795 to $3,500 per hour, depending on the type of aircraft. For comparison, Commerce charges $400 per hour for use of its King Air B200 while one local service charges $1,050 - $1,100 for the same type aircraft. In researching methodologies to determine reasonable billable rates, we learned that there are private aircraft cost evaluators who provide, for a fee, the cost data needed to establish rates for each type of aircraft. Additionally, the federal Office of Management and Budget Circular No. A-126 (see Appendix B, page 44) outlines methods of cost calculation for aircraft that may be appropriate.

RECOMMENDATION

The State should establish a consistent statewide methodology for billing rates by type of aircraft. Consideration should be given to the factors included in private aircraft cost evaluator service models and updated periodically. Consideration should also be given to any existing national costs policies (see page 28) in establishing a consistent statewide methodology. The consolidated aircraft division should maintain documentation on the methodology used to compute billable rates.

DIVISION OF FOREST RESOURCES IS INCONSISTENT IN THE COSTS THAT ARE INCLUDED IN ITS BILLING RATES.

The Division of Forest Resources' policy is to bill other agencies and internal customers for the time that its aircraft are used for non-fire control purposes such as pest control, forest management, water quality, and emergency management. The Division also bills federal agencies for its assistance in controlling fires on federal property—national forests, national parks, and military installations—and other states in compliance with various federal procedures as required by the cooperative agreements. These policies allow recovery of the pilots' and mechanics' overtime, related fringe benefits, and travel expenses if they are deployed to a reimbursable incident.

Division officials report that the Division attempts to recoup the direct operational costs for non-fire control purposes rather than the total costs associated with such flights. The Division has established billing rates for its various aircraft, but the rates do not include all of the costs associated with the Division's aircraft operations. Generally, the billing rates include the cost of maintenance, insurance, fuels and lubricants, hangar space, maintenance publications, and radio maintenance. Other direct costs, such as pilots' and mechanics' salaries, employee benefits, training, and travel expenses, are not included.

Further, the Division does not have cost documentation to support aircraft billing rates. When the Division's chief pilot assumed his duties in early 2002, he was unable to locate any cost documentation to support the Division's April 2001 billing rates. Therefore, in the absence of supporting cost documentation and not knowing which costs were previously included, he revised the rates in August 2002 based on his best judgment of which cost categories had increased. However, the Division is using the direct operating cost data provided by the manufacturer of one aircraft. The manufacturer's costs do not include insurance and hangar space costs which the Division's other billing rates included.

RECOMMENDATION

The Division of Forest Resources should compute billing rates using the statewide procedures once they are established and update as directed in those procedures. Rates for each type of aircraft in its fleet should be recomputed using these consistent cost categories. Until the statewide policies are established, the Department of Environment and Natural Resources should establish a department policy on costs computation. Further, to be better prepared to assign actual costs to each aircraft the Division should develop a cost tracking system that identifies the actual costs for each aircraft. This data should be provided to the consolidated aircraft division for consideration in establishing a statewide methodology for computing billable rates.

DIVISION OF FOREST RESOURCES IS NOT CORRECTLY INVOICING ALL BILLABLE FLIGHTS.

The Division of Forest Resources uses its aircraft to detect and control forest fires. Division policy is to bill other agencies for non-fire control flight time. The Division also bills federal agencies for its assistance in controlling forest fires on federal property. Even though the Division has established billing rates, its regional offices are not applying the billing policy uniformly. Our review of flight records and the 15 invoices (100%) prepared for billable flights for fiscal year 2001-02 showed that the regional offices either billed incorrectly or did not bill for all non-fire control flights. During fiscal year 2001-02, the Division flew 79 billable flights; 4 (5.1%) were not billed and 48 (60.7%) were billed incorrectly, totaling $1,344, for an error rate of 65.8%. See Table 5.

TABLE 5
Review of Division of Forest Resources Invoices for Billable Flights for FY01-02.

Region	Number of Invoices	Number of Billable Flights	Flights Billed Incorrectly	Percent of Errors	Flights Not Billed	Percent of Errors	Total Not Billed or Incorrect
I	5	26	6	23.1%	0	0.0%	$ 196
II	0	4	0	0.0%	4	0.0%	$ 956
III	10	49	42	85.7%	0	0.0%	$ 192
Total	**15**	**79**	**48**	**60.7%**	**4**	**5.1%**	**$1,344**

Source: Data compiled by OSA from Division records

Discussions with Division officials in the regional offices revealed that they were not familiar with which flights should be billed. Many of the officials responsible for invoicing for the flights were new to their positions and had not received specific instruction on billing procedures. Additionally, some of the pilots were unfamiliar with how to code the non-fire control flights which led to missed or inaccurate billings.

RECOMMENDATION

The Division should ensure that all pilots and aircraft officials are trained on which flights should be billed and on how to code all flights properly. Division financial personnel should conduct periodic reviews of billed flights to assure that billings are prepared in accordance with statewide policies once established by the consolidated aircraft operations division or the current Divisional policies.

DEPARTMENT OF COMMERCE BILLABLE RATES DO NOT COVER VARIABLE COSTS.

The Department of Commerce is using aircraft billable rates that have been in effect since the aircraft were purchased. These rates do not currently cover variable costs for three of the aircraft, while the rate for the Sikorsky helicopter more than covers variable costs. Table 6 shows the variance for fiscal years 1999-2000 through 2001-2002**.**

TABLE 6
Department of Commerce
Billable Rate Comparison

Aircraft	FY01/02 Variable Costs *	FY00/01 Variable Costs	FY99/00 Variable Costs	Average Variable Costs	External Billable Rates 2000-2002	Internal Billable Rates 2000-2002
King Air	$ 424.42	$ 596.81	$ 357.12	$ 459.45	$ 400.00	$ 250.00
Sikorsky	267.93	325.47	209.38	267.59	550.00	550.00
Citation	739.18	641.38	543.82	641.46	550.00	350.00
Bell 206L **	823.26	179.84	397.78	600.29	400.00	200.00
Overnight					200.00 per night	

* Variable Costs include: gasoline, replacement parts, and repairs.

** Sold 3/2003

Source: NCAS and Department of Commerce

Commerce does not have a formal structure or methodology for establishing billing rates, and the initial rates established for each of the aircraft have not been revised. The lack of written policies or procedures has led to the continued use of rates established as far back as 1982 for the King Air and 1998 for the Sikorsky and Citation. Documentation shows that Commerce's philosophy is to cover fuel, lubricants, maintenance, and crew members' out-of-pocket travel costs. However, these costs may not be reimbursed unless the billing rates are periodically reviewed.

RECOMMENDATION

Billable rates should be computed using the statewide procedures once they are established and updated as directed in those procedures. The Department of Commerce should establish a policy on how billable rates should be computed and then annually evaluate those rates to ensure that policy is being followed until the statewide procedures are established. (See discussion on page 27.)

DEPARTMENT OF COMMERCE AIRCRAFT FLIGHT INVOICES CONTAIN INCONSISTENCIES.

The Department of Commerce has an Executive Aircraft Operation Statement of Policy that outlines aircraft priority and external billing rates. However, the agency does not have policies and procedures to cover issues such as what constitutes billable hours. To determine the accuracy of billing rates charged, we examined a sample of aircraft flight

invoices for fiscal year 2001-02. Of the 60 invoices reviewed[10], seven contained exceptions, an 11.7% error rate. (See Table 7). The lack of detailed billing policies and procedures may have contributed to the inconsistencies noted in billing.

RECOMMENDATION

The Department of Commerce should develop detailed policies and procedures for billing aircraft invoices so that all invoices will be billed consistently. Statewide policies and procedures should be followed once established.

TABLE 7
Department of Commerce--FY 2001/02 Questioned Flight Invoices

Agency	Date	Issue	Reason	Dollar Value
UNC Chapel Hill, Office of Government Relations	07/09/01	Block time recorded at 3.5, but agency was only charged for 2.0. Note on flight log stated that plane held on ground with engine running due to weather. Other invoices reviewed where total time was charged to the other agency, or overnight fees were charged in lieu of return flight costs.	1.5 hours not charged to customer due to weather hold on ground.	$ 825
NC Department of Transportation	07/30/01	C550 external rate is $550. Agency was charged $350 – the internal rate.	Agency made exception to outside rates since they felt part of trip was Commerce related.	$ 980
Department of Commerce	08/15/01	Business and Industry billed for $725 of flight. The Film Office was to be charged for $325; however, invoice does not show charge for $325.	Due to an oversight, the Film Office was not charged.	$ 325
NCDA – Markets	10/24/01	Block time was added incorrectly. Time adds up to 4.1, agency charged for 3.6.	Lesser time was charged in error.	$ 200
UNC-Chancellor's Office	11/10/01	Block time recorded at 2.4, billed for only 1.3.	NCDOC absorbed the 1.1 return flight stating that crew was needed for another flight.	$ 440
UNC-Chancellor's Office	11/12/01	Block time recorded at 2.9, billed for only 1.6.	NCDOC absorbed the 1.3 stating that crew was needed for another flight.	$ 520
UNC-Chancellor's Office	04/12-14/02	Departure on 4/12/02 and return on 4/14/02, but agency was not charged for 2 overnights for 2 pilots.	$200.00 overnight fee was not charged in error.	$ 400
TOTAL				**$3,690**

Source: NC Department of Commerce Financial Records

[10] Total invoice population was 88. We reviewed a statistical sample of 60 invoices that gave us a 95% confidence level, with an upper error limit of 5% and an expected error rate of 0.

DEPARTMENT OF COMMERCE AIRCRAFT OPERATING COST PER HOUR DOES NOT ACCURATELY REFLECT ACTUAL COSTS.

Inconsistencies exist between the schedule of actual costs per hour prepared by the Department for fiscal year 2001-02 and Department budget reports for each of the aircraft in the Executive Aircraft Division. Comparisons showed:

- Salaries and fringes in actual cost computation included full salary of scheduler (who only works part-time in this section) and salaries that were projected but not actually paid (projected as if had been fully staffed).
- Employee educational expenses were $1,100 less than the actual cost computation.
- Maintenance and repair amounts were allocated by distributing total costs to all aircraft rather than to the specific aircraft incurring the expense.
- Gasoline costs were allocated by distributing total costs to all aircraft rather than to the specific aircraft incurring the expense.
- Payments made on two aircraft (Sikorsky & Citation) are listed as lease payments, but documentation shows that the payments are actually loan payments.
- Sikorsky computations do not include an amount for depreciation. Commerce could not provide criteria on how to compute depreciation for any of its aircraft.

When computing actual cost per hour, only actual expenses for each aircraft should be included, using prior year actual costs to compute current year estimated cost per hour. Expenses that can be associated with a specific aircraft should be charged accordingly and not allocated to all aircraft. Allocation is appropriate when expenses cannot be associated to a specific aircraft. Inaccuracies in rate computations result in incorrect rates being charged to user agencies.

RECOMMENDATION

The Department of Commerce should compute the actual cost per hour for each aircraft using the actual expenditures per aircraft when available. When actual charges cannot be determined by aircraft, then allocating by hours used or some other method is appropriate to distribute cost. The agency should determine the appropriate method for computing depreciation and document the method used. Statewide policies and procedures should be followed once established.

DEPARTMENT OF TRANSPORTATION REDUCED ITS INTERNAL HOURLY RATE BASED ON INCORRECT DATA.

The Department of Transportation bills individual highway projects for use of its aircraft to provide photogrammetry and aerial survey services. Examination of financial records for the Department showed that the internal billable rate for aircraft was $402.75 through December 2001. The Board of Transportation reduced this rate to $292.88 in January 2002. Examination of the documentation used to reduce the rate showed the reduced rate was based on erroneous cost data. This rate was computed using an incorrect factor for fuel costs which underestimated the cost of fuel. As of April 1, 2003, the Department activated its new accounting system known as BSIP (Business Systems Improvement Project). BSIP is now able to more accurately capture total operating costs for the aircraft, resulting in an increase of the billable rate to $1,990 per hour.

RECOMMENDATION

The Department should examine the methodology BSIP uses to determine hourly aircraft rates for reasonableness. See discussion on methods for computing billable rates on page 27. This information should be supplied to the consolidated aircraft division to consider when it establishes a statewide methodology for setting aircraft reimbursement rates. Once statewide procedures are established, the Department should use those, updating as those procedures direct.

TRANSPORTATION AND COMMERCE PILOTS HAVE ONLY FLIGHT DUTIES.

Examination of flight records showed that the Commerce and Transportation passenger aircraft were used a limited number of hours each month. (See discussion on page 12.) To confirm this, we examined time records for the pilots. This examination revealed that pilots for both agencies are considered permanent full-time State employees scheduled to work 40-hour weeks. Flight and time records show that rarely have flights consumed the entire 40 hours for a given week. Discussions with the pilots and other aircraft personnel revealed that the pilots are "on call[11]" for the 40 hours. However, since they only have flight duties, they generally do not report to work unless they have a flight scheduled. This contrasts with the pilots in the other general government State agencies who have additional duties assigned if they are not flying. Review of time records showed that Transportation pilots record working 8 hours per day (or leave taken) even if they are not scheduled to fly. Commerce pilots only record the actual time they work, however, along with any leave taken.

[11] Commerce has established a rotating schedule for weekends with two of the pilots on standby each weekend.

Further examination of time records revealed that the pilots for Commerce have a flexible 40-hour workweek. That is, if the flight is from 2:00 pm to 10:00 pm, that constitutes their 8-hour workday. Table 8, page 35, summarizes the hours actually worked for each of the Commerce pilots for fiscal year 2002-03. The pilots for Transportation have a fixed 8:00 am to 5:00 pm workday. Therefore, if they have a flight from 2:00 pm to 10:00 pm, they are earning overtime for all time after 5:00 pm regardless of whether they have flown for 40 hours during the week. With the activation of BSIP, the Transportation pilots are receiving overtime pay for any time worked outside their "normal" workday. Table 9, page 36, summarizes the hours worked for each of the Transportation pilots for fiscal year 2002-03. The annual salaries range from $53,680 to $65,370 for the Commerce pilots and from $43,649 to $49,982 for the Transportation pilots. Annual compensation[12] for the Commerce pilots was $442,277 ($ 37.50 per hour) and for Transportation pilots $262,815 ($31.47 per hour). When their annual compensation is divided by actual flight hours, the hourly rate increases to $116.50 for Commerce pilots and $109.50 for Transportation pilots.

RECOMMENDATION

Senior management for the Departments of Commerce and Transportation should immediately devise a flexible 40-hour workweek schedule for pilots to eliminate the need for compensatory time and/or overtime. Further, to maximize the State's investment in these employees, they should be assigned additional duties when they are not flying and should be required to report to work every day. Consolidation of the passenger aircraft operations, as discussed on page 12, may reduce the number of pilots needed and / or increase productivity of the pilots. Consideration should be given to contracting for needed pilots to potentially reduce costs. (See discussion on page 22.)

[12] The total FY02-03 compensation for the pilots was $705,092 which included annual salaries and benefits computed at 39.29%, based on 2,088 hours in the year.

TABLE 8
DEPARTMENT OF COMMERCE
Pilot Time Records vs. Total Flight Hours
Fiscal Year 2002-03

		Pilot #1		Pilot #2		Pilot #3		Pilot #4		Pilot #5		Pilot #6	
Date	Normal Work Hrs. in month	Total Time Sheet Hours	Total Flight Hours	Total Time Sheet Hours	Total Flight Hours	Total Time Sheet Hours	Total Flight Hours	Total Time Sheet Hours	Total Flight Hours	Total Time Sheet Hours	Total Flight Hours	Total Time Sheet Hours	Total Flight Hours
July 2002	**184.00**	85.00	34.33	84.00	13.50	181.00	36.17	75.00	11.58	109.75	71.67	81.25	64.83
August 2002	**176.00**	69.50	59.42	75.50	66.33	127.00	28.42	71.50	67.75	65.00	44.83	57.50	23.75
Sept. 2002	**168.00**	89.00	85.92	93.00	48.42	127.00	49.58	91.50	55.75	121.00	54.58	116.50	62.83
Oct. 2002	**184.00**	104.50	47.42	168.00	57.50	131.00	32.75	91.00	13.00	124.00	47.00	90.75	32.67
Nov. 2002	**168.00**	138.00	85.07	123.50	65.08	167.00	52.08	110.00	45.33	116.50	49.67	87.50	56.58
Dec. 2002	**176.00**	104.50	55.67	109.00	58.50	124.00	19.42	102.50	55.58	71.00	29.92	90.00	43.00
Jan. 2003	**184.00**	93.00	59.33	113.50	64.75	111.00	16.58	74.00	55.17	119.00	33.08	73.00	44.17
Feb. 2003	**160.00**	69.00	49.42	70.00	57.42	132.00	48.00	98.00	39.08	118.00	62.92	0.00	6.50
March 2003	**168.00**	75.00	73.88	121.00	91.67	168.00	112.92	150.50	78.58	135.00	84.92		
April 2003	**176.00**	120.50	61.42	133.00	92.00	169.00	99.17	121.00	92.08	138.00	85.83		
May 2003	**176.00**	77.00	74.67	108.00	63.17	165.50	55.42	73.00	55.92	137.00	51.00		
June 2003	**168.00**	134.50	77.92	157.50	124.08	129.50	65.00	137.00	72.67	141.00	71.75		
TOTALS	**2,088.00**	**1,159.50**	**764.47**	**1,356.00**	**802.42**	**1,732.00**	**615.51**	**1,195.00**	**642.49**	**1,395.25**	**687.17**	**596.50**	**334.33**

Total Time Sheet Hours include hours worked, annual leave, sick leave, holidays, special annual leave, and community service.
Total Flight Hours include preparation time, flight time, and idle time between flight segments.
Normal Work Hours in Month include 8 hours for each work day and holidays.

Source: Pilot Timesheets and Flight Logs

TABLE 9
DEPARTMENT OF TRANSPORTATION
Pilot Time Records vs. Total Flight Hours
Fiscal Year 2002-03

		Pilot #1		Pilot #2		Pilot #3		Pilot #4	
Pay Period	**Normal Work Hrs./Pay Period**	**Total Time Sheet Hours**	**Total Flight Hours**	**Total Time Sheet Hours**	**Total Flight Hours**	**Total Time Sheet Hours**	**Total Flight Hours**	**Total Time Sheet Hours**	**Total Flight Hours**
13	**80.00**	80.00	9.30	80.00	9.50	80.00	0.00	80.00	16.85
23	**80.00**	80.00	16.20	80.00	31.90	80.00	25.40	80.00	15.95
33	**80.00**	80.00	25.50	80.00	30.30	80.00	22.00	80.00	30.55
43	**80.00**	80.00	11.90	80.00	34.30	80.00	21.80	80.00	40.30
53	**80.00**	80.00	27.80	80.00	14.10	80.00	31.40	80.00	47.05
63	**80.00**	80.00	21.90	80.00	30.45	80.00	23.40	80.00	26.35
73	**80.00**	80.00	30.50	80.00	30.30	80.00	26.25	80.00	18.70
83	**80.00**	80.00	12.90	80.00	12.60	80.00	11.25	80.00	19.00
93	**80.00**	80.00	18.30	80.00	35.30	80.00	32.55	80.00	47.20
103	**80.00**	80.00	7.90	80.00	20.30	80.00	25.05	80.00	28.50
113	**80.00**	80.00	25.35	80.00	40.60	80.00	21.10	80.00	30.40
123	**80.00**	80.00	9.10	80.00	9.50	80.00	2.75	80.00	9.15
133	**80.00**	80.00	39.95	80.00	33.90	80.00	25.00	80.00	40.70
143	**80.00**	80.00	0.00	80.00	18.55	80.00	10.10	80.00	14.65
153	**80.00**	80.00	33.35	80.00	34.55	80.00	19.65	80.00	11.20
163	**80.00**	80.00	8.30	80.00	3.90	80.00	8.20	80.00	33.00
173	**80.00**	80.00	25.85	80.00	32.55	80.00	24.25	80.00	26.65
183	**80.00**	80.00	18.80	80.00	30.05	84.00	25.40	80.00	29.75
193	**80.00**	80.00	22.10	92.00	27.15	80.00	29.35	80.00	29.95
203	**80.00**	80.00	23.70	80.00	38.10	91.00	44.60	80.00	50.50
213	**80.00**	80.00	27.40	80.00	21.80	80.00	24.25	80.00	26.55
223	**80.00**	80.00	40.20	85.00	36.60	80.00	9.00	80.00	24.20
233	**80.00**	96.00	10.30	80.00	19.20	80.00	7.80	80.00	19.50
243	**80.00**	84.50	15.90	80.00	34.05	80.00	14.95	83.00	49.70
253	**80.00**	87.90	25.30	80.00	17.90	80.00	16.30	80.00	28.05
263	**80.00**	83.80	14.60	82.00	21.15	80.00	19.75	84.50	28.70
TOTALS	**2,080.00**	**2,112.20**	522.40	**2,099.00**	668.60	**2,095.00**	521.55	**2,087.50**	743.10

Total Time Sheet Hours include hours worked, annual leave, sick leave, holidays, special annual leave, and community service.
Total Flight Hours include preparation time, flight time, and idle time between flight segments.
Normal Work Hours in Month include 8 hours for each work day and holidays.

Source: Pilot Timesheets and Flight Logs

APPENDICES

APPENDICES

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APPENDICES

APPENDIX A

INFORMATION FROM OTHER STATES

STATE	DEPARTMENT/ AGENCY	AIRCRAFT USED FOR PASSENGER TRANSPORTATION?	HOW BILLED?	FACTORS INCLUDED IN HOURLY FLIGHT RATE COMPUTATION	HOURLY RATE	AIRCRAFT TYPE
Alaska @	Department of Public Safety--Division of Fish and Wildlife Protection	YES	Per flight hour	Aircraft fuel and oil, aircraft repairs and maintenance aircraft insurance, supplies, pilot training, navigational charts	$ 400	King Air 200
Arizona #	Department of Public Safety	YES	Per flight hour	Fuel, maintenance, pilot overtime	$ 526	King Air B-200
					$ 464	King Air E-90
					$ 173	Cessna 210
					$ 82	Cessna 182
Georgia *	Department of Transportation	YES	Per hour of operation	Direct operating costs--fuel and oil, maintenance, escrow for engines and propellers	No answer	No answer
Mississippi ^	Department of Finance and Administration--Office of Air Transport Services	YES	Per hour of operation	Fuel, maintenance, overhaul	$ 895	Lear Jet 35
					$ 550	King Air 300
					$ 503	King Air 200
Missouri +	Department of Transportation	YES	Per flight hour	Full operating cost--fuel, maintenance, pilot salary, pilot training, hangar, aircraft insurance, FAA charts, weather systems, aircraft depreciation	$ 530	King Air 200
	Office of Administration	YES	Per flight hour	Fuel, maintenance, pilot salary, mechanic salaries, administrative costs, engine reserve fund, layover fee	$ 665	Citation Jet
					$ 420	Navajo
					$ 420	Navajo
	Department of Conservation	YES	Per flight hour	Full operating cost--fuel, maintenance, pilot salary, pilot training, hangar, aircraft insurance, FAA charts, weather systems, aircraft depreciation	$ 232	Cessna 402
	State Highway Patrol	YES	Per flight hour	Higher than direct operating costs--fuel, maintenance	$ 550	King Air 200
					$ 160	Queen Air
					$ 160	Queen Air

Sources:

@ = "Department of Public Safety, Division of Fish and Wildlife Protection, Aircraft Section Various Issues", November 2001

= "Performance Audit, Department of Public Safety, Aviation Section", June 2000

* = as reported by agency contact

^ = "Performance Review of State Aircraft Use by State-Wide Elected Officials", September 1999

+ = "State Passenger Aircraft Fleet", April 2003

APPENDICES

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APPENDIX B

May 22, 1992

Circular No. A-126

(Revised)

TO THE HEADS OF EXECUTIVE DEPARTMENTS AND ESTABLISHMENTS

SUBJECT: Improving the Management and Use of Government Aircraft

1. **Purpose**. This Circular is being issued to minimize cost and improve the management and use of government aviation resources. It prescribes policies to be followed by Executive Agencies in acquiring, managing, using, accounting for the costs of, and disposing of aircraft.

2. **Authority**. This Circular is issued under the authority of the Budget and Accounting Act of 1921, as amended; the Budget and Accounting Procedures Act of 1950, as amended; Reorganization Plan No. 2 of 1970; Executive Order 11541; and 31 U.S.C. 1344.

3. **Background**. The Office of Management and Budget has concluded that the government-wide policy guidance with respect to the use of government aircraft should be clarified to restrict the operation of government aircraft to defined official purposes; restrict travel on such aircraft; require special review of such travel on government aircraft by senior officials or non-Federal travelers in circumstances described hereafter; and codify policies for reimbursement for the use of government aircraft.

4. **Scope and Coverage**. This Circular applies to all government-owned, leased, chartered and rental aircraft and related services operated by Executive Agencies except for aircraft while in use by or in support of the President or Vice President.

5. **Definitions**. For purposes of this Circular, the following definitions apply.

a. **Government aircraft** means any aircraft owned, leased, chartered or rented and operated by an Executive Agency.

b. **Mission requirements** means activities that constitute the discharge of an agency's official responsibilities. Such activities include, but are not limited to, the transport of troops and/or equipment, training, evacuation (including medical evacuation), intelligence and counter-narcotics activities, search and rescue, transportation of prisoners, use of defense attache-controlled aircraft, aeronautical research and space and science applications, and other such activities. For purposes of

this Circular, mission requirements do not include official travel to give speeches, to attend conferences or meetings, or to make routine site visits.

c. **Official travel** means (i) travel to meet mission requirements, (ii) required use travel, and (iii) other travel for the conduct of agency business.

d. **Required use** means use of a government aircraft for the travel of an Executive Agency officer or employee, where the use of the government aircraft is required because of bona fide communications or security needs of the agency or exceptional scheduling requirements.

e. **Senior Federal officials** are persons:

(i) employed at a rate of pay specified in or fixed according to subchapter II of chapter 53 of title 5 of the U.S. Code;

(ii) employed in a position in an Executive Agency, including any independent agency, at a rate of pay payable for level I of the Executive Schedule or employed in the Executive Office of the President at a rate of pay payable for level II of the Executive Schedule;

(iii) employed in a position in an Executive Agency that is not referred to in clause (i) (other than a position that is subject to pay adjustment under Section 1009 of Title 37 of the U.S. Code) and for which the basic rate of pay, exclusive of any locality-based pay adjustment under section 5304 of title 5 of the U.S. Code (or any comparable adjustment pursuant to interim authority of the President), is equal to or greater than the rate of basic pay payable for the Senior Executive Service under Section 5382 of title 5 of the U.S. Code; or

(iv) appointed by the President to a position under section 105(a)(2)(A), (B), or (C) of title 3 of the U.S. Code or by the Vice President to a position under section 106(a) (1) (A), (B), or (C) of title 3 of the U.S. Code.

Generally, these are persons employed by the White House and executive agencies, including independent agencies, at a rate of pay equal to or greater than the minimum rate of basic pay for the Senior Executive Service. Exempted from this definition, for purposes of this Circular, are active duty military officers.

f. **Full coach fare** means a coach fare available to the general public between the day that the travel was planned and the day the travel occurred.

g. **Actual cost** means all costs associated with the use and operation of an aircraft. (See Attachment A for detailed definition.)

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6. **Acquisition and Management**.

a. The number and size of aircraft acquired by an agency and the capacity of those aircraft to carry passengers and cargo shall not exceed the level necessary to meet the agency's mission requirements.

b. Agencies must comply with OMB Circular No. A-76 before purchasing, leasing or otherwise acquiring aircraft and related services to assure that these services cannot be obtained from and operated by the private sector more cost effectively.

c. Agencies shall review periodically the continuing need for all of their aircraft and the cost effectiveness of their aircraft operations in accordance with the requirements of OMB Circular No. A-76. A copy of each agency review shall be submitted to GSA when completed and to OMB with

the agency's next budget submission. Agencies shall report any excess aircraft and release all aircraft that are not fully justified by these reviews.

d. Agencies shall use their aircraft in the most cost effective way to meet their requirements.

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7. **Use of Government Aircraft**. Agencies shall operate government aircraft only for official purposes. Official purposes include the operation of government aircraft for (i) mission requirements, and (ii) other official travel.

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8. **Travel on Government Aircraft**. Government aircraft shall only be used for (i) official travel; or (ii) on a space available basis subject to the following policies:

a. Official travel that is not also required use travel or to meet mission requirements shall be authorized only when:

(i) no commercial airline or aircraft (including charter) service is reasonably available (i.e., able to meet the traveler's departure and/or arrival requirements within a 24 hour period, unless the traveler demonstrates that extraordinary circumstances require a shorter period) to fulfill effectively the agency requirement; or

(ii) the actual cost of using a government aircraft is not more than the cost of using commercial airline or aircraft (including charter) service. When a flight is being made to meet mission requirements or for required use travel (and is certified as such in writing by the agency which is conducting the mission as required in Section 10.b.), secondary use of the aircraft for other travel for the conduct of agency business may be presumed to result in cost savings (i.e., cost comparisons are not required).

b. Travelers may not use government aircraft on a "space available" basis unless:

(i) the aircraft is already scheduled for use for an official purpose;

(ii) such "space available" use does not require a larger aircraft than needed for the official purpose;

(iii) such "space available" use results only in minor additional cost to the government; and

(iv) reimbursement is provided as set forth in Section 9.

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9. **Reimbursement for Use of Government Aircraft**.

a. For travel that is not required use travel:

(i) Any incidental private activities (personal or political) of an employee undertaken on an employee's own time while on official travel shall not result in any increase in the actual costs to the government of operating the aircraft.

(ii) The government shall be reimbursed the appropriate share of the full coach fare for any portion of the time on the trip spent on political activities (except as provided in subsection (d) below).

b. For required use travel. The government shall be reimbursed as follows (except as may otherwise be required by subsection (d)) for required use travel:

(i) For a wholly personal or political trip, the full coach fare for the trip;

(ii) For an official trip during which the employee engages in political activities, the appropriate share of the full coach fare for the entire trip;

(iii) For an official trip during which the employee flies to one or more locations for personal reasons, the excess of the full coach fare of all flights taken by the employee on the trip over the full coach fare of the flights that would have been taken by the employee had there been no personal activities on the trip.

c. "Space available" travel. For "space available" travel other than for the conduct of agency business, whether on mission or other flights, the government shall be reimbursed at the full coach fare except (i) as authorized under 10 U.S.C. 4744 and regulations implementing the statute; and (ii) by civilian personnel and their dependents in remote locations (i.e., locations not reasonably accessible to regularly scheduled commercial airline service).

d. In any case of political travel, reimbursement shall be made in the amount required by law or regulation (e.g., 11 C.F.R. 106.3) if greater than the amount otherwise required by the foregoing reimbursement rules.

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10. Approving the Use of Government Aircraft. The following policies apply to the procedures under which the use of government aircraft for official travel may be approved by the agency which owns or operates the aircraft:

a. Only an agency head, or officials designated by the agency head, may approve the use of agency aircraft for official travel.

b. Whenever a government aircraft used to fulfill a mission requirement is used also to transport senior Federal officials, members of their families or other non-Federal travelers on a "space available" basis (except as authorized under 10 U.S.C. 4744 and regulations implementing that statute), the agency that is conducting the mission shall certify in writing prior to the flight that the aircraft is scheduled to perform a bona fide mission activity, and that the minimum mission requirements have not been exceeded in order to transport such "space available" travelers. In special emergency situations, an after-the-fact written certification by an agency is permitted.

c. Agencies that use government aircraft shall report semi-annually to GSA each use of such aircraft for non-mission travel by senior Federal officials, members of the families of such officials, and any non-Federal travelers (except as authorized under 10 U.S.C. 4744 and regulations implementing that statute). Such reports shall be in a format specified by GSA and shall list all such travel conducted during the preceding six month period. The report shall include: (i) the name of each such traveler, (ii) the official purpose of the trip, (iii) destination(s), and (iv) for travel to which Section 8.a.(ii) applies, the appropriate allocated share of the full operating cost of each trip and the corresponding commercial cost for the trip. In addition, agencies shall report a summary of these data to OMB semi-annually in a format specified by GSA. (Reports on classified trips shall not be reported to GSA but must be maintained by the agency using the aircraft and available for review as authorized.)

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11. **Approving Travel on Government Aircraft**. The following policies apply to the procedures under which travel on government aircraft may be approved by the agency which sponsors the travel:

a. General approval requirements - All travel on government aircraft must be authorized by the sponsoring agency in accordance with its travel policies and this Circular and, when applicable, documented on an official travel authorization. Where possible, such travel must be approved by at least one organizational level above the person(s) traveling. If review by a higher organizational level is not possible, another appropriate approval is required.

b. Special approval requirements for required use travel - Use of government aircraft for required use travel must be approved in advance and in writing. A Federal officer or employee must obtain written approval for all required use travel on a trip-by-trip basis from the agency's senior legal official or his/her principal deputy, unless (1) in the case of an officer or employee who is not an agency head, the agency head has determined that all travel by the officer or employee or travel in specified categories qualifies as required use travel, or (2) in the case of an agency head, the President has determined that all travel, or travel in specified categories, by the agency head qualifies as required use travel. Any determination by an agency head that travel by an officer or employee of that agency qualifies as required use travel must be in writing and set forth the basis for that determination. In special emergency situations, an after-the-fact written certification by an agency is permitted.

Any agency head opting to determine that travel by an officer or employee may be required use travel shall establish written standards for determining when required use travel is permitted. Such travel is not permitted unless in conformance with such written standards.

c. Special approval requirements for travel that is not to meet mission requirements or required use travel - Use of government aircraft for such travel by the following categories of people must be authorized in advance and in writing:

(i) senior Federal officials;

(ii) members of families of such senior Federal officials; and

(iii) non-Federal travelers.

Such authorizations must be approved on a trip-by-trip basis and be signed by the agency's senior legal official or his/her principal deputy; or be in conformance with an agency review and approval system that has been approved by OMB. In special emergency situations, an after-the-fact written certification by an agency is permitted.

Travel by such individuals that is deemed to be official travel shall be subject to the same rules and conditions as any other official travel. Travel by such individuals that is not official travel is subject to the reimbursement requirements in Section 9.c. for "space available" travel.

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12. **Documenting the Use of Government Aircraft**. All uses of government aircraft must be documented and this documentation must be retained for at least two years. At a minimum, the documentation of each use of government aircraft must include:

- the tail number of the plane used

- the date(s) used

- the name(s) of the pilot(s) and flight crew

- the purpose(s) of the flight

- the route(s) flown

- the names of all passengers

When government aircraft are used to support official travel, the documentation must also include evidence that the applicable provisions of this Circular have been satisfied.

13. Responsibilities.

a. All Executive Agency officials with statutory authority to procure aircraft will assure that:

(i) Their agency's internal policies and procedures for procuring aircraft and related services are consistent with the requirements of OMB Circular No. A-76.

(ii) Their agency's aircraft programs comply with the internal control requirements of OMB Circular No. A-123 and that they are included in the agency's Management Control Plan. Any material weaknesses in these programs are to be reported in the annual internal control reports to the President and the Congress.

(iii) Their agency cooperates with the General Services Administration in the development of aircraft management policies and standards and in the collection of aircraft information.

(iv) Their agency has an aircraft information system that conforms to the generic data and reporting standards developed by GSA. Agencies that do not already have systems that conform to these standards are required to implement such systems within one year from the issuance of the GSA standards.

b. The Secretaries of Defense and "the uniformed services," the Secretary of State, and the Administrator of General Services shall incorporate the applicable policies in this Circular into the travel regulations which they promulgate for uniformed service, foreign service, and civilian employees, respectively. The necessary changes to these regulations should be issued no later than 180 days from the date of this Circular.

c. The Administrator of General Services shall maintain a single coordinating office for agency aircraft management. The responsibilities of this office shall include, but not be limited to, the following:

(i) coordination of the development of effectiveness measures and standards, policy recommendations, and guidance for the procurement, operation, safety, and disposal of civilian agency aircraft;

(ii) operation of a government-wide aircraft management information system;

(iii) identification, for agencies and OMB, of opportunities: to share, transfer, or dispose of underutilized aircraft; to reduce excessive aircraft operations and maintenance costs; and to replace obsolete aircraft;

(iv) development of generic aircraft information system standards and software;

(v) other technical assistance to agencies in establishing automated aircraft information and cost accounting systems and conducting the cost analyses required by this Circular;

(vi) review of proposed agency internal aircraft policies for compliance with OMB guidance and notification to OMB of any discrepancies; and

(vii) conduct of an annual study of the variable and fixed costs of operating the different categories of government aircraft and dissemination of the results for use in making the cost comparisons required in Section 8.a.(ii) and reporting the trip costs as required in Section 10.c.

In order to carry out these responsibilities, the Administrator of General Services shall maintain an interagency aviation policy working group to advise him in developing or changing aircraft policies and information requirements.

d. Except for provisions of this Circular which specify their own implementation dates, each agency head shall issue internal agency directives to implement this Circular no later than 180 days from the date of the Circular. These internal agency directives must include all policies contained in this Circular, but may also contain additional policies unique to the agency. Responsibility for these policies shall be assigned to a senior management official who has the agency-wide authority and resources to implement them.

14. **Accounting for Aircraft Costs**. Agencies must maintain systems for their aircraft operations which will permit them to: (i) justify the use of government aircraft in lieu of commercially available aircraft, and the use of one government aircraft in lieu of another; (ii) recover the costs of operating government aircraft when appropriate; (iii) determine the cost effectiveness of various aspects of their aircraft programs; and (iv) conduct the cost comparisons required by OMB Circular A-76 to justify in-house operation of government aircraft versus procurement of commercially available aircraft services. Although agency accounting systems do not have to be uniform in their design or operation to comply with this Circular, they must accumulate costs which can be summarized into the standard Aircraft Program Cost Elements defined in Attachment B. The use of these elements to account for aircraft costs is discussed in Attachment A.

15. **Effective Date**. This Circular is effective on publication.

16. **Information Contact**. All inquiries should be addressed to the General Management Division, Office of Management and Budget, telephone number (202) 395-5090.

Richard Darman
Director

Attachments

Attachment A
Attachment B

APPENDIX B

ATTACHMENT A

Circular No. A-126

ACCOUNTING FOR AIRCRAFT COSTS

The costs associated with agency aircraft programs must be accumulated to: (1) justify the use of government aircraft in lieu of commercially available aircraft, and the use of one government aircraft in lieu of another; (2) recover the costs of operating government aircraft when appropriate; (3) determine the cost effectiveness of various aspects of agency aircraft programs; and (4) conduct the cost comparisons required by OMB Circular No. A-76 to justify in-house operation of government aircraft versus procurement of commercially available aircraft services. To accomplish these purposes, agencies must accumulate their aircraft program costs into the Standard Aircraft Program Cost Elements defined in Attachment B. The remainder of this Attachment presents guidance for accomplishing each of these purposes.

Justify Use of Aircraft

The cost comparison to justify the use of a government aircraft for a proposed trip under Section 8.a.(ii) of this Circular should be made prior to authorizing the use of the aircraft for that trip. Agencies that propose to use their aircraft to support recurring travel between locations are encouraged to develop standard trip cost justification schedules. These schedules would summarize the projected costs of using one or more specific types of agency aircraft to travel between selected locations as compared to using commercial aircraft (including charter) or airline service between those locations. Comparative costs for varying passenger loads would also be shown. Agencies that chose to use this approach would be able to see at a glance the minimum number of official travelers needed to justify the use of a particular aircraft or aircraft type for a trip between locations on the schedule. Agencies that are not able to use such schedules are required to do a cost justification on a case by case basis.

To make the cost comparisons necessary to justify the use of a government aircraft, the agency must compare the actual cost of using a government aircraft to the cost of using a commercial aircraft (including charter) or airline service. The actual cost of using a government aircraft is either: (a) the amount that the agency will be charged by the organization that provides the aircraft, (b), if the agency operates its own aircraft, the variable cost of using the aircraft; or (c), if the agency is not charged for the use of an aircraft owned by another agency, the variable cost of using the aircraft as reported to it by the owning agency.

Agencies should develop a variable cost rate for each aircraft or aircraft type (i.e., make and model) in their inventories before the beginning of each fiscal year. These rates should be developed as follows:

1. Accumulate or allocate to the aircraft or aircraft type all historical costs (for the previous 12 months) grouped under the variable cost category defined in Attachment B. These costs should be obtained from the agency's accounting system.

2. Adjust the historical variable costs from Step 1 for inflation and for any known upcoming cost changes to project the new variable cost total. The inflation and escalation factors used must conform to OMB Circular No. A-76.

3. Divide the total projected variable costs of the aircraft or aircraft type by the projected annual flying hours for the aircraft or aircraft type to compute the projected variable cost or usage rate (per flying hour).

To compute the variable cost of using an agency's own aircraft for a proposed trip, multiply the variable cost rate computed in Step 3 (above) by the estimated number of flying hours for the trip. The number of flying hours should include all time required to position the aircraft to begin the trip and to return the

aircraft to its normal base of operations, if no follow-on trip is scheduled. If a follow-on trip requires any repositioning time, it should be charged with that time. If one aircraft mission (i.e., a series of flights scheduled sequentially) supports multiple trips, the use of the aircraft for the total mission may be justified by comparing the actual cost of the entire mission to the commercial aircraft (including charter) or airline costs for all the component trips.

The cost of using commercial airline or aircraft services for the purpose of justifying the use of government aircraft must:

1. be the current government contract fare or price or the lowest fare or price known to be available for the trip(s) in question;

2. include, as appropriate, any differences in the costs of any additional ground or air travel, per diem and miscellaneous travel (e.g., taxis, parking, etc.), and lost employees' work time (computed at gross hourly costs to the government, including benefits) between the two options; and

3. only include costs associated with passengers on official business. Costs associated with passengers traveling "space available" may not be used in the cost comparison.

Recover Cost of Operation

Under the Economy Act of 1932, as amended, (31 U.S.C.S. 1535), and various acts appropriating funds or establishing working funds to operate aircraft, agencies are required to recover the costs of operating their aircraft for use by other agencies, other governments (e.g., state, local, or foreign), or non-official travelers. Depending on the statutory authorities under which its aircraft were obtained or are operated, an agency may use either of two methods for establishing the rates charged for using its aircraft: (1) the full cost recovery rate or (2), the variable cost recovery rate.

The **full cost recovery rate** for an aircraft is the sum of the variable and fixed cost rates for that aircraft. The computation of the variable cost rate for an aircraft or aircraft type is described under the previous paragraph "Justify Use of Aircraft." The fixed cost rate for an aircraft or aircraft type is computed as follows:

1. Accumulate from the agency's accounting system the fixed costs listed in Attachment B that are directly attributable to the aircraft or aircraft type (e.g. crew costs-fixed, maintenance costs-fixed, and aircraft lease-fixed).

2. Adjust the historical fixed costs from Step 1 for inflation and for any known upcoming cost changes to project the new fixed cost total. The inflation and escalation factors used must conform to OMB Circular No. A-76.

3. Add to the adjusted historical fixed costs amounts representing self insurance costs and the annual depreciation or replacement costs, as described in Attachment B.

4. Allocate operations and administrative overhead costs to the aircraft or aircraft type based on the percentage of total aircraft program flying hours attributable to that aircraft or aircraft type.

5. Compute a fixed cost recovery rate for the aircraft or aircraft type by dividing the sum of the projected directly attributable fixed costs (from Step 3) and the allocated fixed costs (from Step 4) by the annual flying hours projected for the aircraft or aircraft type.

To compute the full cost of using a government aircraft for a trip, add the variable cost rate for the aircraft or aircraft type to the corresponding fixed cost rate (computed in Step 5 above) and multiply the result by the estimated number of flying hours for the trip using the proposed aircraft.

The **variable cost recovery rate** for an aircraft or aircraft type is the same as the variable cost or usage rate described under the previous paragraph "Justify Use of Aircraft." If an agency decides to base the charge for using its aircraft solely on this rate, it must recover the fixed costs of those aircraft separately from the appropriation which supports the mission for which the procurement of the aircraft was justified. In such cases, the fixed cost recovery rate may be expressed on an annual, monthly or flying hour basis.

Determine Aircraft Program Cost Effectiveness

Although cost data are not the only measures of the effectiveness of an agency's aircraft program, they can be very useful in identifying opportunities to reduce aircraft operational costs. These opportunities might include changing maintenance practices, purchasing fuel at lower costs, and the replacement of old, inefficient aircraft with aircraft that are more fuel efficient and have lower operations and maintenance costs.

The most common measures used to evaluate the cost effectiveness of various aspects of an aircraft program are expressed as the cost per flying hour or per passenger mile for certain types of aircraft costs. These measures may be developed using the Standard Aircraft Cost Elements and include, but are not limited to: maintenance costs/flying hour, fuel and other fluids cost/flying hour, accident repair costs/flying hour (or per aircraft), and variable cost/passenger mile.

The Administrator of General Services should coordinate the development of specific cost effectiveness measures with an interagency aircraft policy working group.

Justify In-House Operation

OMB Circular No. A-76, "Performance of Commercial Activities," requires Federal agencies to conduct cost comparisons of commercial activities they operate and, where appropriate, to determine the most economical way to perform the work -- whether by private commercial source or using in-house government resources. The guidelines for conducting these cost comparisons are presented in the Supplement to the Circular

APPENDIX B

ATTACHMENT B

Circular No. A-126

STANDARD AIRCRAFT PROGRAM COST ELEMENT DEFINITIONS

VARIABLE COSTS

The variable costs of operating aircraft are those costs that vary depending on how much the aircraft are used. The specific variable cost elements include:

Crew costs - variable - The crew costs which vary according to aircraft usage consist of travel expenses (particularly reimbursement of subsistence (i.e., per diem and miscellaneous expenses), overtime charges, and wages of crew members hired on an hourly or part-time basis.

Maintenance costs - variable - Unscheduled maintenance and maintenance scheduled on the basis of flying time vary with aircraft usage and, therefore, the associated costs are considered variable costs. In addition to the costs of normal maintenance activities, variable maintenance costs shall include aircraft refurbishment, such as painting and interior restoration, and costs of or allowances for performing overhauls and modifications required by service bulletins and airworthiness directives. If they wish, agencies may consider all of their maintenance costs as variable costs and account for them accordingly. Otherwise, certain maintenance costs will be considered fixed as described in a subsequent paragraph. Variable maintenance costs include the costs of:

Maintenance labor - variable - This includes all labor (i.e., salaries and wages, benefits, travel, and training) expended by mechanics, technicians, and inspectors, exclusive of labor for engine overhaul, aircraft refurbishment, and/or repair of major components.

Maintenance parts - variable - This includes cost of materials and parts consumed in aircraft maintenance and inspections, exclusive of materials and parts for engine overhaul, aircraft refurbishment, and/or repair of major components.

Maintenance contracts - variable - This includes all contracted costs for unscheduled maintenance and for maintenance scheduled on a flying hour basis or based on the condition of the part or component.

Engine overhaul, aircraft refurbishment, and major component repairs - These are the materials and labor costs of overhauling engines, refurbishing aircraft, and/or repairing major aircraft components.

NOTE 1: In general, the flight hour cost is computed by dividing the costs for a period by the projected hours flown during the period. However, when computing the flight hour cost factor for this cost category, divide the total estimated cost for the activities in this category (e.g., overhaul, refurbishment and major repairs) by the number of flight hours **between** these activities.

NOTE 2: Separate cost or reserve accounts for engine overhaul, aircraft refurbishment, major component repairs, and other maintenance cost elements, may, at the agency's discretion, be identified and quantified separately for mission-pertinent information purposes. Reserve accounts are generally used when the aircraft program is funded through a working capital or revolving fund.

Fuel and other fluids - The costs of the aviation gasoline, jet fuel, and other fluids (eg. engine oil, hydraulic fluids and water-methanol) consumed by aircraft.

Lease costs - variable - When the cost of leasing an aircraft is based on flight hours , the associated lease or rental costs are considered variable costs.

Landing and tie down fees - Landing fees and tie down fees associated with aircraft usage are considered variable costs. Tie down fees for storing an aircraft at its base of operations should be considered part of operations overhead, a fixed cost.

FIXED COSTS

The fixed costs of operating aircraft are those that result from owning and support the aircraft and that do not vary according to aircraft usage. The specific fixed cost elements include:

Crew costs - fixed - The crew costs which do not vary according to aircraft usage consist of salaries, benefits, and training costs. This includes the salaries, benefits, and training costs of crew members who also perform minimal aircraft maintenance. Also included in fixed crew costs are the costs of their charts, personal protective equipment, uniforms, and other personal equipment.

Maintenance costs - fixed - This cost category includes certain maintenance and inspection activities which are scheduled on a calendar interval basis and take place regardless of whether or how much the aircraft are flown. Agencies are encouraged to simplify their accounting systems and account for all maintenance costs as variable costs. However, if they wish, agencies may account for the following costs as fixed costs:

Maintenance labor - fixed - This includes all projected labor expended by mechanics and inspectors associated with maintenance scheduled on a calendar interval basis. This does not include variable maintenance labor or work on items having a TBO or retirement life.

This category also includes costs associated with unallocated maintenance labor expenses, i.e., associated salaries, benefits, travel expenses and training costs. These costs should be evenly allocated over the number of the aircraft in the fleet.

Maintenance parts - fixed - This includes all parts and consumables used for maintenance scheduled on a calendar basis.

Maintenance contracts - fixed - This includes all contracted costs for maintenance or inspections scheduled on a calendar basis.

Lease costs - fixed - When the cost of leasing an aircraft is based on a length of time (e.g., days, weeks, months, or years) and does not vary according to aircraft usage, the associated leased costs are considered fixed costs.

Operations overhead - These include all costs, not accounted for elsewhere, associated with direct management and support of the aircraft program. Examples of such costs include: personnel costs (salaries, benefits, travel, uniform allowances, training, etc.) for management and administrative personnel directly responsible for the aircraft program; building and ground maintenance; janitorial services; lease or rent costs for hangers and administrative buildings and office space; communications and utilities costs; office supplies and equipment; maintenance and depreciation of support equipment; tie down fees for aircraft located on base; and miscellaneous operational support costs.

Administrative overhead - These costs represent a pro-rated share of salaries, office supplies and other expenses of fiscal, accounting, personnel, management, and similar common services performed outside and the aircraft program but which support this program. For purposes of recovering the costs of operations, agencies should exercise their own judgement as to the extent to which aircraft users should bear the administrative overhead costs. Agencies may, for example, decide to charge non-agency users a higher proportion of administrative overhead than agency users. For purposes of A-76 cost comparisons,

agencies should compute the actual administrative costs that would be avoided if a decision is made to contract out the operation under study.

Self-insurance costs - Aviation activity involves risks and potential casualty losses and liability claims. Theses risks are normally covered in the private sector by purchasing and insurance policy. The government is self insuring; the Treasury's General Fund is charged for casualty losses and/or liability claims resulting from accidents. For the purposes of analyses, government managers will recognize a cost for "self-insurance" by developing a cost based on rates published in OMB Circular No. A-76.

Depreciation - Depreciation represents the cost or value of ownership. Aircraft have a finite useful economic or service life. Depreciation is the method used to spread the cost of the purchase price, less residual value, over an asset's useful life. A-76 provides guidance on computing depreciation charges to be used in computing the fixed costs of an aircraft or aircraft program. Although these costs are not direct outlays in the sense of most other aircraft costs, it is important to recognize them for A-76 cost comparison purposes and when replenishing a working capital fund by recovering the full cost of aircraft operations. Depreciation costs depend on aircraft acquisition or replacement costs, useful life, and residual or salvage value. To calculate the cost of depreciation that shall be allocated to each year, subtract the residual value from the total of the acquisition cost plus any capital improvements and, then, divide by the estimated useful life of the asset.

OTHER COSTS

There are certain other costs of the aircraft program which should be recorded but are not appropriate for inclusion in either the variable or fixed cost categories for the purposes of justifying aircraft use or recovering the cost of aircraft operations. These costs include:

Accident repair costs - These costs include all parts, materials, equipment and maintenance labor related to repairing accidental damage to airframes or aircraft equipment. Also included are all accident investigation costs.

Aircraft costs - This is the basic aircraft inventory or asset account used as the basis for determining aircraft depreciation charges. These costs include the cost of acquiring aircraft and accessories, including transportation and initial installation. Also included are all costs required to bring aircraft and capitalized accessories up to fleet standards.

Cost of Capital - The cost of capital is the cost to the Government of acquiring the funds necessary for capital investments. The agency shall use the borrowing rate announced by the Department of Treasury for bonds or notes whose maturities correspond to the useful life of the asset.

APPENDICES

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APPENDIX C

Response from Agencies and Programs

State of North Carolina
Roy Cooper
Attorney General

November 7, 2003

The Honorable Ralph Campbell, Jr., State Auditor
Ms. Janet Hayes, Audit Manager
2 S. Salisbury Street
20601 Mail Service Center
Raleigh, North Carolina 27699-0601

Dear Mr. Campbell and Ms. Hayes:

I am writing in response to your draft performance audit regarding State Aircraft Operations, dated October 2003. The members of the Department of Justice who worked with you and your staff found this audit process to be a constructive learning experience for the State Bureau of Investigation Airwing Division.

We appreciate the specific proposals suggested by your audit team, and we will look forward to working with those state officials who may continue your examination of state aircraft policy. We would encourage careful consideration of the SBI's unique law enforcement mission and its need for distinct standards for investigative and transportation use. We look forward to working with you and others to continually improve the management and operations of the SBI Airwing.

Thank you again for the opportunity to respond to your findings and recommendations and for the professionalism and courtesy of your audit team. With warm regards, I am

Very truly yours,

Roy Cooper
Attorney General

Julia White

Julia White
Chief of Staff

Department of Justice, Post Office Box 629, Raleigh, North Carolina 27602-0629
Phone: (919) 716-6400 Fax: (919) 716-0803

The response from the agency has been reformatted to conform with the style and format of the rest of the audit report. However, no data has been changed.

APPENDIX C

Response from Agencies and Programs

North Carolina
Department of Commerce

Michael F. Easley, Governor **James T. Fain III, Secretary**

November 7, 2003

Mr. Ralph Campbell, Jr.
State Auditor
300 N. Salisbury Street
Raleigh, NC 27603-5903

Dear Mr. Campbell:

We appreciate the work of you and your staff in the State Aircraft Operations Performance Audit. The Department of Commerce is continuously aimed at improving all our operations in terms of economy, efficiency, and effectiveness. To those ends, we initiated with the Department of Transportation our co-location beginning in 2001 and have achieved to date cost savings and cost avoidances from our physical move. Also as a result of our participation with the chief pilot's group, we have realized the savings of bulk fuel purchases from across the State.

Further, we would welcome working with any future studies. We would hope that any established statewide policies and procedures would foremost consider each Agency's unique mission and purpose with their use of such specialized equipment as in aircraft operations.

Thank you and your staff for this most valuable performance audit.

Sincerely,

Denise A. Sessoms

James T. Fain III, Secretary

Denise A. Sessoms
Assistant Secretary for Administration
North Carolina. A Better Place To Be
301 North Wilmington Street • 4301 Mail Service Center • Raleigh, North Carolina 27699-4301
Tel: (919) 733-3431 • Fax: (919) 733-8356
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The response from the agency has been reformatted to conform with the style and format of the rest of the audit report. However, no data has been changed.

APPENDIX C

Response from Agencies and Programs

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

1501 MAIL SERVICE CENTER, RALEIGH, N.C. 27699-1501

LYNDO TIPPETT
SECRETARY

November 5, 2003

The Honorable Ralph Campbell, Jr.
State Auditor
20601 Mail Service Center
Raleigh, North Carolina 27699-0601

Dear Mr. Campbell:

Thank you for the opportunity to respond to the State Aircraft Operations Performance Audit Report. Please find below each recommendation followed by our response. We generally agree with the overall findings, conclusions, and recommendations of the report. However, we are providing specific responses to each of the report's recommendations.

Recommendation. Page 17. The General Assembly should consider establishing a centralized aircraft operations division within an existing agency for better coordination and to achieve efficiencies of passenger aircraft operations. The main aircraft functions that would comprise the passenger services are now located in the North Carolina Departments of Commerce (NCDOC) and Transportation (NCDOT) and UNC-AHEC-MedAir. Commerce, Transportation, Highway Patrol, and MedAir have maintenance functions that would be consolidated. Because of the need for regional location of the Forest Resources aircraft, those mechanics would not be physically relocated. Rather, they would report administratively to the consolidated head mechanic. The Department of Transportation already has an established Aviation Division and would be the logical choice for the consolidated aircraft operations division. The other agencies would then purchase passenger flight time and maintenance services from the consolidated operation. The specialized law enforcement functions would continue to operate and house their respective aircraft at their current locations and have the option of using the consolidated maintenance operation.

Response: We agree. For the past two years the NCDOT and NCDOC flight operations units have jointly shared office and hangar space at the NCDOT aviation facility. To date, there has been no formal agreement between the parties. Both agencies currently share air crew, aircraft, scheduling, and maintenance resources.

PHONE 919-733-2520 FAX 919-733-9150

The response from the agency has been reformatted to conform with the style and format of the rest of the audit report. However, no data has been changed.

APPENDIX C

Response from Agencies and Programs

The Honorable Ralph Campbell, Jr.
November 5, 2003
Page 2

Recommendation. Page 22. The General Assembly should direct an independent contractor to perform a comprehensive study of the operational condition of all state-owned and supported aircraft. This study should include recommendations on when to replace the aircraft, the required number of maintenance staff, and the feasibility of contracting for all maintenance as a possible cost saving measure, as well as contracting for pilots. Additionally, the General Assembly should consider whether there is a need for all aircraft now owned and maintained by the state. The contractor-developed plan should include a recommendation on how to divest the state's ownership of any aircraft deemed unnecessary. Pending the contractor's study, the agencies and programs should address the staffing levels for mechanics, determining how many mechanics are needed for effective operation.

Response. We agree. NCDOT currently has a contract with a consultant to accomplish the objectives outlined in this recommendation for NCDOT flight operations. Expected completion date is 60 days.

Recommendation. Page 23. The General Assembly should consider legislation that establishes statewide policies and procedures for administration and use of state aircraft. Such legislation should address, but not be limited to:

- requiring documented purpose and justification for every flight;
- requiring signed authorization from public officials or agency heads for all flights;
- describing cost calculation for flights charged to agencies while acknowledging that some costs are subsidized by the aircraft operating agency;
- identifying all passengers on flights; and
- describing circumstances where family members are permitted to accompany state officials or agency heads.

While aircraft operations remain separate, each agency maintaining and operating state aircraft should establish internal policies and procedures consistent with existing guidelines. If the General Assembly establishes a consolidated aircraft operations function, then that entity should have the responsibility of developing and implementing statewide policies and procedures for aircraft use.

Response. We agree and believe a standardized policy and procedure to be used statewide would provide for more efficient oversight and management of state aircraft resources.

The response from the agency has been reformatted to conform with the style and format of the rest of the audit report. However, no data has been changed.

APPENDIX C

Response from Agencies and Programs

The Honorable Ralph Campbell, Jr.
November 5, 2003
Page 3

Recommendation. Page 24. Crime Control and Public Safety management should give consideration to purchasing larger aircraft for use by the Highway Patrol. A study should be conducted to identify the appropriate type and number of aircraft to allow the Patrol to execute rescues as well as conduct its primary law enforcement missions.

Response. This recommendation does not pertain directly to NCDOT aircraft operations.

Recommendation. Page 27. Operational costs for all state operated aircraft should be captured by aircraft. This information would improve the administration of flight operations and would allow more informed decisions on the efficiencies of each aircraft. A consolidated flight operations division may enhance the state's ability to capture this date.

Response. We partially agree with this recommendation. We agree that operation costs of state operated aircraft should be captured. However, from a business and management perspective, it would appear to be more beneficial to identify cost aircraft type rather than by each individual aircraft. The NCDOT study, which was previously mentioned, would include this component in its review and analysis. In addition, NCDOT is evaluating the feasibility of restructuring its current aircraft ownership and operations assignment.

Recommendation. Page 27. The State should establish a consistent statewide methodology for billing rates by type of aircraft. Consideration should be given to the factors included in private aircraft cost evaluator service models and updated periodically. The consolidated aircraft division should maintain documentation on the methodology used to compute billable rates.

Response. We agree. NCDOT plans to use data from the study that was mentioned earlier to assist with an appropriate billable rate model.

Recommendation. Page 28. The Division of Forest Resources should compute billing rates using the statewide procedures once they are established and update as directed in those procedures. Rates for each type of aircraft in its fleet should be recomputed using these consistent cost categories. Until the statewide policies are established, the Department of Environment and Natural Resources should establish a department policy on cost computation. Further, to be better prepared to assign actual costs to each aircraft, the Division should develop a cost tracking system that identifies the actual costs for each aircraft. This data should be provided to the consolidated aircraft division for consideration in establishing a statewide methodology for computing billable rates.

Response. NCDOT has no comment on this recommendation.

The response from the agency has been reformatted to conform with the style and format of the rest of the audit report. However, no data has been changed.

APPENDIX C

Response from Agencies and Programs

The Honorable Ralph Campbell, Jr.
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Recommendation. Page 29. The Division should ensure that all pilots and aircraft officials are trained on which flights should be billed and how to code all flights properly. Division financial personnel should conduct periodic reviews of billed flights to assure that billings are prepared in accordance with statewide policies once established by the consolidated aircraft operations division or the current divisional policies.

Response. NCDOT has no comment on this recommendation.

Recommendation. Page 30. Billable rates should be computed using the statewide procedures once they are established and updated as directed in those procedures. The Department of Commerce should establish a policy on how billable rates should be computed and then annually evaluate those rates to ensure that policy is being followed until the statewide procedures are established.

Response. NCDOT has no comment on this recommendation.

Recommendation. Page 31. The Department of Commerce should develop detailed policies and procedures for billing aircraft invoices so that all invoices will be billed consistently. Statewide policies and procedures should be followed once established.

Response. NCDOT has no comment on this recommendation.

Recommendation. Page 32. The Department of Commerce should compute the actual cost per hour for each aircraft using the actual expenditures per aircraft when available. When actual charges cannot be determined by aircraft, then allocating by hours used or some other method is appropriate to distribute cost. The agency should determine the appropriate method for computing depreciation and document the method used. Statewide policies and procedures should be followed once established.

Response. NCDOT has no comment on this recommendation.

Recommendation. Page 33. The Department should examine the methodology BSIP uses to determine hourly aircraft rates for reasonableness. See discussion on methods for computing billable rates on page 27. This information should be supplied to the consolidated aircraft division to consider when it establishes a statewide methodology for setting aircraft reimbursement rates. Once statewide procedures are established, the Department should use those, updating as those procedures direct.

Response. We agree. NCDOT will use the findings and data from the current study as a basis for this determination.

The response from the agency has been reformatted to conform with the style and format of the rest of the audit report. However, no data has been changed.

APPENDIX C

Response from Agencies and Programs

The Honorable Ralph Campbell, Jr.
November 5, 2003
Page 5

Recommendation. Page 34. Senior management for the Departments of Commerce and Transportation should immediately devise a flexible 40-hour workweek schedule for pilots to eliminate the need for compensatory time and/or overtime. Further, to maximize the State's investment in these employees, they should be assigned additional duties when not flying and should be required to report to work every day. Consolidation of the passenger aircraft operations, as discussed on page 12, may reduce the number of pilots needed and/or increase productivity of the pilots. Consideration should be given to contracting for needed pilots to potentially reduce costs. (See discussion on Page 22.)

Response. We agree. NCDOT is taking steps to develop and implement a policy to address the objectives outlined in this recommendation to be accomplished within the next 60 days.

Further, we wish to comment on two additional items mentioned in the audit report.

Comment. Page 16. As shown in Table 3, the Department of Transportation rented aircraft on dates when Commerce and Transportation aircraft were available.

Response. The aircraft rented was a small, single engine aircraft used in support of the Department's Aviation Safety Program. This aircraft was substantially less expensive than NCDOT aircraft and more appropriate for the particular mission. Prior to this audit, the NCDOT ceased the practice of renting aircraft and all contracts were previously cancelled.

Comment. Page 25. The Departments of Justice, Crime Control and Public Safety, and Transportation also receive federal funds that assist in supporting aircraft operations.

Response. Federal funds given to the NCDOT's Division of Aviation are not used to support aircraft operations.

If you have any questions, or desire any additional information regarding our response, please let me know. We look forward to working with you and other state aircraft operating agencies to create a statewide aircraft operating structure that is accountable, efficient, cost-effective and safe.

Sincerely,

Lyndo Tippett

LT/ww

The response from the agency has been reformatted to conform with the style and format of the rest of the audit report. However, no data has been changed.

APPENDIX C

Response from Agencies and Programs

North Carolina Department of Crime Control and Public Safety

Michael F. Easley, Governor

Bryan E. Beatty, Secretary

October 21, 2003

The Honorable Ralph Campbell, Jr.
North Carolina Office of the State Auditor
2 Salisbury Street
20601 Mail Service Center
Raleigh, NC 27699-0601

Reference: Recommendation on Aircraft Operations for the State Highway Patrol

Dear Mr. Campbell:

I am writing to comment on your State Aircraft Operations Performance Audit recommendations regarding the State Highway Patrol's fleet of eleven single-engine Bell OH-58 helicopters.

Ownership: With regard to your recommendation on ownership on page 17, I agree that law enforcement aircraft should not be consolidated with civilian aircraft operations, housing and maintenance. As you note, our aircraft have been obtained through military surplus transfers from the federal government, and already are housed at four dispersed facilities statewide and maintained to different standards appropriate to their emergency response missions.

Replacement schedule: I also agree with the recommendation on page 22 that the age of the state fleet requires a comprehensive study to include a planned replacement schedule. Our newest helicopter was built during the Vietnam War. Our two full-time mechanics have so far been able to keep nine helicopters in near-top working condition, but this cannot continue indefinitely without increasing cost and risk. Given the prohibitive cost of complete fleet replacement, a phased replacement budget makes sense before a crisis occurs.

Written use authorization: The recommendation on page 23 suggests legislation requiring signed authorization from public officials or agency heads for all flights. Such legislation should include a protocol for emergency use without signatures. Currently more than 70% of the missions flown by the Highway Patrol are at the request of outside public safety agencies. The helicopter fleet has repeatedly proven its value in our growing state

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APPENDIX C

Response from Agencies and Programs

by providing significant surveillance capabilities for enforcement actions, multi-county pursuits, and searches. Appropriate financial controls can be developed without the attendant delays of prior signatures.

Expanded capability: Finally, I agree with the recommendation on page 24 that we should consider larger aircraft with rescue capabilities for the State Highway Patrol. With the small size of the current single-engine aircraft, they cannot provide rescue capability due to limited space and lift capacity. In addition, our current aircraft cannot match the speed available in larger twin-engine helicopters, which would increase their usefulness still more by reducing response time.

Thank you for a thorough look at the issues and the opportunity to respond.

Sincerely,

Bryan E. Beatty
Secretary

BEB:tcc

cc: Honorable Michael F. Easley
Colonel R.W. Holden, SHP
Fred J. Tucker, CCPS Controller

The response from the agency has been reformatted to conform with the style and format of the rest of the audit report. However, no data has been changed.

APPENDIX C

Response from Agencies and Programs

North Carolina Department of Environment and Natural Resources

Michael F. Easley, Governor

William G. Ross Jr., Secretary

November 7, 2003

Ralph Campbell, Jr., State Auditor
Office of the State Auditor
2 South Salisbury Street
20601 Mail Service Center
Raleigh, NC 27699-0601

Dear Mr. Campbell:

We have reviewed the performance audit entitled ***State Aircraft Operations*** with the appropriate staff within the Department of Environment and Natural Resources (DENR), and with your audit team. We appreciate the cooperation of your staff in discussing our questions and concerns regarding the audit.

As noted in your report, DENR has aircraft operations in the Divisions of Marine Fisheries (DMF) and Forest Resources (DFR). These aircraft are used for emergency response and law enforcement missions, which precludes the general use of these aircraft and requires policies and procedures specific to their respective functions. We agree with your recommendation that these "functions would continue to operate and house their respective aircraft at their current locations and have the option of using the consolidated maintenance operation".

However, DENR is concerned with the proposal to have DFR regional mechanics "report administratively" to a consolidated head mechanic. Such an approach should be thoroughly tested for cost savings, efficiency, and applicability to the responsibilities of the division's aircraft maintenance program. The DFR is concerned that the proposed arrangement would unnecessarily complicate flight operations, and not result in any savings to the state.

We agree with the finding concerning DFR billing rates. However, we do not believe that the recommendation to develop a system to track the actual costs of each aircraft individually is practical. This would require collecting and analyzing data, and computing rates for 33 individual aircraft. These rates would need to be approved by FEMA, the National Wildfire Coordinating Group, and others. The benefits of developing individual rates do not justify the costs. We propose developing new rates

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based on aircraft usage and performance characteristics; DFR would collect costs in a manner consistent with the billable rate methodology used.

We have reviewed the aircraft logs, pilot logs, invoices, and related information regarding the invoicing of billable flights. We agree with the finding and recommendation. Invoices have been created for flights not appropriately billed. We are also training pilots and other personnel in the proper coding of flight information to ensure future flights are properly billed.

Thank you for the opportunity to respond to the audit findings and recommendations. If you have any questions concerning this response, please contact Rod Davis, DENR Controller, at 733-4166. Mr. Davis can also be contacted by e-mail at rod.davis@ncmail.net.

Sincerely,

Dempsey Benton
Chief Deputy Secretary

DB/rd

Cc: Bill Ross
Stan Adams
Preston Pate
Rod Davis
Rex Whaley
Kathy Lagana
Tony Pate

The response from the agency has been reformatted to conform with the style and format of the rest of the audit report. However, no data has been changed.

APPENDIX C

Response from Agencies and Programs

NORTH CAROLINA WILDLIFE RESOURCES COMMISSION

Charles R. Fullwood, Executive Director
www.ncwildlife.org

October 15, 2003

Mr. Ralph Campbell, Jr., State Auditor
Office of the State Auditor
2 South Salisbury Street
20601 Mail Service Center
Raleigh, North Carolina 27699-0601

Dear Mr. Campbell:

We are providing this letter in connection with your performance audit of the state aircraft operations for the period ending June 30, 2003. The North Carolina Wildlife Resources Commission wishes to thank you and your staff for continuing to provide the state excellent assurances that our operations are not only effective but as efficient as they can possibly be. Since the audit report does not distinguish WRC as having a finding independent of the other agencies, but rather the general findings and recommendations include WRC as part of a group, we will not respond to any of the findings on our own. We do concur as an agency on the findings in which WRC was mentioned, and would be willing to discuss the recommendations of the Office of the State Auditor in a group atmosphere along with the other agencies named in the findings.

Charles R Fullwood
Executive Director

Tommy Clark
Chief Financial Officer

The response from the agency has been reformatted to conform with the style and format of the rest of the audit report. However, no data has been changed.

APPENDIX C

Response from Agencies and Programs

THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL
Office of the Chancellor

James C. Moeser
Chancellor

103 South Building
Campus Box 9100
Chapel Hill, NC 27599-9100
(919) 962-1365 Fax (919) 962-1647
james_moeser@unc.edu

November 7, 2003

The Honorable Ralph Campbell
Office of the State Auditor
20602 Mail Service Center
Raleigh, NC 27699-0601

Dear Mr. Campbell:

I appreciate the opportunity to comment on the draft findings and recommendations from your performance audit of state aircraft operational costs. I asked Dr. Tom Bacon, executive associate dean of the UNC School of Medicine and director of the Area Health Education Centers Program, to respond on the University's behalf. His response is attached.

In addition, I note that your audit identified errors in Department of Commerce billings for three flights that I took. I hope that it's clear that my office paid the amount we were billed. If the Department of Commerce believes that we were billed in error, they may, of course, request that we pay an additional amount.

As you know, the N.C. AHEC Program Medical Air, Inc. has a long history of service to the people of North Carolina. I was particularly pleased to see that your audit confirms that we run a lean and efficient operation.

Sincerely,

James Moeser

Cc: Molly Corbett Broad, President
The University of North Carolina

Jeffrey Houpt, Vice Chancellor for Medical Affairs,
CEO, UNC Health Care System, and
Dean, UNC School of Medicine

Dr. Thomas J. Bacon
Executive Associate Dean, UNC School of Medicine

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APPENDIX C

Response from Agencies and Programs

University of North Carolina
Area Health Education Centers (AHEC) Program
Medical Air, Inc.
Response to Performance Audit Recommendations
For State Aircraft Operations

Purpose

- To provide a written response to the recommendations contained in the final draft of the Performance Audit Report for State Aircraft Operations.

General Comments

- UNC-AHEC/Medical Air, Inc. (MedAir) has run an efficient and lean operation since 1968. This performance audit shows that our six aircraft are utilized at the highest number of flight hours compared to the aircraft in the other six state government agencies with aircraft operations. The graphs on pages 18-21 do not depict the same values for the vertical axis; MedAir far exceeds average flight hours per month per aircraft and average elapsed hours per month per aircraft as compared to other state agencies with aircraft operations.

- UNC-AHEC/MedAir is proud of the service provided to the citizens of North Carolina by flying faculty and physicians with healthcare expertise across the state to conduct consultation clinics and continuing education programs.

- AHEC depends upon physicians' access to air services. The audit recognizes the pending closure of Horace Williams Airport. Should consolidation be pursued, it is critical that the identification of a site mitigates potential disruption in AHEC services.

- The chief pilots committee formed in April 2002 has increased communication and rapport among the state agencies with aircraft operations. In addition to lowering fuel costs and listing specialized equipment on a web site for sharing purposes, the chief pilots also continue to review interagency pilot and mechanic training, standard operating procedures, and safety protocols.

- UNC-AHEC/MedAir will respond to specific recommendations in the audit related to our operations. Under Objective 1: Ownership – response is given to three out of four recommendations. Under Objective 2: Costs and Reimbursements – response is given to two out of nine recommendations.

The response from the agency has been reformatted to conform with the style and format of the rest of the audit report. However, no data has been changed.

APPENDIX C

Response from Agencies and Programs

Recommendations and Responses

Objective 1: OWNERSHIP. To identify the State agencies and programs with aircraft operations, whether aircraft are purchased or leased, the original purchase cost or annual cost of the lease, and the current value of the aircraft or lease, and to review the maintenance logs.

STATE AIRCRAFT ARE USED A LIMITED NUMBER OF HOURS EACH MONTH.

1. **Recommendation: The General Assembly should consider establishing a centralized aircraft operations division within an existing agency for better coordination and to achieve efficiencies of passenger aircraft operations. The main aircraft functions that would comprise the passenger services are now located in the Departments of Commerce and Transportation and UNC-AHEC-MedAir. Commerce, Transportation, Highway Patrol, and MedAir have maintenance functions that would be consolidated. Because of the need for regional location of the Forest Resources aircraft, those mechanics would not be physically relocated. Rather, they would report administratively to the consolidated head mechanic. The Department of Transportation already has an established Aviation Division and would be the logical choice for the consolidated aircraft operations division. The other agencies would then purchase passenger flight time and maintenance services from the consolidated operation. The specialized law enforcement functions would continue to operate and house their respective aircraft at their current locations and have the option of using the consolidated maintenance operation.**

Response:

- UNC-AHEC-MedAir's 36.5 average FLIGHT hours per month per aircraft and 154.9 average ELAPSED hours per month per aircraft is the highest utilization of aircraft among the state agencies with aircraft operations.

- UNC-AHEC-MedAir has a long history of high safety standards having flown for 35 years and over 17 million passenger miles and over 65,000 flight hours without major incident. The data in this audit report clearly shows that MedAir is an efficiently run organization and was able to provide financial and operating statistics per aircraft and for the entire organization. MedAir mechanics go well beyond the minimum maintenance requirements of the FAA for our aircraft by performing inspections every 50 hours as well as a walk around inspection any time an aircraft is in the hangar. A weekly inspection is also performed on the King Air. Because MedAir is a 501(c)3 organization, there is an annual outside audit of the financial statements. UNC-AHEC-MedAir would hope that any consolidated aircraft operations division would meet our same high standards. The identified deficiencies in the other state

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aircraft operations need to be addressed before establishing a consolidated aircraft operations division.

- Maintenance efficiencies will not be realized until a fleet of similar aircraft is established among the agencies. Because of MedAir's high utilization of aircraft, the twin engine piston Barons flown with one pilot are ideal for destinations within North Carolina. The Barons are less expensive to operate than turbine aircraft like the King Air or Cessna Citation. Insurance availability may dictate changes such as two pilots in the future, but the twin engine piston aircraft meets the current needs of MedAir. Insurance availability may also be dependent on newer aircraft. Each flight department is operating different types of aircraft with different maintenance requirements and parts. The parts used on the Barons will not work on the Cessna Citation or Conquest and the training to do the maintenance is also different. Even though all mechanics are licensed to work on all planes, each mechanic requires supervised experience or training before being able to work on different aircraft. For example, MedAir mechanics have had plenty of experience changing tires on the Barons and King Air but would not be able to change the tires on the Citation without proper training. Also, the equipment required to do even a simple job like that would be different for the different aircraft. Different jacks, tools, and parts are required for each type of aircraft and cannot be interchanged. When working on the complex systems of the aircraft and troubleshooting the problems, the incompatibilities of equipment and training become even greater. With the intimate knowledge of the Barons and King Air aircraft, MedAir mechanics are able to repair a problem in substantially less time than other mechanics who are less familiar with our aircraft.

- Scheduling efficiencies also will not be achieved until a fleet of similar aircraft is established among the agencies. For example, Department of Commerce passengers may prefer the turbine Cessna Citation flown by two pilots over the twin engine piston Baron flown by one pilot.

- Passenger priority will need to be considered with a consolidated aircraft operations division. For example, does a physician flying to Wilmington to see 30 pediatric cardiology patients take priority over a state government official flying to Asheville on state business? Currently, a physician flying on MedAir to a clinic with 30 patients scheduled knows the flight will not be bumped.

- Maintenance priority will need to be considered with a consolidated aircraft operations division. Would MedAir mechanics be required to stop or delay work on MedAir aircraft to work on Department of Transportation or other aircraft and who would determine priority? MedAir's three mechanics currently work full time on MedAir's six aircraft; MedAir's maintenance would be compromised if the mechanics were required to frequently assist other aviation divisions.

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APPENDIX C

Response from Agencies and Programs

THE AGE OF THE STATE'S AIR FLEET INCREASES THE NEED FOR MAINTENANCE.

2. **Recommendation: The General Assembly should direct that an independent contractor perform a comprehensive study of the operational condition of all State-owned and supported aircraft. This study should include recommendations on when to replace the aircraft, the required number of maintenance staff, and the feasibility of contracting for all maintenance as a possible cost saving measure, as well as contracting for pilots. Additionally, the General Assembly should consider whether there is a need for all aircraft now owned and maintained by the State. The contractor developed plan should include a recommendation on how to divest the State's ownership of any aircraft deemed unnecessary. Pending the contractor's study, the agencies and programs should address the staffing levels for mechanics, determining how many mechanics are needed for effective operation.**

Response:

- UNC-AHEC-MedAir enthusiastically supports a comprehensive study of existing and future aircraft. Cost efficiencies could be achieved with fleets of newer, similar aircraft across agencies. The millions of dollars needed to purchase newer aircraft should result in future operating cost efficiencies.

- Training costs for pilots and mechanics need to be considered if new types of aircraft replace existing aircraft.

- A detailed COST analysis of outsourcing maintenance needs full attention. Although at first glance outsourcing maintenance appears to be cost effective, it is not for several reasons. Shop rates are currently $60 to $68 per hour for piston aircraft and $68 to $75 per hour for turbine aircraft and will increase at the end of this year. A 100-hour/annual inspection on a Baron currently costs $2,100 just for the inspection. Grease and miscellaneous hardware are another $85 and the average cost of the inspection plus repair of all discrepancies is a minimum of $4,300. With each of the five Barons requiring four 100-hour/annual inspections each year, the total cost would be greater than $86,000 per year and this does not include the 50-hour inspections and other maintenance required between inspections. With in-house maintenance, MedAir mechanics are able to repair many items between flights that would otherwise require bringing in a mechanic from a local airport and delaying or canceling a flight. MedAir pays wholesale price for parts whereas retail price would be paid if the maintenance were contracted out. The discounts received range from 15% to more than 50% off the retail price. A recent example is the starter adapter for the Continental engine on the Barons. The list price is $2,026.82 while the wholesale price is only $1,256.63 for a savings of $770.19 on this one item alone. During Fiscal Year 2001-02, MedAir's three mechanics spent a total of 4,287.7 hours working on the five Barons and the King Air. At current shop rates, that would come to more than $260,000 for labor alone and does not include the cost of parts. The salaries and benefits of the three mechanics equal $156,024. Three MedAir mechanics is the

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appropriate staffing level for the size, age, and utilization of the fleet of five Barons and one King Air.

- SAFETY is the number one priority when considering outsourcing of maintenance. Occasionally MedAir sends some of the planes out for maintenance at local airports, but every time the MedAir mechanics find items that were not repaired properly. When the King Air was sent out for its first inspection, a hydraulic line for the landing gear was left loose, filling the belly of the aircraft with hydraulic fluid. If the flight had been longer, there would have not been enough fluid left to extend the landing gear normally and would have required an emergency landing gear extension procedure. MedAir mechanics have found flight controls not properly safety wired or installed as well as incorrect fasteners installed and trash in the control cable pulleys. Many times mechanics at the local airports will skip things such as a grease fitting that will not take grease because it takes too long to fix it. MedAir mechanics take pride in making sure that every plane is kept safe and operational. The three MedAir mechanics have an average of 13 years service to MedAir and a total of 74 years aviation maintenance experience. They believe in the mission of MedAir and take the additional time to make sure every job is done right. The mechanics often arrive before their 7:30 am start time to be available for early morning flights in case there are unforeseen mechanical problems. This early arrival of mechanics is one factor in few scheduled flights being cancelled due to mechanical problems.

- The MedAir pilots have an average of 16 years service to Medical Air and a total of 157 years of pilot experience. Pilots, too, believe in the mission of the North Carolina AHEC Program and Medical Air. Contract pilots may not have the same dedication. MedAir pilots are familiar with MedAir's operating procedures and attend annual simulator training. This employment longevity and current training, along with well-maintained aircraft, has resulted in an outstanding safety record. Safety could be compromised with outsourcing pilots.

THE STATE HAS NOT ESTABLISHED STATEWIDE POLICIES AND PROCEDURES FOR USE OF ITS AIRCRAFT.

3. **Recommendation: The General Assembly should consider legislation that establishes statewide policies for administration and use of State aircraft. Such legislation should address, but not be limited to:**

- **Requiring documented purpose and justification for every flight,**
- **Requiring signed authorization from public officials or agency heads for all flights,**
- **Describing cost calculation for flights charged to agencies while acknowledging that some costs are subsidized by the aircraft operating agency,**
- **Identifying all passengers on flights, and**
- **Describing circumstances where family members are permitted to accompany state officials or agency heads.**

The response from the agency has been reformatted to conform with the style and format of the rest of the audit report. However, no data has been changed.

APPENDIX C

Response from Agencies and Programs

While aircraft operations remain separate, each agency maintaining and operating State aircraft should establish internal policies and procedures consistent with existing guidelines. If the General Assembly establishes a consolidated aircraft operations function, then that entity should have the responsibility of developing and implementing statewide policies and procedures for aircraft use.

Response:

- UNC-AHEC-MedAir complies with all of the recommendations. When a flight request is made, passenger information, purpose of flight, billing procedure, and supervisor approval is noted on the request. A specific pre-approval form for spouse/family member is completed before these infrequent flights.

- UNC-AHEC-MedAir has a specific passenger eligibility policy where individuals will be traveling on either state or university business. The policy further elaborates on criteria related to the North Carolina AHEC Program:

Objective 2:.COSTS AND REIMBURSEMENTS: To determine the total operational costs for each aircraft per agency and program, determine and analyze the hourly rate for aircraft operations, and identify the agency's aircraft billable reimbursement rates and how the rates are computed.

TOTAL OPERATIONAL COSTS FOR ALL STATE AIRCRAFT CANNOT BE DETERMINED.

4. **Recommendation: Operational costs for all State operated aircraft should be captured by aircraft. This information would improve the administration of flight operations and would allow for informed decisions on the efficiencies of each aircraft. A consolidated flight operations division may enhance the State's ability to capture this data.**

Response:

- UNC-AHEC-MedAir is a 501(c)3 non-profit organization and is subject to an annual outside audit of our financial statements. MedAir generates monthly internal reports listing operating statistics and costs by aircraft.

The response from the agency has been reformatted to conform with the style and format of the rest of the audit report. However, no data has been changed.

APPENDIX C

Response from Agencies and Programs

THERE IS NO CONSISTENT METHOD FOR COMPUTING BILLABLE RATES FOR STATE AIRCRAFT USAGE.

5. **Recommendation: The State should establish a consistent statewide methodology for billing rates by type of aircraft. Consideration should be given to the factors included in private aircraft cost evaluator service models and updated periodically. The consolidated aircraft division should maintain documentation on the methodology used to compute billable rates.**

Response:

- UNC-AHEC-MedAir charges a per-mile/per-passenger rate for in-state flights and an hourly rate for out-of-state flights. The methodology to compute these billable rates has been documented.

The response from the agency has been reformatted to conform with the style and format of the rest of the audit report. However, no data has been changed.

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In accordance with General Statutes 147-64.5 and 147-64.6(c)(14), copies of this report have been distributed to the public officials listed below. Additional copies are provided to other legislators, state officials, the press, and the general public upon request.

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The Honorable Richard H. Moore	State Treasurer
The Honorable Roy A. Cooper, III	Attorney General
Mr. David T. McCoy	State Budget Officer
Mr. Robert L. Powell	State Controller
Mr. Jim Fain	Secretary, Department of Commerce
Mr. Lindo Tippett	Secretary, Department of Transportation
Mr. Bryan Beatty	Secretary, Department of Crime Control and Public Safety
Mr. William G. Ross, Jr.	Secretary, Department of Environment and Natural Resources
Mr. Charles Fullwood	Executive Director, Wildlife Resources Commission
Dr. James C. Moeser	Chancellor, University of North Carolina at Chapel Hill

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Appointees to the Joint Legislative Commission on Governmental Operations

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Representative James B. Black	Speaker of the NC House of Representatives
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Members of the Local Legislative Delegation	NC House and Senate
Mr. James D. Johnson	Director, Fiscal Research Division

November 25, 2003

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