

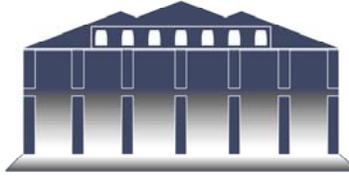
**Follow-Up Analysis of
25 Underutilized State Aircraft Confirmed
Inefficiency and Potential Cost Savings**



**Final Report to the Joint Legislative
Program Evaluation Oversight Committee**

Report Number 2010-04-01

May 24, 2010



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John W. Turcotte
Director

May 24, 2010

Representative James W. Crawford, Jr., Co-Chair, Joint Legislative Program Evaluation Oversight Committee

Representative Nelson Cole, Co-Chair, Joint Legislative Program Evaluation Oversight Committee

Senator Daniel G. Clodfelter, Co-Chair, Joint Legislative Program Evaluation Oversight Committee

Senator Fletcher L. Hartsell, Jr., Co-Chair, Joint Legislative Program Evaluation Oversight Committee

North Carolina General Assembly

Legislative Building

16 West Jones Street

Raleigh, NC 27601

Honorable Co-Chairs:

Session Law 2009-451, Section 14.6 directed the Program Evaluation Division to study the number, use, and effectiveness of state aircraft; consider ways to achieve efficiency; and determine if it is desirable or feasible to sell or transfer aircraft. This report follows up the Program Evaluation Division's April 2010 report entitled *Selling 25 Underutilized Aircraft May Yield Up to \$8.1 Million and Save \$1.5 Million Annually*.

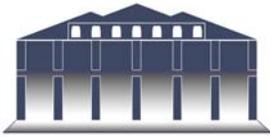
I am pleased to report that the Departments of Commerce, Crime Control and Public Safety, Environment and Natural Resources, Justice, and Transportation; the Wildlife Resources Commission; and the University of North Carolina at Chapel Hill, Area Health Education Centers program cooperated with us fully and were at all times courteous to our evaluators during the evaluation.

Per Session Law 2009-451, Section 14.6, this report also was submitted to the Senate and the House of Representatives Appropriations Committees and the Fiscal Research Division.

Sincerely,

A handwritten signature in black ink, appearing to read "John W. Turcotte".

John W. Turcotte
Director



PROGRAM EVALUATION DIVISION

NORTH CAROLINA GENERAL ASSEMBLY

May 2010

Report No. 2010-04-01

Follow-Up Analysis of 25 Underutilized State Aircraft Confirmed Inefficiency and Potential Cost Savings

Summary

This report follows up the Program Evaluation Division's April 2010 report entitled *Selling 25 Underutilized Aircraft May Yield Up to \$8.1 Million and Save \$1.5 Million Annually* and provides more details on the aircraft identified for elimination. The North Carolina General Assembly directed the Program Evaluation Division to conduct an initial evaluation of the number, use, and effectiveness of the state aircraft fleet and to consider ways to achieve efficiency savings. The legislation also directed the Division to determine if it is desirable or feasible to sell or transfer any aircraft to another state agency.

The follow up focused on utilization data on the 25 aircraft recommended for elimination by the Division's first report. For each aviation program that operates aircraft identified for elimination, this report provides a brief overview of the aviation program; results of the analyses that identified each aircraft; alternatives to owning specific aircraft, if needed; and the fiscal impacts associated with aircraft elimination. In addition, the report presents data that address specific concerns raised by the agencies in response to the report recommendations for eliminating aircraft.

- One twin engine passenger transport airplane operated by the Department of Transportation, which averaged only 42 flight hours, could be sold for \$4.6 million and save \$307,343 annually.
- The State Bureau of Investigation (SBI) twin engine airplane, which averaged only 148 hours per year, could be sold for \$650,000 and save \$12,000 annually. During the 3-year data period, SBI did not fly the plane 84% of the time. SBI used 43% of actual flight hours for conferences, meetings, and trainings; contrary to SBI's assertions, only 19% of actual flight hours were used for prisoner transport.
- The Division of Marine Fisheries could sell three underused helicopters for a total of \$190,000 to save \$11,570 annually. The Division concurred.
- The Division of Forest Resources could eliminate 20 aircraft, realize \$2.6 million in sales proceeds and save \$1.2 million annually. The only fire suppression aircraft proposed for elimination is a scooper/tanker that has not flown since 2008; sits outside a leased hangar that is too small to store the plane; needs a \$1 million mandatory inspection and potential repairs of up to \$1 million; and has no pilot qualified to fly it.

Scope

This report follows up the Program Evaluation Division's April 2010 report entitled *Selling 25 Underutilized Aircraft May Yield Up to \$8.1 Million and Save \$1.5 Million Annually* and provides more details on the aircraft identified for elimination. The North Carolina General Assembly directed the Program Evaluation Division to conduct an initial evaluation of the number, use, and effectiveness of the state aircraft fleet and to consider ways to achieve efficiency savings.¹ The legislation also directed the Division to determine if it is desirable or feasible to sell or transfer any aircraft to another state agency.

Background

In Fiscal Year 2008-09, eight separate North Carolina programs operated 72 aircraft at a cost of \$10.8 million. These aircraft were used for four basic types of aviation missions: passenger transport, photogrammetry, law enforcement, and natural resources protection. Three programs (Departments of Commerce and Transportation and the University of North Carolina's Area Health Education Centers) provided passenger transport services. The Department of Transportation also flew photogrammetry missions that aid in the design, planning, and construction of highways.² Four programs (State Bureau of Investigation, State Highway Patrol, Division of Marine Fisheries, and Wildlife Resources Commission) used aircraft for law enforcement activities. One program (Division of Forest Resources) supported resource protection.

The legislation directing the initial evaluation emphasized exploring the possible elimination of aircraft. The Program Evaluation Division conducted a three-phase analysis to examine aircraft use and fleet demand to accomplish this task.

- **Phase One: Annual Flight Hours** – Eliminate passenger transport aircraft based on utilization, using a transportation industry benchmark of 200 flight hours per year.
- **Phase Two: Daily Demand** – Eliminate non-passenger transport aircraft based on fleet demand, examining the patterns of daily use for each aviation program purpose.
- **Phase Three: Age of Remaining Aircraft** – Examine need for back-up aircraft based on age of remaining aircraft.

Details of this analysis are summarized in Appendix A and are described fully in the initial evaluation report. As a result of the full three-phase analysis, the Program Evaluation Division determined that 25 aircraft could be eliminated (see Exhibit 1).

¹ 2009 NC Sess. Laws, 2009-451.

² For the purpose of this report photogrammetry is included in the passenger transport category.

Exhibit 1: 25 Aircraft Can Be Eliminated

State Program	Aircraft Purpose	Current Number of Aircraft	Number of Aircraft to Eliminate	Potential One-Time Proceeds from Sale	Annual Cost Savings
Passenger Transport					
Area Health Education Centers	Passenger transport	6	0	n/a	n/a
Department of Commerce	Passenger transport	2	0	n/a	n/a
Department of Transportation	Passenger transport	1	1	\$ 4,649,000	\$ 307,343
Department of Transportation	Photogrammetry	1	0	n/a	n/a
Subtotal		10	1	4,649,000	307,434
Law Enforcement					
State Bureau of Investigation	Law enforcement	3	1	650,000	12,000
State Highway Patrol	Law enforcement	9	0	n/a	n/a
Wildlife Resources Commission	Law enforcement patrol	4	0	n/a	n/a
Division of Marine Fisheries	Law enforcement patrol	5	2	190,000	11,570
Division of Marine Fisheries	Salvage	1	1	0	0
Subtotal		22	4	840,000	23,570
Resource Protection					
Division of Forest Resources	Fire control	6	2	0	
Division of Forest Resources	Fire patrol	18	11	678,500	
Division of Forest Resources	Fire suppression	5	1	0	
Division of Forest Resources	Fire suppression/ prescribed burn	2	1	1,950,000	1,191,905
Division of Forest Resources	Transport	3	1	0	
Division of Forest Resources	Salvage	4	4	0	
Subtotal		38	20	2,628,500	1,191,905
Total		70	25	\$ 8,117,500	\$ 1,522,818

Notes: The Area Health Education Centers program and the Departments of Commerce and Transportation each sold aircraft since the start of Fiscal Year 2008-09. The Area Health Education Centers program purchased an airplane in January 2010.

Source: Program Evaluation Division based on flight records provided by state programs.

This follow-up report provides additional details on and the estimated cost savings associated with the aircraft identified for elimination. As shown in Exhibit 1, these aircraft are currently operated by the Department of Transportation, State Bureau of Investigation, Division of Marine Fisheries, and Division of Forest Resources. Specific information on individual aircraft identified for elimination including annual flight hours by mission, days flown, and cost information is provided in Appendix B.³

This report is divided into sections by aircraft purpose within programs. The sections provide a brief overview of the aviation program and purpose;

³ Each agency may have additional criteria it would like considered when determining which specific aircraft should be eliminated such as special capabilities needed for a particular purpose. Justification and detailed explanations of these criteria should be provided by agencies if they desire that alternate aircraft be eliminated.

results of the analyses that identified each aircraft for elimination; alternatives to owning specific aircraft, if needed; and the fiscal impacts associated with aircraft elimination.⁴ Finally, evaluation data that address specific concerns raised by the agencies in response to the report recommendations for eliminating aircraft are noted.

Department of Transportation

The Department of Transportation operates two aircraft. Both are large twin engine airplanes, one is used for passenger transport and the other for photogrammetry missions. These transport aircraft were evaluated only in the first phase of the analysis.

Aircraft to Eliminate	Potential One-Time Proceeds from Sale	Annual Cost Savings
One passenger transport airplane	\$4,649,000	\$307,343

Analysis: Results of this analysis indicated that the Department of Transportation passenger transport aircraft could be eliminated. This aircraft did not meet the 200-hour efficient use threshold for passenger transport.

- Because the department only flew an average of 42 passenger transport mission hours per year, the passenger transport aircraft was identified for elimination.

Alternatives: Two other state programs (Department of Commerce and the University of North Carolina’s Area Health Education Centers) offer passenger transport services. Any passenger transport missions that had been flown by the Department of Transportation could be flown by either of the other two programs.

Fiscal Impact: Eliminating this aircraft could yield up to \$4.6 million in proceeds from its sale and save \$307,343 from reduction in force and operation costs (\$143,750 in personnel, \$14,880 in insurance, and \$148,713 in depreciation).

Agency Concerns	Response
<ul style="list-style-type: none"> • Fleet mix study should determine which aircraft are eliminated 	<ul style="list-style-type: none"> • This concern presumes consolidation of passenger transport; elimination of the department’s twin engine airplane is based on low utilization of this aircraft

Department of Justice, State Bureau of Investigation

The State Bureau of Investigation (SBI) operates three aircraft, two single engine airplanes and one twin engine airplane. The bureau uses its aircraft for law enforcement activities including searches, surveillance, photography, reconnaissance, and transportation. The twin engine airplane is used for investigating crimes, transporting prisoners and witnesses, and transporting Department of Justice and SBI staff to conferences, meetings, and trainings.

⁴ Cost savings figures assume programs will fly the same number of hours in years following elimination by using other program aircraft.

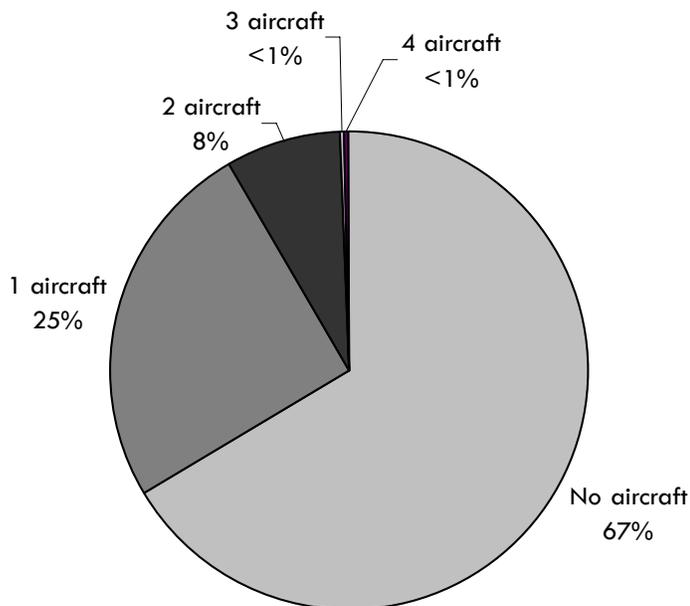
Aircraft to Eliminate	Potential One-Time Proceeds from Sale	Annual Cost Savings
One twin engine airplane	\$650,000	\$12,000

Analysis: SBI’s flight data revealed SBI could meet its mission requirements with two aircraft and the twin engine aircraft could be eliminated.

- SBI aircraft flew an average of 168 hours per year; the twin engine airplane flew an average of 148 hours per year.
- Analysis of daily demand (i.e., the frequency of aircraft use across the fleet over a three-year time period) revealed SBI flew aircraft 33.7% of the time (369 out of 1,096 days; see Exhibit 2). On most flight days, SBI flew one or two aircraft. There were only six days during the three-year time period when three aircraft were flown.

Exhibit 2

Daily Demand for SBI Aircraft, Fiscal Years 2006-07, 2007-08, and 2008-09

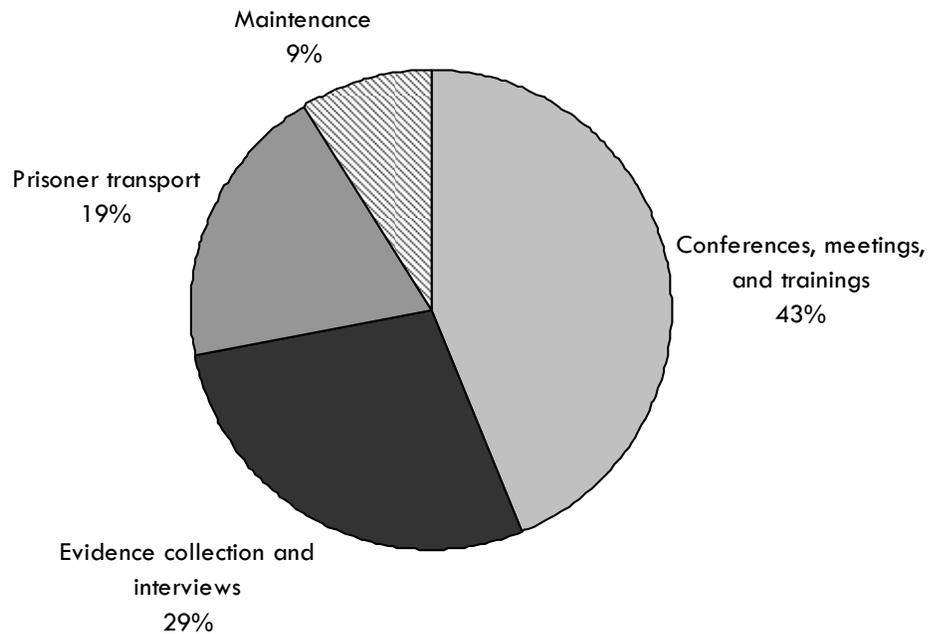


Source: Program Evaluation Division based on State Bureau of Investigation flight data.

Additional analysis was conducted to address agency concerns about eliminating the twin engine, which they stated was essential for prisoner transport. As shown in Exhibit 3, this aircraft was used for prisoner transport less than 20% of hours flown over the three-year period examined.

Exhibit 3

SBI Twin Engine Flight Hours by Mission, Fiscal Years 2006-07, 2007-08, 2008-09



Note: Maintenance hours included flying the twin engine to a facility for maintenance or flying to drop off or pick up a pilot when one of the single engine airplanes was having maintenance performed.

Source: Program Evaluation Division based on State Bureau of Investigation flight data.

Alternatives: Several alternatives are available to SBI for missions that have been flown by the twin engine airplane.

- Three other state aviation programs (Departments of Commerce and Transportation and the University of North Carolina's Area Health Education Centers) provide passenger transport services and could be used for transporting staff to conferences, meetings, and trainings. The Departments of Commerce and Transportation aircraft may be more convenient for Department of Justice and SBI staff who would no longer need to drive from Raleigh to Erwin, where SBI aircraft are located. In addition, 80% of the locations for these conferences, meetings, and trainings were in-state and ground transportation could be used.
- The bureau's two single engine airplanes could be used to transport staff for evidence collection and to interview suspects and witnesses.
- Bureau staff stated that prisoner transport is one of the main reasons they need a twin engine airplane. However, prisoner transport missions accounted for only 86 flight hours during the three-year study period (37 hours in Fiscal Year 2006-07, 44 hours in Fiscal Year 2007-08, and 5 hours in Fiscal Year 2008-09). Several private companies provide prisoner transport services. These businesses pick up and transport prisoners throughout the United States using ground or air transportation. Several companies provided quotes of 75 to 95 cents per mile for this service.

Fiscal Impact: Eliminating SBI's twin engine aircraft would yield up to \$650,000 in proceeds from its sale and \$12,000 in recurring savings from operation costs.

Agency Concerns	Response
<ul style="list-style-type: none"> Both single engines needed for U.S. Drug Enforcement Agency marijuana eradication program The twin engine is needed to transport the Bomb Squad, Special Response Team (SRT)/SWAT, hostage negotiation teams 	<ul style="list-style-type: none"> Retain both single engine airplanes; eliminate the twin engine airplane Flight records reveal that one flight was related to bombs, but the mission was to pick up supplies for training the K-9 unit; one flight was related to the SBI Special Response Team (SRT), but it was to attend training; no other missions related to the Bomb Squad, SRT/SWAT, or hostage negotiating teams were listed in the flight records for the twin engine airplane over three fiscal years
<ul style="list-style-type: none"> The twin engine is needed to deploy agents to crime scenes 	<ul style="list-style-type: none"> The bureau's single engine airplanes can be used to deploy agents to crime scenes
<ul style="list-style-type: none"> The twin engine is essential for prisoner transport 	<ul style="list-style-type: none"> SBI used this aircraft an average of 148 hours per year, only 19% of which was for prisoner transport (see Exhibit 3); private companies routinely provide prisoner transport

Department of Environment and Natural Resources, Division of Marine Fisheries

The Division of Marine Fisheries operates six aircraft, three single engine airplanes and three helicopters. One helicopter does not fly and is used as a source of parts for the other two helicopters. Aircraft are used to patrol the state's coastal waters to ensure that people fishing comply with general statues and rules developed to protect and regulate the harvest of the state's fisheries. Missions include patrolling polluted shellfish and nursery areas that are closed to fishing. The division also patrols these areas by boat, but aircraft can cover the area more quickly. The division also has flown missions for the Division of Coastal Management to survey development on the coast.

Aircraft to Eliminate	Potential One-Time Proceeds from Sale	Annual Cost Savings
Three helicopters	\$190,000	\$11,570

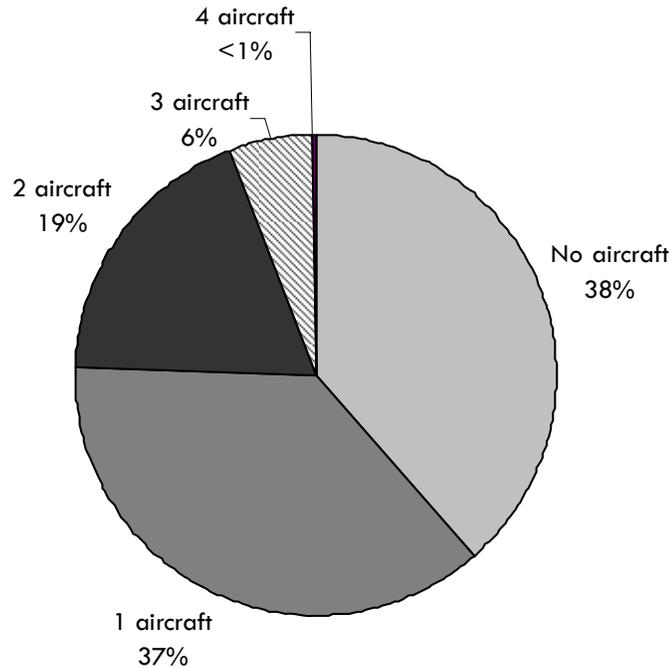
Analysis: The Division of Marine Fisheries' flight data revealed the division could meet its mission requirements with three aircraft. Three helicopters could be eliminated.

- The Division of Marine Fisheries aircraft flew an average of 146 hours per year.
- Daily demand analysis revealed aircraft were used 61.4% of the time (673 days) during the three-year period (see Exhibit 4). On most flight days, the division flew one or two aircraft. There were

an additional 63 days when three aircraft were flown on the same day, but only two days in the three-year period when four aircraft were flown on the same day.

Exhibit 4

Daily Demand for Division of Marine Fisheries Aircraft, Fiscal Years 2006-07, 2007-08, and 2008-09



Source: Program Evaluation Division based on Division of Marine Fisheries flight data.

Alternatives: No alternatives are required to compensate for eliminated aircraft. In August 2009, the division grounded its helicopter program to meet a mandated budget reduction. Since that time the division has used its three single engine airplanes for all missions and has been able to meet mission requirements. The Program Evaluation Division identified these three helicopters for elimination.

Fiscal Impact: Savings associated with eliminating these three helicopters are estimated at \$190,000 in proceeds from sales and \$11,570 in recurring savings from operation costs.

Agency Concerns	Response
<ul style="list-style-type: none"> None; the Division of Marine Fisheries concurs with eliminating three helicopters 	<ul style="list-style-type: none"> None

Department of Environment and Natural Resources, Division of Forest Resources

The Department of Environment and Natural Resources, Division of Forest Resources operates 38 aircraft for fire detection, fire suppression, prescribed burning, forest management, and forest surveys and assessments. Aircraft identified for elimination were used for fire control, fire patrol, fire suppression, fire suppression/prescribed burn, transportation, and salvage, each of which is described separately. Savings for all Division of Forest Resources aircraft and responses to division concerns are provided at the end of this section.

Aircraft to Eliminate	Potential One-Time Proceeds from Sale	Annual Cost Savings
20 aircraft (2 fire control, 11 fire patrol, 1 fire suppression, 1 fire suppression/prescribed burn, 1 transport, 4 salvage)	\$2,628,500	\$1,191,950

Fire Control

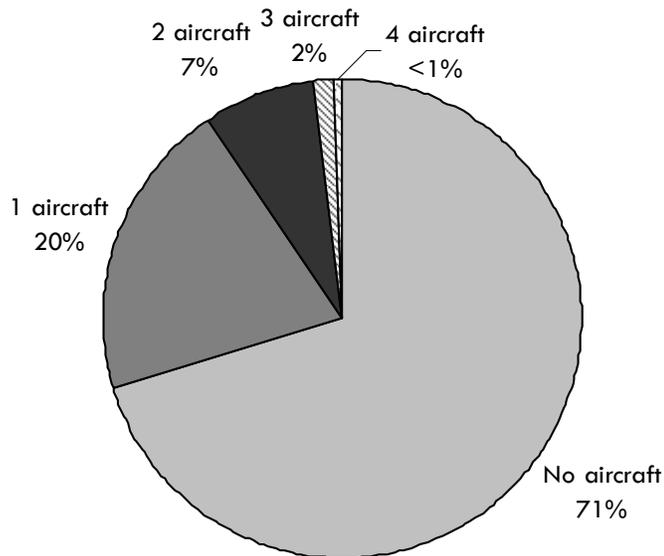
The Division of Forest Resources operates six fire control aircraft, three single engine airplanes and three helicopters. These two types of aircraft are used for different flight missions in different parts of the state. The three airplanes are used primarily in the east to guide fire suppression airplanes and to ensure the safety of pilots, ground forces, and the public. The three helicopters are used primarily in the west to drop water on fires, transport fire crews, and ensure safe operations. All six of these aircraft are federally owned and are on loan to North Carolina.

Analysis: The Division of Forest Resources flight data revealed the division could meet its mission requirements with four aircraft. Two fire control aircraft, one airplane and one helicopter, could be eliminated.

- Fire control aircraft flew an average of 60 hours per year.
- Because these aircraft may be in high demand during fire season, the most important analysis of aircraft use is fleet demand. Daily demand analysis revealed fire control aircraft were used 29.7% of the time (326 days; see Exhibit 5). The division did not fly more than four fire control aircraft on any one day during the three-year study period.

Exhibit 5

Daily Demand for Fire Control Aircraft, Fiscal Years 2006-07, 2007-08, and 2008-09



Source: Program Evaluation Division based on Division of Forest Resources flight data.

- The fire control airplane identified for elimination did not fly at all in Fiscal Years 2006-07 and 2007-08. In Fiscal Year 2008-09, this airplane flew only four hours.

- The helicopter identified for elimination flew an average of 57 hour per year. The other two helicopters flew an average of 104 and 85 hours per year and could fly more hours if necessary.

Alternatives: The Program Evaluation Division analysis determined the Division of Forest Resources could meet its fire control mission requirements with four fire control aircraft. Alternative arrangements are therefore unnecessary.

Fiscal Impact: Eliminating these two fire control aircraft would not provide any sales proceeds because they are both federally owned and must be returned to the federal government. Recurring savings are presented for all Division of Forest Resource eliminations at the end of this section.

Fire Patrol

The Division of Forest Resources operates 18 fire patrol aircraft. All of them are single engine airplanes and six are federally owned. The airplanes are used for fire detection, ensuring safe operations during fires, photography, and forest management. In addition to the missions listed above, the state-owned airplanes also are used for forest surveys and disaster assessments, and they have flown missions for the Division of Water Quality and the Coastal Resources Commission.⁵

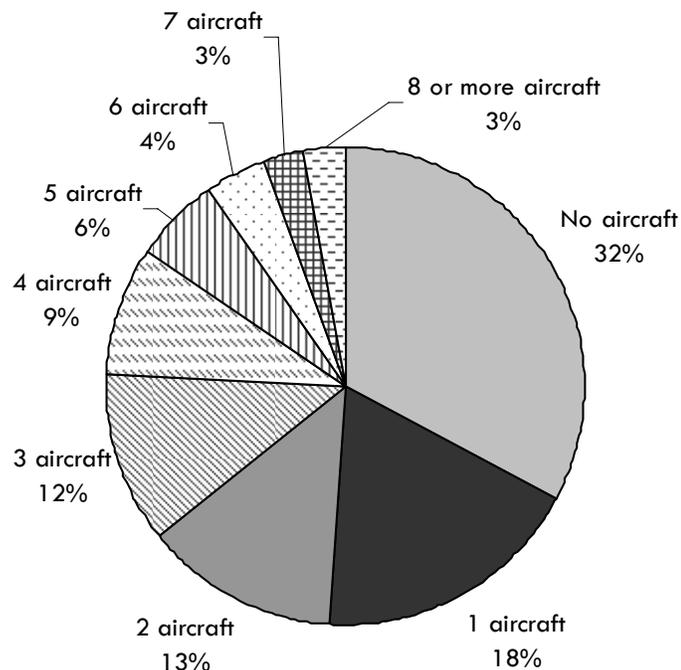
Analysis: The Division of Forest Resources' flight data revealed 11 fire patrol aircraft could be eliminated without affecting current agency operations on all but the few days of extremely high demand.

- The 18 fire patrol airplanes flew an average of 106 hours per year. The number of hours flown per plane ranged from an average of 20 hours per year to 324 hours per year.
- Daily demand analysis revealed fire patrol aircraft were used on 67.2% of the days (see Exhibit 6) in the three-year study period. There were 31 days during this time period when the division flew more than seven aircraft on one day, 23 of which were in Fiscal Year 2007-08.

⁵ Federally owned aircraft can not have more than 10% of their flight hours for missions other than for controlling fires.

Exhibit 6

Daily Demand for Fire Patrol Aircraft Flown, Fiscal Years 2006-07, 2007-08, and 2008-09



Source: Program Evaluation Division based on Division of Forest Resources flight data.

- The aircraft identified for elimination include six federally owned airplanes, which must be returned to the federal government when the state can no longer use them, and five state-owned airplanes. The airplanes identified for elimination include four federally owned airplanes that are 58 years old, four airplanes that are over 40 years old, two airplanes that did not fly at all during Fiscal Year 2008-09, and only one that flew more than 50 hours during Fiscal Year 2008-09.
- The remaining airplanes are all Cessna C182s, and the state would save money by only having to maintain one type of aircraft.

Alternatives: There are several alternatives available to cover occasional days when the state may need additional fire patrol aircraft.

- The Division of Forest Resources could contract with other states or private operators to meet demand during high fire years. The cost of contracting for additional aircraft as needed on extremely high demand days is estimated at \$42,000 per year,⁶ which would cover 100% of the maximum demand reflected in the last three years. Eliminating 11 excess fire patrol airplanes would save \$552,600 per year, more than 13 times the cost of contracting services on the few occasions when it is necessary.
- The remaining fire patrol aircraft can fly more hours. Flight records indicate the average annual flight hours for five of the seven remaining airplanes was between 87 and 170 hours per year.
- Three other state aviation programs—Division of Marine Fisheries, Wildlife Resources Commission, and State Bureau of Investigation—

⁶ Costs were estimated using information found in the Southeastern Interstate Forest Fire Protection Compact.

operate single engine airplanes similar to the fire patrol airplanes. The Division of Forest Resources could work with these programs to share resources.

Fiscal Impact: Elimination of 11 fire patrol airplanes could yield up to \$678,500 in sales proceeds. Recurring savings are presented for all Division of Forest Resource eliminations at the end of this section.

Fire Suppression

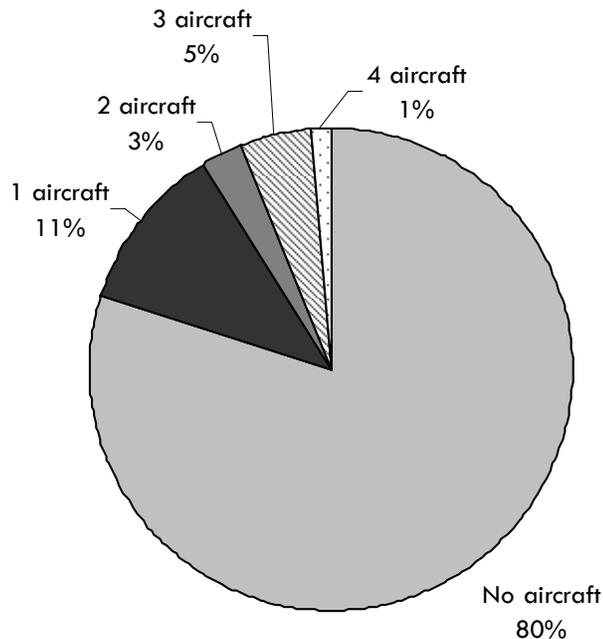
The Division of Forest Resources operates five fire suppression aircraft, four single engine and one twin engine. These are specialized fire-fighting aircraft designed to carry and disperse fire retardant.

Analysis: The Division of Forest Resources' flight data revealed the division could meet its mission requirements with four fire suppression aircraft. One fire suppression aircraft that has been grounded for two years could be eliminated.

- Because of the specialized nature of these aircraft, they do not fly as much as some other types of aircraft. The Division of Forest Resources flew an annual average of 57 flight hours per fire suppression airplane. The number of hours flown per plane ranged from an average of 25 to 83 hours per year.
- The Division of Forest Resources flew these five airplanes on 219 days, or 20% of the time; the other 80% of the time, these airplanes were idle (see Exhibit 7). During the three-year study period, the Division of Forest Resources did not fly more than four fire suppression airplanes on any one day.

Exhibit 7

Daily Demand for Fire Suppression Aircraft Flown, Fiscal Years 2006-07, 2007-08, and 2008-09



Source: Program Evaluation Division based on Division of Forest Resources flight data.

- The division currently owns five fire suppression airplanes, one of which (a Canadair CL215) has been grounded since May 2008

waiting for a required inspection estimated to cost \$1 million. This inspection may reveal between \$500,000 and \$1 million in needed repairs. Because the division does not have the money for this inspection and the necessary repairs, the plane remains grounded.

Alternatives: Analysis of daily demand suggests that alternatives are not necessary. Despite the inoperability of the Canadair CL215, the Division of Forest Resources has been able to meet its mission requirements since May 2008, when the Canadair was grounded. This time period includes the Evans Road fire, a fire so extensive that it alone was larger than any entire fire season within the last 22 years. If there were a fire season in North Carolina more severe than during the Evans Road fire, there are several private businesses that provide fire suppression aircraft. In addition, the National Guard could be called upon for help.

Fiscal Impact: Eliminating the Canadair is unlikely to provide any proceeds because there is a limited market for this aircraft. Recurring savings are presented for all Division of Forest Resource eliminations at the end of this section.

Fire Suppression/Prescribed Burn

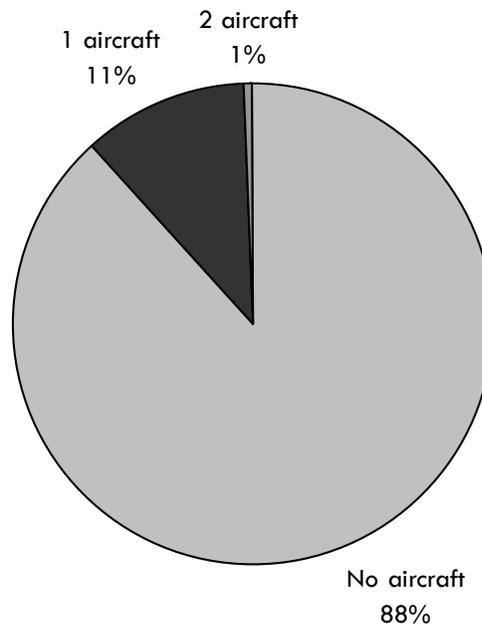
The Division of Forest Resources operates two multi-use helicopters for fire suppression, fire detection, and prescribed burn and to ensure safe operations during aerial fire fighting. These multi-use helicopters are used in the east and piedmont regions to fly missions similar to the fire control helicopters which are used in the west.

Analysis: The Division of Forest Resources' flight data revealed the division could meet its mission requirements with one aircraft. One helicopter could be eliminated.

- The two multi-use helicopters flew an annual average of 54 flight hours per helicopter.
- Analysis of daily demand showed these helicopters were only flown on 129 days (out of a possible 1,096 days) during the three-year study period or 11.8% of the time (see Exhibit 8). There were only six days in the three-year period when both helicopters were flown on the same day.

Exhibit 8

Daily Demand for Multi-Use Helicopters, Fiscal Years 2006-07, 2007-08, and 2008-09



Source: Program Evaluation Division based on Division of Forest Resources flight data.

Alternatives: The Division of Forest Resources has other aircraft (fire control helicopters and fire suppression airplanes) that can cover missions flown by these multi-use helicopters. If there are times when the Division of Forest Resources is using all of its fleet and additional aircraft are needed, several private businesses and the National Guard could provide helicopters.

Fiscal Impact: Elimination of this helicopter could yield up to \$1,950,000 in proceeds from its sale. Recurring savings are presented for all Division of Forest Resource eliminations at the end of this section.

Transport

The Division of Forest Resources operates three transport aircraft, two single engine airplanes and one twin engine airplane. One of the single engine airplanes is used to transport both people and equipment and is state owned, whereas the other single engine is used only to transport equipment and is federally owned. The twin engine airplane is only used to transport people and is federally owned.

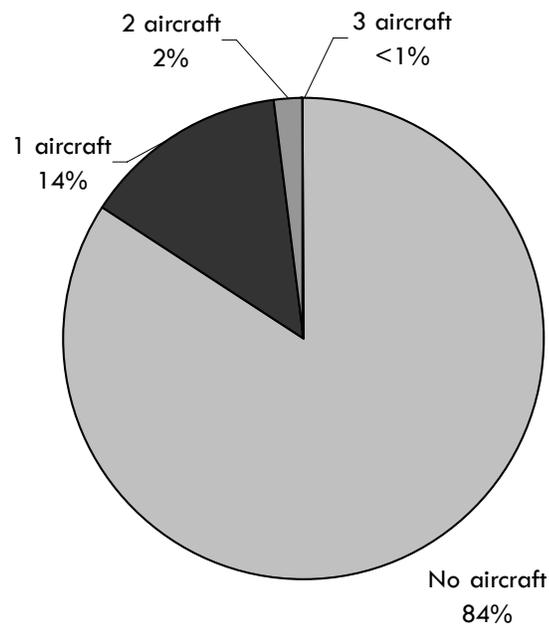
Analysis: The Division of Forest Resources' flight data revealed the division could meet its mission requirements with two aircraft. One transport airplane could be eliminated.

- The average annual flight hours for the division's transport aircraft was 47. The twin engine airplane is federally owned, which limits its use; it flew a total of 12.4 hours in three years, an average of 4 hours per year.
- Daily demand analysis showed the Division of Forest Resources used transport aircraft on 174 days during the three-year study

period, or 15.9% of the time (see Exhibit 9). There was only one day when the Division of Forest Resources flew all three airplanes.

Exhibit 9

Daily Demand for Transport Aircraft, Fiscal Years 2006-07, 2007-08, and 2008-09



Source: Program Evaluation Division based on Division of Forest Resources flight data.

Alternatives: The remaining Division of Forest Resources transport aircraft should be able to cover any missions that might be flown by the twin engine airplane identified for elimination.

Fiscal Impact: Eliminating the twin engine transport airplane would not provide any proceeds because it is federally owned and must be returned to the federal government. Recurring savings are presented for all Division of Forest Resource eliminations at the end of this section.

Salvage

The Division of Forest Resources has four salvage aircraft, two airplanes and two helicopters. These aircraft are used for the sole purpose of providing parts for other aircraft.

Analysis: All four salvage aircraft could be eliminated from the fleet.

- A recent review of the Division of Forest Resources' safety program by aviation consultant Conklin & de Decker⁷ found approximately 90% of the spare parts used are untraceable, making these parts suspected unapproved parts. If these parts are installed on other aircraft, the airworthiness of the aircraft is jeopardized.

Alternatives: These aircraft do not fly and no alternatives are needed.

Fiscal Impact: Three of these aircraft are federal surplus aircraft and must be returned to the federal government. While the elimination of these

⁷ Conklin & de Decker. (2010, January). *Safety and Training Program Review*. Report for Aviation Branch, Forest Protection Section, Division of Forest Resources, North Carolina Department of Environment and Natural Resources. Arlington, TX.

aircraft does not save the state any money or provide any proceeds, it does free up space in Division of Forest Resources hangars.

Division of Forest Resources Summary

Elimination of 20 aircraft from the Division of Forest Resources could yield up to \$2,628,500 in sales proceeds and \$1,191,905 in annual cost savings (see Exhibit 10). However, the Division of Forest Resources may occasionally need to contract with other states or private operators to meet their needs during high fire years. Based on data from the Southeastern Interstate Forest Fire Protection Compact, \$51,000⁸ of the cost savings identified should be included in the Division of Forest Resources budget to meet these additional needs. This money should be used exclusively for contracting additional aircraft support and should revert back to the General Fund if it is not used during the fiscal year.

Exhibit 10

Annual Cost Savings from Elimination of 20 Division of Forest Resources Aircraft

	Annual Cost Savings
Personnel	\$ 880,613
Insurance	131,196
Depreciation	180,096
Subtotal	1,191,905
Division of Forest Resources Reserve Fund	(51,000)
Total Savings	\$ 1,140,905
Note: Personnel savings for the Division of Forest Resources include nine pilot and five mechanic positions.	

Source: Program Evaluation Division based on cost data provided by the Division of Forest Resources.

⁸ This amount includes enough to contract out the aircraft needed to cover 100% of the historic daily maximum demand and an extra 20% for years when demand exceeds historic trends.

Agency Concerns	Response
<ul style="list-style-type: none"> The number of aircraft needed to respond to fires should reflect planning for the worst-case scenario Contracting through the Southeastern Interstate Forest Fire Protection Compact for fire patrol airplanes does not ensure resources will be there when needed The division needs an adequate number of fire suppression aircraft to be prepared for the worst-case scenario 	<ul style="list-style-type: none"> Daily demand analysis takes aircraft needed for response into consideration; the time period used for this evaluation includes the Evans Road fire, a fire so extensive that it alone was larger than any entire fire season within the last 22 years; aircraft elimination will leave the division with enough aircraft to meet the vast majority of historic daily demand except for fire patrol; Program Evaluation Division recommends that \$51,000 be retained to contract for additional fire patrol aircraft, if needed Fire patrol aircraft are not specialized airplanes; other state programs operate similar airplanes which, through written agreements, could be used by the Division of Forest Resources; the remaining fire patrol airplanes can fly more hours per year Only one fire suppression aircraft was identified for elimination and it does not fly; the remaining four fire suppression aircraft met mission requirements even during the Evans Road fire

In summary, the Program Evaluation Division recommends 25 aircraft be eliminated from the state’s fleet of 72 aircraft. Elimination of these 25 aircraft may yield up to \$8.1 million in proceeds and \$1.5 million in annual cost savings. Based on the elimination of 25 aircraft, five hangars could also be eliminated, saving \$26,060 per year.

Appendices

- Appendix A: Three-Phase Analysis for Aircraft Elimination
- Appendix B: Information on Aircraft Identified for Elimination

Report Distribution to Agencies

This report was submitted to the University of North Carolina’s Area Health Education Centers, Department of Commerce, Department of Transportation, Department of Environment and Natural Resources, Department of Crime Control and Public Safety, Department of Justice, and Wildlife Resources Commission on May 21, 2010.

Program Evaluation Division Contact and Acknowledgments

For more information on this report, please contact the lead evaluator, Catherine Moga Bryant, at Catherine.MogaBryant@ncleg.net.

Staff members who made key contributions to this report include Sean Hamel, Carol H. Ripple, Pamela L. Taylor, and Larry Yates. John W. Turcotte is the director of the Program Evaluation Division.

Appendix A: Aircraft to Be Eliminated

The Program Evaluation Division analyzed flight hours and fleet utilization by aircraft purpose within each aviation program to estimate the number of aircraft required to meet program missions. This appendix provides additional detail on the thresholds and analysis described in Finding 2. A flowchart depicting the three phases of this analysis is presented at the end of this appendix.

Phase One

This phase of the analysis consisted of the following steps:

1. The average annual flight hours by purpose within program was calculated using flight information from three fiscal years (2006-07, 2007-08, and 2008-09). Averages were adjusted to account for partial data.
2. This average was divided by the number of aircraft used for this purpose and was compared to the 200-hour benchmark.
3. If the hours per aircraft was greater than or equal to the 200-hour benchmark, aircraft were identified as meeting the 200-hour benchmark and were not recommended for elimination.
4. If passenger transport aircraft did not meet this 200-hour benchmark, aircraft were identified for elimination.
5. Law enforcement and resource protection aircraft that did not meet the 200-hour benchmark were analyzed in phase two based on patterns of daily use.

Exhibit C1 summarizes data examined in this phase. The right-hand column reflects the results for each purpose within programs.

Exhibit C1: Phase One of Elimination Analysis Based on Utilization

State Program	Aircraft Purpose	3-Year Annual Average Flight Hours	Current Fleet	Hours per Aircraft	Keep all Aircraft?	Next Analytic Step
Passenger Transport						
Area Health Education Centers	Passenger transport	1,607	6	268	Yes	None
Department of Commerce	Passenger transport	528	2	264	Yes	
Department of Transportation	Passenger transport	42	1	42	No	
Department of Transportation	Photogrammetry	214	1	214	Yes	
Law Enforcement						
State Bureau of Investigation	Law enforcement	503	3	168	No	Continue to Phase 2
State Highway Patrol	Law enforcement	1,711	9	190	No	
Wildlife Resources Commission	Law enforcement patrol	802	4	200	Yes	None
Division of Marine Fisheries	Law enforcement patrol	731	5	146	No	Continue to Phase 2
Division of Marine Fisheries	Salvage	0	1	0	No	
Resource Protection						
Division of Forest Resources	Fire control	358	6	60	No	Continue to Phase 2
Division of Forest Resources	Fire patrol	1,916	18	106	No	
Division of Forest Resources	Fire suppression	286	5	57	No	
Division of Forest Resources	Fire suppression/prescribed burn	107	2	54	No	
Division of Forest Resources	Transport	141	3	47	No	
Division of Forest Resources	Salvage	0	4	0	No	

Source: Program Evaluation Division based on flight records provided by state programs.

Phase Two

This phase of the analysis consisted of the following steps:

1. The flight demand for each aircraft purpose within agency was determined by identifying the unique number of aircraft flown on any given day between July 1, 2006 and June 30, 2009.
2. The daily demand threshold was calculated by determining the number of aircraft used on 95% of flight days. This step eliminates outlier days that account for fewer than 5% of days in the three-year time period.

The daily demand threshold calculated for each program within each agency is shown in the right-hand column of Exhibit C2.

Exhibit C2: Phase Two of Elimination Analysis Based on Fleet Demand

State Program	Aircraft Purpose	Current Number of Aircraft	Number of Aircraft Needed to Meet Daily Demand Threshold
Law Enforcement			
Division of Marine Fisheries	Law enforcement patrol	5	3
Division of Marine Fisheries	Salvage	1	0
State Bureau of Investigation	Law enforcement	3	2
State Highway Patrol	Law enforcement	9	5
Resource Protection			
Division of Forest Resources	Fire control	6	3
Division of Forest Resources	Fire patrol	18	7
Division of Forest Resources	Fire suppression	5	4
Division of Forest Resources	Fire suppression/ prescribed burn	2	1
Division of Forest Resources	Transport	3	2
Division of Forest Resources	Salvage	4	0

Source: Program Evaluation Division based on flight records provided by state programs.

Phase Three

The third phase of the analysis evaluated the age of the aircraft that remained after phases one and two and applied availability rates identified by aviation consultants Conklin & de Decker:¹

- at age 25, the average availability of aircraft is about 90%;
- at age 30, the average availability of aircraft is about 80%; and
- at age 35, the average availability of aircraft is about 50%.

This phase of the analysis consisted of the following steps:

1. The age of the aircraft not identified for elimination in phase two were examined.
2. If the aircraft age was 25 to 29 years old and the percentage of days flown was greater than or equal to 90% of all possible days, the fleet size was increased by 10% to allow for diminished reliability.
3. If the aircraft age was 30 to 34 years old and the percentage of days flown was greater than or equal to 80% of all possible days, the fleet size was increased by 20% to allow for diminished reliability.
4. If the aircraft age was 35 years old or older and the percentage of days flown was greater than or equal to 50% of all possible days, the fleet size was increased by 100% to allow for diminished reliability.

¹ Conklin & de Decker. *How Old is Too Old?* Retrieved March 31, 2010, from <http://www.conklindd.com/Page.aspx?cid=1070>.

Only the aircraft operated by the State Highway Patrol met this criteria (i.e., four of their five remaining aircraft are 38 years old or older and the fleet flew more than the 50% availability that can be expected due to its age). Exhibit C3 summarizes the results of this phase of the analysis.

Exhibit C3: Phase Three of Elimination Analysis Based on Aircraft Age

State Program	Aircraft Purpose	Age of Remaining Aircraft	Percentage of Days Flown During 3-Year Time Period (N=1,096)	Adjustment Needed to Account for Aging Aircraft?
Law Enforcement				
Division of Marine Fisheries	Law enforcement patrol	5, 14, 23	61.4%	No, all aircraft less than age 25
Division of Marine Fisheries	Salvage		0%	No
State Bureau of Investigation	Law enforcement	23, 24	33.7%	No, all aircraft less than age 25
State Highway Patrol	Law enforcement	1, 38, 38, 38, 38	75.5%	Yes, 4 aircraft greater than age 35 and fly more than 50% of days; require 4 additional aircraft to compensate
Resource Protection				
Division of Forest Resources	Fire control	41, 41, 52, 56	29.7%	No, all aircraft greater than age 30 but fly less than 50% of days
Division of Forest Resources	Fire patrol	5, 6, 7, 8, 9, 10, 11	67.2%	No, aircraft less than age 25
Division of Forest Resources	Fire suppression	13, 15, 15, 34	20.0%	No, 1 aircraft greater than age 30 but flies less than 80% of days
Division of Forest Resources	Fire suppression/prescribed burn	2	11.8%	No, all aircraft less than age 25
Division of Forest Resources	Transport	24, 57	15.9%	No, 1 aircraft greater than age 35 but flies less than 50% of days
Division of Forest Resources	Salvage		0%	No

Source: Program Evaluation Division based on aircraft specifications and flight records provided by state programs.

Feasibility Review

The results of the analysis were reviewed for feasibility, and the following determinations were made:

- The analysis suggested the Division of Marine Fisheries should have three aircraft. The Division of Marine Fisheries grounded all three of their helicopters in August 2009 due to budget constraints and has been able to complete its flight missions without them. The division agrees that all three helicopters can be eliminated and the division can continue operating with three airplanes.
- The analysis suggested the Division of Forest Resources should have three fire control aircraft. The Division of Forest Resources uses two types of aircraft for fire control, airplanes in the eastern part of the state and helicopters in the western part of the state. Because these resources are region specific, the Program Evaluation Division determined the division should have two aircraft for each region and thus increased the number of fire control aircraft to four.

The results of all three phases of the analysis and the feasibility review are summarized in Exhibit C4.

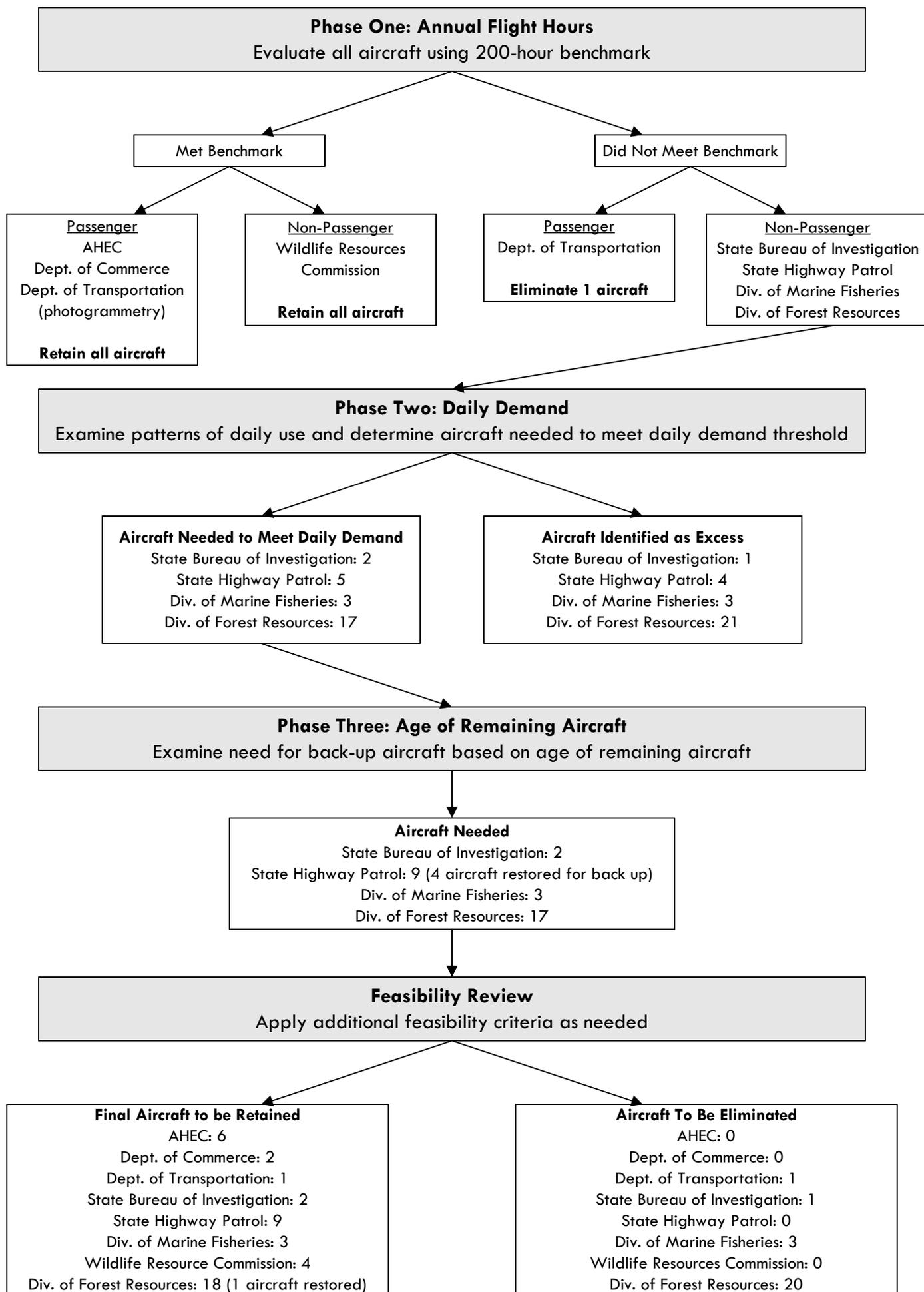
Exhibit C4: Summary of Aircraft to Eliminate

State Program	Aircraft Purpose	Number of Aircraft Needed to Meet Mission Requirements	Number of Aircraft to Eliminate
Passenger Transport			
Area Health Education Centers	Passenger transport	6	0
Department of Commerce	Passenger transport	2	0
Department of Transportation	Passenger transport	0	1
Department of Transportation	Photogrammetry	1	0
Law Enforcement			
State Bureau of Investigation	Law enforcement	2	1
State Highway Patrol	Law enforcement	9	0
Wildlife Resources Commission	Law enforcement patrol	4	0
Division of Marine Fisheries	Law enforcement patrol	3	2
Division of Marine Fisheries	Salvage	0	1
Resource Protection			
Division of Forest Resources	Fire control	4	2
Division of Forest Resources	Fire patrol	7	11
Division of Forest Resources	Fire suppression	4	1
Division of Forest Resources	Fire suppression/ prescribed burn	1	1
Division of Forest Resources	Transport	2	1
Division of Forest Resources	Salvage	0	4
Total		45	25

Note: The Departments of Commerce and Transportation have since sold one aircraft each.

Source: Program Evaluation Division based on flight records provided by state programs.

Flowchart of Three Phase Analysis for Aircraft Elimination



**Appendix B:
Information on Aircraft Identified for Elimination**

Department of Transportation, Division of Aviation

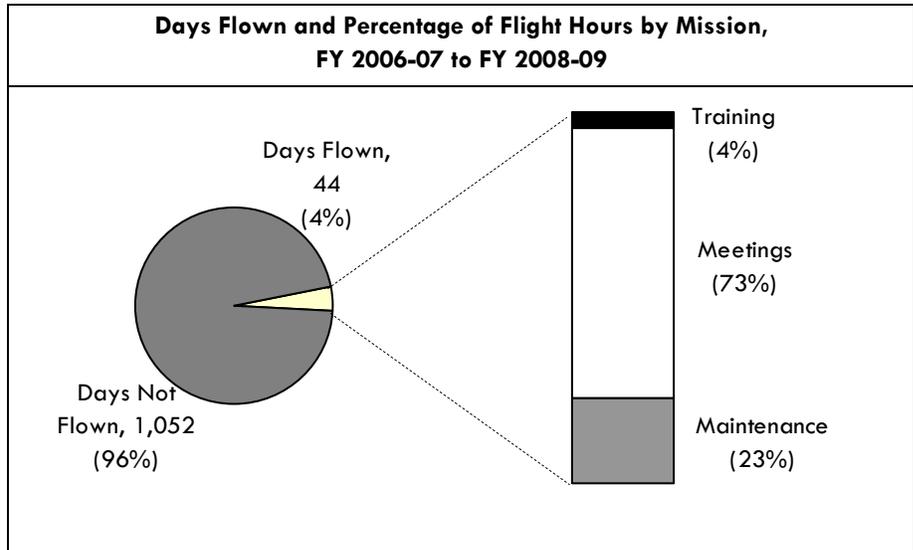
N3NC – Beechcraft B200



Purpose: Passenger transport		
Specifications: Twin engine turboprop airplane with retractable landing gear, seats 9		
Age: 2 years	Ownership: State	Current Value: \$4,649,000

Annual Flight Hours	
Fiscal Year 2006-07	Did not own
Fiscal Year 2007-08	Purchased
Fiscal Year 2008-09	27.5

Aircraft Costs	
Total cost (FY 2008-09)	\$338,017
Average annual flight hours (FY 2007-09)	27.5
Cost per hour	\$14,110



Department of Justice, State Bureau of Investigation

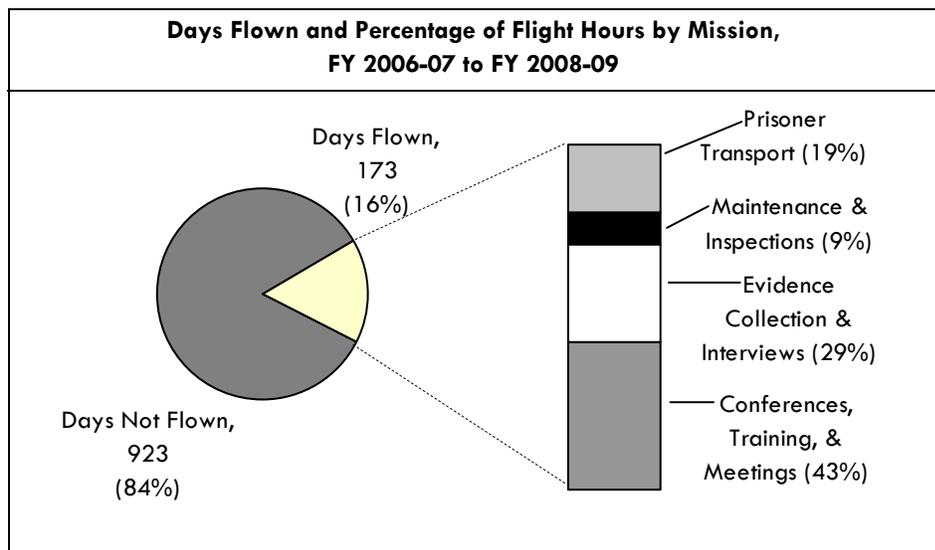
N500KR – Beechcraft King Air C90



Purpose: Law enforcement flights for investigating crimes, transporting prisoners and witnesses, and transporting Department of Justice and SBI staff to conferences, meetings, and trainings		
Specifications: Twin engine turboprop airplane with retractable landing gear, seats 7		
Age: 33 years	Ownership: State	Current Value: \$650,000

Annual Flight Hours	
Fiscal Year 2006-07	207.4
Fiscal Year 2007-08	155.4
Fiscal Year 2008-09	79.7

Aircraft Costs	
Total cost (FY 2008-09)	\$234,704
Average annual flight hours (FY 2007-09)	148
Cost per hour	\$1,591



Department of Environment and Natural Resources, Division of Marine Fisheries

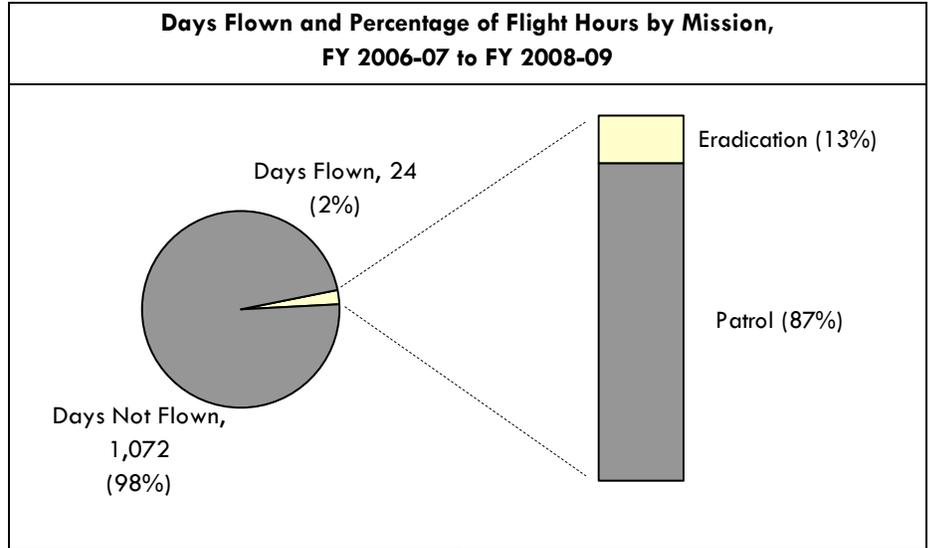
N431MP – Bell OH-58C



Purpose: Law enforcement patrol, currently used for salvage		
Specifications: Helicopter, seats 3		
Age: 41 years	Ownership: State	Current Value: \$0

Annual Flight Hours	
Fiscal Year 2006-07	30.8
Fiscal Year 2007-08	Salvage
Fiscal Year 2008-09	Salvage

Aircraft Costs	
Total cost (FY 2008-09)	\$8,408
Average annual flight hours (FY 2007-09)	31
Cost per hour	\$273



Department of Environment and Natural Resources, Division of Marine Fisheries

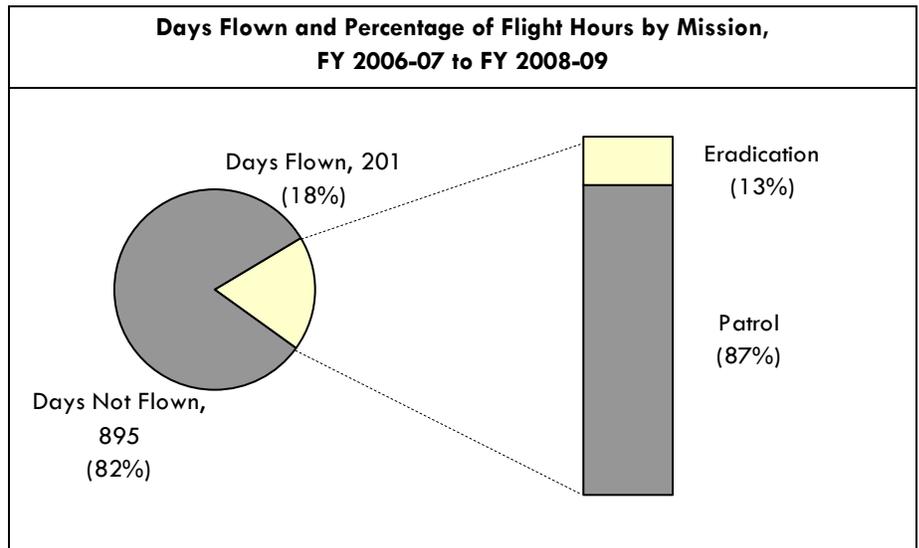
N433MP – Bell OH-58C



Purpose: Law enforcement patrol		
Specifications: Helicopter, seats 3		
Age: 37 years	Ownership: State	Current Value: \$190,000

Annual Flight Hours	
Fiscal Year 2006-07	110.2
Fiscal Year 2007-08	127.0
Fiscal Year 2008-09	55.8

Aircraft Costs	
Total cost (FY 2008-09)	\$41,203
Average annual flight hours (FY 2007-09)	98
Cost per hour	\$422



Department of Environment and Natural Resources, Division of Marine Fisheries

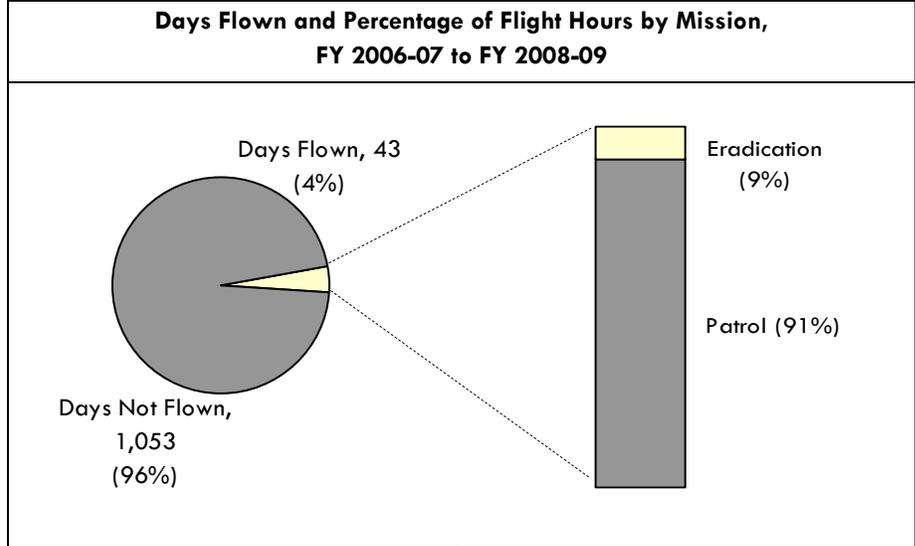
N434MP – Bell OH-58C



Purpose: Law enforcement patrol		
Specifications: Helicopter, seats 3		
Age: 41 years	Ownership: Federal	Current Value: Must be returned

Annual Flight Hours	
Fiscal Year 2006-07	15.0
Fiscal Year 2007-08	31.5
Fiscal Year 2008-09	8.0

Aircraft Costs	
Total cost (FY 2008-09)	\$1,813
Average annual flight hours (FY 2007-09)	18
Cost per hour	\$100



Department of Environment and Natural Resources, Division of Forest Resources

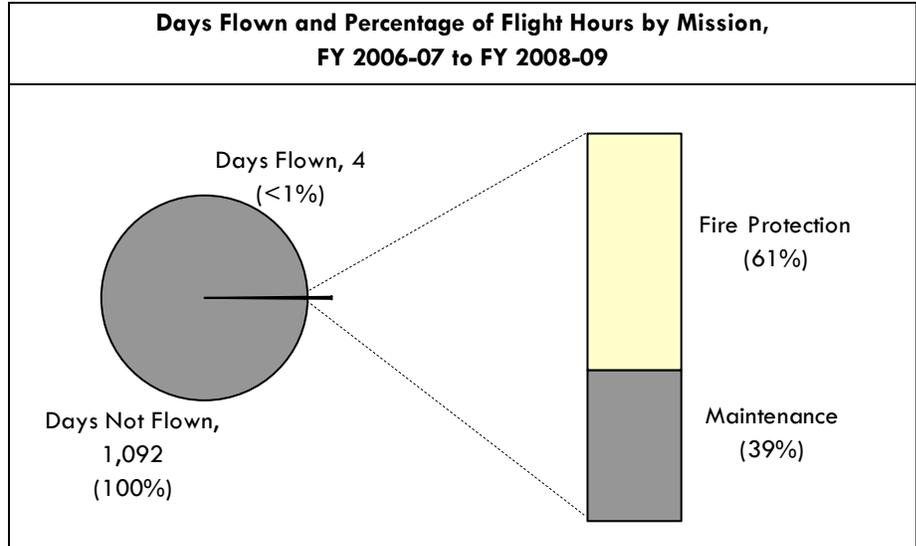
N8457 – Beechcraft T34



Purpose: Fire control, single engine air taker (SEAT) lead		
Specifications: Single engine airplane with retractable landing gear, seats 1		
Age: 52 years	Ownership: Federal	Current Value: Must be returned

Annual Flight Hours	
Fiscal Year 2006-07	Out of Service
Fiscal Year 2007-08	Out of Service
Fiscal Year 2008-09	4.1

Aircraft Costs	
Total cost (FY 2008-09)	\$47,982
Average annual flight hours (FY 2007-09)	4
Cost per hour	\$11,703



Department of Environment and Natural Resources, Division of Forest Resources

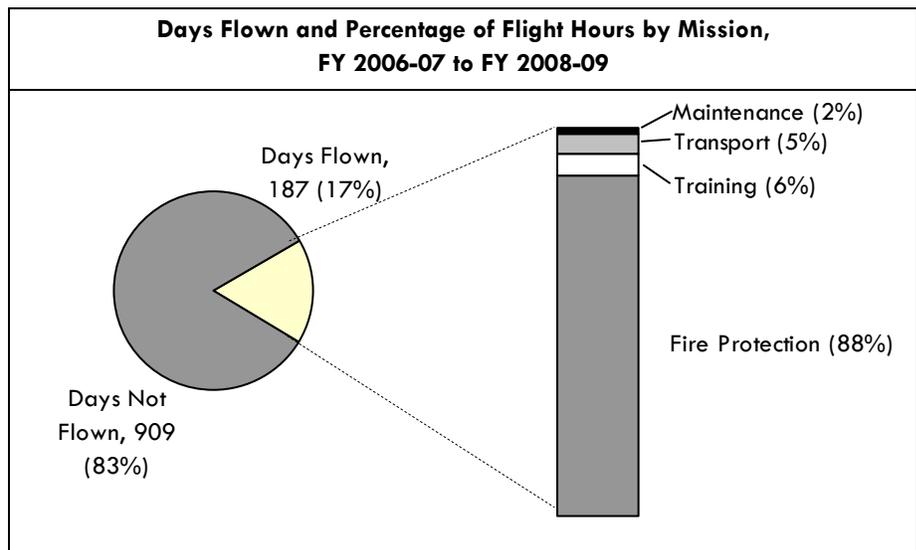
N6132N – Bell UH1H

PHOTO NOT AVAILABLE

Purpose: Fire control		
Specifications: Helicopter, seats 9		
Age: 43 years	Ownership: Federal	Current Value: Must be returned

Annual Flight Hours	
Fiscal Year 2006-07	1.0
Fiscal Year 2007-08	120.8
Fiscal Year 2008-09	47.7

Aircraft Costs	
Total cost (FY 2008-09)	\$181,461
Average annual flight hours (FY 2007-09)	57
Cost per hour	\$3,212



Department of Environment and Natural Resources, Division of Forest Resources

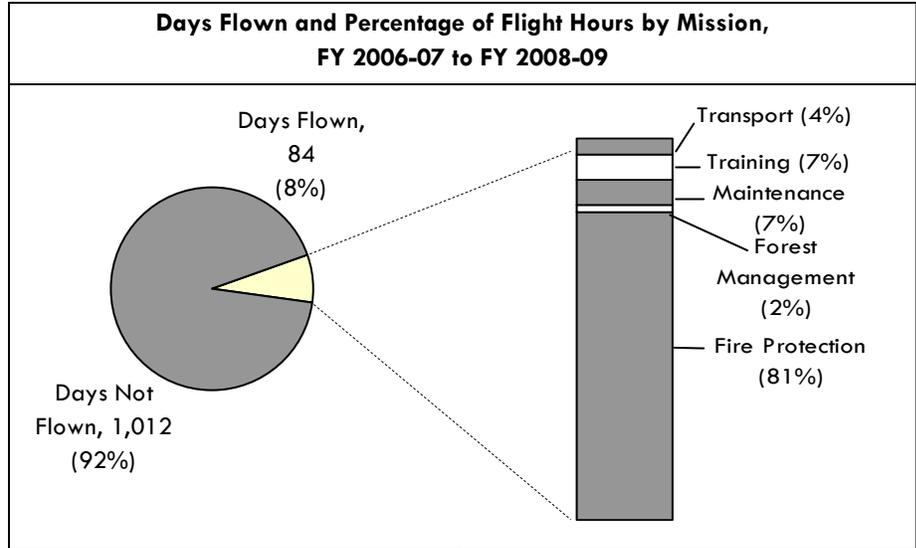
N5182F – Cessna C172



Purpose: Fire patrol		
Specifications: Single engine airplane with non-retractable landing gear, seats 1		
Age: 44 years	Ownership: Federal	Current Value: Must be returned

Annual Flight Hours	
Fiscal Year 2006-07	73.9
Fiscal Year 2007-08	94.7
Fiscal Year 2008-09	29.6

Aircraft Costs	
Total cost (FY 2008-09)	\$51,374
Average annual flight hours (FY 2007-09)	66
Cost per hour	\$778



Department of Environment and Natural Resources, Division of Forest Resources

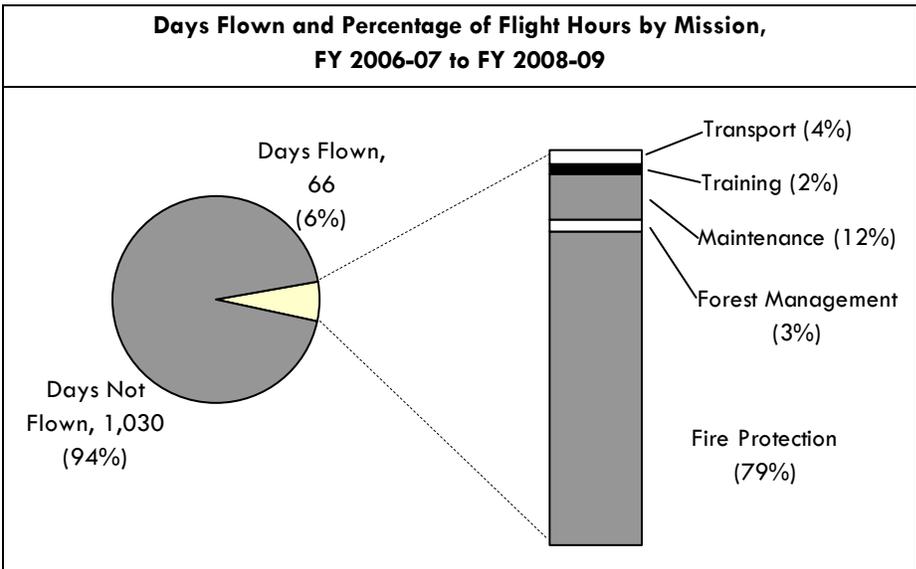
N920NC – Cessna C182



Purpose: Fire patrol, aerial photography		
Specifications: Single engine airplane with non-retractable landing gear, seats 3		
Age: 9 years	Ownership: State	Current Value: \$147,000

Annual Flight Hours	
Fiscal Year 2006-07	33.1
Fiscal Year 2007-08	82.8
Fiscal Year 2008-09	36.8

Aircraft Costs	
Total cost (FY 2008-09)	\$69,274
Average annual flight hours (FY 2007-09)	51
Cost per hour	\$1,361



Department of Environment and Natural Resources, Division of Forest Resources

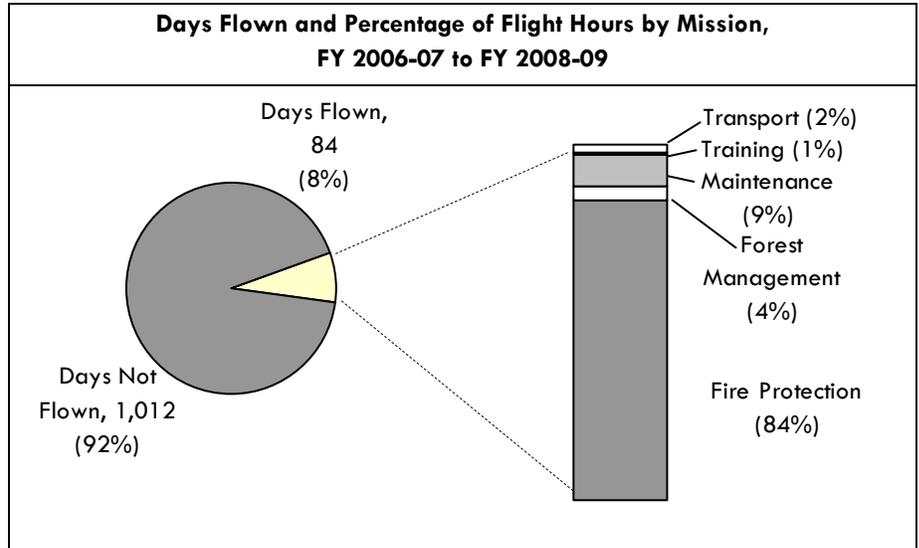
N735AX – Cessna C185

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Purpose: Fire patrol, water quality		
Specifications: Single engine airplane with non-retractable landing gear, tail dragger, seats 3		
Age: 24 years	Ownership: State	Current Value: \$183,000

Annual Flight Hours	
Fiscal Year 2006-07	96.0
Fiscal Year 2007-08	93.3
Fiscal Year 2008-09	51.1

Aircraft Costs	
Total cost (FY 2008-09)	\$65,007
Average annual flight hours (FY 2007-09)	80
Cost per hour	\$812



Department of Environment and Natural Resources, Division of Forest Resources

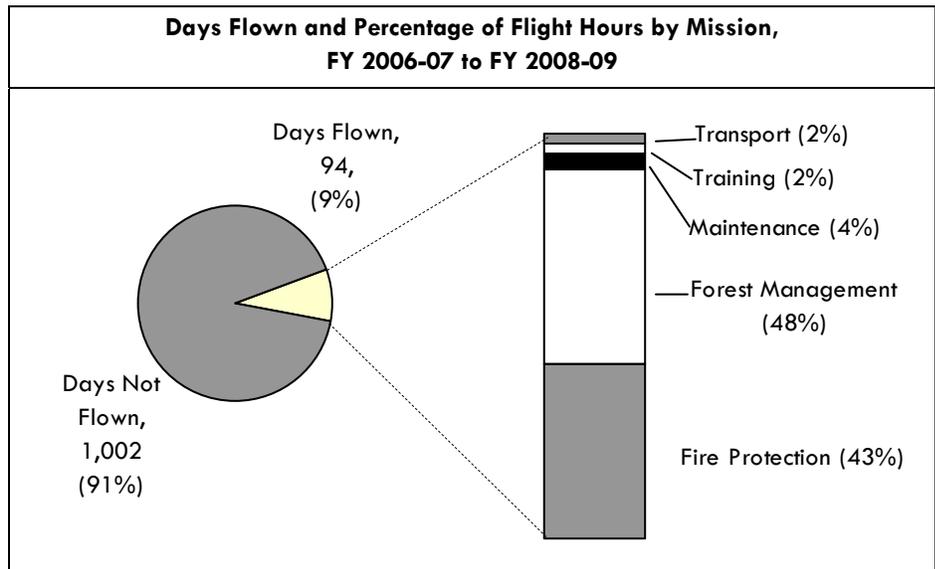
N735EK – Cessna C185



Purpose: Fire patrol, aerial photography		
Specifications: Single engine airplane with non-retractable landing gear, tail dragger, seats 3		
Age: 24 years	Ownership: State	Current Value: \$183,000

Annual Flight Hours	
Fiscal Year 2006-07	70.8
Fiscal Year 2007-08	135.5
Fiscal Year 2008-09	32.3

Aircraft Costs	
Total cost (FY 2008-09)	\$126,170
Average annual flight hours (FY 2007-09)	80
Cost per hour	\$1,586



Department of Environment and Natural Resources, Division of Forest Resources

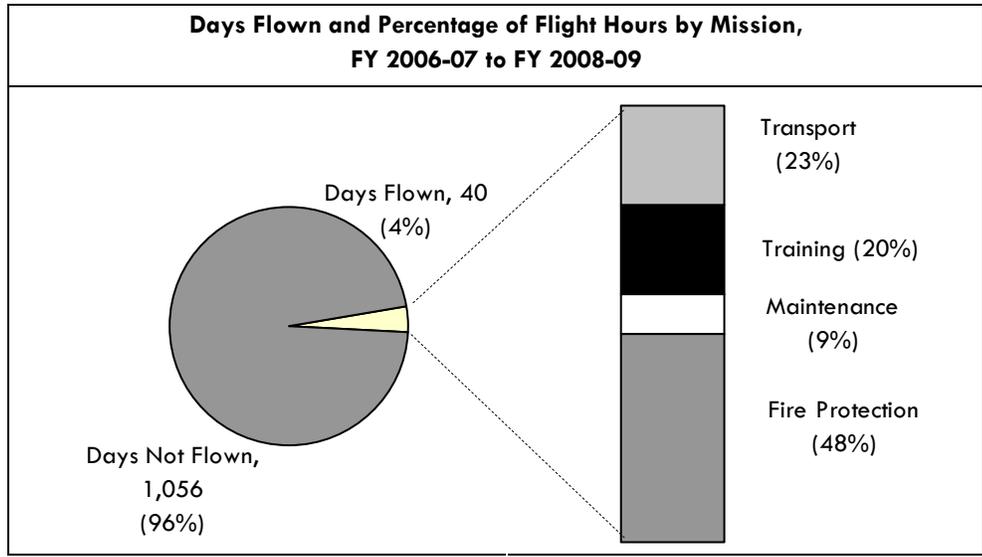
N29FC – Cessna C206



Purpose: Fire patrol, single engine air tanker (SEAT) support		
Specifications: Single engine airplane with non-retractable landing gear, seats 3		
Age: 41 years	Ownership: Federal	Current Value: Must be returned

Annual Flight Hours	
Fiscal Year 2006-07	Did not own
Fiscal Year 2007-08	46.8
Fiscal Year 2008-09	27.4

Aircraft Costs	
Total cost (FY 2008-09)	\$52,295
Average annual flight hours (FY 2007-09)	37
Cost per hour	\$1,410



Department of Environment and Natural Resources, Division of Forest Resources

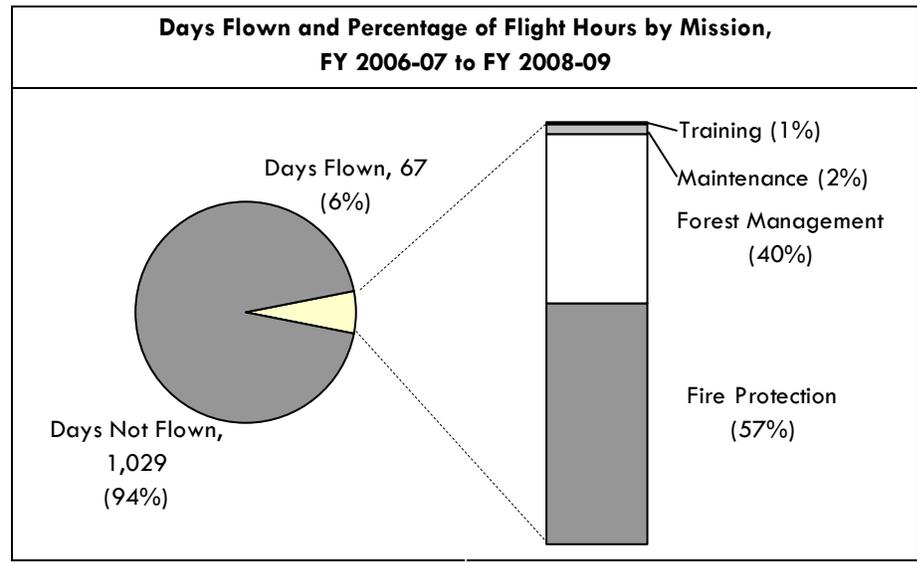
N1833 – Cessna C305A



Purpose: Fire patrol, aerial photography		
Specifications: Single engine airplane with non-retractable landing gear, tail dragger, seats 1		
Age: 44 years	Ownership: State	Current Value: \$110,000

Annual Flight Hours	
Fiscal Year 2006-07	141.0
Fiscal Year 2007-08	11.0
Fiscal Year 2008-09	Grounded

Aircraft Costs	
Total cost (FY 2008-09)	\$5,460
Average annual flight hours (FY 2007-09)	76
Cost per hour	\$72



Department of Environment and Natural Resources, Division of Forest Resources

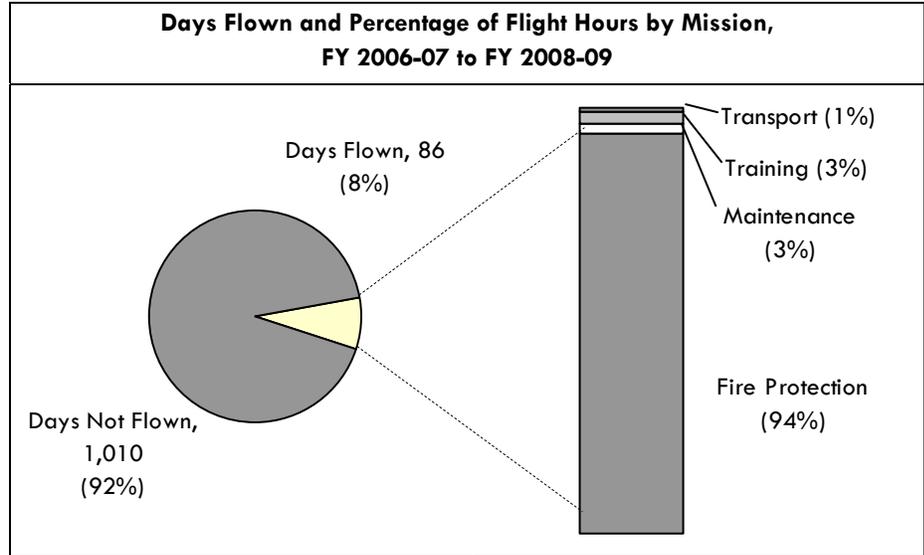
N150FS – Cessna L19



Purpose: Fire patrol		
Specifications: Single engine airplane with non-retractable landing gear, tail dragger, seats 1		
Age: 58 years	Ownership: Federal	Current Value: Must be returned

Annual Flight Hours	
Fiscal Year 2006-07	14.3
Fiscal Year 2007-08	197.6
Fiscal Year 2008-09	1.2

Aircraft Costs	
Total cost (FY 2008-09)	\$48,914
Average annual flight hours (FY 2007-09)	71
Cost per hour	\$689



Department of Environment and Natural Resources, Division of Forest Resources

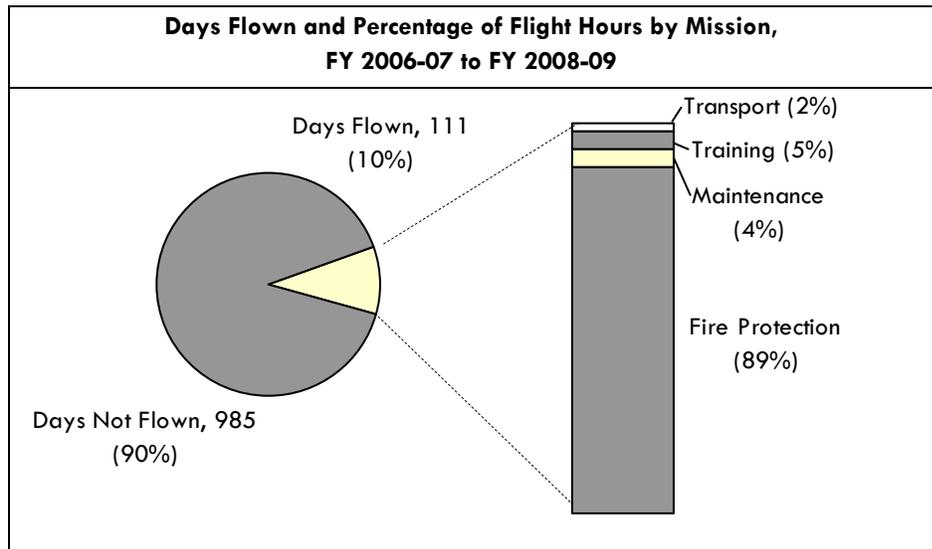
N4FS – Cessna L19



Purpose: Fire patrol		
Specifications: Single engine airplane with non-retractable landing gear, tail dragger, seats 1		
Age: 58 years	Ownership: Federal	Current Value: Must be returned

Annual Flight Hours	
Fiscal Year 2006-07	47.6
Fiscal Year 2007-08	197.6
Fiscal Year 2008-09	26.4

Aircraft Costs	
Total cost (FY 2008-09)	\$54,769
Average annual flight hours (FY 2007-09)	91
Cost per hour	\$605



Department of Environment and Natural Resources, Division of Forest Resources

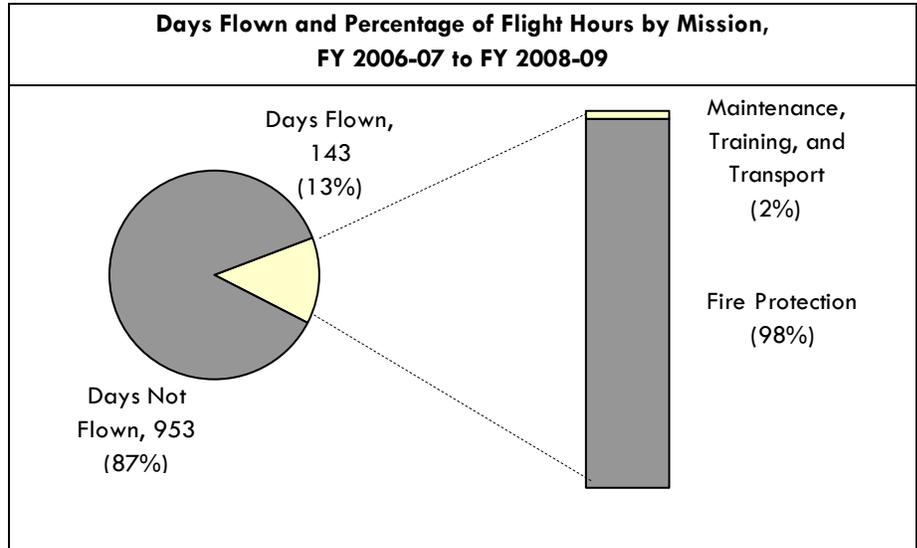
N64835 – Cessna L19



Purpose: Fire patrol		
Specifications: Single engine airplane with non-retractable landing gear, tail dragger, seats 1		
Age: 58 years	Ownership: Federal	Current Value: Must be returned

Annual Flight Hours	
Fiscal Year 2006-07	148.6
Fiscal Year 2007-08	244.7
Fiscal Year 2008-09	39.7

Aircraft Costs	
Total cost (FY 2008-09)	\$55,738
Average annual flight hours (FY 2007-09)	144
Cost per hour	\$386



Department of Environment and Natural Resources, Division of Forest Resources

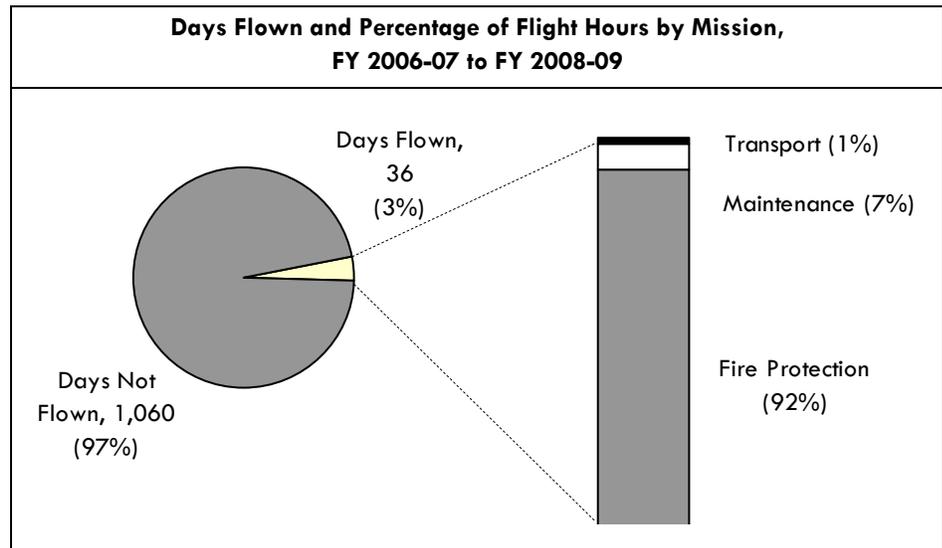
N9623Q – Cessna L19



Purpose: Fire patrol		
Specifications: Single engine airplane with non-retractable landing gear, tail dragger, seats 1		
Age: 58 years	Ownership: Federal	Current Value: Must be returned

Annual Flight Hours	
Fiscal Year 2006-07	81
Fiscal Year 2007-08	Not Flown
Fiscal Year 2008-09	Not Flown

Aircraft Costs	
Total cost (FY 2008-09)	\$2,295
Average annual flight hours (FY 2007-09)	81
Cost per hour	\$28



Department of Environment and Natural Resources, Division of Forest Resources

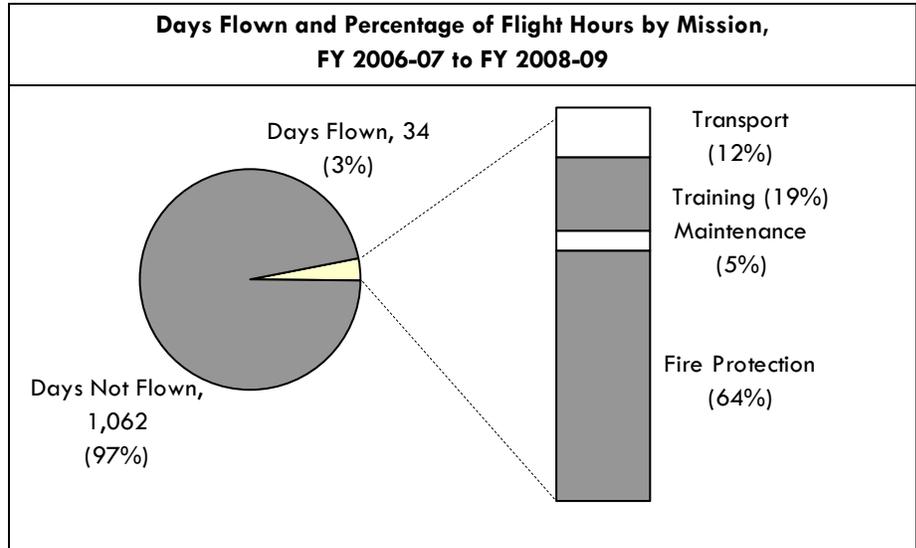
N4138Z – Piper PA 18-150



Purpose: Fire patrol		
Specifications: Single engine airplane with non-retractable landing gear, tail dragger, seats 1		
Age: 44 years	Ownership: State	Current Value: \$55,500

Annual Flight Hours	
Fiscal Year 2006-07	20.9
Fiscal Year 2007-08	37.4
Fiscal Year 2008-09	2.8

Aircraft Costs	
Total cost (FY 2008-09)	\$48,504
Average annual flight hours (FY 2007-09)	20
Cost per hour	\$2,382



Department of Environment and Natural Resources, Division of Forest Resources

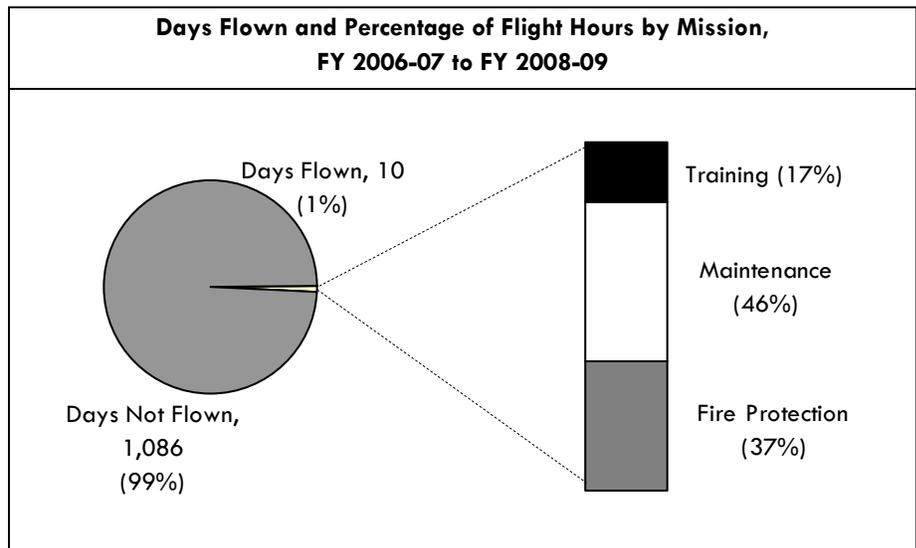
N7854Q – Piper PA 31-350



Purpose: Personnel transport		
Specifications: Twin engine airplane with retractable landing gear, seats 4		
Age: 32 years	Ownership: Federal	Current Value: Must be returned

Annual Flight Hours	
Fiscal Year 2006-07	8.5
Fiscal Year 2007-08	2.1
Fiscal Year 2008-09	1.8

Aircraft Costs	
Total cost (FY 2008-09)	\$50,846
Average annual flight hours (FY 2007-09)	4
Cost per hour	\$12,301



Department of Environment and Natural Resources, Division of Forest Resources

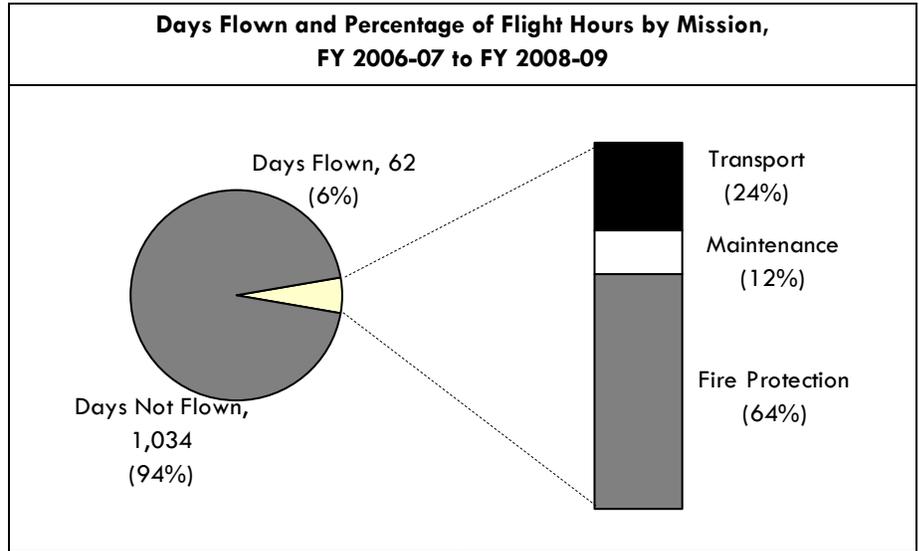
N215NC – Canadair CL215



Purpose: Fire suppression special use tanker		
Specifications: Twin engine propeller airplane, capable of scooping water from lakes, no passengers		
Age: 41 years	Ownership: State	Current Value: Limited market value

Annual Flight Hours	
Fiscal Year 2006-07	124.4
Fiscal Year 2007-08	42.1
Fiscal Year 2008-09	Out of service

Aircraft Costs	
Total cost (FY 2008-09)	\$338,549
Average annual flight hours (FY 2007-09)	83
Cost per hour	\$4,667



Department of Environment and Natural Resources, Division of Forest Resources

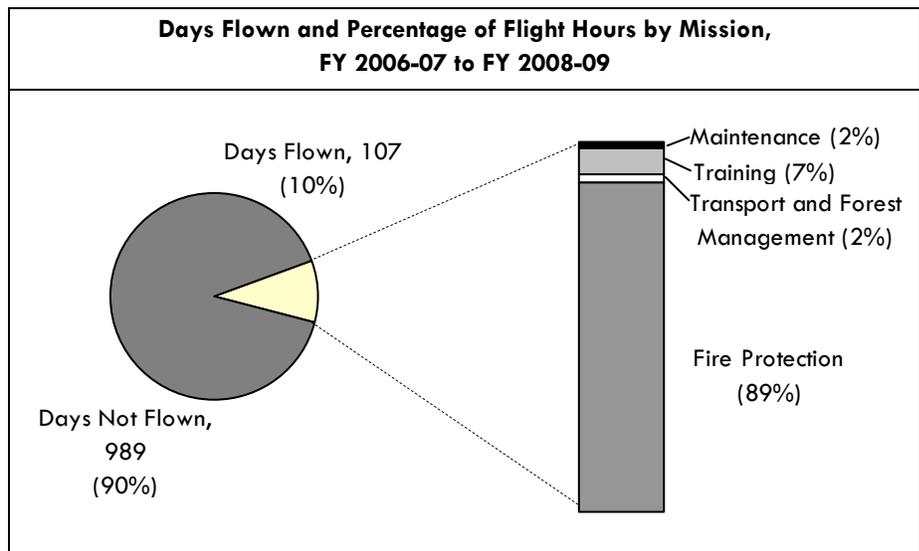
N350NC – Eurocopter As350B



Purpose: Fire suppression, prescribed burning, search and rescue		
Specifications: Helicopter, seats 4		
Age: 7 years	Ownership: State	Current Value: \$1,950,000

Annual Flight Hours	
Fiscal Year 2006-07	64.2
Fiscal Year 2007-08	120.7
Fiscal Year 2008-09	88.0

Aircraft Costs	
Total cost (FY 2008-09)	\$220,298
Average annual flight hours (FY 2007-09)	91
Cost per hour	\$2,422



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Salvage Aircraft

De-registered – Dehavilland DHC2



Specifications: Single engine airplane with non-retractable landing gear, seats 3		
Age: 54 years	Ownership: Federal	Current Value: Must be returned
Total Cost FY 2008-09: \$1,999		

N1623S – Snow S2C



Specifications: Single engine airplane with non-retractable landing gear, tail dragger, no passengers		
Age: 46 years	Ownership: State	Current Value: \$0
Total Cost FY 2008-09: \$26,043		

N382CJ – Bell UH1H



Specifications: Helicopter, seats 9		
Age: 45 years	Ownership: Federal	Current Value: Must be returned
Total Cost FY 2008-09: \$1,999		

N81785– Bell UH1H



Specifications: Helicopter, seats 9		
Age: 46 years	Ownership: Federal	Current Value: Must be returned
Total Cost FY 2008-09: \$0		