



10. AVIATION

10.1 Introduction

Air transportation is an important transportation mode in the DRA region because these facilities transport people and cargo throughout the region and the world; provide quick response to critically ill residents accessing local and regional hospitals and trauma centers; provide recreational pilots access to hundreds of destinations; and provide economic development opportunities to local and regional economies. There are a total of 993 public and private aviation facilities in the DRA region, while 256 are public facilities. While every public air transportation facility serves a purpose, the 13 commercial airports that provide both passenger and freight service are vital assets to the quality of life and economy in the DRA region. The following section outlines the air transportation assets, needs and recommendations in the DRA region.

10.1.1 Asset Inventory

10.1.1.1 Facility Type

Air transportation facilities in the DRA Region take a number of forms, including: airports, heliports, seaplane bases, STOLPorts, ultralight flight parks, and gliderports.

The FAA maintains a database to record all public and private air transportation facilities. While all air transportation facilities are an asset in the DRA region, this report focuses on public air transportation facilities. As shown in **Table 16**, there are 256 public and 737 private air transportation facilities in the DRA region that provide a variety of aviation choices. Public airports and heliports represent 26 percent of total air transportation facilities in the DRA region. **Figure 32** shows a breakdown by state of the number of public and private air transportation facilities in the DRA region.

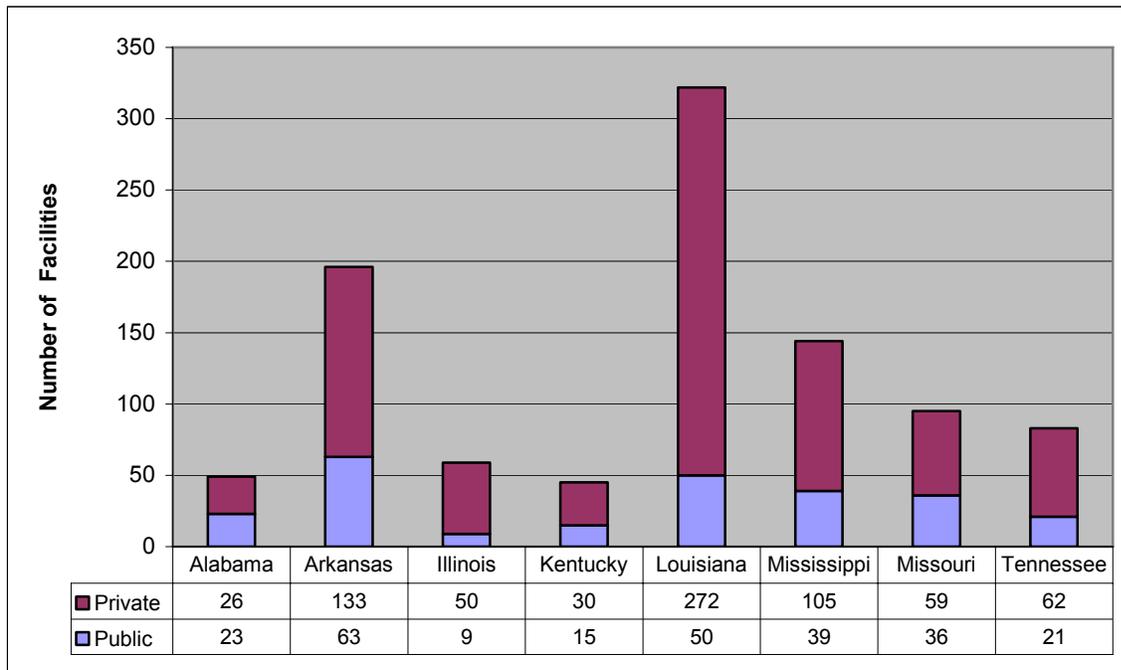
Table 16: DRA Air Transportation Facilities by Type

Facility Type	Public Use	Private Use	Total
Airport	253	405	658
Heliport	3	306	309
Gliderport	0	2	2
Seaplane Base	0	6	6
Ultralight Flight Park	0	14	14
STOLPort	0	4	4
Total	256	737	993

Source: Federal Aviation Administration



Figure 32: DRA Air Transportation Facilities by State



Source: Federal Aviation Administration

10.1.1.2 National Plan of Integrated Airport Systems

The FAA recognizes the importance of a safe, efficient civil air transportation system, and has developed a national aviation system plan to identify airports significant to national air transportation. This plan is known as the *National Plan of Integrated Airport Systems* (NPIAS). The NPIAS includes all commercial service and reliever airports, and selected general aviation airports. Approximately 65 percent of U.S. airports, open to the public, are included in the NPIAS and approximately 98 percent of the U.S. population resides within 20 miles of one of these NPIAS airports. FAA uses the NPIAS to identify airports eligible to receive federal grants through the Airport Improvement Program (AIP). The AIP provides funding to improve the safety and capacity, as well as rehabilitation/reconstruction funding to preserve infrastructure of the nation’s air transportation system.

The NPIAS categorizes airports into the following major categories, as shown in **Table 17**.



Table 17: NPIAS Airport Categories

Airport Type	Basic Description	Example Airport
Primary Commercial Service Airports	Receive greater than 2,500 scheduled passenger service enplanements per year	None
Large Hub	Account for at least 1 percent of total U.S. annual enplanements	Memphis International Airport
Medium Hub	Account for between 0.25 percent and 1 percent of total U.S. annual enplanements	Baton Rouge
Small Hub	Account for between 0.05 percent and 0.25 percent of total U.S. annual enplanements	Metropolitan Airport
Non-Hub	Account for less than 0.05 percent of total U.S., but more than 10,000 annual enplanements	Barkley Regional Airport, Paducah, Kentucky
Non-Primary Commercial Service Airports	Between 2,500 and 10,000 annual enplanements	Cape Girardeau Regional, Cape Girardeau, Missouri
Reliever Airports	High capacity general aviation airports to relieve commercial airports in major metropolitan areas.	Olive Branch Airport, Olive Branch, Mississippi
General Aviation Airports	Provide airport facilities to communities greater than 20 miles from nearest NPIAS Airport. Must have at least 10 based aircraft.	Benton Municipal Airport, Benton, Illinois

Source: Federal Aviation Administration

Of the 256 public airports located in the DRA region, 192 are included in the NPIAS and are therefore eligible for AIP federal funding. The 192 public airports in the DRA region have the following NPIAS classifications:

- 2 Medium hub;
- 3 Small hub;
- 5 Non-hub;
- 3 Non-primary commercial service airport;
- 4 reliever airports; and
- 173 General aviation airports.

There are 64 non-NPIAS public General Aviation airports in the DRA region and these facilities are dependent on state and local funding. Based on consultation with each of the eight state aeronautics departments, the following new airports have been proposed in the DRA region:

- Delta Regional Airport, St. Francis County, Arkansas; and
- Choctaw, Clarke, and Marengo County, Alabama Regional Airport.

Regional Airports are typically designed to replace one or more municipal or county airports in order to provide an expanded range of services to meet a region’s anticipate aviation needs. Regional Airports can also be effective in reducing the overall operations and rehabilitation cost by combining several facilities. These facilities are often used to serve as



an economic recruiting tool for an entire region consisting of several counties and municipalities.

10.1.1.3 Major Passenger and Cargo Airports

The following five airports provide valuable passenger and cargo services and are large economic engines in the DRA region.

BATON ROUGE METROPOLITAN AIRPORT

The Baton Rouge Metropolitan Airport is located in the northwest portion of East Baton Rouge Parish, about 5 miles north of downtown Baton Rouge, adjacent to I-110. In the fall of 2005, Hurricanes Katrina and Rita caused a series of unforeseeable events that significantly changed Baton Rouge's aviation activity and growth. Although the hurricanes displaced a substantial portion of the region's population and damaged a number of airports along the Gulf Coast, Baton Rouge Metropolitan Airport emerged relatively unharmed. As a result, the airport has experienced a dramatic increase in operations since the fall 2005.¹⁰⁰ The Baton Rouge Metropolitan Airport completed Phase I (32,800 Square Feet) of its Air Cargo Facilities in 2005. The Phase I Cargo Facility is currently at capacity with air cargo operations conducted by FedEx Air Cargo and Integrated Airlines Services. However, to continue its pursuit to develop air cargo activity, the Airport is currently in the design process for the Phase II Air Cargo Project, which entails adding additional facilities, truck docking, staging and aircraft parking area.¹⁰¹ Although some of the post-hurricane activity receded in 2006, the latest statistics from January to April 2008 show that the number of passengers was nearly 307,000, which is substantially higher than during the same period in 2005.¹⁰²

JACKSON-EVERS INTERNATIONAL AIRPORT

The Jackson-Evers International Airport is located 5 miles east of Jackson, Mississippi at the intersection I-55 and I-20. The airport provides 40 daily non-stop flights (arrivals and departures) to 10 cities/12 airports via eight passenger carriers and provides cargo services. The Jackson International Airport Air Cargo Logistics Center provides an optimal location for air cargo and logistics management for companies doing business in the South Central United States of America. Kansas City Southern and Canadian National Railways maintain two mainlines and yards with 10 minutes of Jackson International Airport, both with modern full service intermodal facilities.¹⁰³ As of April 2008, passenger service is up nearly 1 percent

¹⁰⁰ *Master Plan Update baton Rouge Metropolitan Airport*, Great Baton Rouge Airport District. February 2007.

¹⁰¹ Baton Rouge Metropolitan Airport

¹⁰² Baton Rouge Metropolitan Airport

¹⁰³ *Mississippi Air Cargo Logistics Center, Jackson International Airport, the Intermodal Link for Southcentral U.S. Jackson-Evers International Airport*, 2006



over 2007 with approximately 440,000 passengers using the airport during this four month period.¹⁰⁴

LITTLE ROCK NATIONAL AIRPORT

Little Rock National Airport officially designated Adams Field, is located 2 miles east of the downtown Little Rock and it is Arkansas' largest commercial service airport, serving about 2.1 million passengers annually. The airport attracts passengers from a large part of Arkansas, as well as a number of surrounding states. There are more than 150 flights (arrivals and departures) a day, serving 18 cities. A \$3 million renovation of the baggage claim wing has been completed and upgrades to the second level, including the concourse, are currently under construction. Over the last year and a half, almost \$180 million in improvement have been made at the airport to ensure it will continue to serve the traveling public. The direct economic benefit of the Little Rock National Airport has been estimated at \$263 million annually. As of April 2008, passenger service is up nearly 2 percent over 2007 with over 768,000 passengers using the airport during this four month period.¹⁰⁵

LOUIS ARMSTRONG NEW ORLEANS INTERNATIONAL AIRPORT

The Louis Armstrong New Orleans International Airport (LANOIA) is a very important part of the New Orleans area economy. The airport serves as the gateway to the important New Orleans tourism industry, as well as for local and visiting business people. Most importantly, however, the economic activities directly related to LANOIA generate over \$1 billion in economic impact to the economy. The airport also provides crucial services to local business and industry and it is the ninth largest origin-and-destination airport in the U.S. These activities are concentrated in close physical proximity to the Airport and generate income, jobs and tax revenue for local residents. Airport cargo facilities play a large part in the efficient movement of your cargo. LANOIA, as your cargo partner, has embarked on an aggressive \$850 million expansion plan resulting in cargo facilities and equipment. As of March 2008, passenger service is nearly 16 percent over 2007 with over 1 million passengers using the airport during this three month period.¹⁰⁶

MEMPHIS INTERNATIONAL AIRPORT

The single largest economic engine in Memphis is the Memphis International Airport, which is located three miles south of downtown Memphis with access to I-240 and I-55. Memphis International Airport serves as a regional hub for Northwest Airlines and is home to Federal Express Corporation Super Hub.

¹⁰⁴ Jackson-Evers International Airport

¹⁰⁵ Little Rock National Airport

¹⁰⁶ Louis Armstrong New Orleans International Airport



The continued development of a powerful value-added air-cargo, logistics, and distribution industry in Memphis depends heavily upon air services. In 2003, Memphis International Airport ranked 37th of all U.S. airports in passenger enplanements and number 1 in cargo volume. Memphis International Airport has been the world's busiest cargo airport since 1992, and operations at the FedEx Super Hub accounted for 93.6 percent of all cargo at the airport. The long-term investments completed by the Airport have generated billions in output and earnings and thousands of job opportunities for Memphis-area residents. In fact, the total combined direct expenditures of FY 2004 cargo and passenger operations and construction projects and expenditures at Memphis International Airport totaled nearly \$10.7 billion, resulting in total output in the Memphis area of over \$20.7 billion and the generation of nearly 166,000 jobs.¹⁰⁷ Memphis International Airport is poised to become one of the few global transportation logistics hubs in the world due to the strategic improvements made and planned at the airport. As of April 2008, passenger service is up 2 percent over 2007 with over 3.4 million passengers using the airport during this four month period.¹⁰⁸

10.1.2 Needs

Needs were collected and assessed using a variety of sources, including FAA's NPIAS Plan, State Aviation System Plans, input from each facility owner / operator through an open on-line survey provided on the project website (www.dramultimodal.com), and the regional coordination meeting conducted in each of the eight states. Needs for each airport facility are included in the CD that accompanies this report. Air Transportation needs are classified into the following categories:

- Safety;
- Capacity;
- Rehabilitation and Reconstruction; and
- Economic Development.

The public air transportation needs in the DRA region total \$1.5 billion.¹⁰⁹

10.1.2.1 Safety

Airports provide aircraft with a safe environment from which to takeoff, land, taxi, and transfer cargo and passengers. The U.S. has the largest, most complex, and safest aviation system in the world.¹¹⁰ To ensure uniform operating facilities throughout the country, FAA has developed standards that address the physical layout characteristics of an airfield. FAA

¹⁰⁷ *The Economic Impact of Memphis International Airport*. Memphis International Airport, May 2005

¹⁰⁸ Memphis International Airport

¹⁰⁹ Needs calculated by reviewing the *National Plan of Integrated Airport Systems*, state aviation plans, and local airport operators in the DRA region.

¹¹⁰ *National Plan of Integrated Airport Systems (NPIAS), 2007 – 2011 Report to Congress*



provides funding to NPIAS airports to make necessary capital improvements to comply with established standards.

The FAA Office of Airport Safety and Standards has primary responsibility for all programs related to airport design, construction, and safety. In recent years, FAA has placed an emphasis on airport certification, runway safety areas, and runway incursion prevention.

10.1.2.2 Airport Certification

The FAA has maintained an airport certification program since 1972. This program is described in Code 14 of Federal Regulations, Part 139 Certification of Airports. This Code requires FAA to issue operating certificates to airports that serve commercial aircraft with a seating capacity of greater than nine passengers. Part 139 establishes safety standards for items such as the condition of pavement surfaces, shoulders, safety area, lighting signage, and other items that may affect safe aircraft movement. Part 139 also establishes standards for the type of aircraft rescue and fire fighting equipment and personnel training. Part 139 certificated airports are eligible to use federal AIP funding toward certain items specifically pertaining to maintaining Part 139 standards. The following 16 airports are Part 139 certificated airports in the DRA region:¹¹¹

- South Arkansas Regional, Arkansas (ELD);
- Jonesboro Municipal, Jonesboro, Arkansas (JBR);
- Adams Field, Little Rock, Arkansas (LIT);
- Southern Illinois, Carbondale, Illinois (MDH) ;
- Williamson County Regional, Marion, Illinois (MWA);
- Barkley Regional, Paducah, Kentucky (PAH);
- Alexandria International, Alexandria, Louisiana (AEX) ;
- Baton Rouge Metro – Ryan Field, Baton Rouge, Louisiana (BTR);
- Monroe Regional, Monroe, Louisiana (MLU) ;
- Jackson-Evers International, Jackson, Mississippi (JAN);
- University-Oxford Airport, Oxford, Mississippi (UOX);
- Tunica Airport, Tunica, Mississippi (UTA) ;
- Cape Girardeau Regional, Cape Girardeau, Missouri (CGI);
- Memphis International, Memphis, Tennessee (MEM);
- McKellar-Sipes Regional, Jackson, Tennessee (MKL); and
- Millington Municipal, Millington, Tennessee (NQA).

¹¹¹ http://www.faa.gov/airports_airtraffic/airports/airport_safety/part139_cert/



10.1.2.3 Runway Safety Areas

Runway Safety Areas (RSAs) are defined surfaces surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway¹¹². These standards generally require a graded, compacted area free of ruts, humps, surface irregularities, and any other objects.

The FAA began an initiative in 2000 to accelerate RSA improvements at the nation's commercial service airports. The program's goal is to have all practical improvements completed by 2015. Approximately 88 percent of the required improvements will be made by 2010. In areas where a full RSA is not practical due to land constraints or excessive costs, FAA has approved the use of an Engineered Materials Arresting System (ERAS) consisting of crushable materials placed at the end of the runway designed to absorb the forward momentum of an aircraft veering off the runway. RSA improvements are typically eligible for AIP funding for airports included in the NPIAS.

10.1.2.4 Runway Incursion Prevention

The prevention of runway incursions has been identified as a "Most Wanted Aviation Safety Improvement" by the National Transportation Safety Board (NTSB). Reducing the risk of runway incursions is also one of FAA's top priorities. A runway incursion is any unauthorized intrusion onto a runway, including aircraft, ground vehicles, or pedestrians. Despite improved technology, increased training and awareness, and installation of more visible pavement markings, the rate of runway incursions in the U.S. has not changed appreciably over the past four years at approximately 6.1 incursions per 1,000,000 tower operations.¹¹³ FAA reports that the number of serious runway incursions known as Category A and B incursions has dropped 55 percent from FY 2001 to FY 2007. FAA is continuing to emphasize this issue through outreach, training, improved infrastructure, and technology. The proposed physical improvements to airfields include improved pavement markings, "end-around" taxiways, runway status lights similar in concept to traffic signals, and installation of more advanced surface movement detection equipment.

The needs identified by DRA region airports and in the NPIAS include numerous runway, taxiway, apron, roadway and facility safety improvements.

10.1.2.5 Capacity

The capacity of an airport system is affected by a variety of factors, including the physical layout of individual airport facilities, airspace utilization and organization, airport operating procedures, and technology.¹¹⁴ In May 2007, FAA released a report on airport capacity titled

¹¹² FAA Advisory Circular 150/5300-13.

¹¹³ National Transportation Safety Board.

¹¹⁴ *National Plan of Integrated Airport Systems*, 2007. Federal Aviation Administration.



Capacity Needs in the National Airspace System. This report, known as FACT2, was developed to determine which airports and metropolitan areas have the greatest need for additional capacity. The analysis included 291 commercial service airports in the U.S. The report recommended that 56 commercial airports be studied in greater detail to evaluate future capacity needs. Memphis International Airport was one of the 56 airports recommended for further capacity evaluation. Meeting future capacity for the nation's air transportation system will require ongoing monitoring and study of the system and a variety of solutions, including new runways and commercial service airports, more efficient management of traffic, and improved technology to increase capacity.

Although airport capacity is a critical issue to the nation's air transportation system, the majority of the airports within the DRA region are not limited by infrastructure capacity. A general rule is that a single runway with a parallel taxiway can normally accommodate 200,000 annual aircraft operations.¹¹⁵ Very few airports within the DRA region surpass this number of annual operations. The development and use of reliever airports around major metropolitan air carrier airports is recognized as an effective way to reduce airport congestion. The needs identified by DRA region airports and in the NPIAS include many runway, taxiway, apron, roadway and facility expansion improvements.

10.1.2.6 Rehabilitation and Reconstruction

Rehabilitating and preserving existing air transportation assets is a top priority for all airports in the DRA region. It is critical to maintaining safe, operable airports and protecting previous federal, state, and local infrastructure investments. The timing of rehabilitation and maintenance measures is critical in extending the life of airport pavements. Delay of maintenance measures can result in major rehabilitation or reconstruction measures costing four to five times as much as the original maintenance costs performed at the optimum time.¹¹⁶ The needs identified by DRA region airports and in the NPIAS include many runway, taxiway, apron, roadway and facility rehabilitation and maintenance improvements.

10.1.2.7 Economic Development

Initially railroads played a vital role in determining a region's economic power and over the last 50 years highway systems have served this role. However, global air transportation systems are proving to be essential economic engines in the future for cities, regions and countries. The DRA region is home to the largest air freight cargo airport in the world. Memphis International Airport is home to Federal Express Corporation, which is a huge economic engine to Memphis and the surrounding DRA region. Federal Express handles more than 7.5 million daily shipments; provides service to more than 220 countries and

¹¹⁵ *National Plan of Integrated Airport Systems.* Federal Aviation Administration.

¹¹⁶ *Selecting a Preventative Maintenance Treatment for Flexible Pavements,* Gary R. Hicks, P.E., Ph.D., June 14, 2000



territories; employs more than 290,000 employees and contractors worldwide; operates four separate companies; and owns 671 aircraft, more than 75,000 motorized vehicles and serves 375 airports worldwide.¹¹⁷ Freight cargo carriers continue to have a significant impact at the Memphis International Airport, making the airport one of the few dual-purpose airports in the U.S. The Memphis International Airport has maintained its #1 ranking in the world for total air cargo handled since 1992, according to statistics reported by Airports Council International, Geneva, Switzerland.¹¹⁸ In addition to the airport, the Memphis region also provides over 130 million square feet of distribution space, which has resulted in this area being described as the following:¹¹⁹

- The “hottest logistics location from which to manage logistics operations in the U.S. today”— *Business Facilities*.
- Considered an ““Elite, Five Star Logistics Metro” by *Expansion Management Magazine*.
- Memphis is “North America’s Logistics Center” leading the nation in Logistics Industry workforce (17%).

The needs identified by DRA region airports and in the NPIAS include many runway, roadway, passenger terminal and cargo facility improvements that once completed will assist in local and regional economic developments efforts in the DRA region.

10.1.2.8 Heliports

As mentioned earlier, a heliport is a small airport suitable for use only by helicopters. A heliport will typically have one or more paved helipads to provide a landing area for helicopters and may also have lighting, a windsock, and fueling facilities. Typically, a heliport is substantially smaller than an airport providing comparable services. The helicopter has the capability of providing a wide variety of important services to any community that integrates this aircraft into its local transportation system. In addition to service in the transportation of people, helicopters have proven to be useful to local communities in the following ways:¹²⁰

- Disaster relief;
- Air ambulance services;
- Police services; and
- Moving high-value assets.

¹¹⁷ Federal Express Corporation, May 2008.

¹¹⁸ Memphis International Airport, May 2008

¹¹⁹ *Memphis International Airport & Air Cargo. Where World Class Logistics meet America’s Distribution Center!* Memphis International Airport Brochure.

¹²⁰ *Heliport Design – Advisory Circular 150/5390-2B*. U.S. Department of Transportation Federal Aviation Administration. September 2004.



Helicopters have proven to be an effective means of transporting injured persons from the scene of an accident to a hospital and in transferring patients in critical need of specialized services from one hospital to another hospital having that capability. A functional hospital heliport may be as simple as a cleared area on the ground, together with a windsock and a clear approach/ departure path.¹²¹ There are 309 heliports in the DRA region and numerous hospitals and other medical facilities maintain private heliport to provide rapid access to healthcare for critical patients. These heliports are strategically located throughout the DRA region and are extremely important to meeting critical health care needs of residents in the DRA region.

While the vast majority of heliports are privately owned, there are three public heliports in the DRA region that are publicly owned. For instance, the New Orleans Downtown Heliport is conveniently located on top of the parking garage next to the Louisiana Superdome in the heart of the Central Business District. The heliport is operated by the New Orleans Aviation Board and it is vital to the long-term growth and economic health of the New Orleans area. It is vitally important that heliports associated with transporting critically ill patients are maintained, improved and expanded throughout the DRA region.

10.1.2.9 State Aviation Initiatives

Significant changes in the aviation industry have taken place in the DRA region in recent years. In particular, Hurricanes Katrina and Rita caused significant damages to public and private airports in New Orleans and other coastal parishes. Aviation fuel prices have risen dramatically over the past 18 months and many recreational pilots have reduced flying hours because of the higher fuel prices. Regional jets are now the prominent jet serving smaller commercial airports in the DRA region. Finally, uncertainty in the FY 2008 Aviation Improvement Program Legislation has caused many projects to be scaled back or delayed.

While Baton Rouge, Little Rock, Jackson (Mississippi), Memphis and New Orleans airports will continue to be strong economic engines, there are many other commercial and general aviation airports in the DRA region that have needs. The following provides a state-by-state summary of airport needs documented in state aviation plans or provided in the DRA needs survey. All airport needs are provided in the CD that accompanies this report.

ALABAMA

The Alabama Department of Transportation Aeronautics Bureau (ALDOT Aeronautics) completed a State Aviation System Plan in January 2005. The purpose of the plan was to

¹²¹ *Helicopter Design – Advisory Circular 150/5390-2B*. U.S. Department of Transportation Federal Aviation Administration. September 2004.



evaluate the needs of the state's aviation system, assess the performance of the system, and to determine the level of spending required to support future activity and growth.¹²²

The Plan includes an inventory of the existing state aviation system, aviation demand forecasts, an evaluation of airport roles, a recommended airport system to effectively serve aviation needs, and an analysis of each airport's economic impact. The needs assessment contained in the study recommends a total of \$667 million over the next 10 years to improve Alabama's airport system (statewide).

The DRA region encompasses 23 public use airports in Alabama including 19 NPIAS General Aviation Airports and 4 Non-NPIAS Airports. Based on the System Plan there are approximately \$45 million in airport needs in the DRA region.¹²³ A summary of specific airport needs include the following:

- Extend runway at Demopolis Municipal Airport;
- Extend runway at Atmore Municipal Airport;
- Construct runway at Franklin Field in Union Springs; and
- Install instrument approach aid at George Downer Airport in Aliceville.

While this only provides a sample of the airport needs, the CD that accompanies this report includes a comprehensive list of all public airport needs in the DRA region.

ALDOT Aeronautics is participating in a study for a new regional airport proposed in Southwest Alabama. The study is the result of interest from Choctaw, Clarke, and Marengo Counties, as well as the municipalities of Butler, Grove Hill, Linden, Pine Hill, and Thomasville. Once complete, the study will include an economic impact analysis and evaluation to determine the feasibility of constructing a new airport versus the cost of maintaining existing airports serving these three counties. A preliminary cost estimate for construction of the new airport facility totals \$12.9 million.

An economic analysis of Alabama's airports showed that Alabama's airports are critical to economic growth, including business recruitment, retention, and expansion. The study found that for every dollar invested in the aviation system, approximately \$163 is returned to Alabama's economy. Alabama's airport system supports more than 73,100 jobs and \$1.8 billion in payroll, and creates an economic output of nearly \$4.7 billion.¹²⁴

ARKANSAS

The Arkansas Department of Aeronautics completed a State Aviation System Plan in December 2006. This plan studied the performance and interaction of all of the airports in the

¹²² *Alabama State Aviation System Plan*. ALDOT, January 2005.

¹²³ *Alabama State Aviation System Plan*. ALDOT, January 2005.

¹²⁴ *Alabama State Aviation System Plan*. ALDOT, January 2005.



state as part of a complete system. The plan examined economic impact, aviation activity and developed a future aviation demand forecast. Based on this demand, each airport was assigned to one of five categories depending on the type of aircraft operating from that airport. A defined set of minimum standards was developed for each category of airport. The minimum standards include items such as runway length and width, taxiways, lighting, navigational aids and weather reporting, fuel availability, and landside support services. The existing facilities at each airport were then compared to the appropriate minimum standard to develop recommended improvements.

The study shows that Arkansas' airports provide a significant impact to the state's economy. Specifically, Arkansas' airports support over 29,000 jobs, \$846 million in payroll, and produce \$2.5 billion in economic activity.¹²⁵

A significant number of Arkansas' airports are located in the DRA region. Of the 91 public use airports in Arkansas, 63 are in the DRA region. Forty seven of these airports are included in the NPIAS, which are eligible for AIP federal funding. Sixteen of the top 25 Arkansas airports with the largest number of operations are located in the DRA region. These airports comprise approximately 42 percent of the total number of aircraft operations in Arkansas.¹²⁶

The State System Plan recommends \$353.5 million in improvements statewide over the 20-year planning period to meet benchmarks and facility/service objectives. These improvements include approximately \$258 million in airfield improvements, \$6 million in visual and navigational aids, \$81 million in general aviation facilities and \$8 million in planning. A summary of specific airport needs include the following:

- Widen runway at North Little Rock Municipal Airport;
- Extend runway at Melbourne Municipal (John E Miller Field);
- Extend runway at Little Rock National Airport (Adams Field);
- Rehabilitate runway at West Memphis Municipal Airport;
- Improve runway safety area at Batesville Regional Airport; and
- Rehabilitate runway lighting at Kirk Field in Paragould.

While this only provides a sample of the airport needs, the CD that accompanies this report includes a comprehensive list of all public airport needs in the DRA region.

A new regional airport facility is proposed in St. Francis County, Arkansas. This airport, known as the Delta Regional Airport, is scheduled to open in approximately five years (2013). Immediate needs total \$5 million and include an access road, hangars, public use

¹²⁵ *Arkansas Aviation System Plan*. Arkansas Department of Aeronautics, December 2006.

¹²⁶ *Arkansas Aviation System Plan*. Arkansas Department of Aeronautics, December 2006.



facility, and fuel farm. Future needs total \$7.9 million and include a runway and taxiway extension and strengthening, and an apron expansion and strengthening.¹²⁷

ILLINOIS

The Illinois Department of Transportation published the *Airport Inventory Report* in 2007. This report includes information on the physical characteristics and conditions of the public use airports in Illinois, including airport activity, passenger enplanements, based aircraft, airfield characteristics (runways, navigational aids, etc.), weather reporting capability, and pavement condition.

The airports within the DRA Region in Illinois support 209,000 annual operation and 317 based aircraft.¹²⁸ A review of the pavement evaluation survey contained in the *Airport Inventory Report* shows that the runway and taxiway pavements located at the nine airports within the DRA region are generally in good condition.

IDOT also provided a document titled *Report to Delta Regional Authority In Response to DRA Inventory Survey* in March 2008. This document includes an inventory and needs request for airports located in the DRA region. Of the nine airports in the DRA region, one airport is classified as a commercial service facility, the remaining eight are classified as general aviation airports and all nine are included in the NPIAS, which are eligible for AIP federal funding.

In December 2007, Southern Illinois University students completed the Southern Illinois Regional Aviation System Plan. The plan provides an assessment of ten public use airports located within a seventeen county region in southern Illinois, as well as a system-wide perspective of airport activity. This document concludes with recommendations intended to enhance the capability of the southern Illinois airport system. The entire report is available on the CD that accompanies this report.¹²⁹

IDOT annually compiles a list of requested improvements from each public use airport in the state. The airport needs reported for airports in the DRA region includes \$3.4 million in airfield preservation, \$55,000 in navigational aids, and \$47 million in airport expansion. A summary of specific airport needs include the following:

- Construct a runway at Carmi Municipal Airport;
- Extend runway at Benton Municipal Airport;
- Rehabilitate runway at Sparta Community Airport (Hunter Field);
- Extend taxiway at Metropolis Municipal; and

¹²⁷ DRA Air Transportation On-line Needs Survey. May 2008.

¹²⁸ *Airport Inventory Report*. Illinois Department of Transportation, 2007.

¹²⁹ *Southern Illinois Regional Aviation System Plan*. Sabrina Weber, Joe Byrne, Brian Freeburg, and Matt Romero. Southern Illinois University. December 2007.



- Construct hangars and education building to develop a Shawnee Community College Aviation Center at Cairo Regional Airport.

While this only provides a sample of the airport needs, the CD that accompanies this report includes a comprehensive list of all public airport needs in the DRA region.

KENTUCKY

The Kentucky Transportation Cabinet completed the *Statewide Aviation System Plan* in February 1998. This plan determined that Kentucky's public use airports have a combined economic impact of \$7.1 billion with a payroll of \$2.2 billion supporting 96,291 jobs. Of the \$7.1 billion in impact, the Cincinnati-Northern Kentucky Airport and Louisville International Airport accounted for a combined \$6.8 billion, both of which are located outside the DRA region. The DRA region includes 12 public use airports in Kentucky, including Barkley Regional Airport in Paducah. Barkley Regional Airport is the only commercial Kentucky airport in the DRA region and it operates three departures per day to Memphis. Midwest Aviation operates freight cargo at Barkley Regional Airport with a fleet of various sized planes to handle freight. Midwest Aviation handles an average of 224.5 tons of cargo per year.¹³⁰ A summary of specific airport needs include the following:

- Extend runway safety area at Lake Barkley State Park Airport;
- Construct runway at Hopkinsville-Christian County Airport;
- Improve runway safety area at Mayfield Graves County Airport; and
- Install instrument approach aid at Kyle-Oakley Field in Murray.

While this only provides a sample of the airport needs, the CD that accompanies this report includes a comprehensive list of all public airport needs in the DRA region.

LOUISIANA

The Louisiana Department of Transportation and Development Aviation Section completed the *Louisiana Aviation System Plan* in 2003. The plan was developed to identify and analyze the aviation assets and needs of the State and to ensure that aviation properly performs its role to support Louisiana's economy and its citizens; and to provide continued guidance for development of a system of airports that meets the state's existing and future air transportation needs. The *Louisiana Aviation System Plan* was also developed to provide access to a system airport within a 30 minute drive time to 98 percent of the State's population (88 percent during inclement weather) and provide access to all of the State's major economic centers.¹³¹

¹³⁰ Barley Regional Airport

¹³¹ Louisiana Aviation System Plan. Louisiana Department of Transportation and Development. 2003.



The *Louisiana Aviation System Plan* establishes criteria and benchmarks for the airport system to evaluate the system for adequacy. The three major goals include the following:

- Access – Does the airport system adequately cover the population and provide service during all weather conditions?
- Economic – Does the airport system serve economic / trade centers and meet air cargo needs?
- Physical – Do the airports in the system meet minimum standards?

Based on these goals, the *Louisiana Aviation System Plan* developed recommendations and projects to meet these goals and to improve the system's performance. The *Louisiana Aviation System Plan* identified 14 projects totaling \$7.9 million at General Aviation - National Airports, 60 projects totaling \$29.1 million at General Aviation – Regional Airports, 175 projects totaling \$54.5 million at General Aviation – Local Airports, and 18 projects totaling \$6.1 million at General Aviation – Limited Airports. The top five project categories, based on dollars, are aircraft aprons, aircraft storage (hangars), taxiway improvements, navigational aids, and terminal / pilots' lounge buildings. It is important to note that two of the top five project categories (aircraft storage and terminal buildings / pilots' lounge) are not typically eligible for federal funding at general aviation airports through the AIP.

Although the *Louisiana Aviation System Plan* provides a good overview of the entire airport system in Louisiana, LA DOTD Aviation Section provided the DRA project team an airport project/needs list in April 2008, which identified needs at airports in the DRA region. LA DOTD – Aviation Section also prepared an itemized project list for potential FY 2008 projects. This list includes ten projects at airports in the DRA region totaling \$102.2 million with a request for \$61.1 million in DRA funds. A summary of specific airport needs include the following:

- Extend runway at Le Gros Memorial Airport in Crowley;
- Rehabilitate runway at Hammond Northshore Regional Airport;
- Construct Aircraft Rescue & Fire Fighting Building at Louis Armstrong New Orleans International;
- Install runway lighting at Jonesboro Airport; and
- Improve runway safety area at George R Carr Memorial Air Field in Bogalusa.

While this only provides a sample of the airport needs, the CD that accompanies this report includes a comprehensive list of all public airport needs in the DRA region.

MISSISSIPPI

Mississippi DOT completed the *Mississippi Statewide Airports Study* in May 1999. Although many factors have changed since the development of this plan, many of the principals upon which it was developed have remained constant. Along with other objectives,



the plan was developed to demonstrate the economic value of airports; examine existing funding mechanisms; recommend a system for prioritizing projects; and recognize the multimodal potential of airports.

The *Mississippi Statewide Airports Study* identified \$637 million in economic activity related to the State's public use airports. This amount includes \$203.7 million in earnings paid to 10,347 jobs resulting from aviation activity in Mississippi. Although these figures may be outdated, several Mississippi airports located in and out of the DRA region have experienced tremendous growth since the study was completed due to industrial activities directly related to the airfield's location and services. Some of these include the following:

- The Olive Branch Airport, near Memphis, Tennessee, is located adjacent to an industrial park and primarily serves business aviation needs;
- The Trent Lott International Airport in Moss Point, Mississippi is home to the Northrop Grumman Corporation production facility for the Fire Scout unmanned aerial vehicle;
- The Greenwood-Leflore County Airport is home to The Memphis Group, a company who provide spare parts, parts refurbishment, and aircraft disassembly; and
- The Golden Triangle Regional Airport is home to Eurocopter, a large helicopter manufacturing facility, and SeverCorr, a next generation steel production facility.

Although not all of these developments are located within the DRA region, these airports serve as important examples of the economic value a viable airport can bring to a community. A summary of specific airport needs include the following:

- Extend runway at Magee Municipal Airport;
- Rehabilitate runway at Mid Delta Regional Airport in Greenville;
- Construct Aircraft Rescue & Fire Fighting Building at Tunica Municipal Airport;
- Extend taxiway at Hardy-Anders Field Natchez-Adams County Airport; and
- Rehabilitate runway at Jackson-Evers International.

While this only provides a sample of the airport needs, the CD that accompanies this report includes a comprehensive list of all public airport needs in the DRA region.

Mississippi's primary funding mechanism for airport improvements is FAA's Airport Improvement Program (AIP). Currently, Mississippi DOT will match one half of the local sponsor's share of an AIP grant. In addition, Mississippi also sponsors a state grant program known as the Multi-Modal Transportation Improvement Fund. In recent years, this program has issued grants of approximately \$3.8 million annually to airports seeking projects for multimodal connectivity, revenue producing items, and other projects. The Mississippi Development Authority (MDA) also administers a loan program for airports known as the Mississippi Airport Revitalization Revolving Loan Program. This loan program is available



to all publicly owned airports and is intended for use for improvements directly tied to the airport facility. Up to \$750,000 for any one project may be borrowed for a term of up to 10 years at 3 percent interest.

MISSOURI

The Missouri Department of Transportation – Aviation Section completed an update of the *State Aviation System Plan* in 2005 with the goal of building a consensus with policy makers and airport operators to develop and implement recommendations to improve system performance. The *State Aviation System Plan* measures system performance in the areas of physical performance, economic benefit, and accessibility.

The *State Aviation System Plan* identified airport's roles as commercial, regional, business, and community. Each type of airport serves a specific function in the overall system based on economics, accessibility, and physical characteristics. The *State Aviation System Plan* developed minimum standards for each type of airport in order to provide a benchmark to measure current and future system performance. The *State Aviation System Plan* also developed recommendations and cost estimates to provide stakeholders and policy makers with information to make cost-effective improvements to the entire state airport system. An economic impact analysis was also completed on each of the state's airports to determine each airport's contribution to the local and state economy. In total, Missouri's airports generate \$9.5 billion annually and support 149,500 jobs and \$3.7 billion in payroll.

The *State Aviation System Plan* estimated total airport improvement development costs over the planning period at \$710.2 million (statewide), including projects related to the state system plan and projects identified in each airport's capital improvements plan.¹³²

Missouri's Five Year Statewide Transportation Improvement Program (STIP) identifies aviation needs averaging approximately \$38 million per year. Using current funding levels, available funding falls short by approximately \$10 million annually.

MoDOT administers funding for airports through several federal and state programs. MoDOT is a Block Grant State and as such, administers federal AIP grants for the FAA. MoDOT also provides funding for airports within the state system plan through the *MoDOT Capital Improvements Plan* and *MoDOT STAR Lending Program*. MoDOT has provided between \$2.2 million and \$5.9 million in airport funding since 2001.¹³³

MoDOT also provided a document titled *Missouri's Report to Delta Regional Authority in Response to DRA Inventory Survey* in January 2008. This report included an asset inventory and identified multimodal needs in the DRA region. This MoDOT report identified 34 general aviation airports and one commercial service airport in Missouri within the DRA region with an annual economic impact of approximately \$100 million. Of the 35 airports in

¹³² *State Aviation System Plan*. Missouri Department of Transportation, 2005.

¹³³ *State Aviation System Plan*. Missouri Department of Transportation, 2005.



the DRA region, 19 are included in the NPIAS and are eligible for AIP federal funding and 16 are Non-NPIAS public use airports. Based on the FAA's airport classification system, there is one commercial airport, nine regional airports, 11 business airports, and 14 community airports in the DRA region. A summary of specific airport needs include the following:

- Construct runway at West Plains Municipal Airport;
- Rehabilitate runway at Cape Girardeau Regional Airport;
- Rehabilitate runway lighting at Sikeston Memorial Municipal Airport;
- Extend runway at Mountain Grove Memorial Airport; and
- Install Runway Vertical/Visual Guidance System at Malden Municipal Airport.

While this only provides a sample of the airport needs, the CD that accompanies this report includes a comprehensive list of all public airport needs in the DRA region.

The MoDOT Report to the DRA identified specific high priority aviation projects needed over the next five years. These projects include airfield preservation, navigational aids, and expansion projects at eleven NPIAS airports. The total estimated cost of these projects is \$8.8 million. MoDOT has requested \$4.4 million in DRA assistance to complete these projects.

TENNESSEE

The Tennessee Department of Transportation completed the *Statewide Aviation System Plan* in November 2001. The stated purpose of this plan was to provide a framework for the orderly, ongoing, and timely development of a system of airports that is adequate to meet the current and future aviation needs of the state.¹³⁴

The *Statewide Aviation System Plan* identified several airports within the DRA region that have significant intermodal development opportunity. These include Memphis International Airport, General Dewitt Spain Airport, Charles W. Baker Airport, Millington Airport, Dyersburg Airport, Arnold Field Airport, and Thorton Airport.¹³⁵ The Memphis International Airport and surrounding General Aviation airports, such as General Dewitt Spain, Charles W. Baker, and Millington, are located at the focal point for one of the most prominent locations for intermodal transportation in the country.¹³⁶

A summary of specific airport needs include the following:

- Rehabilitate runaway at Memphis International Airport;
- Rehabilitate runway at McKellar-Sipes Regional Airport in Jackson;

¹³⁴ *Tennessee Airport System Plan*. Tennessee Department of Transportation. November 2001.

¹³⁵ *Tennessee Airport System Plan*. Tennessee Department of Transportation. November 2001.

¹³⁶ *Tennessee Airport System Plan*. Tennessee Department of Transportation. November 2001.



- Extend runway at Benton County Airport;
- Improve runway safety area at Gibson County Airport; and
- Construct taxiway at Savannah-Hardin County Airport.

While this only provides a sample of the airport needs, the CD that accompanies this report includes a comprehensive list of all public airport needs in the DRA region.

10.1.3 Recommendations

10.1.3.1 Policy Recommendations

- Develop an airport system that enhances economic development in the DRA region.
- Provide an airport system that serves the aviation demands of the DRA region for passenger and goods movement.
- Increase awareness of the role of aviation in the transportation system and promote better understanding of the importance and economic value of airports in the DRA region.
- Monitor commercial airline service to ensure the growing fuel prices do not negatively impact passenger air service at smaller commercial airports in the DRA region.

10.1.3.2 Coordination Recommendations

- Develop a DRA Aviation Working Group, which would have representatives from federal, state, and local transportation agencies, as well as airport and heliport managers in the DRA region and would meet twice a year.
- Continual coordination between local airports and state DOTs and other state aeronautics agencies to communicate preservation, expansion and safety needs
- Coordinate with state DOTs and other state aeronautics agencies to ensure airport needs are addressed to ensure efficient passenger and goods movement.
- Coordinate with state Economic Development agencies to ensure aviation needs are addressed to support local and regional economic development efforts.
- Integrate Intermodal planning with other state and/or regional planning activities.
- Local counties and parishes should coordinate to discuss options to construct a regional airport that will serve a multi-county/parish region to encourage regional economic development activity.

10.1.3.3 Funding Recommendations

- Develop and fund an aviation categorical grant program to assist in the development and construction of aviation infrastructure in the DRA region.



- Aviation needs for the majority of the public use airports in the DRA are primarily funded through the FAA's AIP. However, this program does not fund all types of projects at public use airports and funding levels are not sufficient to meet all of the programmed needs. Thus, providing additional funding that is available to both NPIAS and non-NPIAS airports is critical to ensure these assets are maintained and expanded to improve the quality of life and economies in the DRA region.
- Establish a grant funding program to support aviation improvements that are not eligible for federal AIP funding.
- Establish a grant funding program to support general aviation improvements at non-NPIAS airports.

10.1.3.4 Intermodal Recommendations

- Coordinate with appropriate entities with the goal of ensuring adequate highway access is maintained and provided to airports.
- Coordinate with appropriate entities with the goal of ensuring adequate rail access is maintained or extended to strategic airports to improve intermodal transportation connections.

10.1.3.5 Project Recommendations

- Continue to fund the federal Airport Improvement Program to complete projects identified in this program.

10.1.3.6 Priority Recommendations

- Develop and fund an aviation categorical grant program to assist in the development and construction of aviation infrastructure in the DRA region.
- Establish a grant funding program to support aviation improvements that are not eligible for federal AIP funding.
- Establish a grant funding program to support general aviation improvements at non-NPIAS airports.
- Develop a DRA Aviation Working Group.
- Increase awareness of the role of aviation in the transportation system and promote better understanding of the importance and economic value of airports in the DRA region.
- Coordinate with appropriate entities with the goal of ensuring adequate highway access is maintained and provided to airports.