LOUISIANA

AVIATION SYSTEM PLAN

LOUISIANA DEPARTMENT OF
TRANSPORTATION & DEVELOPMENT

June 2015
Executive Summary

Introduction

Aviation System Plan and Economic Impact

Louisiana is blessed with a robust transportation system, of which the state's airport system is a critical component. Through the power of aviation, people and goods move rapidly in, around, and out of Louisiana. The state's system of 68 airports, consisting of seven commercial service airports and 61 general aviation airports, provides reliable access to 93 percent of Louisiana residents when considering what portion of the population is within a 30-minute drive of a system airport. In 2012, this system of airports accommodated 1.8 million general aviation operations and more than 200,000 commercial airline operations, which enplaned more than 5 million passengers.

The Louisiana Department of Transportation and Development (DOTD) has developed this Louisiana Aviation System Plan (LASP) for the purpose of guiding the state's airport planning activities. The Aviation Section of the Louisiana DOTD supports the airport system with annual grants and wanted to establish a long-term needs assessment of the airport system. The LASP is a component of the Louisiana Statewide Transportation Plan which looks back at how the transportation system has evolved and considers, in a broad sense, how the system should evolve to meet changing infrastructure needs for all modes – aviation, port, rail, transit, and navigable waterway - in the years ahead.

The purposes of the LASP are to:

- **Assess the facility needs of the state's airports**
- **Identify airports that support both the state's system of airports as well as the federal National Plan of Integrated Airport Systems (NPIAS)**
- **Estimate costs for needed airport improvements within the system**
- **Provide information for governmental and aviation stakeholders concerning the economic impact of the state's system of public use airports**

Goals, Objectives, and Performance Measures

This study takes a structured approach to system planning. At the highest level, Goals, Objectives and Performance Measures provide a policy framework which assists in the development of key elements of this LASP. Goals are overarching broad descriptions of the general aims of the system while the Objectives identify the more specific aims of the aviation system intended to address the Goals.

LASP Goals

1 Provide an aviation system which allows access to the state's system of airports

OBJECTIVES

- Provide adequate access by air to the population of the state.
- Provide adequate access by air to the state's growing petroleum, agriculture, tourism, aviation, and aeronautical industries.
- Integrate the airport system effectively with other transportation systems.

2 Provide an aviation system which supports economic growth

OBJECTIVES

- Maximize the opportunity for growth in domestic and international commerce and travel.
- Maximize the benefits and return on investment to the state and local communities from the development of the airport system.
- Ensure that airports are capable of supporting economic activity that is generated by urban development.

3 Provide a safe and reliable aviation system

OBJECTIVES

- Ensure system airports have physical facilities to provide services that meet the role the airport is intended to fulfill.
- Assist aviation partners in achieving safe and secure performance.
- Ensure airports in the state system are maintained and in good repair.

4 Provide a framework for future aviation system planning

OBJECTIVES

- Incorporate all aspects of aviation system planning into DOTD processes, policies, and procedures.
- Utilize this plan to revise and implement revisions to the Louisiana Administrative Code for program development and administration.
- Utilize this plan to provide a framework for Louisiana Aviation System Planning throughout the state.

System Role Analysis

Louisiana's system of airports consists of airports that work together to meet the needs of different market segments. A key component of this system plan is identifying what role each airport plays in the system and what facilities are needed at each airport that best allows it to meet its user's needs.

Existing systems of airport classification were examined, including the previous state system plan completed in 2003. Based on current needs, it was decided to classify general aviation airports into one of four roles and classify airports with scheduled airline service into a commercial service airport role. The four general aviation airport roles are defined below.

To determine which airports are in each role, each airport was evaluated using 17 factors. These 17 factors were selected in an effort to measure potential need for aviation services, as well as the current level of aviation services offered. Points were assigned to each airport based upon their evaluation in each of the 17 factors. Airports were then listed in descending order of total role analysis score.

COMMERCIAL SERVICE AIRPORT

General Aviation Airport Roles:

LEVEL 1 AIRPORT – maintains a consistent and contributing role in enabling the local, regional, and statewide economy to have access to and from the national and global economy.

LEVEL 2 AIRPORT – maintains a contributing role in supporting the local and regional economies and connecting it to the state and national economies.

LEVEL 3 AIRPORT – maintains a supplemental contributing role for the local economy and community access.

LEVEL 4 AIRPORT – maintains a limited contributing role for the local economy and community access.

Forecast of Aviation Demand

The general approach used to develop aviation forecasts for the State of Louisiana's airport system was to identify historical relationships between Louisiana aviation factors and total U.S. aviation activity. Actual trends in demand, experienced on a statewide basis and at individual system airports, were also considered. These relationships were then used to estimate future growth rates, which were applied to baselines of various aviation activities. In some cases, existing forecasts of aviation demand were used when assessed as providing sufficient detail. To that end, a forecast of aviation demand was developed out to 2043.

Forecasts of commercial service activity consisted of enplanements and airline operations at the seven Louisiana commercial service airports. General aviation activity forecasts included projections of based aircraft and operations at each of the 68 airports in the Louisiana system. The majority of the state's increase in commercial activity is projected to occur at Louis Armstrong New Orleans International Airport. Based general aviation aircraft for all system airports are projected to grow from a 2011 level of 2,676 to 3,413 in 2043, an average annual growth rate of 0.76 percent. Total annual general aviation operations for all system airports are projected to grow from their 2011 level of 1,794,158 to 3,077,023 in 2043, an average annual growth rate of 1.7 percent.

Statewide Forecast Summary

PROJECTION TYPE	2011	2018	2023	2033	2043
Commercial Service Enplanements	5.4 million	5.8 million	6.2 million	7.3 million	8.4 million
Commercial Airline Operations	211,100	226,900	239,100	266,300	290,800
Based Aircraft	2,676	2,811	2,921	3,154	3,413
General Aviation Operations	1.8 million	2.0 million	2.2 million	2.6 million	3.1 million

Source: CDM Smith

System Adequacy and Options

THE LOUISIANA AIRPORT SYSTEM PROVIDES COVERAGE FOR 93 PERCENT OF THE STATE'S POPULATION.

The identification of each airport's role in the aviation system made it possible to evaluate the performance of the aviation system as a whole as well as assess how well the individual airports fulfilled their role in the system.

The performance of the overall system was examined in terms of access and economic coverage. This was accomplished through the use of market areas for each airport, typically defined as the area encompassed within a 30-minute drive time of the airport. By measuring the population or other parameters within a given set of drive times, the performance of the system could be evaluated. This method was used to evaluate the degree of access the aviation system provided, and the degree of economic coverage afforded by the system.

In terms of access, the system was evaluated by airport role, starting with commercial service airports and expanding coverage by adding additional airport role levels. With all airport roles, the Louisiana airport system provides coverage for 93 percent of the state's population.

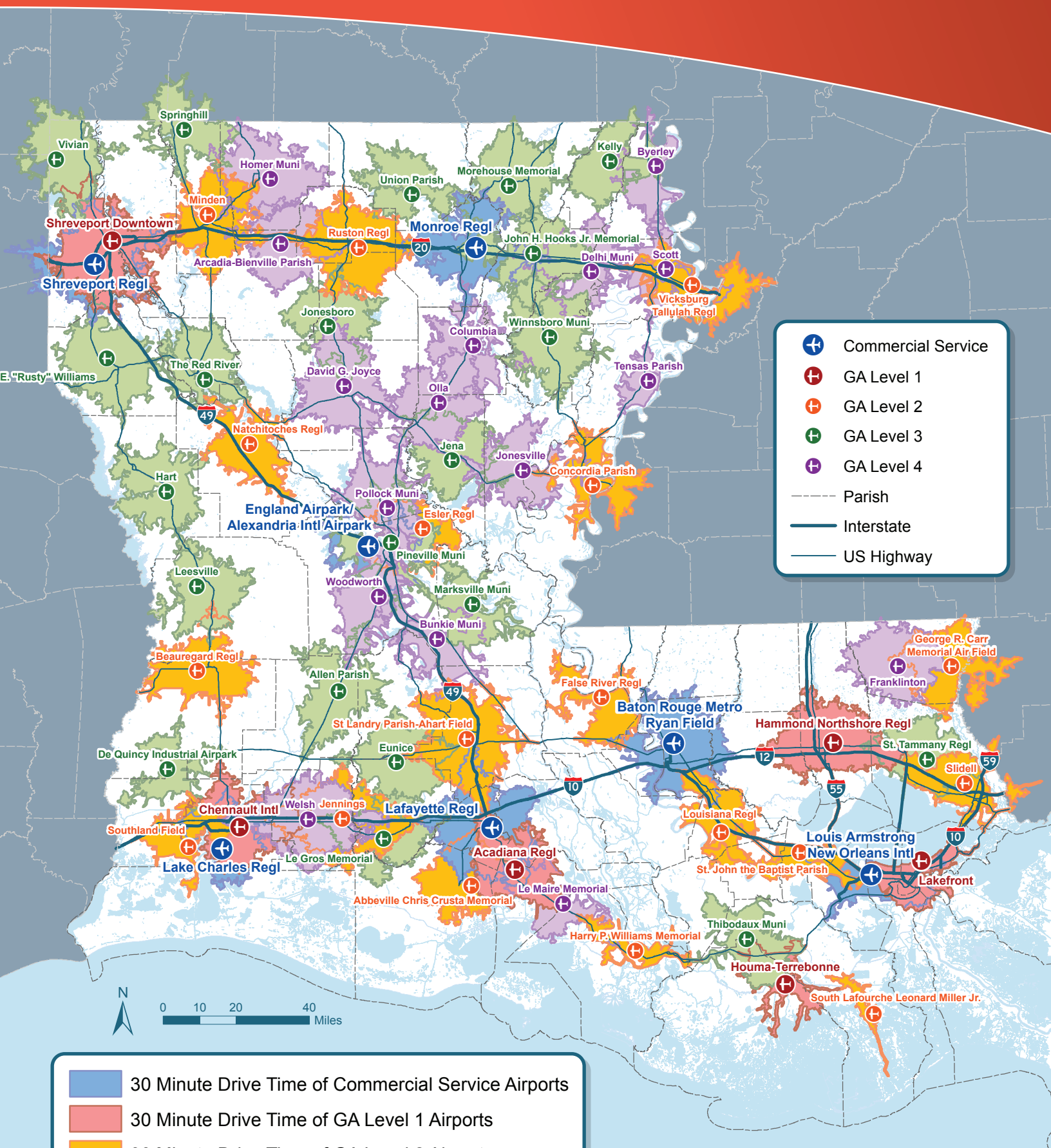
System Option Recommendations

Maintaining the Louisiana airport system requires extensive resources, both in terms of capital and man hours. The system plan identified more than $80 million in airport improvement projects that would contribute to helping Louisiana's airports better fulfill the role they play in the Louisiana airport system. Coupled with other capital needs of aviation in Louisiana, it is estimated that over the next 33 years, Louisiana's airports need $3.48 billion in capital funding.

This system plan also analyzed the Louisiana airport system and identified areas with overlaps and gaps with an eye towards recommending which airports should be eligible for federal funding. Airports that are part of the NPIAS are eligible for federal funding from the FAA. Louisiana currently has 55 out of its 68 system airports in the NPIAS[1]. From that analysis, one Level 4 airport was recommended to be removed from the NPIAS and replaced with an existing or proposed non-NPIAS airport where gaps in coverage were identified.

Under the current state regulations and policies, there is little distinction in terms of funding priority between airports that are part of the state airport system and those that are not. To better control the distribution of state airport funds and make inclusion in the state system more meaningful, it was recommended that the state adopt a funding strategy that either restricted state funding to system airports, or at least gave some degree of priority to system airports. With this in mind, the study recommended three Level 4 airports located in close proximity to other more robust airports be removed from the state system.

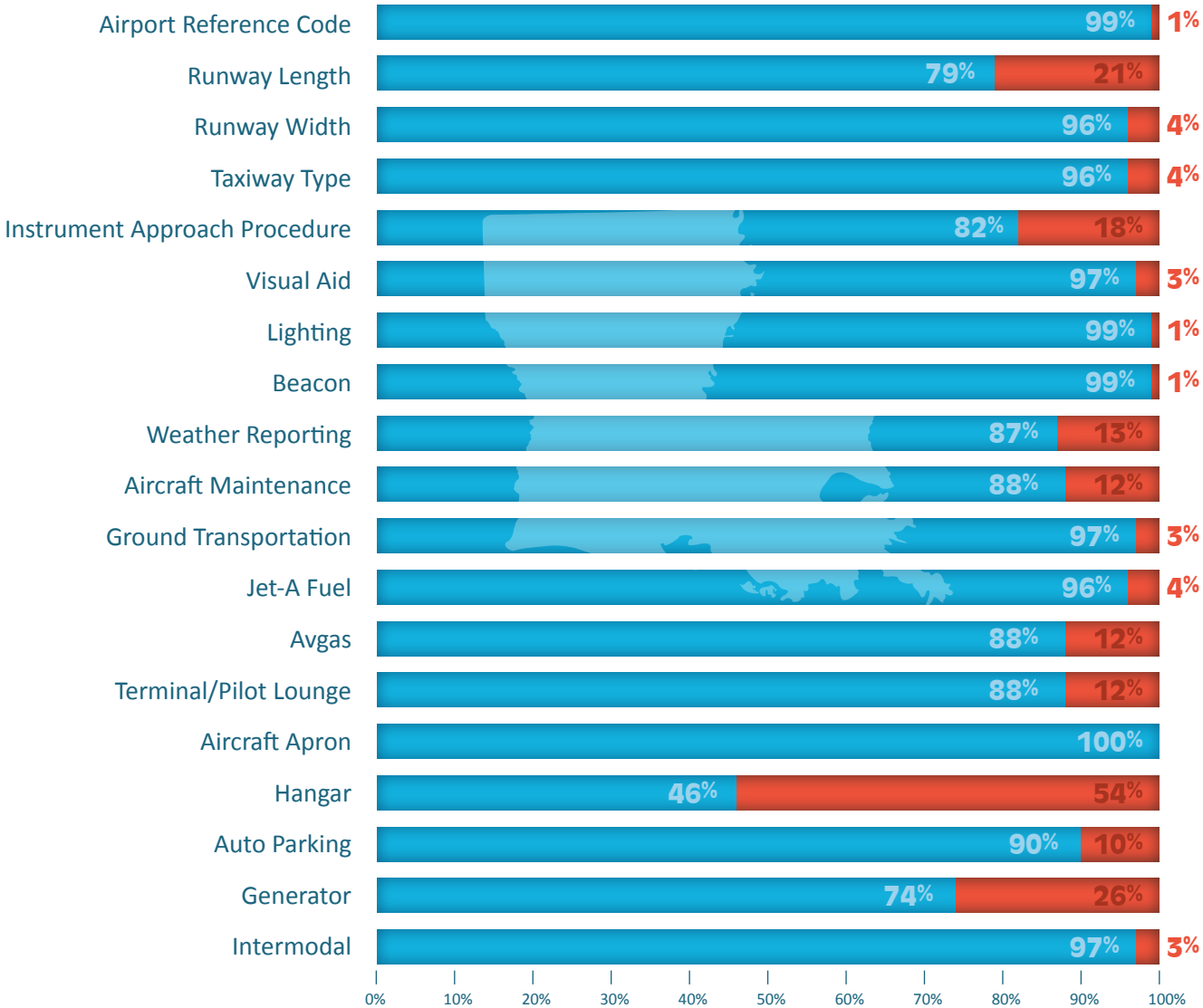
[1] New Orleans Downtown Heliport (7N0) is in the NPIAS but not included in this analysis.



Louisiana Airport System Population Coverage: 93%

The study determined what facility and service needs are recommended for each airport role. These facility and service objectives, shown below, serve as benchmarks for evaluating the overall system performance as well as recommended airport improvements for those airports that do not meet the recommended benchmark. The adequacy of individual airports to fulfill the roles they've been assigned was evaluated based on a set of facility and service objectives. These facility and service objectives were developed for each airport role. By comparing each airport's current facilities and services with the recommended facilities and services for its assigned role, the adequacy of individual airports can be determined.

LOUISIANA AIRPORT SYSTEM PERFORMANCE MEASURES

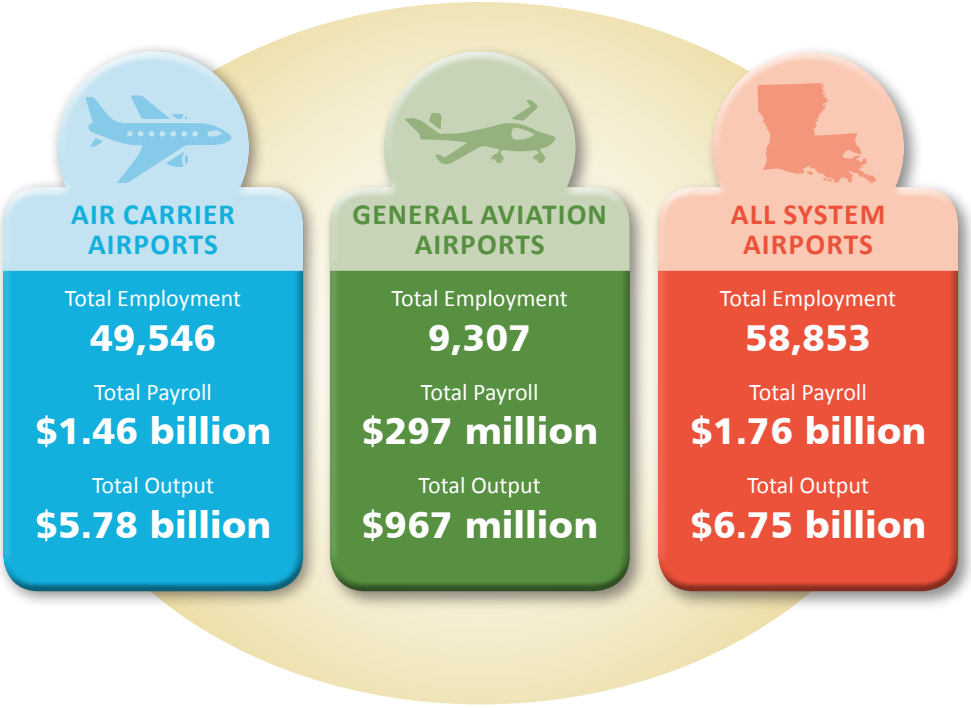


Source: CDM Smith

Aviation's Economic Benefit to Louisiana

To quantify the economic impacts of Louisiana airports, a study gathering economic data from the on-airport businesses and government agencies located on each Louisiana airport was completed. Airport managers and aviation-related organizations were surveyed to collect the data necessary to estimate the direct employment, payroll, and output each airport supports. Additionally, visitors arriving by air were surveyed to estimate the benefits their visitor-related expenditures support.

The multiplier impacts of these airport activities were also calculated using data specific to Louisiana. For example, when an airport employee purchases local goods and services, that spending circulates through the local economy by supporting the jobs and payroll of other businesses and thereby generating additional economic activity in the region. The total economic impact is the sum of all direct and multiplier impacts.



Types of impacts

DIRECT IMPACTS account for activities by on-airport businesses and government agencies, and the off-airport visitor spending at locations such as hotels and restaurants. Direct impacts occur at the initial point where money first starts circulating in the economy.

MULTIPLIER IMPACTS result from the re-spending of direct impacts within the Louisiana economy. This re-spending of money can occur multiple times and is tabulated repeatedly until the money trickles out of Louisiana.

TOTAL IMPACTS are the combination of all direct and multiplier impacts.

Impact Measures

EMPLOYMENT measures the number of full-time equivalent (FTE) jobs related to airport activity. A part-time employee counts as half a full-time employee.

PAYROLL measures the total annual salary, wages, and benefits paid to all workers whose livelihoods are linked to airport activity.

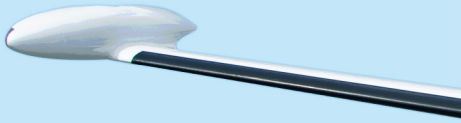
OUTPUT measures the value of goods and services related to airport activity in Louisiana. The output of on-airport businesses is typically assumed to be the sum of annual gross sales and average annual capital expenditures.

SUMMARY OF TOTAL IMPACTS BY AIRPORT

ASSOCIATED CITY	AIRPORT NAME	TOTAL EMPLOYMENT	TOTAL PAYROLL	TOTAL OUTPUT
COMMERCIAL SERVICE AIRPORTS				
Alexandria	England Airpark/Alexandria International Airpark	1,344	$44,439,000	$144,072,300
Baton Rouge	Baton Rouge Metropolitan, Ryan Field	3,109	$105,233,500	$344,725,900
Lake Charles	Lake Charles Regional	1,612	$52,537,100	$223,981,700
Lafayette	Lafayette Regional	4,340	$202,493,800	$1,106,246,100
Monroe	Monroe Regional	816	$27,770,600	$93,225,700
New Orleans	Louis Armstrong New Orleans International	35,621	$936,897,200	$3,556,298,700
Shreveport	Shreveport Regional	2,704	$89,918,300	$313,377,500
COMMERCIAL SERVICE AIRPORTS TOTAL		**49,546**	**$1,459,289,500**	**$5,781,927,900**
GENERAL AVIATION AIRPORTS				
Abbeville	Abbeville Chris Crusta Memorial	136	$3,350,700	$10,112,500
Alexandria	Esler Regional	132	$4,992,000	$6,140,400
Arcadia	Arcadia-Bienville Parish	4	$116,700	$294,900
Bastrop	Morehouse Memorial	30	$837,300	$2,973,300
Bogalusa	George R. Carr Memorial Air Field	44	$1,114,600	$4,703,300
Bunkie	Bunkie Municipal	3	$87,100	$239,500
Columbia	Columbia	7	$181,300	$480,900
Coushatta	The Red River	11	$472,900	$1,670,700
Covington	St. Tammany Regional	35	$887,800	$2,845,500
Crowley	Le Gros Memorial	76	$2,261,100	$8,630,500
De Quincy	De Quincy Industrial Airpark	14	$372,200	$1,632,900
De Ridder	Beauregard Regional	24	$664,600	$1,996,000
Delhi	Delhi Municipal	5	$138,500	$357,700
Eunice	Eunice	23	$715,000	$2,497,000
Farmerville	Union Parish	9	$155,300	$654,600
Franklinton	Franklinton	1	$43,100	$88,300
Galliano	South Lafourche Leonard Miller Jr.	346	$11,396,000	$57,165,300
Gonzales	Louisiana Regional	176	$4,775,200	$14,503,400
Hammond	Hammond Northshore Regional	776	$29,674,100	$70,756,100
Homer	Homer Municipal	8	$168,200	$658,300
Houma	Houma-Terrebonne	597	$17,051,600	$77,181,700
Jeanerette	Le Maire Memorial	17	$486,900	$1,946,200
Jena	Jena	11	$285,300	$893,900

SUMMARY OF TOTAL IMPACTS BY AIRPORT *Continued*

ASSOCIATED CITY	AIRPORT NAME	TOTAL EMPLOYMENT	TOTAL PAYROLL	TOTAL OUTPUT
Jennings	Jennings	147	$3,649,200	$13,358,200
Jonesboro	Jonesboro	9	$244,900	$777,400
Jonesville	Jonesville	88	$2,358,200	$9,006,500
Lake Charles	Chennault International	3,030	$104,484,600	$339,273,600
Lake Providence	Byerley	5	$137,600	$468,200
Leesville	Leesville	15	$378,400	$1,566,800
Mansfield	C.E. “Rusty” Williams	18	$527,800	$1,815,500
Many	Hart	6	$164,800	$546,600
Marksville	Marksville Municipal	5	$137,600	$468,200
Minden	Minden	27	$879,900	$4,013,300
Natchitoches	Natchitoches Regional	45	$1,331,800	$4,844,300
New Iberia	Acadiana Regional	1,101	$29,833,100	$94,309,100
New Orleans	Lakefront	614	$24,414,100	$66,569,000
New Roads	False River Regional	117	$3,157,900	$10,258,700
Oak Grove	Kelly	19	$383,300	$1,395,100
Oakdale	Allen Parish	60	$1,742,000	$8,331,200
Olla	Olla	14	$424,300	$1,517,400
Opelousas	St. Landry Parish-Ahart Field	39	$1,020,200	$3,654,400
Patterson	Harry P. Williams Memorial	435	$11,526,800	$45,797,100
Pineville	Pineville Municipal	36	$758,500	$2,372,800
Pollock	Pollock Municipal	11	$296,900	$1,003,000
Rayville	John H. Hooks Jr. Memorial	17	$438,500	$1,410,900
Reserve	St. John the Baptist Parish	7	$324,300	$1,114,200
Ruston	Ruston Regional	93	$2,451,600	$9,012,400
Shreveport	Shreveport Downtown	287	$8,113,200	$24,236,500
Slidell	Slidell	312	$9,586,600	$25,419,200
Springhill	Springhill	5	$137,600	$513,100
St. Joseph	Tensas Parish	7	$189,600	$586,600
Sulphur	Southland Field	65	$2,608,500	$9,219,700
Tallulah	Scott	16	$361,300	$875,000
Tallulah/Vicksburg, MS	Vicksburg Tallulah Regional	61	$1,751,900	$5,428,100
Thibodaux	Thibodaux Municipal	10	$258,900	$589,600
Vidalia	Concordia Parish	21	$513,300	$2,220,300
Vivian	Vivian	10	$260,400	$858,900
Welsh	Welsh	16	$227,500	$813,400
Winnfield	David G. Joyce	10	$203,700	$488,200
Winnsboro	Winnsboro Municipal	24	$733,400	$2,302,900
Woodworth	Woodworth	20	$579,600	$1,898,400
GENERAL AVIATION AIRPORTS TOTAL		**9,307**	**$296,819,300**	**$966,756,700**
ALL AIRPORTS TOTAL		**58,853**	**$1,756,108,800**	**$6,748,684,600**



LA DOTD Aviation Section would like to thank the Louisiana airports and their passengers, users and tenants, and the Louisiana Airport Managers and Associates, for their cooperation and assistance in the preparation of this study.

For further information about this study please go to the LA DOTD Aviation Section web site at: ***wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Multimodal/Aviation/Pages/default.aspx***

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