



Montana Airports 2016
ECONOMIC IMPACT STUDY

Final Presentation

Study Overview



- Sponsored by the Montana Department of Transportation (MDT) Research Programs
- Study Purpose
 - Understand and communicate the wide range of impacts and benefits derived from airport operations
 - Provide an economic framework to help MDT evaluate airport investments in the context of economic activity
- Qualitative and quantitative economic analysis of Montana airport system

Determined a total economic impact of \$2.8 billion

Research Team

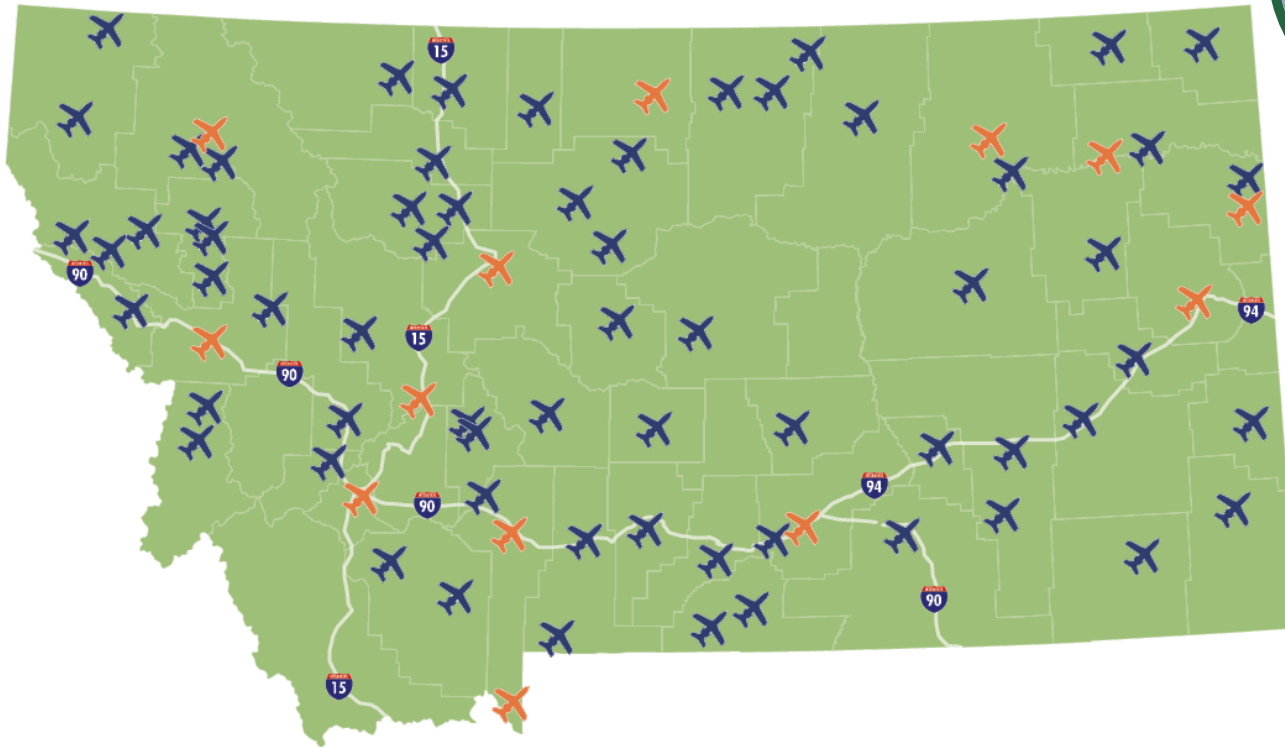


Montana Airport System





- Comprised of:
 - Commercial service
 - General aviation
- Serve 1.9 million visitors per year for leisure and business travel
- 77 airports included in study
 - Airports included due to specific economic measurables
 - Exclusion of airports did not significantly impact the total statewide impact

Montana Airport System



Airport Classifications

-  General aviation
-  Commercial service

Methodology: Inputs

On-Airport

Construction

Visitor Spending

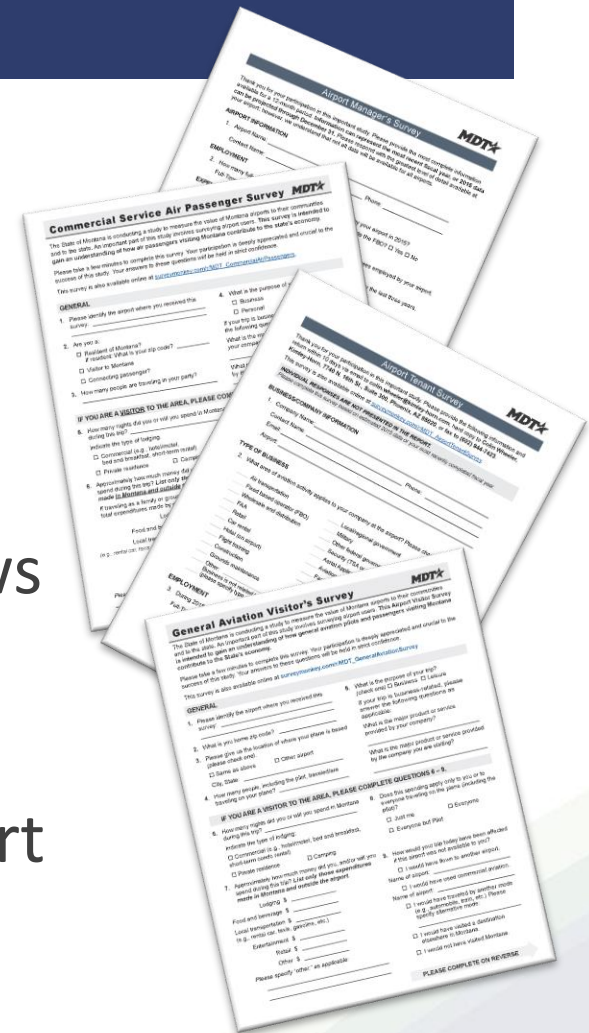


- Direct impacts
 - On-airport businesses
 - Capital expenditures on construction
 - Visitor spending
- Spin-off effects: Occur when dollars spent at an airport and by visitors off-airport are re-spent locally, regionally, and statewide
 - Indirect effects
 - Induced effects

Combined, direct impacts and spin-off effects compose the contribution of an individual airport and determine the total statewide impact of Montana's airport system

Methodology: Data Collection

- Surveys
 - ➔ Airport managers
 - ➔ Tenants
 - ➔ Commercial service passengers
 - ➔ General aviation passengers
- In-person inventories and interviews
- Secondary sources to complete data gaps
- Direct impacts validated with airport managers before spin-off effects modeled



Methodology: Modeling

- IMPLAN modeling software
 - Complete data gaps
 - Estimate jobs and payroll generated from visitor spending
 - Determine spin-off effects
- vFreight™
 - Evaluate contribution of air cargo
- Assumptions
 - Headcount methodology
 - Results rounded to the nearest thousand to account for false precision

Values from Surveys	Values Estimated using IMPLAN
Jobs	Payroll, output
Jobs, payroll	Output
Expenditures	Jobs

Methodology: Secondary Data Sources

- National data sets assembled by IMPLAN to complete missing direct values based on industry averages

Secondary Data Source	Missing Value
ESRI (GIS) and Hoovers/Dun & Bradstreet	Incomplete accounting of airport tenants
University of Montana's Institute for Tourism and Recreation Research	Adjust visitor spending survey results for seasonality
U.S. Department of Agriculture	Estimate the value of aerial applications for Montana agriculture

Methodology: Modeling (vFreight)

- vFreight data sources

Data Sources	Types of Data
WiserTrade, based on U.S. Census Foreign Trade Division	International imports and exports by port by commodity and mode (weight and value)
Freight Analysis Framework, U.S. Department of Transportation	Domestic flows among metro areas and states by commodity and mode (weight and value)
IMPLAN county-level data	County-to-county flows of commodities (value, no mode detail)
U.S.. Department of Energy Oak Ridge National Laboratory	Intercounty impedances (time and distance matrix)

Methodology: Outputs

- Jobs (headcount)
- Payroll
- Total impact



JOBS



PAYROLL



TOTAL IMPACT

*Total statewide impacts are summed to determine
Montana Airports Total Statewide Impacts*

Statewide Summary of Impacts



Results

On-Airport

Impact Type	Jobs	Payroll (\$)	Economic Impacts (\$)
On-airport tenants	4,984	\$255,461,000	\$874,364,000
Airport operations and employees	276	\$16,070,000	\$36,780,000
Spin-off effects (indirect and induced)	4,403	\$181,197,000	\$553,346,000
Total contribution	9,663	\$452,728,000	\$1,464,490,000



Results

Construction

Impact Type	Jobs	Payroll (\$)	Economic Impacts (\$)
Capital expenditures on construction	413	\$18,365,000	\$61,147,000
Spin-off effects: Supplier and income re-spending	316	\$11,923,000	\$38,168,000
Total contribution	729	\$30,288,000	\$99,315,000



Results

Visitor Spending

Impact Type	Jobs	Payroll (\$)	Economic Impacts (\$)
<i>Commercial service</i>			
Direct impacts	8,035	\$168,852,000	\$622,456,000
Spin-off effects	3,567	\$136,479,000	\$432,318,000
<i>Sub-total, commercial service</i>	<i>11,602</i>	<i>\$305,331,000</i>	<i>\$1,054,774,000</i>
<i>General aviation</i>			
Direct impacts	1,325	\$29,456,000	\$95,329,000
Spin-off effects	533	\$20,705,000	\$65,209,000
<i>Sub-total, general aviation</i>	<i>1,858</i>	<i>\$50,161,000</i>	<i>\$160,538,000</i>
Total contribution	13,460	\$355,492,000	\$1,215,312,000



Air Cargo

- \$621 million in exports and imports
- \$156 million in total aviation dependence

Directional Flow	Tonnage (metric tons)	Value (\$)	Percent of Total by Value (%)
Domestic inbound	3,177	\$360,000,000	58%
International import	469	\$84,000,000	14%
Total air cargo received	3,646	\$444,000,000	71%
Domestic outbound	943	\$78,000,000	13%
International export	439	\$98,000,000	16%
Total air cargo shipped	1,382	\$176,000,000	28%
Total received and shipped	5,028	\$621,000,000	100%



863



\$42M



\$156M

Qualitative Benefits

- Provides holistic understanding of the value of airports
- Gathered data thru airport manager and tenant surveys
- Conducted specific analyses of impacts to agriculture, hospitals, wildland firefighting, and business community



These quality of life benefits make Montana safer, more accessible, and a richer place to visit and call home



Agriculture

- 221,500 acres of farmland treated with aerial spraying

Crop	Harvested (acres)	All Methods of Application		Aerial Application	
		Share of Area Treated (%)	Estimate Area Treated (acres)	Share of Treated Acreage (%)	Estimate Area Treated (acres)
Corn	50,000	97%	48,500	25%	12,125
Oat (small grains)	22,000	51%	11,220		2,805
Barley (wheat)	850,000	96%	816,000		204,000
Potato	10,900	96%	10,464		2,616
Totals	932,900	95%	886,184	25%	221,546

3,300

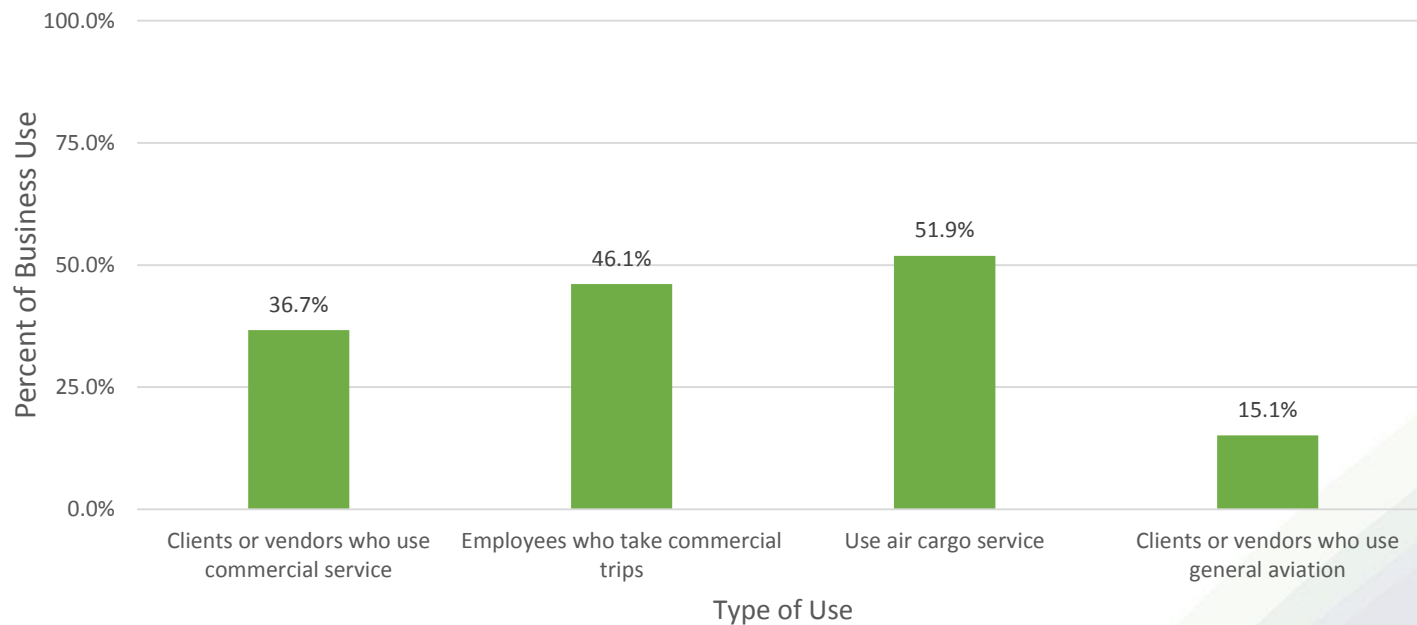
\$118M

\$671M



Business Survey

- More than 600 responses representing all sectors
- Businesses with more than 21 employees or those in the manufacturing industry most likely to rely on airports to conduct business



Medical Flights

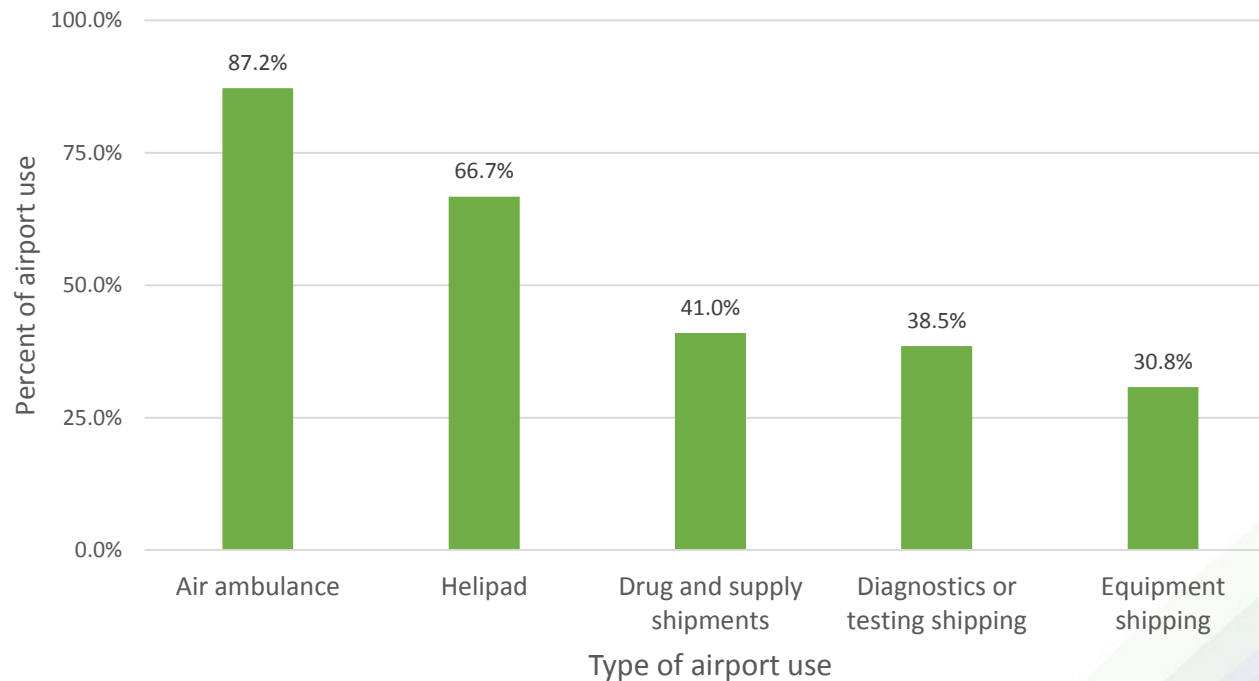


- Key roles
 - Facilitate emergency evacuation services
 - Support health care practitioners who fly to remote communities to provide routine and specialty care
- Benefits
 - Vital for patients who require immediate medical attention or advanced care
 - Allow residents to remain in local communities instead of relocating to receive specialized care
- Hospital survey conducted by the University of Montana Bureau of Business and Economic Research



Hospital Survey

- Indicated that a majority of hospitals depend on airports in some capacity
- Survey encompassed all hospital in the state (61)





Wildland Firefighting



- Majority of airports serve as primary or alternatives for fire suppression
- Key agencies
 - Bureau of Land Management
 - U.S. Forest Service
 - Montana Department of Natural Resources and Conservation
- 8,404 fires from 2011 to 2015
- Operations benefit local and regional economies through indirect and induced spin-off effects



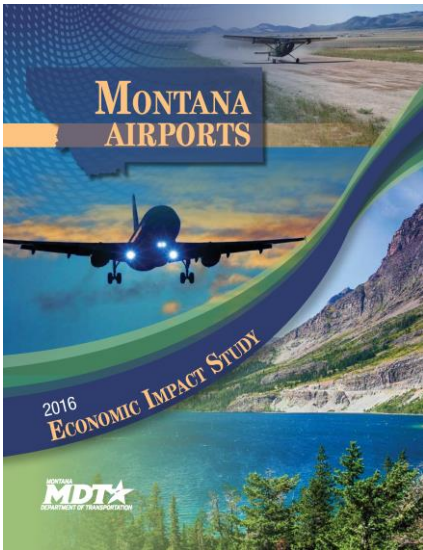
Military / Law Enforcement

- Key law enforcement activities
 - Responding to calls in remote areas
 - Search and rescue
 - Prisoner transport
 - Homeland security operations
- Military exercise and training
 - Over 30 airports accommodate military aircraft
 - Some facilities established by the U.S. Army Air Forces during World War II
- Operations support military and civilian jobs, drive fuel sales, and provide other benefits



Products

Statewide Executive Summary



Introduction

Montana's airports play an integral role in our transportation system by providing access to destinations within the state, throughout the country, and throughout the world. Through the state's air program, Montana benefits our citizens with a wealth of economic, cultural, and recreational opportunities. Airports provide our citizens with a wealth of economic, cultural, and recreational opportunities. Airports provide our citizens with a wealth of economic, cultural, and recreational opportunities.

The Department of Transportation (DOT) and the Montana Department of Transportation (MDTA) have conducted a comprehensive study to determine the economic contribution of Montana's airports to the state's economy. This study updates the previous report released in 2007 and 2010.

2016 Economic Impact Study

MDTA

Statewide Summary of Impacts

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2016 Economic Impact Study

MDTA

Statewide Summary of Impacts

Direct Economic Impacts

- 16 Airports
- \$111,164,000
- 1,147 Employees
- \$1,147,000
- \$172,784,000

Spill-Off Economic Effect

- \$1,089,045,000

Statewide Total Impacts

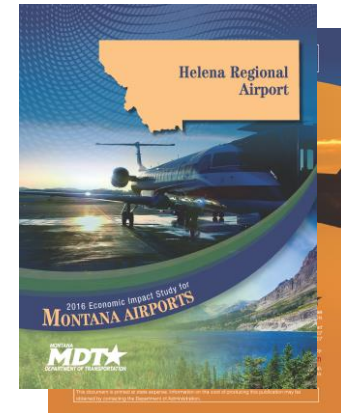
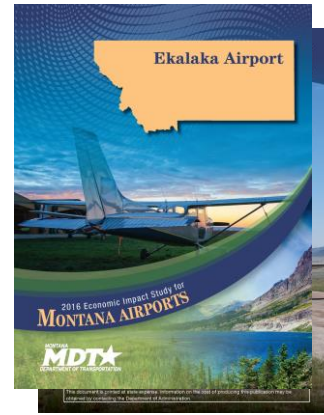
- \$1,200,229,000
- 2,139 Jobs
- \$2,742,113,000

Montana's airport system contributes 4% to the state's employment base.

2016 Economic Impact Study

MDTA

Individual airport brochures



Montana's Airports Support Our State

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- Statewide Impacts**
- 16 Airports
 - 1,147 Employees
 - \$1,147,000
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- Statewide Total Impacts**
- \$1,200,229,000
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Direct Economic Impacts

16 Airports

\$138,000

1,147 Employees

\$1,147,000

\$172,784,000

Spill-Off Economic Effect

\$1,089,045,000

97% Total Impacts

\$1,200,229,000

2,139 Jobs

\$2,742,113,000

Study Benefits and Uses

- Supports decision-making at all levels
- Communicates wide range of benefits of Montana airports, many of which are not recognized or understood
- Promotes economic activity and development
- Understanding of how broader economic, demographic, and other trends have affected aviation in Montana

The results can be used to support decision-making on all levels for projects, resources, and funding

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