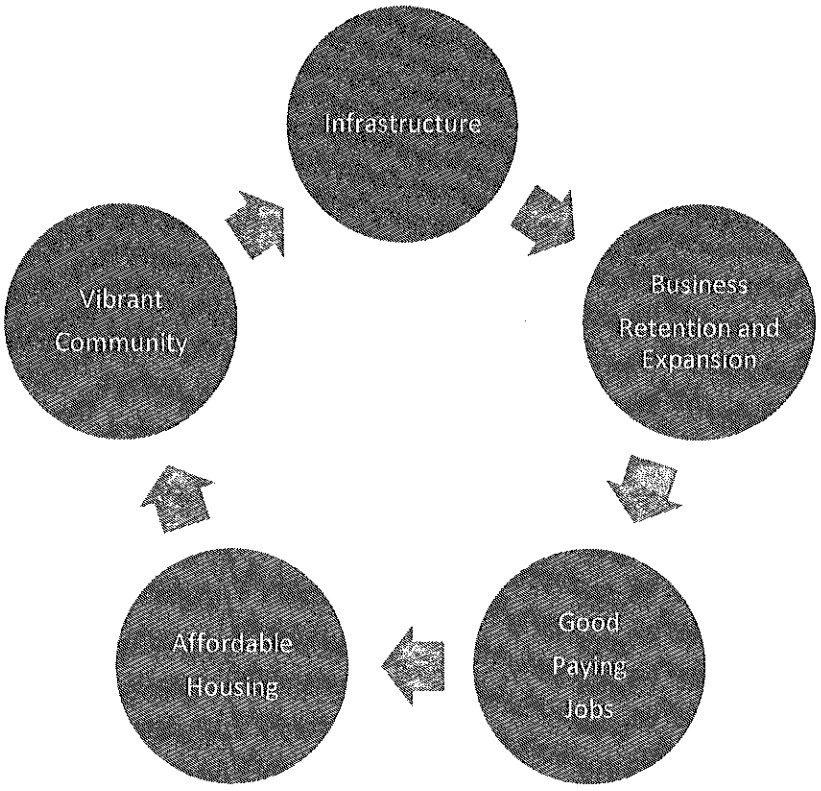
Ravalli County Airport Economic Analysis

prepared by the Ravalli County Economic Development Authority



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Ravalli County Airport Economic Analysis

The purpose of the Economic Analysis is to demonstrate the compelling and critical need for public infrastructure at the Airport, in the Ravalli County Targeted Economic Development District, and in the contiguous areas. Many businesses in this area do not have legal and/ or adequate access to waste water and water; and broadband Internet is not available to some. This is a barrier to job and business creation.

Ravalli County Airport (6S5) is located in Hamilton, Montana. The airport was built in 1934. The field was constructed in a "T" shape, with a north-south runway a quarter mile long and 400 feet wide, and an east-west runway a quarter mile long and 400 feet wide, running along what was called "the airport road" (now called Tammany Lane). Ravalli County Airport is one of the busiest General Aviation airports in the state. The airport lies in the middle of some of the best recreation areas of Western Montana and Idaho and is the gateway to the back country. A few of the airport uses are wildlife management, corporate aviation, law enforcement, and medical evacuations. The airport also serves as the fire fighting base for the Bitterroot National Forest (USFS).

The Airport is an anchor in the recently created 420 acre Ravalli County Targeted Economic Development District and comprises about 50% of the acreage. A key role of the TEDD is to host a diversified tenant base of multiple, independent tenants engaged in secondary value adding business. Ravalli County Commissioners commissioned an engineering report for the district that will examine the infrastructure deficiencies and provide possible solutions to the shortfalls. Deficits in these areas are constricting the ability of business to create good paying jobs, tax base, and affordable housing options. Lack of infrastructure prevents the local government from ensuring the provision and protection of clean water.

2008

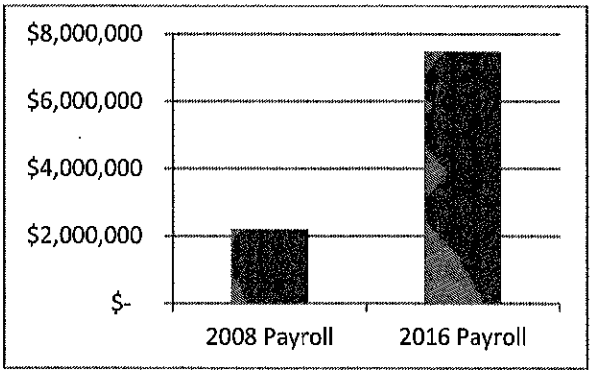
In 2008, there were ten aviation-related tenants on the airport, including airport management, who supported more than 57 jobs. These tenants' direct, or first round employment, payroll, and output impacts were derived from survey data. Direct output from all on-airport aviation-related tenants is estimated at $5.64 million annually. The estimated direct annual payroll of these tenants is $2,206,500. Operational data indicated that approximately 7,300 visitors used the airport. Visitor-related spending supported an additional 12.5 full-time jobs for employees earning more than $243,800 annually. Indirect output from general aviation visitors is estimated at $657,400.

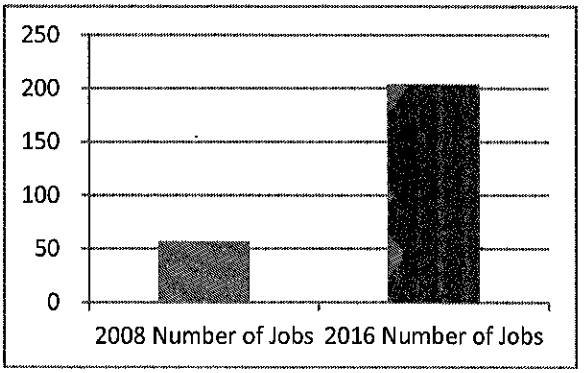
2016

In 2016, the 10 aviation-related businesses on the airport, including airport management, supported more than 204 jobs. These tenants' direct, or first round employment, payroll, and output impacts were derived from survey data. Direct output from all on-airport aviation-related tenants is estimated at $20,090,000 million annually. The estimated direct annual payroll of these tenants is $7,492,000. Operational data indicated that visitor spending was $6,117,000. Annual jobs deriving from the Airport are approximately equivalent to a company about the size of GlaxoSmithKline.

When viewed as a single entity, the Ravalli Airport ranks among the top 6 County Employers.

Job and Wage Growth at the Ravalli County Airport between 2008 and 20016



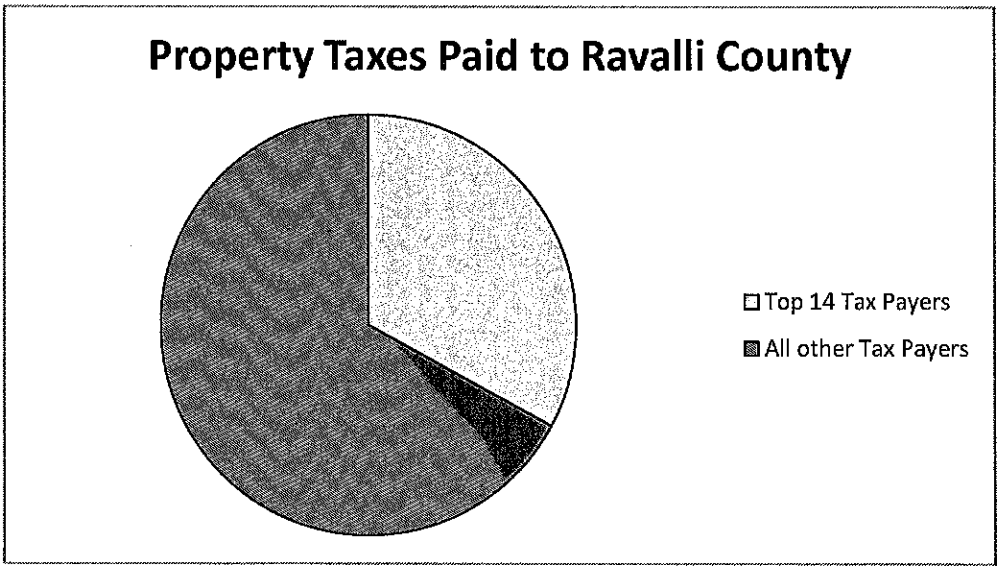


Job numbers at the Ravalli County Airport increased by 28% each year to reach its present level of 204. Payroll for the employees based out of Ravalli County Airport businesses increased 29% each year.

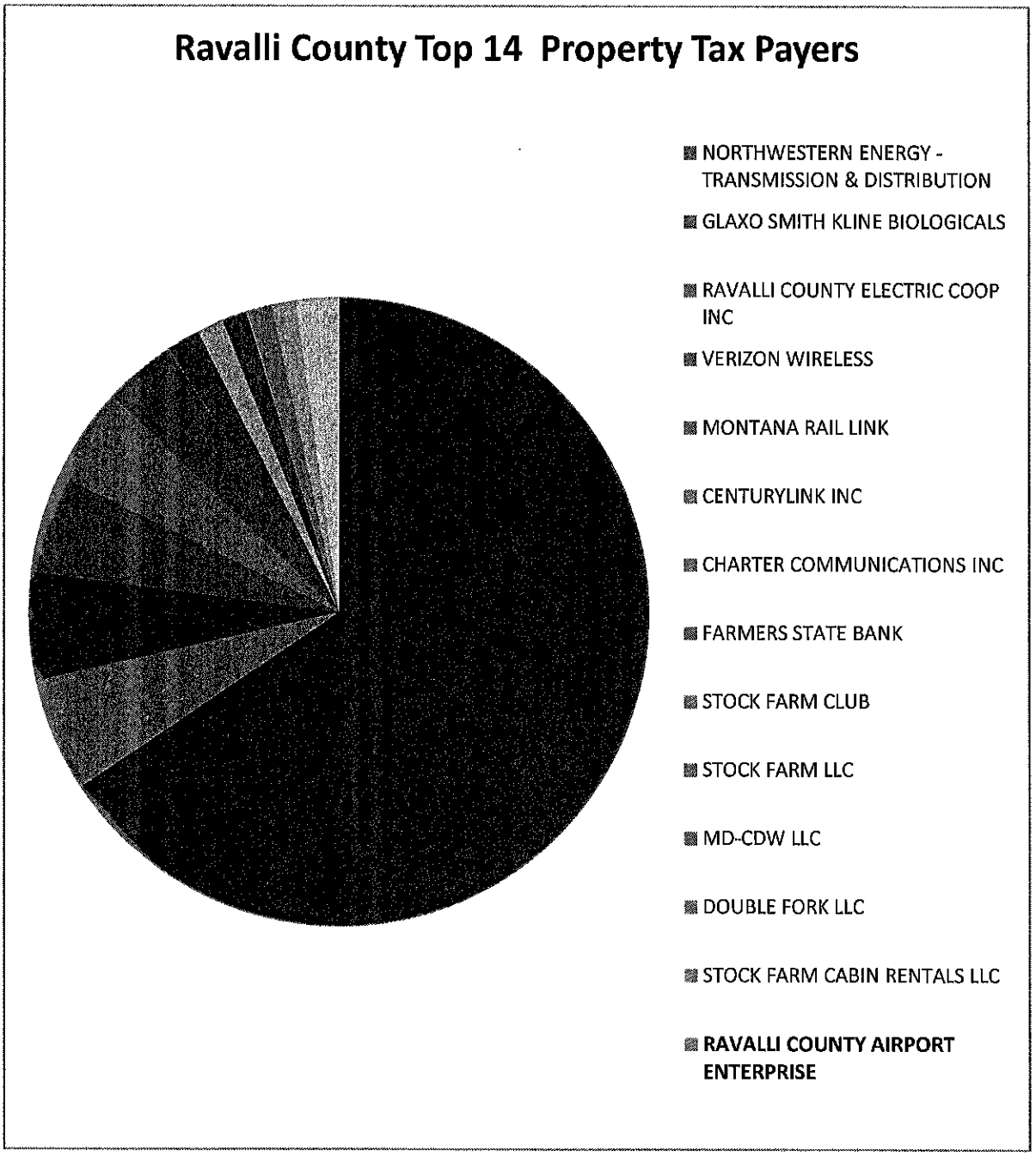
Hanger owners paid $69,181 in taxes to the County in 2016. These taxes are from personal property taxes paid on privately owned hangers at the Airport. These annual taxes include $16,265 to the County, $35,322 for the schools and $5,508 in other taxes. The County also receives approximately $12,000 per year in airplane registration fees. These fees go into the County's general fund.

If the Ravalli County Airport paid taxes as a single entity, it would be the 14th largest County taxpayer

There are approximately 25,800 taxpayers in Ravalli County.



Total Levied Property Taxes Paid by Top 14 Taxpayers	**$ 5,270,251**
Total Levied Property Taxes Paid by All Other Taxpayers	$ 10,729,748
Total Ravalli County Levied Property Taxes	$16,000,000



The table below shows the list of the top 14 tax payers in Ravalli County and the dollar amount of the levied taxes paid. The taxes from all hanger owners and businesses at the Ravalli County Airport have been added to demonstrate the Airport's economic effect as a single, municipal enterprise. Several of the taxpayers listed below don't have many employees. While tax base is always important, those with large number of employees are doubly important.

	Taxpayer Name	Tax Dollars Paid
1	NORTHWESTERN ENERGY - TRANSMISSION & DISTRIBUTION	$ 2,576,637.24
2	GLAXO SMITH KLINE BIOLOGICALS	$ 880,858.95
3	RAVALLI COUNTY ELECTRIC COOP INC	$ 309,785.41
4	VERIZON WIRELESS	$ 293,185.68
5	MONTANA RAIL LINK	$ 269,575.77
6	CENTURYLINK INC	$ 257,329.82
7	CHARTER COMMUNICATIONS INC	$ 195,658.40
8	FARMERS STATE BANK	$ 91,529.56
9	STOCK FARM CLUB	$ 72,546.14
10	STOCK FARM LLC	$ 70,031.54
11	MD-CDW LLC	$ 69,184.88
12	DOUBLE FORK LLC	$ 66,031.09
13	STOCK FARM CABIN RENTALS LLC	$ 60,716.04
14	**RAVALLI COUNTY AIRPORT ENTERPRISE**	**$ 57,181.00**

The average cost to build a hanger today is $200,000. If the taxable valuation of one new hanger is $100,000, then the annual tax base increase for the hanger would be approximately $480. Of the 70 hangers at the Airport, the average taxes paid per hanger to the County are $817. Approximately 9 new hangers have been constructed over an eight year period of time. If this historical trend continues, then 9 new hangers would be constructed by 2025 and the tax base will grow by $7,353.

Using historical data, projected job growth would increase from 204 to 340.

A new business of approximately $10,000,000 in value would need to be built in Ravalli County to reach the Ravalli County Airport levied tax revenue. If the business then hired 204 good paying jobs, they would begin to compete with the Ravalli Airport in economic impact to the County. To date in Ravalli County, this has never happened. Businesses grow slowly over time.

Decisions whether to provide support for public infrastructure at the Ravalli County Airport should take into consideration the potential financial loss of tax revenue, potential school revenue decline, potential school enrollment decline, the loss of good paying jobs, and how long it takes to grow a business of this size in Ravalli County. The Airport can be used to generate additional jobs and tax base if investment is supported. If the Airport and the TEDD do not receive much needed improvements to public infrastructure, they may take their business and jobs to other locations. Like Freight Monster located on Old Corvallis Road, businesses may have no choice but to take their jobs elsewhere. If Freight Monster were to add jobs to their newly acquired facility, they would be in violation of the Montana State DEQ regulations. Businesses at the Ravalli Airport face these same challenges as they are forced to utilize illegal vault style bathroom facilities.

Synopsis of a Few Ravalli Airport, TEDD and Contiguous Area Businesses

Choice Aviation – 18 employees. This company provides aircraft maintenance, flight lessons, flight service and other services in general aviation. With adequate public infrastructure, the company could

double in size. The engineered septic system the company is connected to serves two additional businesses and has been at capacity since 2012.

Marketing Masters – 5 employees. This company began at the airport in about 2015. They initially leased, then purchased their hanger facility. The company manufactures hardware for multi-national companies. Again, there is opportunity for growth. This company is connected to a vault style waste water system.

A-TEC Aircraft Maintenance Center - 8 employees. This company provides a full line of helicopter and aircraft maintenance and repair. The company also has fiber installation technology in its offerings. They are working to bring 100 MB fiber service to the Ravalli Airport to serve their needs. The broadband service will be offered to others in the service area. This company is connected to a vault style waste water system.

Freight Monster – less than 24 employees. This company has three profit centers in the freight industry; freight, high tech logistics, and data recovery. The company is located on Old Corvallis Rd in the city limits of Hamilton. They are not connected to city waste water. The company is poised to grow. However, Freight Monster had to provide a waste water corrective action plan to the MT DEQ that said they could not have more than 24 employees at their 12,000 sq. ft. facility.

EverStone – projected 5 jobs in 24 months with an average wage of $16 per hour. This is a new company that manufactures countertops and similar slab products from recycled glass (much of it local). The company needs 2,000 square feet of heated manufacturing space in Hamilton. The space could not be found and the owner had no choice but to enter a month to month lease just outside the city (May 2017). The owner specifically wanted to be in the City so they could have access to public water and waste water.

Overview of Projects in the Pipeline

The following are a few examples of projects that are underway in various stages in the City and near or in the Ravalli County Targeted Economic Development District. **They all depend upon the infrastructure connections and / or infrastructure being constructed.**

Micro Food Processing Facility – Access to start-up space, cost of equipment, and availability of technical expertise have been flagged as barriers to food processing in Ravalli County. A micro processing center of 4,000 square feet is in the pre-construction phase. About 50% of the funding is in place. The Ravalli County Food Processing facility will be for use by farmers and cooperatives, startup food businesses, expanding food businesses, and those who would like to test new product ideas. The facility will meet regulatory standards of local, state and federal agencies. Businesses will gain access to equipment and services they could not afford to develop or buy on their own. The facility will enable companies to scale with less risk and better stability than they could on their own.

Riverside Crossing Adult Cottage Housing
Riverside Crossing is an adult cottage cooperative located in Hamilton, MT on the campus of the Ravalli County Council on Aging (RCCOA). RCCOA provides senior services throughout Ravalli County including, Meals on Wheels, senior center congregate meals, transportation through BitterRoot Bus, homemaker services, Money Management services, Lifeline Medical Alert system and help with Medicare and Medicaid. Our cooperative campus will have memory care and assisted living following the small home

model concept. The total project is estimated at $11 million dollars. The assisted living portion of the project is approximately $3.5 million. Funding for this portion of the project is in place. Construction on the entire project is scheduled to begin the 3rd quarter of 2017. Approximately 20 jobs will be created with an annual estimated payroll of $625,000.

A bio mass heating district - is a tested way to use traditional resources. Fuels reduction and woody biomass utilization activities can help reduce wildfires and help spur job creation in rural communities.

A biomass heating district located in the County's TEDD could further these key objectives:

1. Reduce heating costs for businesses and residential housing in and near the district
2. Provide incentives and competitive advantages for new businesses to start or expand
3. Keep fuel dollars in the local economy
4. Create job opportunities
5. Reduce biomass in the Wildland urban interface
6. Over time, reduce the intensity and the cost of fighting wild fires in the urban interface
7. Provide infrastructure for value added agriculture, such as fruit drying, heating green houses and cool storage.

Preliminary investigation has been done on this project with the USFS Regional Biomass Coordinator and Montana DNRC Biomass Coordinator. A quality biomass supply without any changes in USFS management is readily available. Knowledge about operating a heating district is available locally, thanks to Darby and Victor school districts being among the first to implement Fuels to Schools technology. There are more than 6,000 district heating and cooling systems providing 360,000 MWh of energy in the United States.

The first district energy system in Canada was introduced in the early 1880s in London Ontario, to meet the heating needs of university, hospital and government complexes. The first known commercial district energy system in Canada was established in 1924 in Winnipeg. The heating district will provide a replicable solution to economic and environmental problems in this community. Our project will improve local forest management issues, employment opportunities; value added agriculture and business infrastructure. The Ravalli County TEDD would be the main heating district customer.

Improving our economy in Ravalli County does not happen by accident nor does it happen overnight. We expect positive change from establishment of the TEDD. The City, County and Citizens must work together to generate opportunities through the development of public infrastructure in and around the Targeted Economic Development District.

For forty years traditional wealth building jobs (agriculture, timber, extractive) have been on a rapid decline in the Bitterroot Valley. In the 1970's the Ravalli County per capita income was in the top ten of the national average. Since the decline of the timber, mining and agricultural economy, Ravalli County per capita incomes have hovered between 47th and 48th. During that same forty years, growth in knowledge based industries and value-adding opportunities have been on a slow incline. Economic developers and local leadership are working to improve the basic infrastructure (waste water, water, broad band Internet) and planning needs so that new economy businesses have a more predictable place in which to start or expand.

Ravalli County has many strong assets. Our economic base is diverse and includes high tech manufacturing, technology, value added agriculture, bio-science, value added forest products industry, and many cottage and life style businesses. 96% of our 1,400 businesses have fewer than 10 employees. The City of Hamilton, the County seat, is home to GlaxoSmithKline (GSK) and Rocky Mountain Laboratories (RML). GSK is the fourth largest pharmaceutical company in the world and RML is the only Level-4 bio lab in the Northwest. Our community has a two-year college, the Bitterroot College.

Ravalli County and the City, in conjunction with the Ravalli County Economic Authority (RCEDA), are working to foster the development of secondary, value adding industries in the community as part of its overall mission to promote economic development, to improve area employment opportunities and to expand the community's tax base. This area around Hamilton is a desirable location where businesses want to locate. However, there is no access to infrastructure for secondary value- adding business growth to occur. Goals to be furthered by the economic strategy which will support business include:

1. Good paying jobs for a varying scale of work force.

2. Support for small business in Ravalli County.

3. Housing that workforce can afford. Housing for seniors. Providing housing for seniors will free some housing that may be more affordable for workforce.

4. Infrastructure: Broadband Internet, Water, Waste Water, Park / trail system, fire and law enforcement services, education of all kinds.

5. Support for value added agriculture.

6. Support for bio mass reduction and value added timber products, such as pellets and heating districts.

Creating and maintaining technology, light industrial, and valued- added agriculture areas for local industries that provide higher wage jobs is critical to the community's economic health and the welfare of its citizens. The chronic difficult business climate, low wages, expensive housing, and deficient infrastructure have created the perfect economic storm for the Bitterroot. For example, in Ravalli County rent is 42% to 62% of an individual's gross wage (30% is the acceptable benchmark). Only 4 counties in Montana share this high rent rate, Ravalli, Missoula, Petroleum, and Prairie. This situation is an ongoing problem for our businesses and local government as they work to retain and attract workers.

Our community too frequently reaches a point where disagreements and long held differences with one another prevent us from making good decisions for the economy. In our grandmother's words, "we cut off our noses to spite our face." If our community is to prosper, we must find a new, productive way to deal with our differences. Because of our inability to compromise, our county is at a disadvantage when competing with Missoula, Montana, and the world to attract good companies to locate in our area.

If our community had the funds that have been spent on lawsuits, settlements, and paying outside consultants to craft reports and studies to defend our collective positions, we would have quite a sum of money to spend on projects that are on the wish list. A citizen plea is "please get accurate facts and engage by supporting your elected officials in making good decisions on the economy." Public meetings on infrastructure aren't as entertaining as a good hike or a nice dinner. However, they may impact your

ability to afford the activities you enjoy. Whether you rent or own your property, poor infrastructure decisions means that more of your money will go to support the local government, schools, and other levied tax endeavors. If you want more money in your pocket, and you want to pay less tax, then support infrastructure.

Ravalli County Airport and Surrounding Area Findings and Recommendations

The Airport has increased its output of revenue and jobs in to the community by more than 27% in the last 8 years, and payroll has increased by 30%. If the County and citizens band together to take pride in their Airport, there is every reason to believe that the Airport will continue to provide good paying jobs and tax base to this community with at least its same historic velocity.

There are five key points to take away from the economic analysis.

1. The Airport is a proven revenue earner for the Town, the Citizens, and outlying areas.

2. Demographics demonstrate that the citizens of the Hamilton area are low income with nearly 30% living below poverty. If the Airport were not part of the County revenue, the tax burden on those with the least income would increase. Tax increases are passed on to residents even though they may not be a property owner (an example of this effect is higher rents).

3. Long term, stable support for economic development is necessary for healthy, competitive communities. The lack of public infrastructure at the Airport and surrounding areas is a barrier to job and business growth.

4. With nearly ZERO support, the Ravalli County Airport is among the top 6 County employers and the 14th largest taxpayer. What would occur with some support?

5. The County has designated the area for Targeted Economic Development. The City has no areas in which to grow; there is very little room for infill, let alone a new business. (Growth Policy and Land Use Planning)

The County and citizens should consider the demographics, below, with an idea toward their future well being.

1. Two census tracts in the Hamilton area have been designated as having persistent and high poverty by the US Census.

2. The majority of the people living in the City of Hamilton and close to its borders are low to moderate income.

3. Housing is not affordable for half the city residents. Families, spending more than 30% of their income on housing, is 62% higher here than in the state. Those spending 50% is 76% higher here than in the state. The cost of ownership and renting are equally unaffordable.

4. Wages are not keeping up with the high cost of living.

5. Citizens and economics agree that clean water and protecting the Bitterroot River from nitrates and other pollutants is critical. Not having public infrastructure, such as waste water, does not further this goal.

We have low wages, high housing cost, and a majority of the area residents are low to moderate income. More commercial, light industrial business growth in and outside of the area is needed in order for the community to be healthy and generate good paying jobs. One path to achieve these recommendations is to support an asset that has been growing and providing positive impacts (jobs and $) despite little to no support: the Ravalli County Airport and its cluster of aviation related businesses.

Hamilton's 2015 Growth Policy lists the following goals for economic development. Many of the City goals mirror the goals of the Ravalli County TEDD.

City of Hamilton Goals & Policies from the Growth Policy

Goal 2: Cultivate a workforce to meet business needs.

A. Identify services that would improve the business climate for entrepreneurs and increase the level of awareness related to the resources available to meet their needs.

B. Identify the region's clusters (i.e., natural resource companies; life science; software development; IT services) and determine ways to support their growth.

C. Identify ways to coordinate workforce and education activities with industry clusters.

D. Coordinate with economic development organizations to identify and leverage the region's assets that attractor retain businesses.

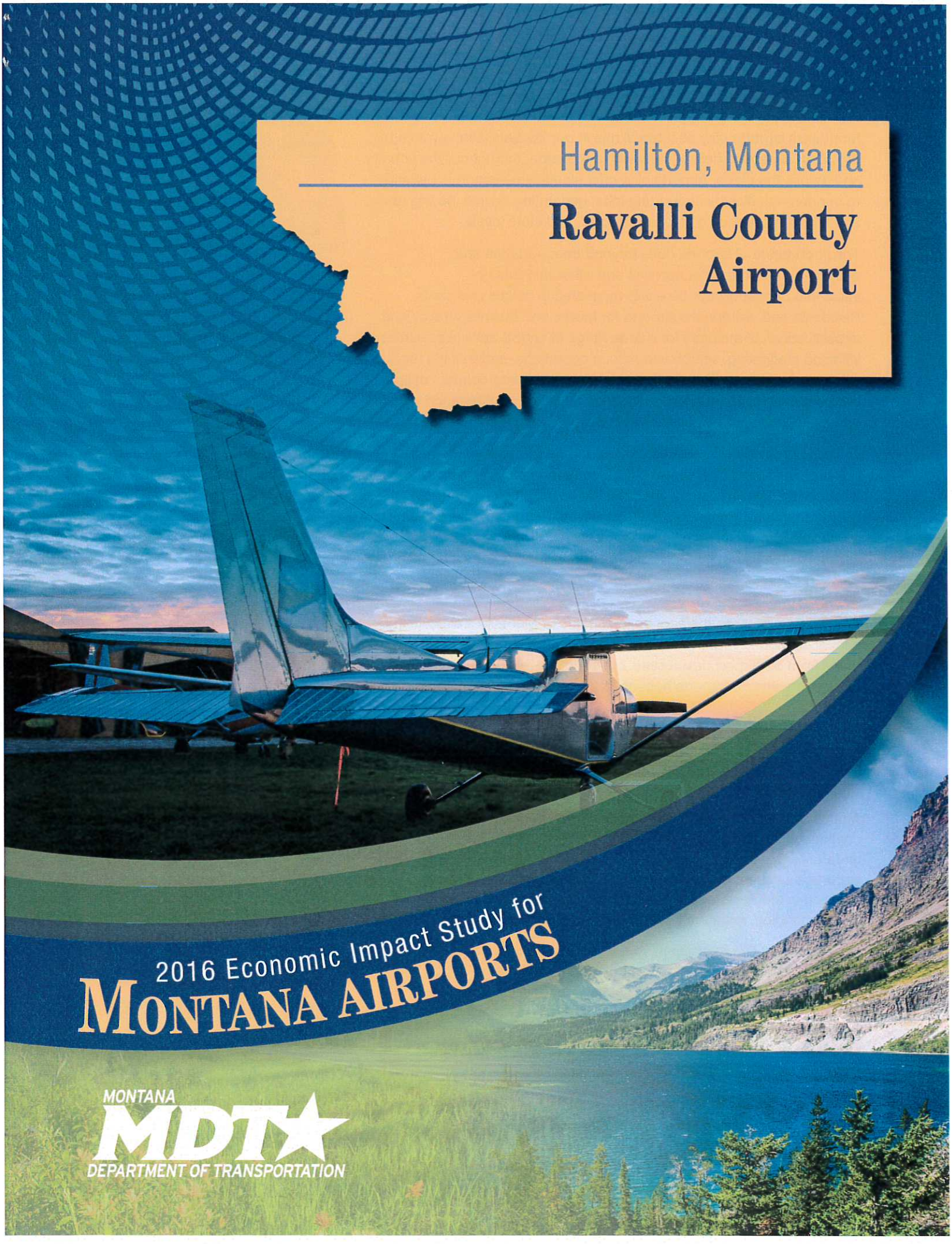
E. Support the needs of existing businesses through business retention efforts such as training, surveying business needs and other assistance such as buy-local programs.

F. Promote telecommuting and other home-based business opportunities.

The next step in this process is to determine if the community really wants good jobs and clean water and to protect the Bitterroot River. Will there be support for public infrastructure? Or will the quiet message to businesses be we don't support infrastructure and therefore this community is not open for business. The Ravalli County TEDD and the Ravalli County Airport are tremendous municipal assets. It is our hope that the citizens will demonstrate their support for business, jobs, and infrastructure.

Sources, Reference Documents (available in a separate file)

- Tax Base Spreadsheet Montana Department of Revenue
- MDOT 2008 Hamilton Airport Economic Impact Report
- MDOT 2016 Hamilton Airport Economic Impact Report
- Ravalli County and City of Hamilton Income and Housing Demographic Charts
- Portions of the City of Hamilton 2015 Growth Policy
- US Census


Hamilton, Montana
Ravalli County Airport
2016 Economic Impact Study for
MONTANA AIRPORTS
MONTANA
MDT
DEPARTMENT OF TRANSPORTATION

Ravalli County Airport

DIRECT ECONOMIC IMPACTS

On-Airport
$5,816,000

Construction
$179,000

Visitor Spending
$6,117,000

- Agricultural Spraying
- Corporate/ Business Activity
- Aerial/Wildland Firefighting
- Military Exercise/ Training
- Emergency Medical Aviation
- Police/Law Enforcement

SPIN-OFF ECONOMIC EFFECT

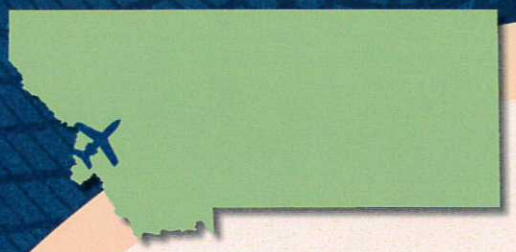
$12,112,000

6S5 TOTAL IMPACTS

204

$7,492,000

$20,090,000



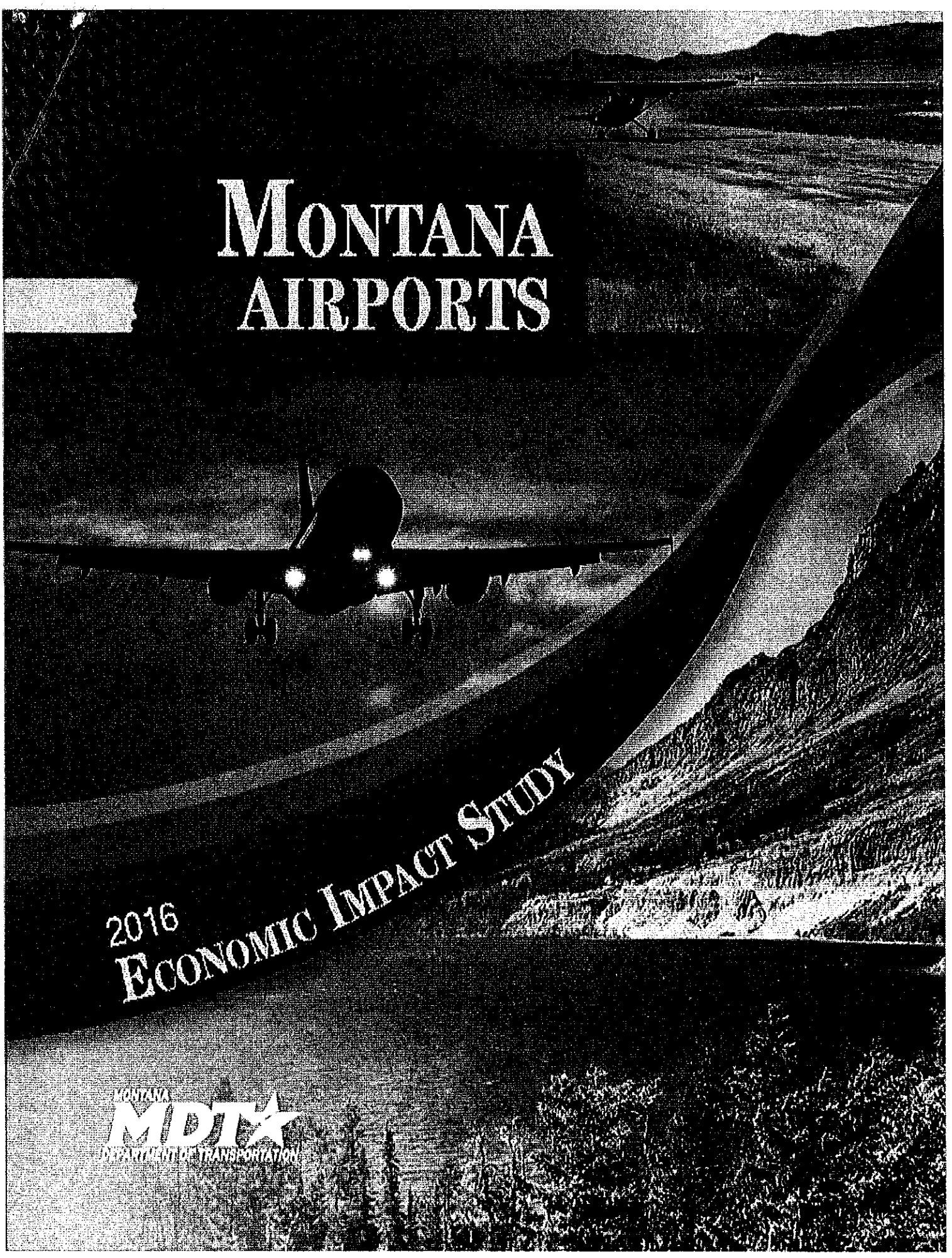
Ravalli County Airport (6S5) is a general aviation airport one mile east of Hamilton in Ravalli County, Montana. The airport is in the western region of the state in a valley with Rocky Mountain peaks to its east and west. The region is known for its stunning scenery and outdoor activities, including camping, hiking, and fishing.

Ravalli County Airport is one of the busiest general aviation airports in Montana, accounting for almost 24,000 aircraft operations annually. These activities include recreational flying, agricultural spraying, cargo flights, corporate and business aviation, aerial wildland firefighting, search and rescue operations, flight training, emergency medical flights, and public charters.

Ravalli County is not all business and no play: The airport hosts the Annual Ravalli County Airport Heritage Days and Car Show during the first weekend in July, including a pancake breakfast fly-in attended by 400 to 500 people. Every Easter, the airport hosts an annual Easter egg hunt for the community with a consistently successful turnout.

The functionality and diverse uses of Ravalli County Airport have generated permanent locations for many companies, including agricultural sprayers, aircraft structural mechanics, fixed-base operators (FBO), a government aerial wildland firefighting agency, and restaurants.

Ravalli County Airport benefits the local community by serving an economic hub and offering a central location for community activities and events.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TECHNICAL REPORT DOCUMENTATION PAGE

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9. Performing Organization Name and Address Kimley-Horn and Associates, Inc., 7740 N. 16th St., Ste. 300, Phoenix, AZ 85020; Economic Development Research Group, Inc., 155 Federal St., Ste. 600, Boston, MA 02110; University of Montana Bureau of Business and Economic Research, 32 Campus Dr., No. 6840, Missoula, MT 59812-6840; Kadrmas, Lee, and Jackson, Inc., 1640 Burnt Boat Dr., Bismarck, ND 58503		**10. Work Unit No.** **11. Contract or Grant No.** Project No. 8233-001
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15. Supplementary Notes

Conducted in cooperation with the U.S. Department of Transportation, Federal Highway Administration. This report can be found at http://www.mdt.mt.gov/research/projects/aer/econ_impact.shtml.

This study updated the previous Montana airport economic impact study conducted in 2007 and 2008.

16. Abstract

The Montana Airports 2016 Economic Impact Study analyzed the qualitative and quantitative impacts of the Montana airport system, including aviation- and non-aviation-related businesses, visitor spending, capital expenditures on construction, and additional spin-off (or "multiplier") effects. Specific activities and uses at each airport were also examined to understand and communicate the wide range of impacts and benefits derived from airport operations. Data was gathered via an extensive surveying effort and supplementary secondary data sources to complete data gaps. Economic modeling utilized the IMPLAN and vFreight™ software platforms. The study determined that Montana's airport system generates a $2.8 billion in total economic impact, supports nearly 24,000 jobs, and generates approximately $839 million in payroll. The results of the project can be used to support decision-making at all levels; promote economic activity and development; and provide a more comprehensive understanding of how broader economic, demographic, and other trends have affected aviation in Montana. This study updated a previous economic impact study conducted in 2007 and 2008.

17. Key Words	18. Distribution Statement
Economic factors, economic analysis, economic models, social factors, socioeconomic factors, impacts, businesses, industries, interdisciplinary studies, methodology, social sciences, mathematical analysis, employment, travel, aviation, airports, payroll, income, revenue, air cargo, capital improvements, construction, hospitals, firefighting, farming, agriculture, crops, freight, hospitality, aircraft, air travel	No restrictions. This document is available through the National Technical Information Service, Springfield, VA 22161.

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified	104	

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1. Introduction

The Montana Department of Transportation (MDT) teamed with Kimley-Horn, Inc. (Kimley-Horn); the Economic Development Research Group, Inc. (EDR Group); Kadrmas, Lee, and Jackson, Inc. (KLJ Engineering); and the University of Montana Bureau of Business and Economic Research (UM BBER) to update the Montana 2007-2008 State Aviation System Plan, Economic Impacts of Airports in Montana. This update quantified the economic contributions of aviation to the state and summarized the benefits that airports provide throughout Montana.

Montana's airports play an integral role in the state's transportation system by providing air service within the state, across the country, and across the world. Airports also offer significant economic benefits to communities by supporting jobs; generating payroll; paying taxes; and triggering spending at local, regional, and state levels.

The importance of airports goes beyond transportation and economics. Airports offer access, services, and other attributes of value to Montanans that cannot always be easily measured in dollars and cents. Residents and visitors use airports for leisure and business travel, and airports serve as the base for a wide range of critical activities such as wildland firefighting, search and rescue operations, and training for future aviators. Airports are the starting point for aircraft that conduct utility inspections, provide medical evacuation services, and transport staff and executives for business activity.

1.1 Objective of Study

MDT conducted a comprehensive study of the state's aviation facilities to better understand the value of Montana's airports from the perspective of both economics and community benefits. This study analyzed the contributions of airports within the Montana system with measurable economic outputs, including on-airport aviation- and non-aviation-related businesses, visitor spending, capital expenditures on construction, and additional spin-off (or "multiplier") effects or benefits.[1] This study also examined specific activities and uses at each airport to identify how these facilities support Montana's residents and visitors. Based on extensive surveying efforts and in-person discussions with airport managers, tenants, and users, Montana's airport system:

- Supports nearly 24,000 jobs
- Generates approximately $839 million in annual payroll
- Generates $2.8 billion in total annual economic impacts

Of the airports included in this economic impact study, 13 are categorized as commercial service airports and 64 are general aviation airports. This distinction is important because different types

[1] The glossary in Appendix A and Chapter 3: Analysis Approach provides more detailed definitions of the economic terminology used in this report.

determined, 50 were selected to be inventoried via on-site surveys. Appendix B provides a list of all airports included in the final study and provides airport-specific impacts and spin-off effects.

Once the airports were selected, economic impact terminology was confirmed with MDT to ensure transparency and clarity throughout the inventory, economic impact data analyses, and documentation processes. In the 2007-2008 study, the terms "first-round" and "second-round" impacts were used to measure economic impact. For this study, these terms were updated to "direct impacts" and "spin-off effects," respectively. Spin-off effects can be further defined as "indirect" or "induced".

Direct impacts include on-airport jobs, capital expenditures on construction, and off-airport visitor spending. Spin-off effects are caused when a portion of direct business revenues are used to purchase goods and services in Montana (i.e., indirect effects) and when the portion of revenues paid as wages to workers are spent within the state (i.e., induced effects). For example, an indirect effect occurs when an on-airport aircraft maintenance company purchases tools from a local vendor, which then recirculates the revenue from the maintenance company into the local economy. An induced impact occurs as an airport employee spends a portion of his or her wages at a local grocery store.

1.3 Summary of Findings

The economic contribution of Montana's aviation system to the state economy is based on on-airport businesses, non-aviation tenants, off-airport businesses serving airport visitors, capital expenditures on construction, and airport-reliant businesses. These business activities generate additional economic activity such as business orders to suppliers (i.e., indirect effects) and business sales generated by the spending of workers' incomes on consumer purchases (i.e., induced effects).

Combined, direct impacts and spin-off effects represent the net contribution that Montana airports provide to the state economy. In total, Montana's airports annually generate nearly $2.8 billion in business sales, almost 24,000 jobs, and $839 million in payroll to Montana residents, as shown in Table 1.

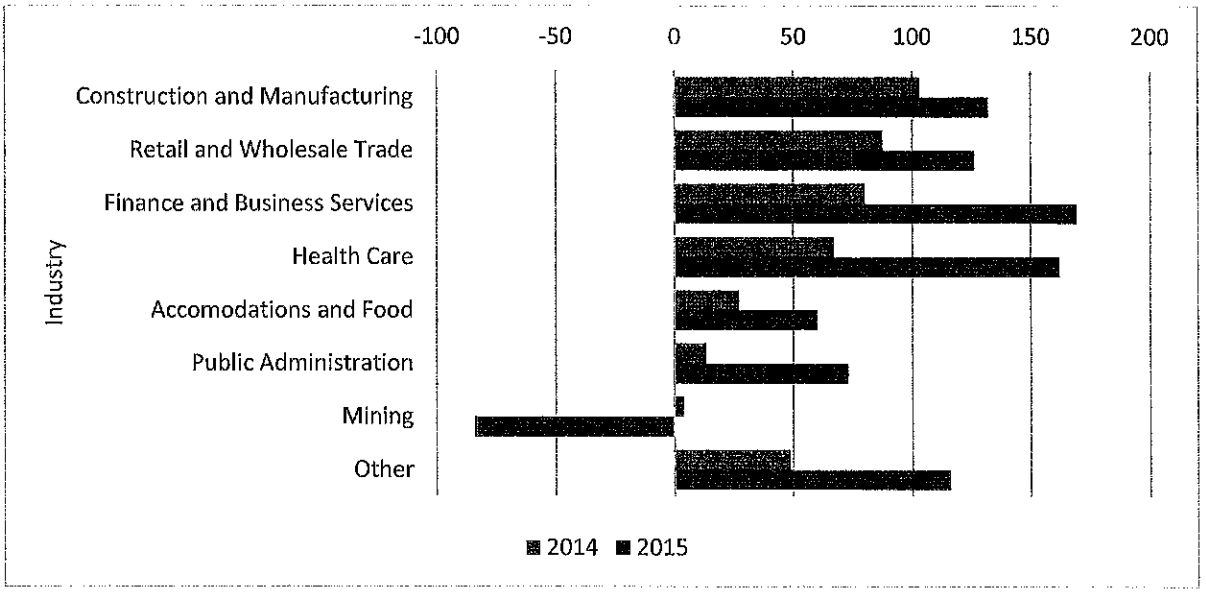
Table 1. Total Annual Economic Contribution of Montana's Aviation System

Impact Type	Jobs	Payroll ($)	Economic Impacts ($)
On-airport	5,260	$271,531,000	$911,144,000
Off-airport visitor spending	9,360	$198,309,000	$717,784,000
Capital expenditures on construction	413	$18,365,000	$61,147,000
Spin-off effects	8,816	$350,305,000	$1,089,040,000
Total Contribution	**23,849**	**$838,510,000**	**$2,779,115,000**

Sources: General aviation, commercial passenger, on-airport, and airport managers surveys; MDT; and IMPLAN 2014. Calculations by EDR Group.

Figure 2 provides an overview of the growth in inflation-corrected wages in Montana (presented in millions of dollars) by industry.

Figure 2. Growth in Inflation-corrected Wages in Montana (2014-2015)



Sources: U.S. Bureau of Labor Statistics 2016 and U.S. Bureau of Economic Analysis 2016.

The growth in construction wages does not signal a rebound in single-family home construction, which has only begun to increase after almost six years of very depressed levels. Instead, construction wages have been driven largely by multi-family residential, commercial, industrial, and civil construction projects. Western Montana is seeing more residential construction, particularly in Bozeman. Billings construction activity is tilted more towards commercial and industrial projects.

Signs of the steep decline in crude oil prices since mid-2014 are apparent in the economic performance of the oil-patch counties on the eastern edge of the state, which have declined after years of very strong growth. It is too soon to register the impact of lower wheat prices on activity in counties with a high grain farming presence. On the other hand, the strength of the retail trade and accommodations industries is consistent with estimates of higher spending by non-resident visitors.

There was greater balance in economic growth in 2015, both across communities and across industries. Except for Butte-Silver Bow, whose economy has been buffeted by lower commodity prices, growth in western Montana continues to improve, with the torrid growth in the east decreasing significantly. The largest contiguous group of underperforming Montana counties in terms of recent wage growth is the formerly fast-growing counties that straddle the North Dakota border. Figure 3 depicts inflation-correction wage growth by county between the fourth-quarter of 2014 and the fourth-quarter of 2015.

eastern Montana and to less than half of 2014 levels in North Dakota. Crude oil prices moved below $40 per barrel—more than 60 percent lower than the triple-digit prices of early 2014.

- The U.S. Environmental Protection Agency (EPA) announced its final rules as part of the Clean Power Plan aimed at reducing greenhouse gas emissions from electric power plants. Montana's emissions rate target for year 2030 is 44 percent lower than the 2012 baseline rate—a larger reduction than any other state. However, those rules have been temporarily stayed by an order from the U.S. Supreme Court.

2.2 Montana's Regions and Cities

Table 2 presents average annual growth rates of real non-farm earnings for the entire state, as well as the eight largest counties for four time periods that roughly correspond to the decades beginning with the 1970s. Real non-farm earnings are the broad measure of economic performance traditionally used to measure local-area economic performance.

Table 2. Real Non-farm Earnings, Average Annual Percent Growth (1970-2013)

	1970 - 1980		1980 - 1990		1990 - 2000		2000 - 2013	
Rank	County	Annual Growth (%)	County	Annual Growth (%)	County	Annual Growth (%)	County	Annual Growth (%)
1	Gallatin	7.1	Gallatin	4.1	Ravalli	10.0	Gallatin	4.9
2	Yellowstone	7.1	Ravalli	2.6	Gallatin	9.4	Butte-Anaconda area	4.6
3	Missoula	6.7	Flathead	2.0	Missoula	5.7	Flathead	3.2
4	Flathead	6.7	Missoula	11	Flathead	5.7	Lewis and Clark	3.0
5	Lewis and Clark	5.8	Lewis and Clark	0.9	Lewis and Clark	5.2	Yellowstone	3.0
6	Ravalli	5.6	Yellowstone	0.4	Yellowstone	4.3	Cascade	1.8
7	Cascade	1.5	Cascade	-0.4	Butte-Anaconda area	2.7	Missoula	1.4

Source: U.S. Bureau of Economic Analysis 2015.

Even though statewide growth rates experienced a significant decline followed by a rebound over the three decades from the 1970s to 1990s, the same six counties were ranked in the top six spots over the 30-year period. Only their rank order changed from one period to the next. In three of the four decades presented, Gallatin County ranked number one in growth. The one exception was the 1990 to 2000 period when it ranked second. Ravalli County ranked sixth in the 1970s, second in the 1980s, and first in the 1990s. Yellowstone County was second in the 1970s, then dropped to sixth in the next two decades.

2002 recession was concentrated in the high-tech sector, much of which was in California. With more than 30 million residents and located relatively nearby, California has traditionally been a major source of migration to Montana. Because mobility typically declines during poor economic times, fewer Californians may have migrated to the state during this period.

The net migration trends for the state's major urban areas are much more difficult to categorize than statewide trends. For example, the 2009 recession impacts were much greater than those in 2001-2002 in Flathead, Gallatin, and Ravalli counties. Conversely, Missoula County experienced a relatively stable number of annual net arrivals of new residents during both recession and recovery periods.

2.4 Conclusion

While the pace of growth accelerated in 2015 in Montana, the pattern of growth, both geographically and across industries, continued to change. Overall, growth has picked up in the more populous western portion of the state, while the once-booming counties along the eastern edge of Montana have suffered from an energy-related contraction. Recent data suggest that faster growth in 2015 did not carry forward into the current year.

Surveys of airport managers and tenants were used to collect airport-specific data, including jobs by industry, capital budgets, and airport operating expenses. In cases where responses were not obtained from all tenants at an airport, the consultant team used databases assembled by business establishments (e.g., Hoovers/Dun and Bradstreet) or GIS tools with an industry overlay (i.e., ESRI) to supplement the survey data and furnish complete coverage of Montana airport employment. Once assembled, employment data were sent to each airport for final review and confirmation. The survey methodology is described in Section 4 Survey and Data Collection Methods.

Visitor spending data were estimated by administering visitor intercept surveys to passengers at commercial airports and pilots and passengers at general aviation airports statewide. These surveys enabled the consultant team to develop estimates of off-airport spending by visitors to Montana who arrive through the state's airports to then apply to the estimates of the number of visitors at each airport. The passenger intercept surveys were conducted during the winter of 2015-2016. To adjust the survey findings to accurately reflect annualized spending and visitor travel patterns, the consultant team applied seasonality adjustments based on the annual report of tourism developed and published by the Institute for Tourism and Recreation Research at the University of Montana (Grau 2016).

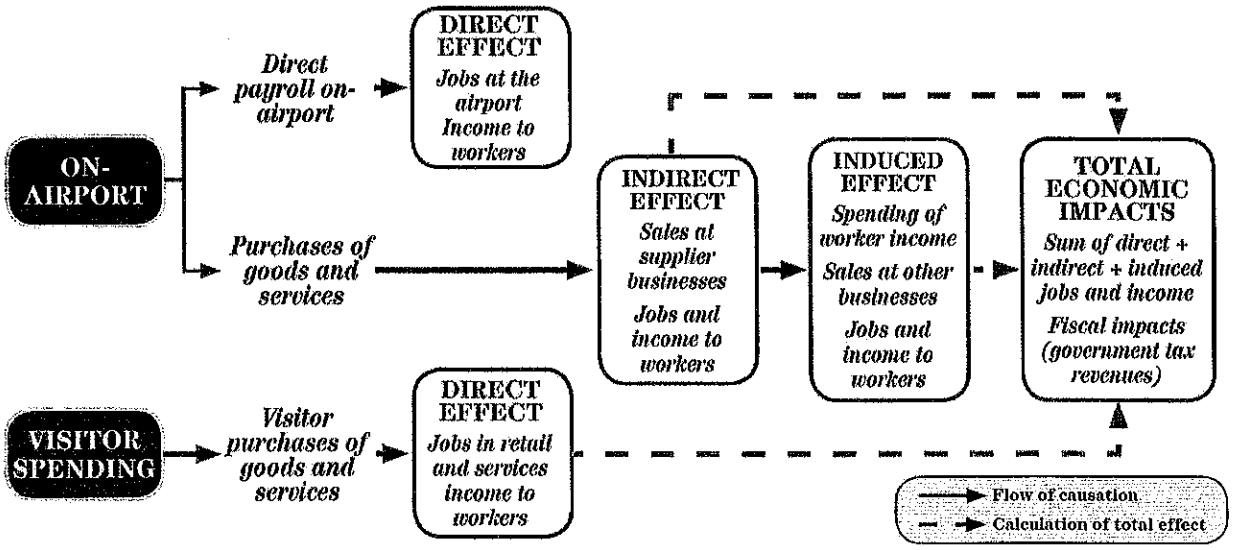
The number of visitors varies between commercial service and general aviation airports and activities. Visitor estimates were obtained from multiple sources. For commercial service airports, the Market Resident Visitor Report was purchased from Data Base Products, Inc., a firm that analyzes raw data from the U.S. Department of Transportation's (DOT) airline passenger traffic and financial datasets (2015). This report provides an estimate of the number of commercial airline passengers that were visitors during an identified period. For general aviation activity, which occurs at both commercial service and general aviation airports, airport managers were asked to estimate the percentage of general aviation operational activity related to visitors. These percentages were applied to counts of itinerant or non-local operations provided by the FAA for airports with an air traffic control tower or by airport operators for airports without towers. MDT reviewed the estimates and either confirmed or modified the estimates based on knowledge of the individual airports.

The contribution of air cargo to the economy of Montana was estimated though vFreight™. vFreight was developed by the EDR Group to evaluate the economic significance of domestic and international freight movement by mode. The data are national in scope and use county-level economic models to spatially down-allocate broader freight flows to the industries that are involved in their production and consumption. Coverage includes the two-digit Standard Classification of Transported Goods (SCTG) Commodity Classification by mode with a county level of detail for domestic movements and a port level of detail for international freight flows. Table 4 reports the foundational components of vFreight.

additional economic activity. These dollars re-circulate throughout the state's economy, supporting additional employment, payroll, and spending. These spin-off effects were applied at a state level to be consistent with the goal of providing a single, statewide economic impact analysis.

The intertwined relationship of direct, indirect, and induced impacts is illustrated in Figure 4. Note that due to space limitations, Figure 4 shows only airport and visitor spending effects. However, these principles are consistent for construction activity.

Figure 4. Flow of Direct Impacts and Spin-Off Effects



Source: EDR Group.

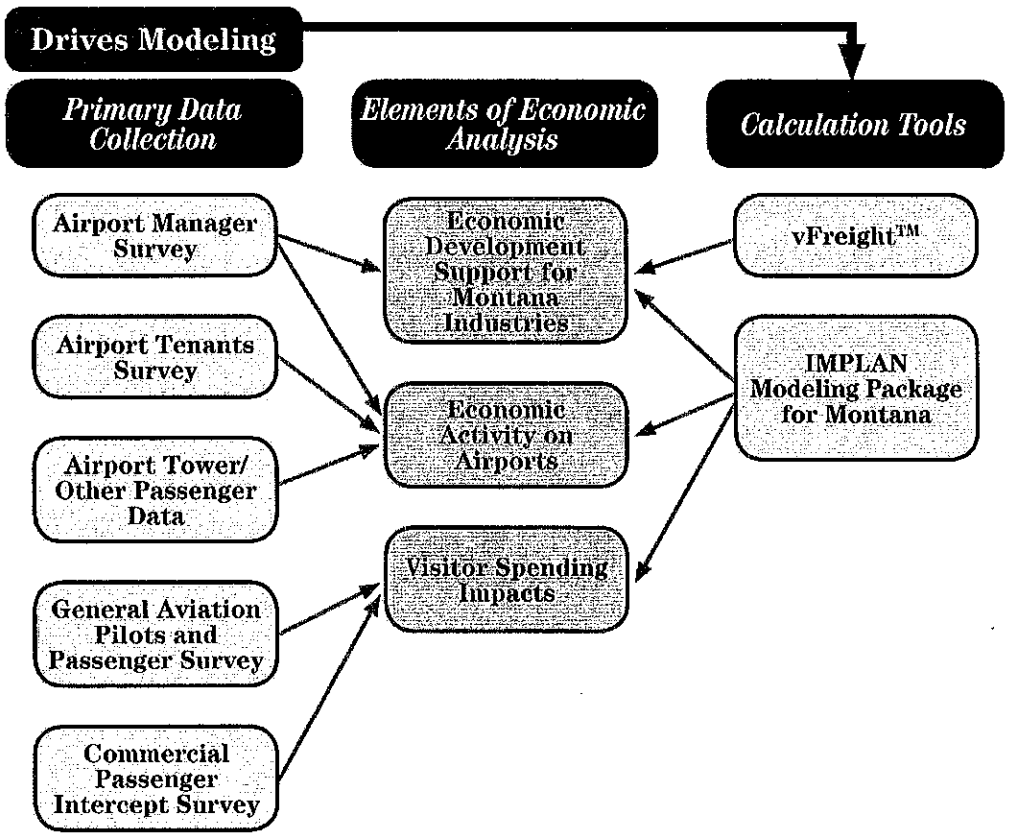
3.2.1 Margining for Retail

Retail sales include the cost of goods sold, defined as the price at which they were purchased from a supplier or wholesaler. Because retail sales are "re-selling" products produced elsewhere, the value of the sale includes the cost of producing products and subsequent wholesale costs to retail establishments, the costs of transportation of the products to retail establishments, and the mark-up from those costs by the retailers.

Only the mark-up that produces revenue for retailers and revenue generated by that mark-up supports employee wages and operating costs of business (e.g., rents, utilities, business machines, and other business expenses)—not gross revenue collected by the retail business or industry. For example, if retail sales total $1 million, only $200,000 of these sales may be revenues earned by retail establishments, since it may have cost the stores $800,000 to purchase the items for sale from wholesalers or distributors.

Each of the attributes associated with the economic role of Montana airports is discussed in the sections below. Figure 5 illustrates the intertwining of data collection[5], utilization of economic calculation tools, and resulting economic analyses.

Figure 5. Data Collection Plus Calculation Process



Source: EDR Group.

3.3.1 On-Airport Employment Activity

On-airport tenants are involved in activities such as FBOs, fuel sales, flight schools, rental car agencies, food vendors, agricultural sprayers, and other businesses that serve passengers, airlines, and general aviation pilots and aircraft. Airports with commercial services also support a wide variety of aviation-related jobs in transportation, concessions, government, and other services. Examples of jobs found on airports include:

- Freight services, including dedicated cargo aviation, courier, delivery, custom broker, and trucking

[5] Secondary data from third-party sources including Hoovers/Dun and Bradstreet, ESRI, Data Base Products, Inc., and the Institute of Tourism and Recreation Research at the University of Montana were used to supplement primary data collection.

Table 6. Annual Commercial Service Visitors in 2015

City	Airport	Visitors (quantity)	Total (percent)
Bozeman	Bozeman Yellowstone International	272,765	32%
Billings	Billings Logan International	167,919	20%
Missoula	Missoula International	151,247	18%
Kalispell	Glacier Park International	124,839	15%
Great Falls	Great Falls International	74,145	9%
Helena	Helena Regional	34,994	4%
Butte	Bert Mooney	11,295	1%
West Yellowstone	Yellowstone	6,688	1%
Sidney	Sidney-Richmond Municipal	4,148	0.5%
Wolf Point	L. M. Clayton	1,586	0.2%
Glasgow	Glasgow International	1,555	0.2%
Havre	Havre City-County	966	0.1%
Glendive	Dawson Community	921	0.1%
	Total	**853,067**	**100%**

Source: Data Base Products, Inc. 2015.

Table 7 profiles visitor spending by airport and spending category. Visitors arriving through Bozeman Yellowstone International Airport and Yellowstone Airport averaged the highest spending per visitor with over $1,000 spent per trip, followed by visitors arriving through Missoula International Airport ($749 per visitor) and Glacier Park International Airport ($634 per visitor). Visitors arriving in Montana through Billings Logan International Airport, Bert Mooney Airport, Helena Regional Airport, and Great Falls International Airport spent about $500 per trip. Visitors arriving in Montana via all other commercial airports in the state average approximately $240 per visitor per trip.

Table 8. Commercial Service Visitors and Visitor Spending

City	Airport	Visitors (quantity)	Direct output ($)	Total (percent)
Bozeman	Bozeman Yellowstone International	272,765	$277,654,000	45%
Missoula	Missoula International	151,247	$113,219,000	18%
Billings	Billings Logan International	167,919	$84,810,000	14%
Kalispell	Glacier Park International	124,839	$79,169,000	13%
Great Falls	Great Falls International	74,145	$35,222,000	6%
Helena	Helena Regional	34,994	$17,662,000	3%
West Yellowstone	Yellowstone	6,688	$6,807,000	1%
Butte	Bert Mooney	11,295	$5,701,000	1%
Sidney	Sidney-Richland Municipal	4,148	$1,000,000	0.2%
Wolf Point	L. M. Clayton	1,586	$382,000	0.1%
Glasgow	Glasgow International	1,555	$375,000	0.1%
Havre	Havre City-County	966	$233,000	0.0%
Glendive	Dawson Community	921	$222,000	0.0%
	Total	**853,067**	**$622,456,000**	**100%**

Sources: Commercial passenger survey and Grau 2016. Calculations by the EDR Group.

The $622.5 million in visitor spending across a variety of spending hospitality industries support employees who work for these businesses. Table 9 indicates that over 8,000 jobs and nearly $169 million in payroll is generated by out-of-state visitor spending. Including spin-off effects adds an additional 3,500 jobs, $136 million in payroll, and over $432 million in business sales. Combined, visitor spending facilitated by Montana's commercial service airports supports over 11,600 jobs, $305 million in payroll, and $1.05 billion in business sales within the state. Additional details on spin-off effects by airport are included in Appendix B.

commercial passenger service, and three categories comprise airports that provide only general aviation service. The classification structure is summarized in Table 10. Appendix D provides a complete break-down of spending of airport spending profiles by MT SASP classification.

Spending per general aviation visitor is considerably larger at airports that also provide commercial passenger service (categories one and two) than those that solely offer general aviation service (categories two through five). Spending is highest for general aviation visitors arriving in Montana through Bozeman Yellowstone International Airport, Glacier Park International Airport, and Kalispell City Airport, who spend an average of nearly $500 per visit. General aviation visitors arriving through the state's remaining four primary commercial service airports (Billings International Airport, Great Falls International Airport, Helena Airport, and Missoula International Airport) spend an average of $339 per trip.

The third category of airport types are commercial service airports with Essential Air Service (EAS) and general aviation level 1 airports (Morrison Maierle 2015). Visitors arriving at this type of airport spend an average $184 per trip. General aviation levels two and three are combined for another 35 airports with an average spending of $43, followed lastly by general aviation level four with an average of $14 in visitor spending.

Table 10. General Aviation Visitor Spending Profiles based on Modified MT SASP Classifications

Modified MT SASP Classification	Visitor Spending Per Trip ($)	Airports (number)	Total (percent)
Bozeman Yellowstone International Airport, Glacier Park International Airport, and Kalispell City Airport	$496	3	4%
Primary commercial service: Billings International Airport, Great Falls International Airport, Helena Airport and Missoula International Airport	$339	4	5%
EAS / General aviation level 1	$184	31	40%
General aviation levels 2 and 3	$43	35	45%
General aviation level 4	$14	4	6%
	Total	**77**	**100%**

Sources: Morrison Maierle 2015 and general aviation passenger survey. Calculations by EDR Group.

3.4 Air Cargo Reliance

Air service supports Montana businesses by facilitating the long-distance and time-efficient movement of goods for incoming commodities and outgoing products. As shown in Table 13, over 5,000 metric tons of air cargo valued at more than $621 million was shipped to and from Montana domestically and internationally. About 28 percent of the value of these goods was sold to domestic and international external markets (*total air cargo shipped*, Table 13). About 71 percent were shipped to Montana (*total air cargo received*, Table 13), consisting of both produced goods ready for purchase (durable and non-durable), as well as goods used as inputs to production.

Table 13. Air Cargo Tonnage and Value by Direction Flow To and From Montana

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

Sources: World Institute for Strategic Economic Research 2016, U.S. Department of Transportation Federal Highway Administration 2016, Minnesota IMPLAN Group 2014, and Oak Ridge National Laboratory 2009 aggregated through vFreight. Calculations by EDR Group.

More than 4,120 metric tons of goods valued at $438 million were shipped both to and from Montana by producers or for customers within the U.S. (domestic inbound plus domestic outbound, Table 13). As depicted in Figure 6, approximately 86 percent of these commodities consist of precision instruments (36 percent), pharmaceuticals (23 percent), electronics (14 percent), and transportation equipment (13 percent).

Examples of airport-dependent businesses include retailers that ship freight via airports or retrieve freight from airports, technology manufacturers, or traditional manufacturers that receive production inputs "just-in-time". Table 14 depicts the industry business sales dependence on Montana's system of airports. The columns are defined as follows:

- *Industry Sector:* Industries that receive and export commodities. Service industries refer to products used in those industries. For example, "health care and social assistance" refers to products such as surgical instruments
- *Inbound/Import:* Value of commodities entering Montana by air transportation
- *Outbound/Export:* Value added in Montana by producing products reliant on commodities received via Montana's airports (*inbound/import column*) that are then shipped via air for sale out of state
- *Total Aviation Dependency:* Total value of sales by industry attributable to Montana airports
- *Total Jobs:* Total number of jobs in Montana supported by the industry's total aviation dependency
- *Total Payroll:* Labor payroll portion of the industry's total aviation dependency earned by the workers (*total jobs column*)

Table 14 also shows that over $156 million in business sales are reliant on airports to receive necessary inputs for production or to ship manufactured goods to customers. More business sales are reliant on imports shipped via air to Montana to produce $134 million in sales versus $21 million in sales that are shipped or exported outside the state.

Table 14. Industry Business Sales Dependence on Montana's Aviation System

Industry Sector	Inbound/ Import ($millions)	Outbound/ Export ($millions)	Total Aviation Dependency ($millions)	Total Jobs (number)	Total Payroll ($millions)
Health care and social assistance	$27	$0	$27	232	$14
Construction and buildings	$18	$0	$18	103	$4
Miscellaneous manufacturing	$4	$9	$13	66	$3
Chemical manufacturing	$6	$5	$12	13	$1
Transportation equipment manufacturing	$10	$0	$10	29	$2
Rail transportation	$9	$0	$9	19	$2
Computer and electronic manufacturing	$4	$3	$7	16	$1
Machinery manufacturing	$4	$1	$5	13	$1
Animal production	$5	$0	$5	35	$1
Fabricated metal manufacturing	$4	$1	$5	21	$1
All others	$43	$1	$44	317	$12
Total	**$134**	**$21**	**$156**	**863**	**$42**

Sources: World Institute for Strategic Economic Research 2016, U.S. Department of Transportation Federal Highway Administration 2016, Minnesota IMPLAN Group 2014, and Oak Ridge National Laboratory 2009 aggregated through vFreight. Calculations by EDR Group.

spending result in an additional 300 jobs, nearly $12 million in payroll, and $38 million in business sales.

Table 16. Economic Contribution of Capital Expenditures on Construction

Impact Type	Jobs (number)	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**

Source: Airport managers survey. Calculations by EDR Group.

3.6 Comparison With Previous Economic Study

This report is a current economic impact assessment of aviation in Montana. The preceding economic impact study was developed in 2007-2008 by Wilbur Smith Associates (2009). As shown in Table 17, the current study (i.e., 2016) reports a significantly higher total economic impact, jobs, and payroll associated with Montana's airport system, indicating growth in all categories since the previous study.

Table 17. Comparison of Total Economic Impacts, 2007-2008 versus 2016

Economic Contribution	Report Year		Percent Change (%)
	2007-2008	2016	
Jobs	18,743.5	23,849	27%
Payroll	$598,897,800	$838,510,000	40%
Economic Impact	$1,555,988,000	$2,779,115,000	79%

Sources: Wilbur Smith 2009, EDR Group, and Kimley-Horn.

The 2016 total economic impact of Montana's airports is 79 percent higher than reported in 2007-2008. During that same time period, Montana's gross domestic product (GDP) steadily grew, rising from $36 billion in 2007 to over $45 billion in 2015 (U.S. Department of Commerce Bureau of Economic Analysis 2017).

While this upward economic trend is partially responsible for the increase in economic impacts associated with Montana airports, there are other factors that influenced the study results. An adjustment in the methodological approach, as well as changes in socio-economic conditions within the state, contributed to a higher estimate of economic activity associated with Montana's aviation system. It is important to consider these differences and other contributing factors when making comparisons of impacts over time to understand the role aviation plays in Montana's economy. Key factors for consideration include:

- **Headcount methodology.** As discussed in Section 1.2 Overview of Approach, the 2007-2008 study defined jobs based on a full-time equivalent methodology (Wilbur Smith Associates 2009); however, this study defines jobs by a headcount. A headcount

4. Surveys and Data Collection Methods

The total economic impact per airport was summed to determine the outcome for the statewide total economic impact. As such, it was critical to accurately identify the direct impacts at each of the airports in the study. The direct impacts are a key factor in generating spin-off effects because they provide the framework for the total economic impact of Montana's airports. Spin-off effects are dependent on multiple variables that need to be accounted for to produce the highest degree of accuracy.

All information provided by the airports, tenants, and users was taken into consideration during the development of this study. Every email, phone conversation, and hard-copy survey was documented, reviewed, and archived to create a large pool of data to be used throughout the economic impact study process. The direct economic impact and job estimates for each airport in the study were sent to the responsible airport representative for final review and comment prior to calculating the spin-off effects.

Multiple methodologies were employed to gather data at airports in Montana. These included on-site inventories and interviews at 50 airports through the state; phone interviews; and electronic, hard-copy, and in-person surveys for airport managers, airport tenants, and commercial and general aviation visiting passengers. These methods were applied to gain as much data from all elements of airport operations as possible. MDT notified airport sponsors and representatives of the economic impact study surveying efforts to increase awareness and participation, as well as address any concerns regarding the detailed financial questions included in the surveys.

4.1 Airport Manager Surveys

Airport manager surveys provide great insight to the activity, functionality, and business presence at individual airports. The airport management surveys were administered between November 2015 and September 2016. Airport managers were asked to provide specific data on their airport's operation and management, as well as information on the airport's tenants that have employees at the airport. Surveys regarding the following issues were sent to managers at all airports in the study to obtain input on:

- Airport information (airport name and manager contact information)
- Airport employment information (number of full- and part-time employees)
- Airport expenditures (payroll, capital improvements on construction, and operating expenses)
- Airport activity (commercial and general aviation operations, number of transient aircraft, and average number of commercial and general aviation passengers)
- Aviation activities (types of activity and descriptions)
- Special attributes of the airport
- Modes of transportation provided by the airport
- Airport tenants, based aircraft, and local and non-local businesses utilizing the airport

4.2 Airport Tenant Surveys

Each tenant at all airports in the study were surveyed to obtain specific information about their on-airport business. The results of the survey provided a strong sense of the economic impact that the company has at the airport and in the local and state economies.

Airport managers primarily provided general tenant information and contacts. Additional tenant information was obtained via on-site inventories, phone calls, emails, and hard-copy surveys disseminated to individual tenants. When responses were not received from a tenant, assumptions were developed based on regional demographic and economic information, airport manager estimates, and other factors. The number of tenants that did not participate in the survey process was extremely small.

4.2.1 Approach

Similar to the airport manager surveys, airport tenant surveys were approved by MDT and sent to tenants with direction to return to the consultant upon completion via e-mail. As the tenant surveys were received, a master tenant spreadsheet was created to compile all responses into one document. The spreadsheet information was sorted per the survey questions and referenced continually while conducting each airport's individual economic impact analysis. Tenant participation in the survey process was very high, and general employment and economic impact estimates were developed for the limited number of tenants unable or unwilling to participate.

4.2.2 Key Data

Using the contact information provided by airport managers, each tenant located on airport property received a survey to provide the follow key data:

- Basic company information
- Type of business activity
- Number of full- and part-time employees in 2015
- Total annual payroll to employees at the airport in 2015
- Total real estate taxes paid in 2015
- Estimated business-spent expenditures for capital improvements in 2013, 2014, and 2015
- Any additional economic benefits or services that the business provides to the local community (open-ended question)

This information provided the basis for estimating industry-specific jobs and the amount of labor income supported by aviation- and non-aviation-related businesses located on airport property. The industry classification is particularly important because the relationship of total economic impacts, including direct impacts and spin-off effects, varies by economic sector.

When known tenants did not respond to the survey, the consultant team reached out to the respective airport managers to identify the number of employees, which is the minimum data needed for the economic analysis. This was successful in almost all cases. In the few cases in

- Additional comments or recommendations regarding Montana's airports (open-ended question)

The results of this survey were used to develop a statistically valid average spending profile of visitors who used commercial airline service to arrive in Montana.

The passenger visitor surveys were conducted during the winter of 2015-2016 when visitation to Montana is significantly lower than the spring, summer, and fall seasons. The limited visitor traffic curbed total responses. Consequently, while the number of valid survey responses were sufficient for a statewide estimate for all of Montana in the winter, the responses could not be extended to each airport and did not incorporate seasonality. These concerns were addressed in two ways.

As discussed in Section 3.1, data from the University of Montana Institute for Tourism and Recreation Research was used to adjust the commercial visitor spending profiles to account for seasonality and reflect spending year-round (i.e., annualization) (Grau 2016). These adjustments were made for each of the 13 airports in Montana that provide commercial service.

Secondly, standard General Services Administration (GSA) per diem rates for Montana were used to align visitor spending profiles to the regional economies of the Sidney-Richland Municipal Airport, Dawson Community Airport (Glendive), Glasgow International Airport, Havre City-County Airport, and L. M. Clayton Airport (Wolf Point) areas. These are smaller commercial service airports in Montana that returned a limited number of visitor surveys when solicited in the winter. Per diem rates included estimates for lodging, meals, incidental, and car rental expenditures.

4.4 General Aviation Passenger Surveys

The general aviation passenger survey was like the commercial passenger survey except it focused on passengers on transient general aviation aircraft, including pilots. A transient aircraft is one that is not based at the arrival airport or one that arrived from another airport. The general aviation passenger survey measured the economic impact of general aviation visitors and pilots.

4.4.1 Approach

To conduct the general aviation passenger survey, hard copies and posters inviting passengers to complete an online version were disseminated to approximately 30 FBOs throughout the state at both commercial service and general aviation airports. FBO managers were contacted prior to surveys being administered with instructions to post surveys and posters in highly visible and high-traffic areas at their facilities to promote participation. The responses were gathered and documented similarly to the airport manager and tenant surveys by recording all responses in one master spreadsheet. The spreadsheet was sorted by the survey questions and used frequently during the economic impact data collection effort.

5. Hospital Use of Montana's Airports

Medical flights provide a critical, and oftentimes lifesaving, service for Montanans, especially those residents who live in remote areas of the state without access to major medical facilities. Airports host emergency evacuation services and healthcare practitioners who fly to communities to provide routine and specialty medical care. Many rural airports accommodate regularly scheduled medical flights that offer care for residents who cannot receive required medical attention in their local communities. Medical flights are particularly vital for patients in critical condition without immediate access to specialized medical attention. Medical transport, either for doctors flying to patients or patients necessitating transport for advanced medical care, is one of the most significant qualitative benefits of Montana's airports.

As part of the Montana Airports Economic Impact Study, a survey was conducted by the University of Montana's Bureau of Business and Economic Research (UM BBER) to evaluate the extent to which and type of Montana airport used by hospitals in the state. A survey was administered to 61 hospitals that are members of the Montana Hospital Association from June to August 2016. Thirty-nine responses were received for a 64 percent response rate. Because the entire population of Montana hospitals was included in the study, the data reflects no sampling error. An overview of the questions and responses is provided below. The full Montana Hospital Survey Analysis is included as Appendix E.

Does your facility use air cargo or air express shipment for any of the following purposes: drug shipments, supply shipments, diagnostics or testing, equipment shipments, document shipments?

The thirty-nine hospitals in the study indicated the following:

- Drug shipments (41 percent)
- Supply shipments (41 percent)
- Diagnostics or testing (39 percent)
- Equipment shipments (31 percent)
- Document shipments (26 percent)

Does your facility have a helipad?

Nearly 67 percent of hospitals responded they have a helipad. The average (mean) helipad is used 14.7 times per month; however, a small proportion of helipads are used more frequently. One hospital reported 80 uses in a one-month period.

Are patients transferred to or from your facility via air ambulance?

Almost 88 percent of Montana hospitals transport at least some patients via air ambulances. The Billings Clinic (Billings), St. Vincent's Hospital (Billings), and Benefis Hospital (Great Falls) reported the highest percentage of patients transported via air ambulance.

6. Wildland Firefighting

Aerial wildland firefighting is the use of fixed-wing aircraft and helicopters to combat wildfires using water, foams, and gels. This also includes smokejumpers who parachute and firefighters who rappel from helicopters into wildfires. Aerial wildland firefighting is an integral component of aviation throughout the state of Montana. The service protects lives, property, and natural resources of all wildlands in Montana.

Many airports in Montana serve as a base of operation for the Bureau of Land Management (BLM), U.S. Forest Service (USFS), and Montana Department of Natural Resources and Conservation (DNRC), the three agencies that provide the main defense to wildland fires in Montana. Table 18 provides an overview of the aerial wildland firefight bases in Montana's airport system.

Table 18. Montana Aerial Wildland Firefighting Bases

City	Airport Name	Type of Aerial Wildland Firefighting Facility
Baker	Baker Municipal	BLM, USFS SEAT
Big Timber	Big Timber	USFS SEAT
Billings	Billings Logan International	BLM large tankers, SEAT, light fixed-wing, helo; DNRC helo; USFS
Broadus	Broadus	USFS SEAT
Colstrip	Colstrip	USFS SEAT
Ekalaka	Ekalaka	USFS SEAT
Hamilton	Ravalli County	USFS SEAT
Helena	Helena Regional	DNRC helo, Cessna 182 aerial recon; USFS
Jordan	Jordan	USFS SEAT
Kalispell	Glacier Park International	USFS SEAT
Kalispell	Kalispell City	DNRC helo, Cessna 182 aerial recon
Laurel	Laurel Municipal	BLM
Lewistown	Lewistown Municipal	BLM SEAT, light fixed-wing, helo; USFS SEAT
Miles City	Frank Wiley Field	BLM SEAT, light fixed-wing, helo; DNRC helo; USFS SEAT
Missoula	Missoula International	DNRC Cessna aerial recon, USFS
Plains	Plains	USFS SEAT
Ronan	Ronan	USFS SEAT
West Yellowstone	Yellowstone	USFS SEAT

Note: Single-engine air tanker (SEAT); helicopter (helo); Confederated Salish and Kootenai Tribes (CSKT).
Sources: Monzie 2016, Flesch 2016, and USDA Forest Service 2013.

While these agencies do not have a presence at every airport in Montana, many airports in the state accommodate aerial wildland firefighting operations on a full- or part-time basis. Approximately 47 airports were identified as supporting aerial wildland firefighting operations, either as a base or alternate airport suitable for wildland firefighting. It should also be noted that

The agency's mission is to "enhance the quality of life, promote economic opportunity, and to carry out the responsibility to protect and improve the trust assets of the Confederated Salish, Kootenai and Pend d'Oreille Tribes of the Flathead Indian Reservation" (CSKT n.d.).

While multiple agencies are responsible for providing fire protection across the state, the Bureau of Indian Affairs (BIA); BLM; county and local, state, and USFS agencies were the primary responders to wildland fires in Montana in 2015. According to a representative of the National Interagency Fire Center, "it doesn't matter the amount of resources each agency has, whoever is closest to the fire will be the first responders using resources from any available agency" (National Interagency Fire Center n.d.).

Over the past five years (2011-2015), all agencies have responded to a total of 8,404 fires, with each year experiencing an ever-increasing number of wildland fires in Montana. Table 19 presents the number of wildland fires and number of acres burned in 2015 by responding agency.

Table 19. Montana Wildland Fires and Acres Burned (2015)

Agency	Number of Fires	Burned Area (acres)
BIA	437	27,206
BLM	94	14,925
County and local agencies	839	68,678
U.S. Fish and Wildlife Service (FWS)	6	704
National Park Service (NPS)	20	23,859
State agencies	339	3,511
USFS	697	212,381
Total	**2,432**	**351,264**

Source: National Interagency Coordination Center n.d.

6.2 Benefits

Aerial wildland firefighting has a significant direct impact on Montana's airports and local communities. According to the Airport Cooperative Research Program (ACRP) *Synthesis 32 Report: Managing Aerial Firefighting Activities on Airports*, "airport operators estimated that from three to eight percent of the local economy is generated by government activities directly related to wildland firefighting suppression activities." The report notes that "the primary source of cost recovery for the airports came in the form of fuel flowage and landing fees. Additional income generators for the airport were rental cars, commercial flights by firefighting agencies, ground/property rental, and fuel sales by the airport and/or the airport's FBOs" (Phillips 2012, 9).

In addition to these direct economic impacts, the same ACRP report notes that spin-off effects can significantly bolster local economies, particularly in areas without a diverse and robust economic base:

7. Airports and the Agricultural Sector

Montana's airports directly link with and contribute to the state's agriculture industry. Montana's airports contribute more than $671 million of total business revenues and more than 3,300 jobs, including the employment and business revenues generated by pilots and the value of agriculture preserved due to aerial application. The economic impact presented in this section includes only the portion of acreage that could not be used if it was trampled by ground application vehicles.

7.1 Crops Treated by Aerial Applicators

According to the National Agricultural Aviation Association (NAAA), there are approximately 1,350 aerial application businesses located in 46 states. Seventy-six aerial applicators are currently registered with the Montana Department of Agriculture (MDA) (Johns 2016). Measured in acreage, the USDA Economic Research Service estimates that 70 percent of U.S. cropland is treated with pesticides, a quarter of which is accomplished by the aviation industry (National Agricultural Aviation Association n.d.). An estimated 221,500 acres of farmland in Montana are treated by aerial applications. This estimate is based on data describing:

- Montana's major crops
- National pesticide application rates for each of Montana's major crops
- National share of cropland treated by aerial applicators

The USDA's Agricultural Chemical Use Survey collects data about pesticide application by major crop category (USDA National Agricultural Statistics Service 2016b). Because past surveys do not include Montana, it is assumed that application rates in Montana are like states that grow the same major crops. In 2014, nearly all the corn, barley, and potato acreage represented in the survey received a pesticide application from all types of applicators.

Applying the application percentages to the acres harvested in Montana in 2015, an estimated 48,500 acres of corn, 11,200 acres of oat, 816,000 acres of barley, and over 10,000 acres of potato received some type of pesticide application. Oat is the least-treated crop among Montana's major crops, with only 51 percent of acreage receiving application.

The MDA, Montana Office of the National Agricultural Statistics Services, and Montana Aerial Applicators Association do not maintain the number of acres that annually receive aerial treatment.[7] The National Agricultural Aviation Association estimates that 25 percent of all treated crops use aerial applicators (National Agricultural Aviation Association n.d.). By applying this national average, an estimated 12,125 acres of corn, 2,805 acres of oat, 204,000 acres of barley, and 2,616 acres of potato in Montana receive aerial application (Table 20).

[7] Based on phone interviews by EDR staff with representatives of each of these organizations.

Table 21. Montana Crop Yields and Dollar Value (2015)

Crop	Per Acre Yield	Aerial-Treated Cropland Yield Units (million)	Price per Unit, 2015 average ($)	Value of Aerial-Treated Cropland ($)
Corn	110 bushels	1.3	$4.05	$5,300,000
Oat	53 bushels	0.149	$3.50	$520,000
Barley (wheat)	52 bushels	10.6	$5.85	$62,100,000
Potato	320 hundredweight (cwt)	0.837	$13.50	$11,300,000
	Total, major crops	**12.886**	**$6.15**	**$79,200,000**

Sources: USDA National Agricultural Statistics Service 2016a and USDA Economics, Statistics and Market Information System 2016.

Average yield loss due to trampling is three percent. As a result, an estimated 40,013 bushels of corn, 4,460 bushels of oat, 318,240 bushels of barley, and 25,114 cwt of potato would have been lost if not for aerial application in Montana. This equates to $162,000 of corn protected by aerial application in 2015. Using the same methodology, it is estimated that aerial application protected $16,000 of oat, $1.9 million of barley, and $339,000 of potato. As shown in Table 21, the annual crop value protected by Montana aerial applicators is an estimated $2.4 million.

Table 22. Effect of Trampling on Montana Crop Yields and Dollar Value (2015)

Crop	Aerial-Treated Cropland Yield (unit)	Average Yield Loss Due to Trampling (%)	Estimated Units Loss Due to Trampling (unit)	Value per Unit ($)	Value of Loss Due to Trampling ($)
Corn	1,333,750 bushels	3%	40,013 bushel	$4.05	$162,000
Oat	148,665 bushels		4,460 bushel	$3.50	$16,000
Barley (wheat)	10,608,000 bushels		318,240 bushel	$5.85	$1,900,000
Potato	837,120 cwt		25,114 cwt	$13.50	$339,000
		Total, major crops	**387,827 units**	**$6.19**	**$2,400,000**

Sources: Gasper 2015 and USDA National Agricultural Statistics Service 2016a.

Table 23. Direct Economic Contribution of Industries Producing Montana's Major Crops by Total Aerial-Treated Crop Production (2015)

Industry	Employment (number)	Payroll ($)	Output ($)
Grain farming	4,468	$109.9 million	$1.6 billion
Vegetable and melon farming	368	$27.2 million	$51.9 million
Total, all crop production	**4,836**	**$137.1 million**	**$53.5 million**
Grain farming	1,081	$27.1 million	$379.2 million
Vegetable and melon farming	89	$6.6 million	$12.6 million
Total, aerial-treated crop production	**1,170**	**$33.7 million**	**$391.8 million**

Sources: IMPLAN 2014. Calculations by EDR Group.

7.3.2 Total Impacts of Aerial Spraying on the Montana Economy

The total contribution of aerial spraying to the Montana state economy amounts to more than $671 million in annual economic output and 3,300 jobs (Table 24). This included $401 million in direct business sales and over 1,300 direct jobs. These direct activities required the purchase of almost $200 million in supplies and services (indirect effects) that generate an additional 1,400 jobs. Spending of $96 million on earnings by workers due to these direct and indirect activities leads to $71 million of consumer spending and almost 600 jobs (induced effects).

Table 24. Total Contribution of Aerial Application to the Montana Economy

Impact Type	Employment (number)	Labor Income ($)	Output ($)
Direct impact	1,329	$39,917,000	$401,254,000
Indirect effect	1,403	$56,053,000	$199,207,000
Induced effect	597	$22,167,000	$71,003,000
Total effect	**3,329**	**$118,136,000**	**$671,464,000**

Source: Calculations by EDR Group using IMPLAN 2014.

responses at 132. NAICS categories 31-33 (manufacturing) are least represented in the survey at seven.

Table 25. Selected Characteristics of Responding Businesses

2012 NAICS Code	Description	Responding Employers			Average annual salary of Montana employees ($)
		Total (number)	Percent Overall (%)	Montana employees (number)	
11	Agriculture, forestry, fishing, and hunting	23	3.8%	138	$31,066
21, 22, 23	Mining, quarrying, and oil and gas extraction; utilities; construction	99	16.3%	1,366	$58,662
31, 32, 33	Manufacturing	7	1.3%	591	$45,754
42, 44-45, 48-49	Wholesale trade, retail trade, transportation and warehousing	127	21.0%	1,556	$35,870
51-56	Information; finance and insurance; real estate, rental, and leasing; professional, scientific, and technical services; management of companies and enterprises; administrative, support, and waste management and remediation services	132	21.9%	2,076	$47,868
62	Health care and social assistance	70	11.6%	844	$42,085
71, 72	Arts, entertainment, and recreation; accommodation and food services	88	14.6%	4,401	$17,884
81	Other services (except public administration)	57	9.5%	392	$41,049
	Totals	**604**	**100%**	**11,364**	**$34,932**

Sources: U.S. Department of Commerce Bureau of Economic Analysis 2016 and UM BBER.

According to the Montana Department of Labor and Industry Unemployment Insurance Division, the survey estimated statistics for a population of employers with approximately 347,457 workers during the data collection period (2016). Thus, this survey represents employers that employ approximately 77 percent of all non-public administration (i.e., local, county, state, and federal government institutions), schools and school districts, and airport workers in the state.

8.2 Results

Facilitating client and vendor travel to sites within Montana is one of the most important benefits of the state's aviation system. More than one-third of Montana business (37 percent) have clients or vendors who use commercial airlines to visit their business sites; that percentage increases to over 52 percent for the state's largest employers. Reflecting this same trend, larger employers

- The manufacturing sector most often reports that employees who take commercial air trips for business (over 71 percent).
- Employers in the manufacturing sector (12 trips per year) and the information, finance, real estate, professional, scientific and technical sector (10 trips per year) generate more total business-related air trips over the previous year when compared with the state median (5 trips per year).

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Appendix A. Glossary

Direct impacts stem from activity that is directly related to the provision of aviation services, visitor spending, or the activity of aviation-reliant businesses. As defined in this study, direct impacts occur in the industry immediately affected whether on- or off-airport. These include on-airport activities, spending by air visitors off-airport, and air cargo activities.

Economic impacts are effects on the level of economic activity in each region or state. Economic impacts in this report are shown as (1) jobs; (2) labor income, labeled as "payroll" in this study, and (3) output (essentially business sales and expenditures by public agencies), labeled as "economic impacts" in this study.

Indirect and induced spin-off (or "multiplier") effects are not defined uniformly across economic studies. As defined in this study, indirect effects measure the purchase of supplies and services needed to produce directly supplied products and services. Induced effects measure the effects of changes in household income, meaning the effects from the spending of wages earned by workers of directly and indirectly affected industries. Total impacts are the summation of direct impacts and spin-off (indirect and induced) effects.

Intermediate commodities are imports that are used as part of a U.S. company's production process, such as imported fabric used by furniture makers. They are not sold as final goods or services.

Input/Output tracks the relationships between the industries of an economy by estimating the scale of what each industry sells to other industries and what each industry buys from other industries. This includes what industries sell to households and what is purchased from industries by households. The circulation of dollars from these purchases and sales is how spin-ff effects are generated.

Jobs are the sum of full-time and part-time jobs. This concept is also known as "headcount", where one full-time job and one part-time job equals two jobs. This definition is consistent with the U.S. Bureau of Economic Analysis and the Bureau of Labor Statistics Covered Employment and Wages and is part of the IMPLAN modeling system (as well as RIMS II multipliers). In this study, jobs include wage and salary jobs, sole proprietorships, and individual general partners, but not unpaid family workers nor volunteers (this is consistent with BEA).

Labor income includes total compensation for work, including gross wages, salaries, proprietor income, employer-provided benefits, and taxes paid to governments on behalf of employees.

Margin is sales receipts minus the cost of the goods received from the producer, leaving the markup by retailers plus any taxes (e.g., sales taxes) collected by the retail establishment. Employment and payroll generated by retail sales are based on mark-ups and do not include the cost of the good to retailers that must be payed to the producer.

Appendix B. Economic Impacts by Airport

The following tables are provided in this section:

- Table B.1. Economic Impacts by Airport, Tenants, and Employees
- Table B.2. Economic Impacts by Airport, Construction
- Table B.3. Economic Impacts by Airport, Visitor Spending at Commercial Airports
- Table B.4. Economic Impacts by Airport, Visitor Spending at General Aviation Airports
- Table B.5. Economic Impacts of Airport, Summary Results

Airport City	Airport	Direct Impacts			Spin-off Effects			Total Impacts		
		Jobs	Payroll ($)	Economic Impacts ($)	Jobs	Payroll ($)	Economic Impacts ($)	Jobs	Payroll ($)	Economic Impacts ($)
Harlowton	Wheatland County at Harlowton Airport	0	$0	$1,000	0	$0	$1,000	0	$0	$2,000
Havre	Havre City-County Airport	13	$402,000	$1,667,000	8	$353,000	$1,018,000	21	$755,000	$2,685,000
Helena	Helena Regional Airport	912	$42,640,000	$164,214,000	598	$24,000,000	$75,673,000	1,510	$66,640,000	$239,887,000
Hot Springs	Hot Springs Airport	0	$0	$0	0	$0	$0	0	$0	$0
Hysham	Hysham Airport	0	$0	$0	0	$0	$0	0	$0	$0
Jordan	Jordan Airport	1	$52,000	$148,000	1	$54,000	$153,000	2	$106,000	$301,000
Kalispell	Glacier Park International Airport	268	$10,619,000	$48,775,000	224	$9,261,000	$27,699,000	492	$19,880,000	$76,474,000
Kalispell	Kalispell City Airport	22	$646,000	$2,392,000	11	$493,000	$1,454,000	33	$1,139,000	$3,846,000
Laurel	Laurel Municipal Airport	22	$763,000	$5,938,000	26	$1,089,000	$3,343,000	48	$1,852,000	$9,281,000
Lewistown	Lewistown Municipal Airport	253	$11,344,000	$23,462,000	120	$4,466,000	$14,616,000	373	$15,810,000	$38,078,000
Libby	Libby Airport	16	$456,000	$1,279,000	5	$210,000	$656,000	21	$666,000	$1,935,000
Lincoln	Lincoln Airport	0	$0	$0	0	$0	$0	0	$0	$0
Livingston	Mission Field Airport	3	$97,000	$731,000	3	$152,000	$461,000	6	$249,000	$1,192,000
Malta	Malta Airport	3	$60,000	$280,000	2	$84,000	$244,000	5	$144,000	$524,000
Miles City	Frank Wiley Field Airport	19	$1,330,000	$1,801,000	10	$378,000	$1,183,000	29	$1,708,000	$2,984,000
Missoula	Missoula International Airport	868	$59,877,000	$174,181,000	1,057	$45,038,000	$130,197,000	1,925	$104,915,000	$304,378,000
Plains	Plains Airport	0	$0	$10,000	0	$3,000	$9,000	0	$3,000	$19,000
Plentywood	Sher-Wood Airport	4	$178,000	$287,000	1	$69,000	$217,000	5	$247,000	$504,000
Polson	Polson Airport	15	$351,000	$1,642,000	4	$178,000	$588,000	19	$529,000	$2,230,000
Poplar	Poplar Municipal Airport	3	$156,000	$427,000	4	$158,000	$442,000	7	$314,000	$869,000
Red Lodge	Red Lodge Airport	2	$68,000	$284,000	2	$81,000	$232,000	4	$149,000	$516,000
Ronan	Ronan Airport	53	$2,884,000	$4,299,000	26	$1,015,000	$3,222,000	79	$3,899,000	$7,521,000
Roundup	Roundup Airport	1	$108,000	$613,000	1	$62,000	$203,000	2	$170,000	$816,000
Saint Ignatius	Saint Ignatius Airport	2	$113,000	$401,000	1	$54,000	$171,000	3	$167,000	$572,000
Scobey	Scobey Airport	8	$316,000	$930,000	8	$341,000	$958,000	16	$657,000	$1,888,000
Seeley Lake	Seeley Lake Airport	0	$0	$7,000	0	$2,000	$7,000	0	$2,000	$14,000
Shelby	Shelby Airport	2	$57,000	$230,000	2	$77,000	$215,000	4	$134,000	$445,000
Sidney	Sidney-Richland Municipal Airport	33	$1,030,000	$2,716,000	22	$943,000	$2,658,000	55	$1,973,000	$5,374,000
Stanford	Stanford Airport/Biggerstaff Field	1	$1,000	$1,000	0	$0	$1,000	1	$1,000	$2,000
Stevensville	Stevensville Airport	24	$547,000	$3,374,000	13	$512,000	$1,568,000	37	$1,059,000	$4,942,000
Superior	Mineral County Airport	1	$4,000	$20,000	0	$7,000	$19,000	1	$11,000	$39,000
Terry	Terry Airport	0	$0	$6,000	0	$2,000	$5,000	0	$2,000	$11,000
Thompson Falls	Thompson Falls Airport	0	$0	$5,000	0	$2,000	$5,000	0	$2,000	$10,000
Three Forks	Three Forks Airport	18	$731,000	$4,194,000	22	$919,000	$2,753,000	40	$1,650,000	$6,947,000
Townsend	Canyon Ferry Airport	6	$136,000	$288,000	2	$64,000	$207,000	8	$200,000	$495,000
Townsend	Townsend Airport	0	$0	$7,000	0	$2,000	$7,000	0	$2,000	$14,000
Turner	Turner Airport	4	$30,000	$50,000	0	$17,000	$47,000	4	$47,000	$97,000
Twin Bridges	Twin Bridges Airport	5	$188,000	$620,000	4	$190,000	$534,000	9	$378,000	$1,154,000

		Direct Impacts			Spin-off Effects			Total Impacts		
Airport City	Airport	Jobs	Payroll ($)	Economic Impacts ($)	Jobs	Payroll ($)	Economic Impacts ($)	Jobs	Payroll ($)	Economic Impacts ($)
Fort Benton	Fort Benton Airport	4	$171,000	$587,000	3	$114,000	$367,000	7	$285,000	$954,000
Fort Peck	Fort Peck Airport	0	$3,000	$8,000	0	$2,000	$5,000	0	$5,000	$13,000
Gardiner	Gardiner Airport	0	$0	$0	0	$0	$0	0	$0	$0
Geraldine	Geraldine Airport	0	$12,000	$41,000	0	$8,000	$25,000	0	$20,000	$66,000
Glasgow	Glasgow International Airport	18	$872,000	$2,749,000	14	$536,000	$1,716,000	32	$1,408,000	$4,465,000
Glendive	Dawson Community Airport	4	$220,000	$693,000	4	$135,000	$433,000	8	$355,000	$1,126,000
Great Falls	Great Falls International Airport	27	$1,129,000	$3,867,000	20	$754,000	$2,413,000	47	$1,883,000	$6,280,000
Hamilton	Ravalli County Airport	1	$51,000	$179,000	1	$35,000	$112,000	2	$86,000	$291,000
Hardin	Big Horn County Airport	10	$474,000	$1,512,000	8	$295,000	$944,000	18	$769,000	$2,456,000
Harlem	Harlem Airport	1	$48,000	$164,000	1	$32,000	$102,000	2	$80,000	$266,000
Harlowton	Wheatland County at Harlowton Airport	0	$0	$0	0	$0	$0	0	$0	$0
Havre	Havre City-County Airport	8	$331,000	$1,133,000	6	$221,000	$707,000	14	$552,000	$1,840,000
Helena	Helena Regional Airport	16	$681,000	$2,333,000	12	$455,000	$1,456,000	28	$1,136,000	$3,789,000
Hot Springs	Hot Springs Airport	0	$3,000	$10,000	0	$2,000	$6,000	0	$5,000	$16,000
Hysham	Hysham Airport	0	$0	$0	0	$0	$0	0	$0	$0
Jordan	Jordan Airport	0	$24,000	$77,000	0	$15,000	$48,000	0	$39,000	$125,000
Kalispell	Glacier Park International Airport	18	$709,000	$2,495,000	13	$486,000	$1,557,000	31	$1,195,000	$4,052,000
Kalispell	Kalispell City Airport	0	$0	$0	0	$0	$0	0	$0	$0
Laurel	Laurel Municipal Airport	2	$108,000	$345,000	2	$67,000	$215,000	4	$175,000	$560,000
Lewistown	Lewistown Municipal Airport	3	$143,000	$455,000	2	$89,000	$284,000	5	$232,000	$739,000
Libby	Libby Airport	2	$61,000	$214,000	1	$42,000	$133,000	3	$103,000	$347,000
Lincoln	Lincoln Airport	1	$24,000	$81,000	0	$16,000	$51,000	1	$40,000	$132,000
Livingston	Mission Field Airport	2	$76,000	$256,000	1	$50,000	$160,000	3	$126,000	$416,000
Malta	Malta Airport	3	$152,000	$479,000	2	$93,000	$299,000	5	$245,000	$778,000
Miles City	Frank Wiley Field Airport	9	$462,000	$1,458,000	8	$284,000	$910,000	17	$746,000	$2,368,000
Missoula	Missoula International Airport	45	$1,794,000	$6,313,000	33	$1,231,000	$3,940,000	78	$3,025,000	$10,253,000
Plains	Plains Airport	0	$11,000	$40,000	0	$8,000	$25,000	0	$19,000	$65,000
Plentywood	Sher-Wood Airport	2	$113,000	$356,000	2	$69,000	$222,000	4	$182,000	$578,000
Polson	Polson Airport	2	$96,000	$337,000	2	$66,000	$211,000	4	$162,000	$548,000
Poplar	Poplar Municipal Airport	2	$116,000	$365,000	2	$71,000	$228,000	4	$187,000	$593,000
Red Lodge	Red Lodge Airport	0	$20,000	$65,000	0	$13,000	$40,000	0	$33,000	$105,000
Ronan	Ronan Airport	1	$35,000	$122,000	1	$24,000	$76,000	2	$59,000	$198,000
Roundup	Roundup Airport	3	$161,000	$512,000	3	$100,000	$320,000	6	$261,000	$832,000
Saint Ignatius	Saint Ignatius Airport	0	$6,000	$20,000	0	$4,000	$12,000	0	$10,000	$32,000
Scobey	Scobey Airport	1	$40,000	$125,000	1	$24,000	$78,000	2	$64,000	$203,000
Seeley Lake	Seeley Lake Airport	0	$0	$0	0	$0	$0	0	$0	$0
Shelby	Shelby Airport	9	$383,000	$1,311,000	7	$256,000	$818,000	16	$639,000	$2,129,000
Sidney	Sidney-Richland Municipal Airport	10	$485,000	$1,530,000	8	$298,000	$955,000	18	$783,000	$2,485,000

Table B.4. Economic Impacts by Airport, Visitor Spending at General Aviation Airports

			Direct Impacts			Spin-off Effects			Total Impacts	
Airport City	Airport	Visitors	Jobs	Payroll ($)	Economic Impacts ($)	Jobs	Payroll ($)	Economic Impacts ($)	Jobs	Payroll ($)	Economic Impacts ($)
Anaconda	Bowman Field Airport	596	1	$36,000	$110,000	1	$24,000	$75,000	2	$60,000	$185,000
Baker	Baker Municipal Airport	5,425	15	$310,000	$999,000	6	$218,000	$687,000	21	$528,000	$1,686,000
Big Sandy	Big Sandy Airport	446	0	$6,000	$19,000	0	$4,000	$13,000	0	$10,000	$32,000
Big Timber	Big Timber Airport	760	1	$43,000	$140,000	1	$31,000	$96,000	2	$74,000	$236,000
Bigfork	Ferndale Airfield	1,250	0	$6,000	$17,000	0	$4,000	$11,000	0	$10,000	$28,000
Bridger	Bridger Municipal Airport	1,050	1	$15,000	$45,000	0	$9,000	$30,000	1	$24,000	$75,000
Broadus	Broadus Airport	112	0	$2,000	$5,000	0	$1,000	$3,000	0	$3,000	$8,000
Chester	Liberty County Airport	2,468	1	$34,000	$105,000	1	$22,000	$70,000	2	$56,000	$175,000
Chinook	Edgar G. Obie Airport	1,200	1	$17,000	$51,000	0	$11,000	$34,000	1	$28,000	$85,000
Choteau	Choteau Airport	960	2	$55,000	$177,000	1	$39,000	$122,000	3	$94,000	$299,000
Circle	Circle Town County Airport	750	0	$11,000	$32,000	0	$7,000	$21,000	0	$18,000	$53,000
Colstrip	Colstrip Airport	25	0	$0	$1,000	0	$0	$1,000	0	$0	$2,000
Columbus	Woltermann Memorial Airport	1,620	1	$23,000	$69,000	0	$14,000	$46,000	1	$37,000	$115,000
Conrad	Conrad Airport	338	0	$5,000	$14,000	0	$3,000	$10,000	0	$8,000	$24,000
Cut Bank	Cut Bank International Airport	1,140	3	$65,000	$210,000	1	$46,000	$144,000	4	$111,000	$354,000
Deer Lodge	Deer Lodge-City-County Airport	1,500	4	$85,000	$276,000	2	$60,000	$190,000	6	$145,000	$466,000
Dutton	Dutton Airport	38	0	$1,000	$2,000	0	$0	$1,000	0	$1,000	$3,000
Ekalaka	Ekalaka Airport	128	0	$2,000	$5,000	0	$1,000	$4,000	0	$3,000	$9,000
Ennis	Ennis - Big Sky Airport	15,372	40	$931,000	$2,831,000	16	$618,000	$1,946,000	56	$1,549,000	$4,777,000
Eureka	Eureka Airport	750	1	$42,000	$138,000	1	$30,000	$95,000	2	$72,000	$233,000
Fairfield	Fairfield Airport	150	0	$2,000	$6,000	0	$1,000	$4,000	0	$3,000	$10,000
Fairview	Fairview Airport	75	0	$0	$1,000	0	$0	$1,000	0	$0	$2,000
Forsyth	Tillitt Field Airport	900	0	$13,000	$38,000	0	$8,000	$25,000	0	$21,000	$63,000
Fort Benton	Fort Benton Airport	1,053	3	$60,000	$194,000	1	$42,000	$133,000	4	$102,000	$327,000
Fort Peck	Fort Peck Airport	38	0	$1,000	$2,000	0	$0	$1,000	0	$1,000	$3,000
Gardiner	Gardiner Airport	1,360	1	$20,000	$58,000	0	$12,000	$38,000	1	$32,000	$96,000
Geraldine	Geraldine Airport	10	0	$0	$0	0	$0	$0	0	$0	$0
Hamilton	Ravalli County Airport	33,215	88	$1,876,000	$6,117,000	34	$1,335,000	$4,204,000	122	$3,211,000	$10,321,000
Hardin	Big Horn County Airport	350	0	$5,000	$15,000	0	$3,000	$10,000	0	$8,000	$25,000
Harlem	Harlem Airport	680	0	$9,000	$29,000	0	$6,000	$19,000	0	$15,000	$48,000
Harlowton	Harlowton Airport	900	0	$13,000	$38,000	0	$8,000	$25,000	0	$21,000	$63,000
Hot Springs	Hot Springs Airport	120	0	$2,000	$5,000	0	$1,000	$3,000	0	$3,000	$8,000
Hysham	Hysham Airport	165	0	$1,000	$2,000	0	$0	$1,000	0	$1,000	$3,000
Jordan	Jordan Airport	2	0	$0	$0	0	$0	$0	0	$0	$0
Kalispell	Kalispell City Airport	3,450	26	$548,000	$1,711,000	9	$366,000	$1,152,000	35	$914,000	$2,863,000
Laurel	Laurel Municipal Airport	4,000	10	$228,000	$737,000	4	$161,000	$506,000	14	$389,000	$1,243,000
Lewistown	Lewistown Municipal Airport	13,600	34	$774,000	$2,505,000	14	$547,000	$1,721,000	48	$1,321,000	$4,226,000

Airport City	Airport	Direct Impacts				Total Impacts		
		On-Airport	Visitor Spending	Construction	Spin-off Effects ($)	Jobs	Payroll ($)	Economic Impacts ($)
Big Timber	Big Timber Airport	$1,005,000	$140,000	$225,000	$1,370,000	12	$513,000	$2,176,000
Bigfork	Ferndale Airfield	$133,000	$17,000	$0	$150,000	2	$96,000	$283,000
Billings	Billings Logan International Airport	$148,365,000	$93,728,000	$7,296,000	$249,389,000	3,265	$118,844,000	$408,762,000
Bozeman	Bozeman Yellowstone International Airport	$122,027,000	$300,089,000	$4,214,000	$426,330,000	7,024	$207,325,000	$717,384,000
Bridger	Bridger Municipal Airport	$57,000	$45,000	$16,000	$118,000	2	$88,000	$211,000
Broadus	Broadus Airport	$20,000	$5,000	$13,000	$38,000	1	$18,000	$68,000
Butte	Bert Mooney Airport	$14,636,000	$6,947,000	$3,241,000	$24,824,000	322	$11,399,000	$41,000,000
Chester	Liberty County Airport	$918,000	$105,000	$67,000	$1,090,000	18	$663,000	$1,763,000
Chinook	Edgar G. Obie Airport	$74,000	$51,000	$357,000	$482,000	7	$276,000	$808,000
Choteau	Choteau Airport	$49,000	$177,000	$235,000	$461,000	7	$274,000	$776,000
Circle	Circle Town County Airport	$328,000	$32,000	$14,000	$374,000	2	$157,000	$555,000
Colstrip	Colstrip Airport	$30,000	$1,000	$380,000	$411,000	4	$205,000	$677,000
Columbus	Woltermann Memorial Airport	$251,000	$69,000	$119,000	$439,000	7	$248,000	$772,000
Conrad	Conrad Airport	$139,000	$14,000	$88,000	$241,000	4	$151,000	$450,000
Cut Bank	Cut Bank International Airport	$695,000	$210,000	$3,333,000	$4,238,000	53	$2,217,000	$6,972,000
Deer Lodge	Deer Lodge-City-County Airport	$143,000	$276,000	$140,000	$559,000	11	$306,000	$968,000
Dillon	Dillon Airport	$367,000	$0	$0	$367,000	6	$226,000	$683,000
Dutton	Dutton Airport	$192,000	$2,000	$0	$194,000	5	$146,000	$299,000
Ekalaka	Ekalaka Airport	$38,000	$5,000	$257,000	$300,000	4	$161,000	$500,000
Ennis	Ennis - Big Sky Airport	$549,000	$2,831,000	$875,000	$4,255,000	75	$2,341,000	$7,224,000
Eureka	Eureka Airport	$13,000	$138,000	$249,000	$400,000	6	$198,000	$662,000
Fairfield	Fairfield Airport	$50,000	$6,000	$5,000	$61,000	1	$71,000	$115,000
Fairview	Fairview Airport	$105,000	$1,000	$0	$106,000	3	$139,000	$205,000
Forsyth	Tillitt Field Airport	$363,000	$38,000	$710,000	$1,111,000	15	$688,000	$1,902,000
Fort Benton	Fort Benton Airport	$8,270,000	$194,000	$587,000	$9,051,000	64	$2,739,000	$12,307,000
Fort Peck	Fort Peck Airport	$2,000	$2,000	$8,000	$12,000	0	$7,000	$20,000
Gardiner	Gardiner Airport	$40,000	$58,000	$0	$98,000	2	$83,000	$173,000
Geraldine	Geraldine Airport	$49,000	$0	$41,000	$90,000	2	$57,000	$142,000
Glasgow	Glasgow International Airport	$24,390,000	$1,207,000	$2,749,000	$28,346,000	227	$11,392,000	$47,274,000
Glendive	Dawson Community Airport	$939,000	$305,000	$693,000	$1,937,000	34	$1,256,000	$3,425,000
Great Falls	Great Falls International Airport	$118,099,000	$38,132,000	$3,867,000	$160,098,000	2,123	$89,468,000	$252,945,000
Hamilton	Ravalli County Airport	$5,816,000	$6,117,000	$179,000	$12,112,000	204	$7,492,000	$20,090,000
Hardin	Big Horn County Airport	$10,000	$15,000	$1,512,000	$1,537,000	19	$785,000	$2,500,000
Harlem	Harlem Airport	$22,000	$29,000	$164,000	$215,000	2	$102,000	$356,000
Harlowton	Wheatland County at Harlowton Airport	$1,000	$38,000	$0	$39,000	0	$21,000	$65,000
Havre	Havre City-County Airport	$1,667,000	$1,269,000	$1,133,000	$4,069,000	59	$1,962,000	$6,668,000
Helena	Helena Regional Airport	$164,214,000	$24,232,000	$2,333,000	$190,779,000	2,000	$79,543,000	$284,656,000
Hot Springs	Hot Springs Airport	$0	$5,000	$10,000	$15,000	0	$8,000	$24,000

Appendix C. IMPLAN Sector Usage

To determine the full range of direct economic impacts and indirect and induced (i.e., spin-off) economic effects, this study utilized the IMPLAN model system of IMPLAN, LLC. IMPLAN is the most widely used input-output economic modeling system in the U.S., with a client list of 500 public and private agencies including several federal and numerous state agencies. It utilizes the U.S. Commerce Department's National Income and Product Accounts data on inter-industry relationships (also known as input-output structural matrices), countywide employment and income data from the Bureau of Economic Analysis (BEA) and Bureau of Labor Statistics (BLS), and its own industry- and county-specific estimates of local purchasing rates (i.e., regional purchase coefficients).

IMPLAN is enhanced over most other input-output models in that it also includes coverage of public-sector and consumer activity reflected in its social accounting matrix. The industry detail is at the level of 536 industries and is based on the categories of the U.S. Bureau of Economic Analysis (BEA), which correspond to the two- to five-digit groups in the North American Industry Classification System (NAICS).

For this study, the direct job, payroll, and business revenue impacts for on-airport activity, visitor spending, and capital expenditures on construction was documented through surveys, then assigned to specific sector groups based on the EDR Group's experience in aviation. Industry relationships between jobs and payroll and payroll and output were applied using regional ratios to more accurately reflect differing levels of productivity for different regions of Montana.

Statewide multipliers were used to estimate spin-off (i.e., indirect and induced) effects to reflect all additional economic activity supported by the statewide aviation system. Montana airports facilitation of air cargo and support of air-reliant industries was based on the two and three-digit NAICS. Assessment of retail impacts was adjusted to account for retail markup margins and the concentration of sales in airports and in visitor industries when modeling for retail effects were driven by gross business sales (when retail analyses were driven by retail employment, it was assumed that employment is based on "after-margin" effects). Retail portions of multiplier effects also incorporate these margins.

The classification schemes used for this study for on-airport (including construction) and visitor spending impacts are shown in Table C.1 and Table C.2. Some non-aviation related tenants were assigned to one of the 536 available industry sectors per the specific service or product they provide.

Airport Tenant's Classification	IMPLAN Sectors Used
	Health care services
Reliant services	Architectural / engineering Business support Computer systems design services Facilities support Financial services Management, scientific, and technical Parking and miscellaneous

Source: IMPLAN 2014.

Table C.2. Industry Classification of Visitor-Serving Industries

Visitor Spending Classification	IMPLAN Sectors Used
Retail	Electronics / appliance stores
	Food and beverage
	Health and labor
	Clothing stores
	Sporting goods
	General merchandise
	Miscellaneous retail
Entertainment	Performing arts
	Spectator sports
	Artists, writers, and performers
	Museums, zoos, and parks
	Amusement parks and arcades
	Gambling industries
	Fitness and recreational sports centers
	Bowling centers
	Other amusement / recreation
Restaurant	Full-service restaurants
	Limited-service restaurants
	All other food and drinking places
Hotel	Hotels and motels
	Other accommodations
Transportation	Transit and ground passenger transportation
	Scenic and sightseeing
	Support activities
	Gas stations

Source: IMPLAN 2014.

City	Airport	Spending per Visitor ($)
Poplar	Poplar Municipal	$184
Hamilton	Ravalli County	$184
Ronan	Ronan	$184
Roundup	Roundup	$184
Scobey	Scobey	$184
Shelby	Shelby	$184
Stevensville	Stevensville	$184
Three Forks	Three Forks	$184
Twin Bridges	Twin Bridges	$184
General aviation level 2		
Broadus	Broadus	$43
Circle	Circle Town County	$43
Colstrip	Colstrip	$43
Columbus	Columbus (Wolterman Memorial)	$43
Conrad	Conrad	$43
Chinook	Edgar G. Obie	$43
Ekalaka	Ekalaka	$43
Gardiner	Gardiner	$43
Chester	Liberty County	$43
Malta	Malta	$43
Superior	Mineral County	$43
Plains	Plains	$43
Red Lodge	Red Lodge	$43
Plentywood	Sher-Wood	$43
St. Ignatius	St. Ignatius	$43
Stanford	Stanford	$43
Forsyth	Tillitt Field	$43
Townsend	Townsend	$43
Harlowton	Wheatland County	$43
General aviation level 3		
White Sulphur Springs	White Sulphur Springs	$43
Hardin	Big Horn County	$43
Big Sandy	Big Sandy	$43
Bridger	Bridger Municipal	$43
Dutton	Dutton	$43
Fairfield	Fairfield	$43
Fort Peck	Fort Peck	$43
Harlem	Harlem	$43
Hot Springs	Hot Springs	$43
Jordan	Jordan	$43

Appendix E. Hospital Survey Analysis

Executive Summary

A survey of Montana hospitals conducted by University of Montana's Bureau of Business and Economic Research (UM BBER) found that essentially all hospitals in the state depend on airports for their operations. The survey found that:

- 87.2 percent of Montana hospitals transport at least some patients to or from their facilities via air ambulance
- 66.7 percent of all Montana hospitals have a helipad
- 41 percent of Montana hospitals use air cargo for drug shipments and supply shipments
- 38.5 percent of Montana airports use air cargo or express shipping for diagnostics or testing
- 30.8 percent of Montana airports use air cargo or express shipping for equipment

Introduction

This component of the Montana Airports 2016 Economic Impact Study presents the results of a survey of Montana hospitals conducted by University of Montana's Bureau of Business and Economic Research (BBER). The survey results provide information that broadly describes the magnitude and types of Montana airport use by the state's hospitals and gauges the importance of Montana airports to hospitals.

The findings of the hospital survey are presented in three sections. The first section briefly describes the methods used for this survey and presents a description of the responding hospitals. The second section presents the results of the survey administered to hospitals. The third section presents the questionnaire in full and provides complete topline results.

Methods

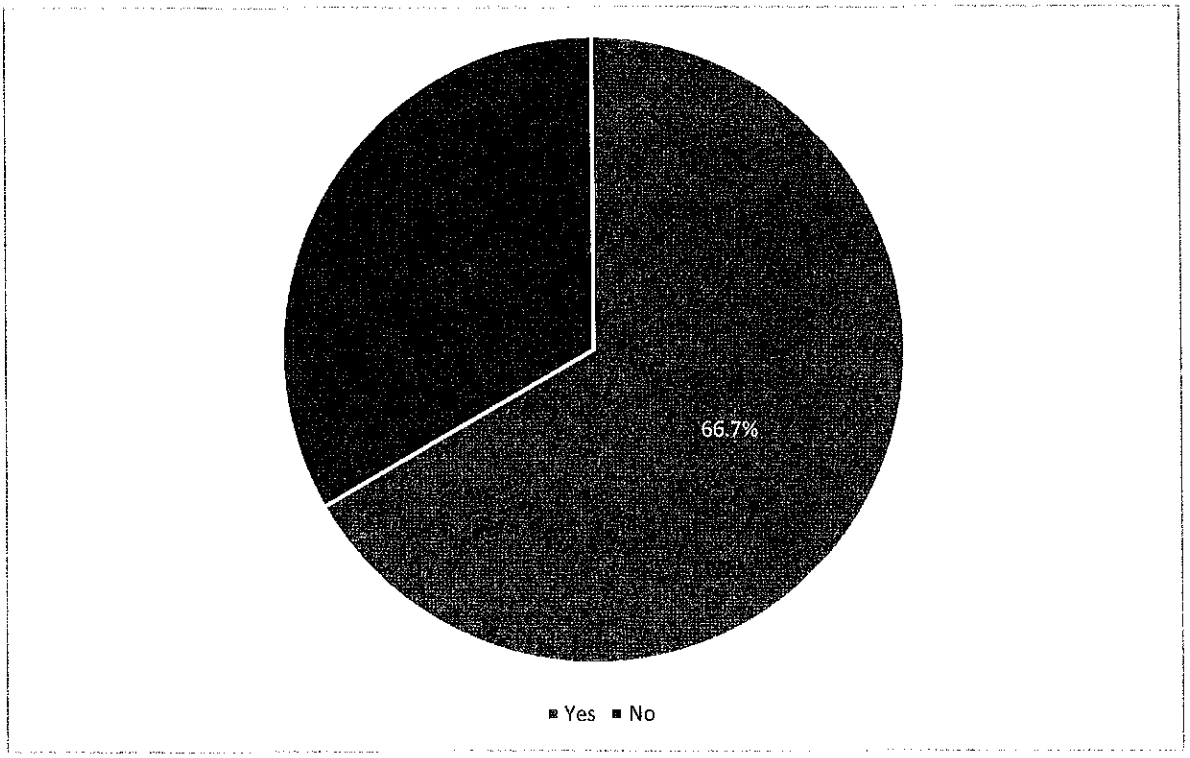
Data for this survey were collected through the administration of a questionnaire via mail and the Internet conducted by UM BBER. Data were collected during the period from June 27, 2016 through August 5, 2016. The questionnaire was developed and formatted based on a version administered in 2008. The survey population included 61 hospitals that are members of the Montana Hospital Association. The population list was provided by the Montana Hospital Association.

Thirty-nine completed questionnaires were collected from Montana hospitals, which reflects a 64 percent response rate. It should be noted that the 2008 study had a response rate of 54 percent. Because the entire population of Montana hospitals was surveyed, there is no sampling error in the data presented by this report. Following receipt and entry of the survey responses, data-appropriate variable and value labels were added to the data set. A statistical analysis of the survey was conducted that utilized frequencies, cross-tabulations, standard measures of central tendency (i.e., mean, median, and mode), sums, and ratios.

Does your facility have a helipad?

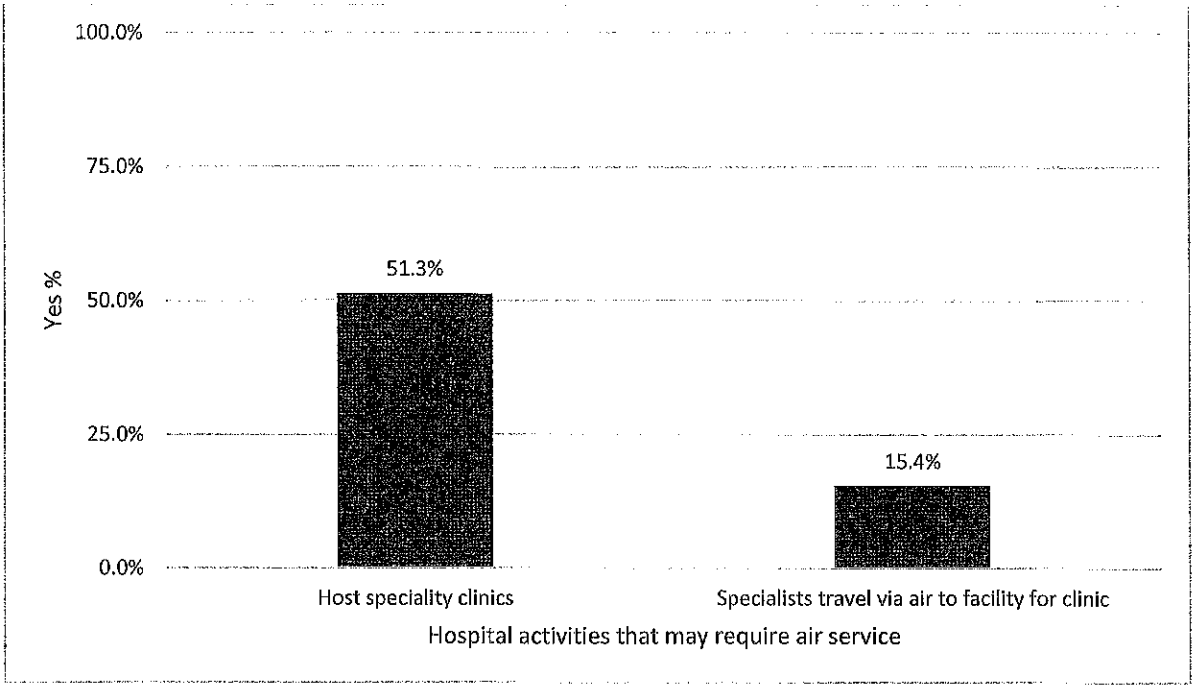
As shown in Figure E.2, two-thirds of all Montana hospitals (66.7 percent) have a helipad. Over the broad range of hospitals, in terms of beds per hospital and location, the average (mean) Montana hospital helipad is used 14.7 times per month. However, a small proportion of Montana hospital helipads are used considerably more frequently. The maximum reported number of uses over a one-month period was 80.

Figure E.2. Proportion of Montana Hospitals with a Helipad



Source: Hospital survey. Analysis by UM BBER.

Figure E.3. Proportion of Montana Hospitals that Fly Specialists to their Facilities to Host Specialty Clinics



Source: Hospital survey. Analysis by UM BBER.

Does your facility conduct specialty clinics at offsite locations that require your staff to fly to the offsite location?

One Montana hospital conducts specialty clinics at offsite locations that require hospital staff to fly-in to deliver services using commercial service and general aviation facilities. The target communities are small and rural. Communities supported by these offsite specialty clinics are:

- Glendive, MT
- Glasgow, MT
- Williston, ND

The responding hospital reported that it conducts five offsite clinics per month with a total of five doctors.

Appendix F. Business Use of Montana Airports

Executive Summary

Montana's businesses depend heavily on the state's airports. This is the primary conclusion drawn from the survey of Montana businesses conducted in 2016 by the University of Montana's Bureau of Business and Economic Research (UM BBER) as a part of the Montana Airports Economic Impact Study. The survey of 604 randomly sampled Montana businesses found that:

- More than one-third of Montana businesses (36.7 percent) have clients or vendors who use commercial airlines to visit Montana business sites
- Just under half of all Montana employers (46.1 percent) have employees who take commercial airline trips for business
- A majority of Montana businesses (51.9 percent) reported using some type of air cargo service
    - About three in ten Montana businesses (30.3 percent) use air cargo service for documents weighing less than two pounds
    - Nearly two-fifths of Montana businesses (39.1 percent) use air cargo service to ship or receive parcels weighing between two and 70 pounds
    - Just over one in ten Montana businesses (11.7 percent) use air cargo service for freight that weighs over 70 pounds
- 15.1 percent of all employers reported that clients or vendors use general aviation aircraft to visit their local business sites
- The most common airports from which visitors originate via commercial service are Seattle–Tacoma, Denver, Minneapolis St. Paul, Salt Lake City, and Chicago O'Hare international airports.
- The most common airports from which visitors originate via general aviation service are Billings Logan International, Denver International, Seattle–Tacoma International, Great Falls International and Helena Regional airports.

The survey also found that larger Montana businesses depend more heavily on airports than do smaller businesses in all categories except the use of air cargo services. For the purposes of this survey business size was defined by number of employees. The survey respondents reported that:

- More of Montana's largest businesses (52.2 percent), those businesses with 21+ employees, have clients or vendors who use commercial airlines to visit Montana business sites than do Montana's smallest businesses (29.6 percent), those with 3-5 employees
- Montana firms that employ 21 or more persons receive about 24 vendor or client air visits yearly; while firms that employ three to five persons receive six visits yearly

- Airports

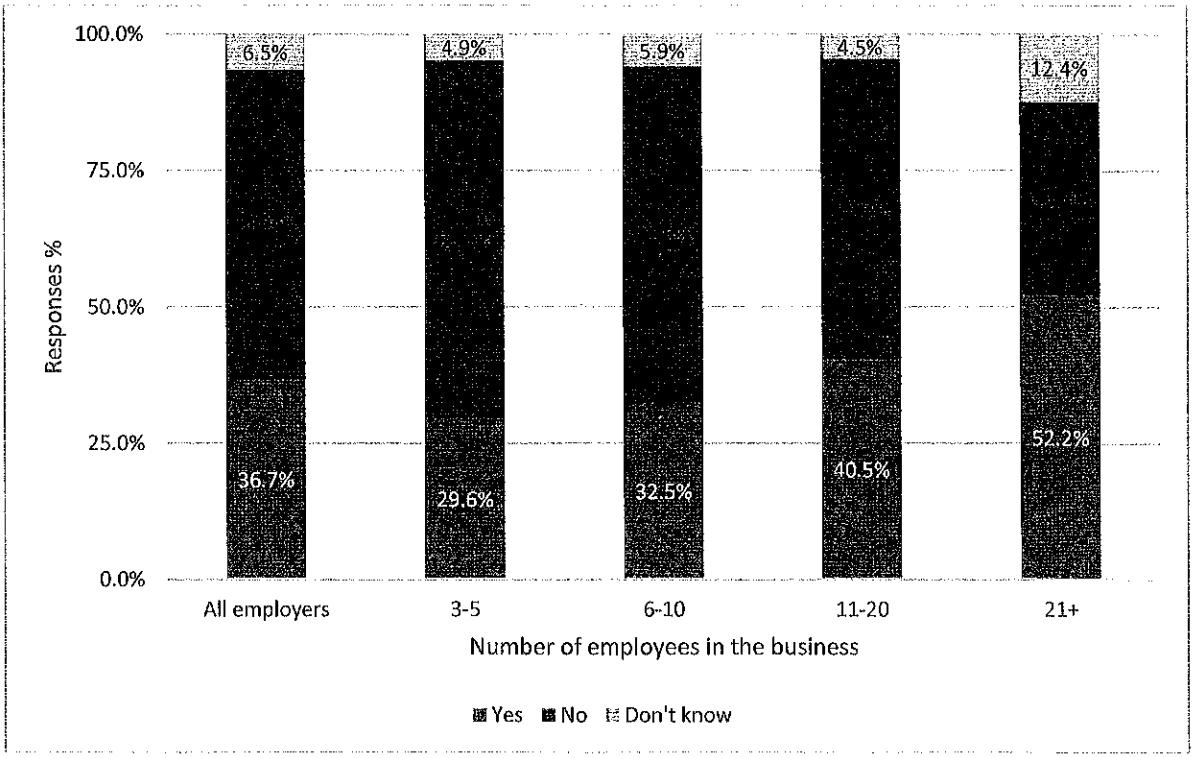
The sample was randomly selected from a current list of all organizations in Montana with employees. This list was provided by the Montana Department of Labor and Industry Unemployment Insurance Division and is the most complete and authoritative list available. At the time the sample was drawn, 17,356 active employers in Montana met the population definition listed above. From this population, 1,877 employers were randomly selected for survey administration.

In total, 604 completed questionnaires were received from Montana employers, which reflects a 32 percent response rate. This response yielded an overall survey sampling error rate of +/- 4 percent. Following receipt and entry of the survey responses, data-appropriate variable and value labels were added to the data set. Appropriate composite variables and flags were added to the data set to facilitate the analysis process.

The data from this survey were weighted by 2012 North American Industry Classification System (NAICS) category and by number of employees using population proportions derived from the Montana Department of Labor and Industry Unemployment Insurance Division's current list of active employers. A statistical analysis was conducted using statistical analysis computer software (SPSS version 23, ©2015, IBM Corporation). Data were analyzed using frequencies, cross-tabulations, standard measures of central tendency (i.e., mean, median, and mode), sums, and ratios.

The 604 Montana businesses that responded to the survey represent the entire range of Montana employers with three or more employees, excluding public administration, schools, and airports. Table F.1 describes the respondents of this survey.

Figure F.1. Commercial Airline Use by Vendors or Clients of Montana Businesses by Total Number of Employees



Source: Business survey. Analysis by UM BBER.

Error! Reference source not found. also demonstrates that more of Montana's largest b usinesses (52.2 percent), those businesses with 21+ employees, have clients or vendors who use commercial airlines to visit Montana business sites than do Montana's smallest businesses (29.6 percent), those with 3-5 employees. In addition, two-thirds of Montana manufacturing businesses (66.7 percent) and a majority of the tourism-oriented arts, entertainment, recreation, accommodation, or food services firms (52.9 percent) have clients or vendors who use commercial airlines to visit Montana business sites.

About how many air trips (visits) do clients or vendors make to your business in a year?

Clients or vendors make a median number of 10 annual commercial air trips to Montana businesses, with smaller businesses reporting fewer trips than the median and larger businesses reporting more trips than the median (Figure F.2).

Table F.2. Top Out-of-State Locations From Which Clients or Vendors Originate

Rank	Location	Percent of Responding Businesses (%)
1	SEA	7.5%
2	DEN	6.6%
3	MSP	2.9%
4	SLC	2.8%
5	ORD	1.9%
6	LAX	1.8%
7	DCA/IAD	1.0%
8	GEG	0.9%
9	PHX	0.8%
10	SFO/OAK	0.6%

Source: Business survey. Analysis by UM BBER.

Denver was the most commonly reported commercial airline flight origin for clients or vendors of three industry sectors:

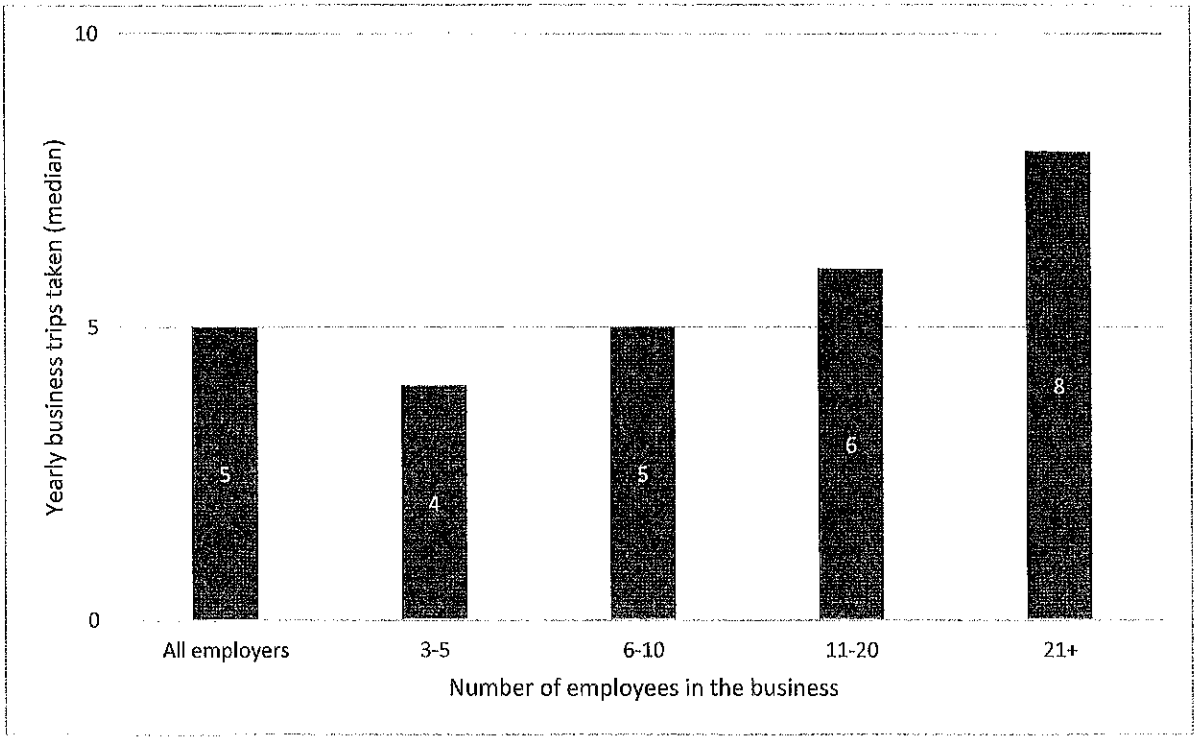
- Wholesale, retail, warehousing, or transportation
- Health care and social assistance
- Manufacturing

Seattle was the most commonly reported flight origin for clients or vendors of the information, finance, real estate, professional, scientific, or technical industry sector. Billings was the most commonly mentioned origin for vendors or clients of businesses in the mining, utility, or construction sector. Bozeman was the most commonly reported flight origin of clients or vendors for businesses in the tourism-related industry sector of arts, entertainment, recreation, accommodation, or food services.

About how many air trips for business were taken by your Montana-based employees over the last year?

The median number of annual commercial airline trips for business per employer taken by Montana employees over the previous year was five. This estimate varies somewhat by the number of employees in each business (Figure F.4).

Figure F.4. Median Number of Yearly Business Trips Taken by Montana Employees by Total Number of Employees



Source: Business survey. Analysis by UM BBER.

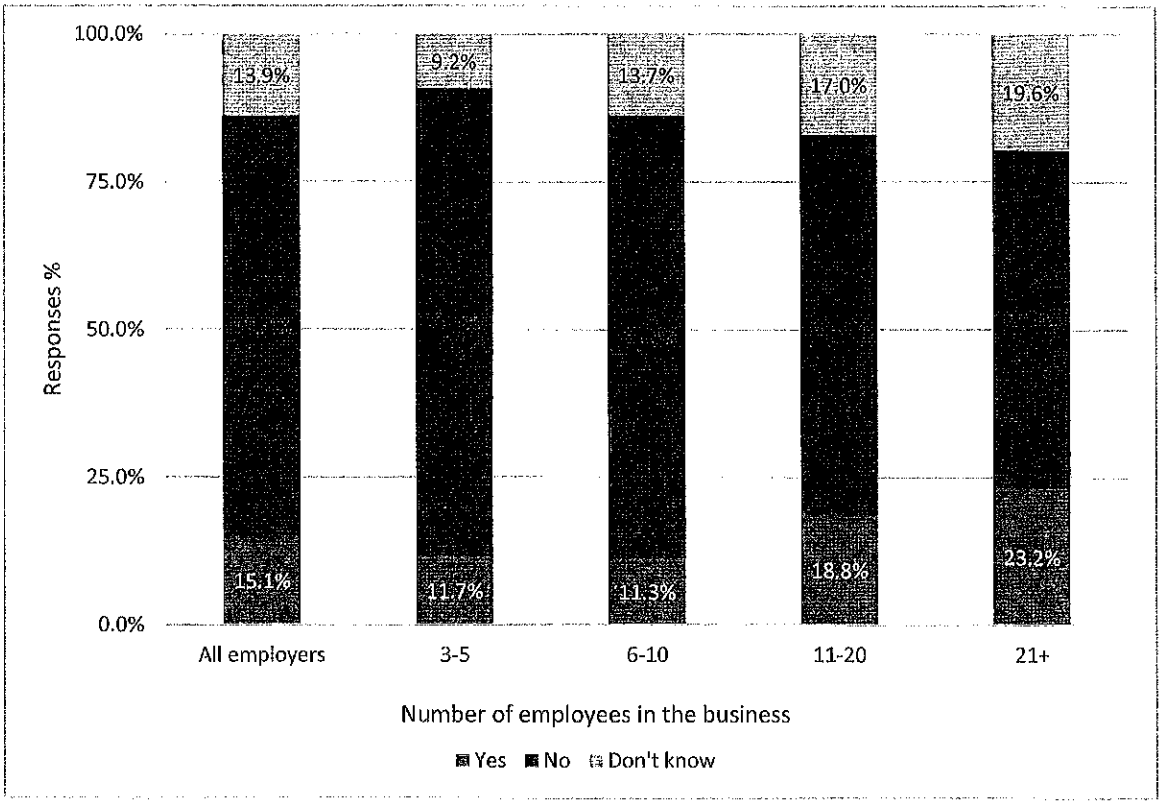
The smallest employers (three to five employees) generated four business-related, commercial airline trips per year; the largest employers (21+ employees) generated eight business-related air trips per year. Employers in the manufacturing sector (12 trips per year) and the information, finance, real estate, professional, scientific and technical sector (10 trips per year) reported generating more total business-related air trips than the previous year when compared with the state median (5).

Over the past 12 months, Montana employers generated 0.4935 business-related, commercial airline trips per employee. The 2008 survey estimated that employers generated 0.65 trips per employee over a similar timeframe (Wilbur Smith Associates, 2009). It should be noted that the 2008 survey sampled businesses with 50 or more employees, so this year's decrease is expected. Applying the 2016 estimate of business-related, commercial airline trips per employee to the 347,457 employees represented by this survey yields an estimated 171,470 business-related,

Do any of your clients or vendors use general aviation aircraft to visit your local business site?

15.1 percent of all employers reported that clients or vendors use general aviation aircraft to visit their local business sites. Businesses with more employees were more likely to report that clients or vendors use general aviation to visit their businesses than smaller employers. More than one-fifth (23.2 percent) of Montana's largest businesses (21+ employees) reported that clients or vendors use general aviation to visit their business, while 11.7 percent of the smallest businesses (three to five employees) said that clients or vendors use general aviation to visit (Figure F.5).

Figure F.5. Percent of Business whose Clients or Vendors Use General Aviation Aircraft



Source: Business survey. Analysis by UM BBER.

Two industry sectors exceeded the statewide percentage of businesses that reported clients or vendors using general aviation to visit their businesses. One-quarter of employers (25.3 percent) in the arts, entertainment, recreation, accommodation, or food service sectors reported that clients or vendors use general aviation to visit their businesses. One-fifth of employers (19.8 percent) in the wholesale, retail, warehousing, or transportation sectors said that clients or vendors use general aviation to visit their businesses. Only 3.4 percent of businesses in the other services (except public administration) sector said that clients or vendors use general aviation to visit their businesses.

What are the top three (3) locations from which your clients or vendors fly general aviation aircraft to visit your business?

Table F.4 lists the top 20 locations from which clients or vendors of Montana businesses originate using general aviation. It should be noted that the responses identified in Table F.4 are based on a total of 91 responses.

Table F.4. Top Locations From Which Clients or Vendors Originate via General Aviation

Rank	Location
1	BIL
2	DEN
3	SEA
4	GTF
5	HLN
6	MSP
7	BZN
8	LEH
9	LAX/ Los Angeles area
10	MSO
11	SLC
12	PHX
13	MLS
14	IAH
15	CTB
16	SBX
17	FCA
18	GEG
19	4U6
20	GDV

Source: Business survey. Analysis by UM BBER.

Which Montana airports does your company use for general aviation?

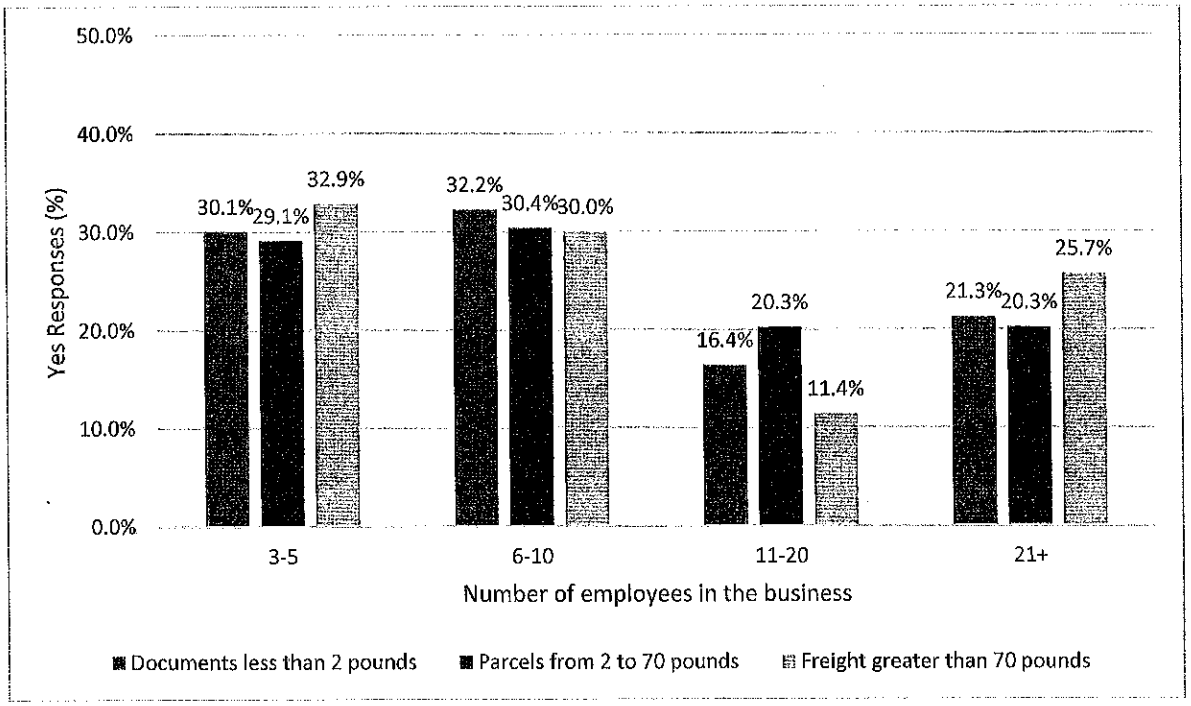
Table F.5 lists the airports used for general aviation as reported by the businesses that answered "yes" to at least one of the four questions described in Figure F.7. Montana Business Use, Ownership, or Leasing of General Aviation Aircraft. Rankings of use by respondents are provided; it should be noted that only 64 businesses responded. Ties in rank are noted where they occur. These businesses reported a median of four yearly; the number of annual general aviation landings reported ranged from one to 365.

Table F.5. Airports Used by Montana Businesses that Own, Charter, or Lease General Aviation Aircraft

Rank	Location
1	BIL
2	MSO
3	BZN
3	GTF
3	LEH
6	6S8
6	9S2
6	CTB
6	SDY
10	4U6
10	HLN
12	6S5
12	8S1
12	BTM
15	6S1
15	9S5
15	FCA
15	GGW
15	MLS
15	S27
21	BHK
21	LWT

Source: Business survey. Analysis by UM BBER.

Figure F.9. Percent of Businesses that Reported Using Some Type of Air Cargo Service by the Number of Employees in the Business



Source: Business survey. Analysis by UM BBER.

While reports air cargo service use ranged between 29.1 percent and 32.9 percent for businesses with 10 or less employees, businesses with 11 or more employees reported air cargo use rates between 11.4 percent and 25.7 percent.

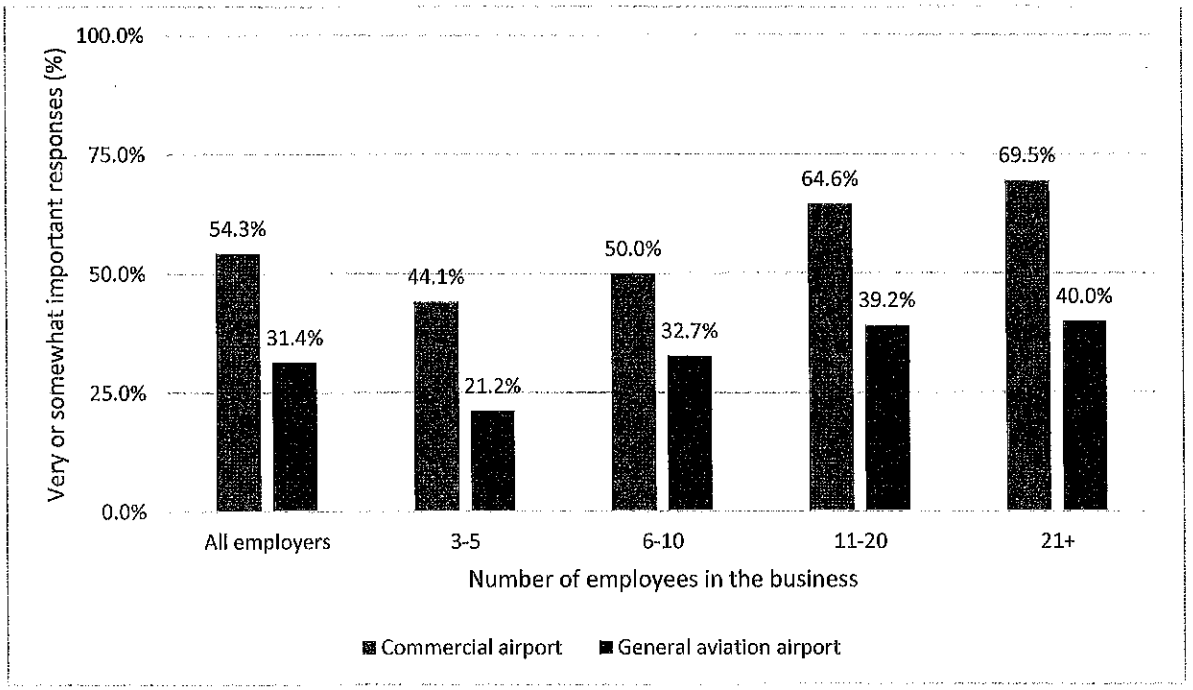
Information, finance, real estate, professional, scientific, or technical businesses most often (33.2 percent) use air cargo service for documents weighing less than two pounds. Wholesale, retail, warehousing, or transportation firms (25.8 percent) and information, finance, real estate, professional, scientific, or technical businesses (20.3 percent) most frequently use air cargo service for parcels weighing from two to 70 pounds. Finally, wholesale, retail, warehousing, or transportation firms (23.6 percent) most commonly use air cargo for freight weighing in excess of 70 pounds.

Air Transportation and Business Expansion or Relocation

How important or unimportant would the following factors be to your business if it were considering expansion or relocation?

Montana employers were asked to rate the importance of various factors that might influence their organization's expansion or relocation plans. Table F.6 presents the results sorted in descending order of importance.

Figure F.10. Percent of Montana Employers that Rated Either Commercial or General Aviation Airports as a Somewhat or Very Important Expansion or Relocation Factor by Number of Employees



Source: Business survey. Analysis by UM BBER.

While 69.5 percent of Montana's employers with 21 or more employees rated commercial airports as a somewhat or very important expansion or relocation factor, only 44.1 percent of their peers with between three and five employees agreed. A similar pattern is evident when examining the perceived importance of general aviation airports as an expansion or relocation factor.

A majority of each of the following Montana industry sectors rated commercial airports somewhat or very important as an expansion or relocation factor:

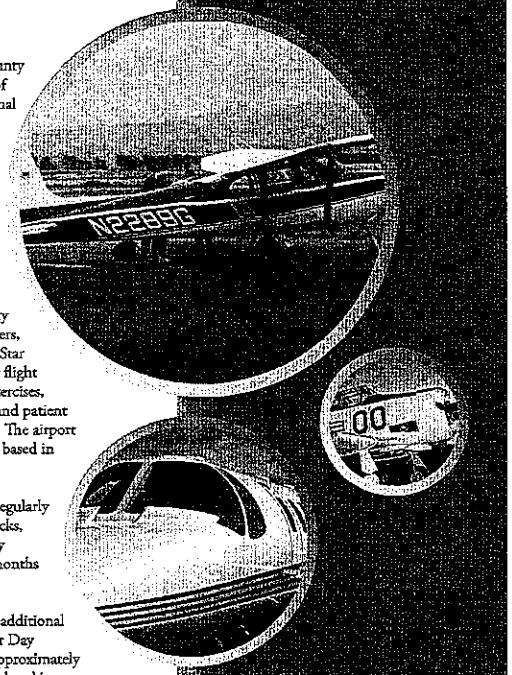
- Arts, entertainment, recreation, accommodation, or food services (72.0 percent)
- Manufacturing (71.4 percent)
- Information, finance, real estate, professional, scientific, and technical (64.6 percent)
- Wholesale, retail, warehousing, and transportation (56.6 percent)

The arts, entertainment, recreation, accommodation, or food services industry rated general aviation airports as an important expansion or relocation factor (43.9 percent).

2008

QUALITATIVE BENEFITS

In addition to the economic benefits described above, Ravalli County Airport provides access and services that promote the well being of the local community. The airport is primarily a base for recreational flying, corporate aviation, and forest and rangeland firefighting. The airport is also used extensively for wildlife management, visitor access to area resorts, aerial inspections of utilities, air cargo operations, law enforcement, emergency medical evacuation, and real estate tours. It also serves as a fire-fighting base for the Bitterroot National Forest where observation flights and air attack platform flights take place. The Forest Service bases helicopters and single engine attack (SEAT) aircraft at the airport. The airport has three helipads dedicated for this activity.



Civilian flight training is another regular activity at Ravalli County Airport. The training is provided by Mission Mountain Helicopters, Flights of Fantasy Flight School, and North Star Aviation. North Star has two contract instructors and five instructional aircraft. Other flight activity that occurs occasionally at the airport includes military exercises, career training, search and rescue operations, medical shipments and patient transfer, aerial photography, real estate tours, and banner towing. The airport also serves a critical role for emergency medical airlifts for aircraft based in Missoula.

The Montana State Department of Fish, Wildlife and Parks flies regularly out of Hamilton to conduct game counts and to monitor wolf packs, contracting with an on-airport Part 135 charter operation, Osprey Aviation. Osprey Aviation is also very busy during the summer months flying visitors to the backcountry.

Ravalli County Airport also hosts two annual events that provide additional economic benefits to the Hamilton, Montana region. Each Labor Day weekend, the Skydiver Boogie is held at the airport and attracts approximately 200 visitors. The Boy Scouts of America also host an aviation weekend in June. Approximately 100 people attend the event.

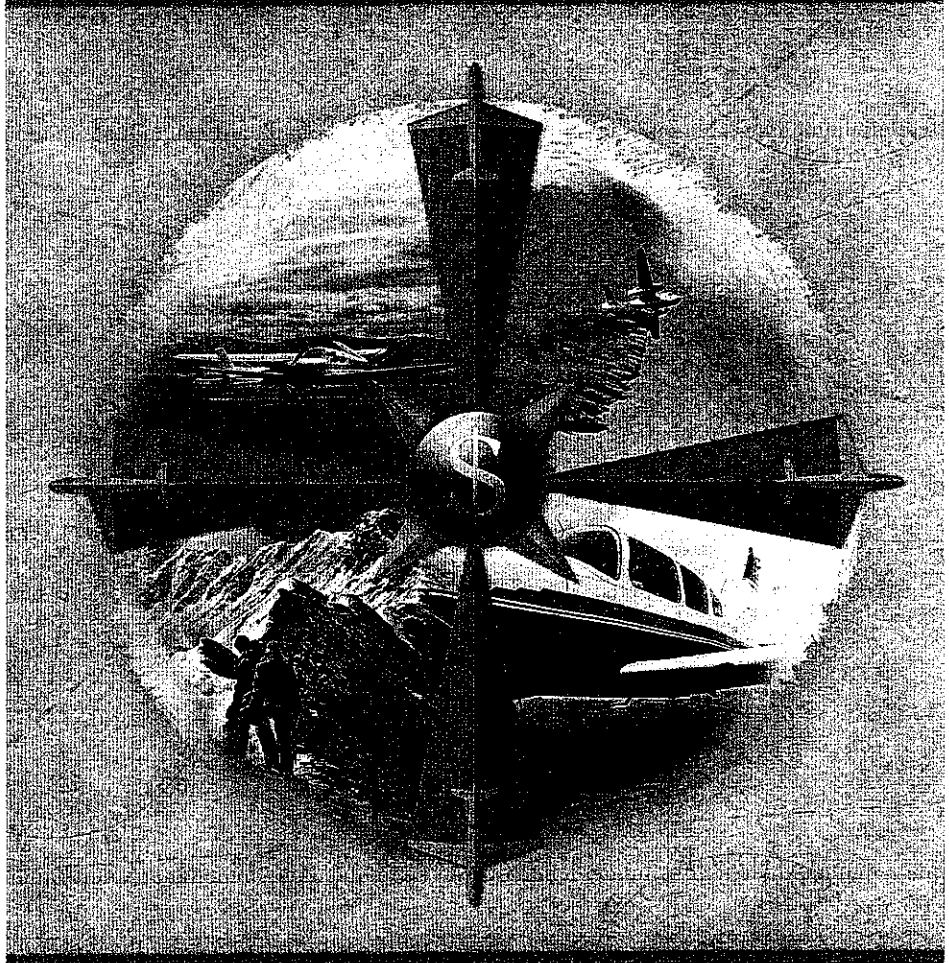
According to airport management data, the major airport users include local and regional banks, Rocky Mountain Lumber, Neville Log Homes, Fox Lumber, Shining Mountain, Charles Schwab Inc., and Industrial Lumber Sales. FAA data indicates the following businesses utilized the airport in 2008:

- Carfaye Inc.
- Conquest Services Inc.
- Erickson Petroleum Corporation
- Grouper LLC
- K & M Equipment
- Kelleher Corporation
- Les Schwab Tire
- Mathews Properties Inc.
- On Line Accountant Corp.
- Pacific Cataract and Laser Institute Inc.
- Platt Electric Supply Inc.
- Preco Electronics Inc.
- Rolling Green Enterprises LLC
- Spence Enterprises

Montana Department of Transportation
2701 Prospect Avenue | PO Box 201001
Helena, MT 59620-1001
406.444.8200

Prepared by
WilburSmith ASSOCIATES

RAVALLI COUNTY AIRPORT
HAMILTON



M O N T A N A
ECONOMIC IMPACT OF AIRPORTS STUDY

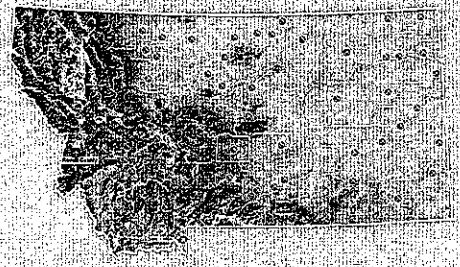
RAVALLI COUNTY AIRPORT – HAMILTON

AIRPORT LOCATION

Ravalli County Airport is located one mile east of Hamilton, Montana, in Ravalli County. Nestled in the Bitterroot Valley between the Bitterroot Range and Sapphire Mountains, the Hamilton area offers excellent recreation opportunities among some of the most spectacular scenery in Montana. Outdoor enthusiasts have easy access to camping, hiking, world class trout fishing on the Bitterroot River, and more. For history buffs, the Daly Mansion and Ravalli County Museum recapture the area's rich history. The Hamilton area also has numerous vacation homes, lodges, and bed and breakfasts that make for a perfect stay in the beautiful Bitterroot Valley. Hamilton is the county seat of Ravalli County.

Hamilton has a population of approximately 4,640. Major employers in the county include US Dept. of Agriculture, Marcus Daly Memorial Hospital, local school districts, Ravalli County, National Institute of Health (Fed. DPHHS), Selway Corporation, GlaxoSmithKline, Discovery Care Center, Farmers State Bank (all branches), Rocky Mountain Log Homes, City of Hamilton, Albertson's, Stock Farm Club, and Fox Lumber Sales.

The 156-acre airport's primary runway, Runway 16/34, measures 4,200 feet in length and 75 feet in width. The airport, with 126 based aircraft, experiences approximately 23,600 aircraft operations annually.



STATEWIDE RESULTS

Economic benefits in the Montana Economic Impact of Airports Study are expressed in terms of jobs, payroll, and annual economic activity or output.

Jobs/Employment

An estimated 18,800 jobs in Montana are in some way supported by the commercial and general aviation airports. These are jobs that are associated with on-airport businesses, tenants, and other activities that are located on commercial or general aviation airports in the State. In addition, spending by visitors arriving in Montana by air helps to support other jobs. When airport improvements are made, additional jobs are supported by the airports over the duration of these projects.

Payroll/Earnings

The 18,800 jobs in Montana that are linked to the commercial and general aviation airports account for over $600 million in annual payroll. Airport related payroll is a key component of the economic benefit cycle that starts at the airport. It was this economic cycle that was measured by this study's induced benefits. When those employed by on-airport businesses use their paycheck to purchase groceries, new clothes, or household items, their spending helps to support other jobs in the community and the payroll associated with these jobs. The initial benefits that start at the airports continue to multiply once they enter the State's economy.

Annual Economic Activity/Output

To operate Montana's airports, businesses located on the airports and businesses that support visitors who arrive in Montana via the airports all require the purchase of goods and services. These expenditures are most often in addition to those benefits identified in the payroll and earnings category. Benefits in this category are expressed in this study as total annual economic activity or output. Annual economic output related to the airports is typically assumed to be the sum of annual gross sales and average annual capital expenditures including capital improvement projects.

JOBS.....18,800

PAYROLL.....$600 MILLION

OUTPUT.....$1.56 BILLION

MONTANA ECONOMIC IMPACT OF AIRPORTS STUDY

ECONOMIC IMPACT ANALYSIS

Economic impacts at an airport are measured through employment, payroll, and output (spending). On-airport business and government activities (direct impacts) account for a significant portion of an airport's first round economic benefits. Additional first round benefits are also linked to visitors who arrive via the State's system of airports (indirect impacts). Spending by these visitors supports additional employment and associated annual payroll. These first round impacts create additional spin-off benefits that ripple through the economy. These second-round or induced benefits were measured with Montana-specific IMPLAN multipliers. When combined, first round and second-round benefits equal the total economic impact associated with each airport.

First Round Impact

In 2008, there were ten aviation-related tenants on the airport, plus airport management, who supported 57 employees. These tenants' direct or first round employment, payroll, and output impacts were derived from survey data. Direct output from all on-airport aviation-related tenants is estimated at $5.64 million annually. The estimated direct annual payroll of these tenants is $2.21 million. Operational data indicated that approximately 7,300 visitors used the airport. Visitor-related spending supported an additional 12.5 full-time jobs for employees earning over $243,800 annually. Indirect output from general aviation visitors is estimated at $657,400. Not included in these impacts are benefits derived from on-airport construction projects.

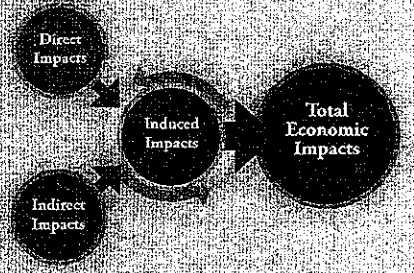
Second-round Impact

The first round impacts associated with on-airport tenants and general aviation visitors also create second-round impacts throughout the State. Second-round impacts are induced impacts calculated using the Montana specific IMPLAN multipliers. The accompanying table presents the 2008 first round, second-round, and total impacts for output, payroll, and employment as they relate to on-airport tenants and general aviation visitors.

Total Impact

For 2008, the total output (including first round and second-round impacts) stemming from all on-airport tenants and general aviation visitors to Ravalli County Airport was approximately $10.42 million. Total full-time employment related to airport tenants and general aviation visitors, including all second-round impacts, is estimated at approximately 124.5 persons, with a total annual payroll (first round and second-round) of approximately $4.20 million associated with these jobs.

METHODOLOGY



AIRPORT SUMMARY TABLE

FIRST-ROUND ECONOMIC IMPACTS

On-Airport	Visitor Spending
• FAA, Other Government • Airport Management • Aircraft maintenance • Vendors • Retail & Restaurant • Car Rental • Parking • Other Ground Transportation • Fixed Based Operators	• Hotels • Retail & Restaurants • Travel Agents • Convention Centers • Tourist Destinations
57.0 Jobs **$2,206,500 in Payroll** **$5,638,200 in Economic Output**	**12.5 Jobs** **$243,800 in Payroll** **$657,400 in Economic Output**

SECOND-ROUND ECONOMIC IMPACTS

- Suppliers of Materials & Services to Airports
- Air Dependent Businesses
- Visitor Dependent Businesses
- Consumer Product and Service Sales

55.0 Jobs
$1,746,400 in Payroll
$4,124,600 in Economic Output

TOTAL ECONOMIC IMPACTS

124.5 Jobs
$4,196,700 in Wages
$10,420,200 in Economic Activity

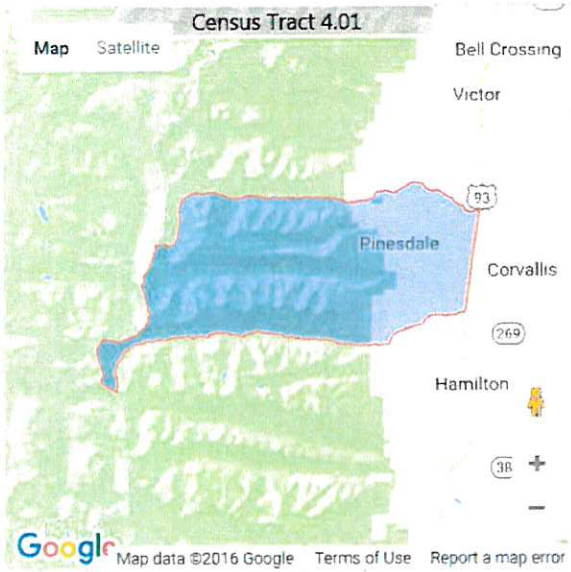
Name	Census Tract 4.01
County	Ravalli County
State	Montana
Area (square miles)	73.54
Land Area (square miles)	73.34
Water Area (square miles)	0.21
% of Land Area	99.72
% of Water Area	0.28
Latitude of the Internal Point	46.30456750
Longtitude of the Internal Point	-114.32460780
Total Population	2,657
Total Housing Units	1,016
Total Households	898
Median Age	36.4

Download More Graphs

*** Data sources from census 2010 ***

Download More Data

Maps



Census Tract 4.01 in Ravalli County

Download

Ravalli County in Montana

Download

Maps Downloads

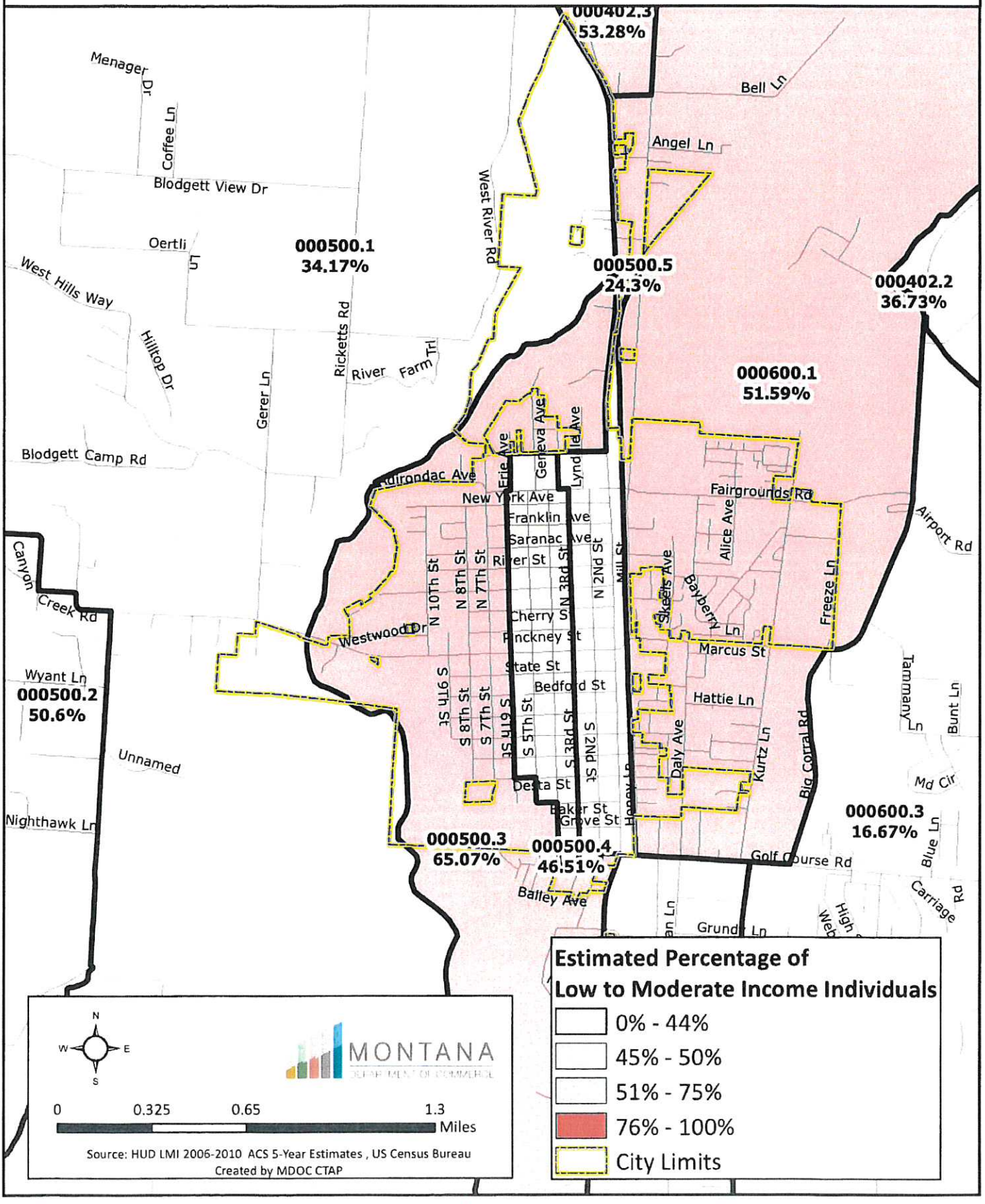
United States outline maps

State outline maps

Estimated Percentage of Low to Moderate Income Individuals

2

Hamilton, MT



3

Select a Location:

City/Designated location Hamilton city or County Choose County

City	Hamilton city
County	*Ravalli County*
Total Population	4,348
Total Households	2,175
Median Household Income	$24,234
Low & Moderate Income Percent	55.11%
Percent Poverty	29.6 %

Target Rates

Water & Waste Water	$46.45
Water Only	$28.27
WasteWater Only	$18.18
Solid Waste Only	$6.06

4

Local Government: Hamilton city

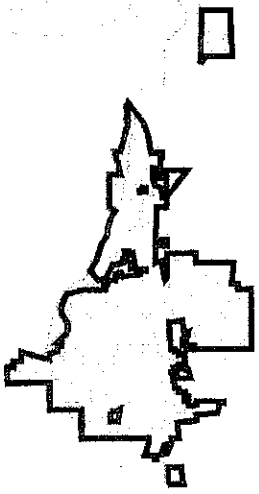
Advanced Search

Search for location...

CPD Grants | Rental Assistance | Mortgage Insurance | Fair Housing | Housing Counseling | Signature | Dem

Map | Details

« Previous Next »



Esri, HERE, Garmin, NGA, USGS, NPS

	Selected Geography	State	National
Total Population	4,435	998,554	311,536,594
Unemployed	8%	7%	10%
Living below poverty level	24%	15%	15%
Families Spending Over 30% On Housing	40%	28%	34%
Families Spending Over 50% On Housing	21%	13%	16%
Families Spending Over 30% On Housing that are low-income	69%	65%	72%

4

FY 2016 Fair Market Rent Documentation System

The Final FY 2016 FMRs for All Bedroom Sizes

Final FY 2016 FMRs By Unit Bedrooms				
Efficiency	One-Bedroom	Two-Bedroom	Three-Bedroom	Four-Bedroom
$544	$548	$733	$972	$1,027

The Office of Management and Budget release new Core Based Statistical Area definitions in February 2013. The Census American Community Survey incorporated these definitions in the ACS_{2013} release, which are the basis for FY2016 Fair Market Rents. HUD has elected to continue use of the pre-2013 definitions except where the post-2013 definitions result in a smaller FMR area. This is consistent with HUD's objective to maximize tenant choice by allowing FMRs to vary locally.

Ravalli County, MT is a non-metropolitan county.

Fair Market Rent Calculation Methodology

Show/Hide Methodology Narrative

Fair Market Rents for metropolitan areas and non-metropolitan FMR areas are developed as follows:

1. 2009-2013 5-year American Community Survey (ACS) estimates of 2-bedroom adjusted standard quality gross rents calculated for each FMR area are used as the new basis for FY2016 provided the estimate is statistically reliable. The test for reliability is whether the margin of error for the estimate is less than 50% of the estimate itself.

   If an area does not have a reliable 2009-2013 5-year, HUD checks whether the area has had a reliable estimate in any of the past 5 years. If so, the most recent reliable estimate is updated by the change in the area's corresponding State metropolitan or non-metropolitan area from the year of the most recent reliable estimate to 2009. This update value becomes the basis for FY2016.

   If an area has not had a reliable estimate in the past 5 years, the estimate State for the area's corresponding metropolitan area (if applicable) or State non-metropolitan area is used as the basis for FY2016.

2. HUD calculates a recent mover adjustment factor by comparing a 2013 1-year 40th percentile recent mover 2-bedrooom rent to the 2009-2013 5-year 40th percentile

Ravalli County

Housing Construction Continues to Lag

JAMES T. SYLVESTER, SENIOR ECONOMIST
Bureau of Business ,and Economic Research

Ravalli County Profile	
Total Population, 2014	41,000
Percent Change in Population, 2010-2014	2.0%
Median Age, 2013	46.4
Percent 65 or Older, 2013	20.1%
Percent of Population with Bachelor's Degree or Higher, 2013	24.5%
Median Household Income, 2013	38,688
Percent of Population without Health Insurance Coverage, 2013	19.2%
Unemployment Rate, November 2014	5.7%
Lived in a Different House in 2013	14.8%

Sources: American Community Survey, U.S. Census Bureau; Research and Analysis Bureau, Montana Department of Labor and Industry.

Recent economic statistics demonstrate Ravalli County's economy is slowly emerging from the downturn experienced in the Great Recession.

Income of Ravalli County residents working in other counties is the largest source of income. The rate of growth in this income stream slowed in the past few years as the housing price difference with Missoula closed. Fuel prices also influence commuting between the two counties – lower fuel prices may increase commuting.

Housing construction, a mainstay of the Ravalli economy, continues to lag, with employment levels still half of what they were in 2007. Construction employment is forecast to remain well below 2007 levels for the foreseeable future.

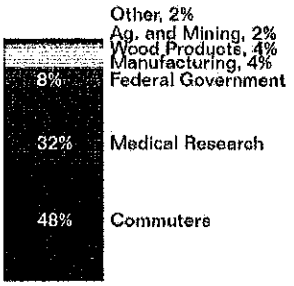
Metal manufacturing, including small arms manufacturing, continues to expand. Wood products manufacturing depends on national housing markets. Wood supply is an ongoing concern, but the market for log homes dominates the Ravalli County wood products.

Glaxo-Smith-Kline, a major pharmaceutical company, and the U.S. Center for Disease Control's Rocky Mountain Lab, employ medical researchers with average annual incomes double the county average of $25,000. Both also employ support personnel stabilizing the local labor market.

Nonfarm earnings are forecast to increase about 2.8 percent per year through 2018. (16)

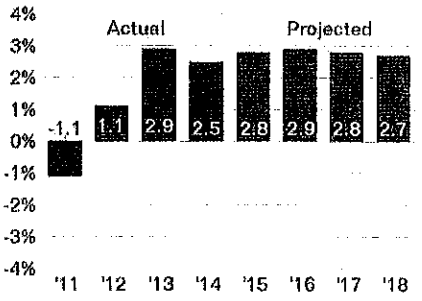
"Metal manufacturing, including small arms manufacturing, continues to expand."

Figure 1
Earnings in Basic Industries, Ravalli County, 2012-2014, Percent of Total



Sources: Bureau of Business and Economic Research, University of Montana; Bureau of Economic Analysis, U.S. Department of Commerce.

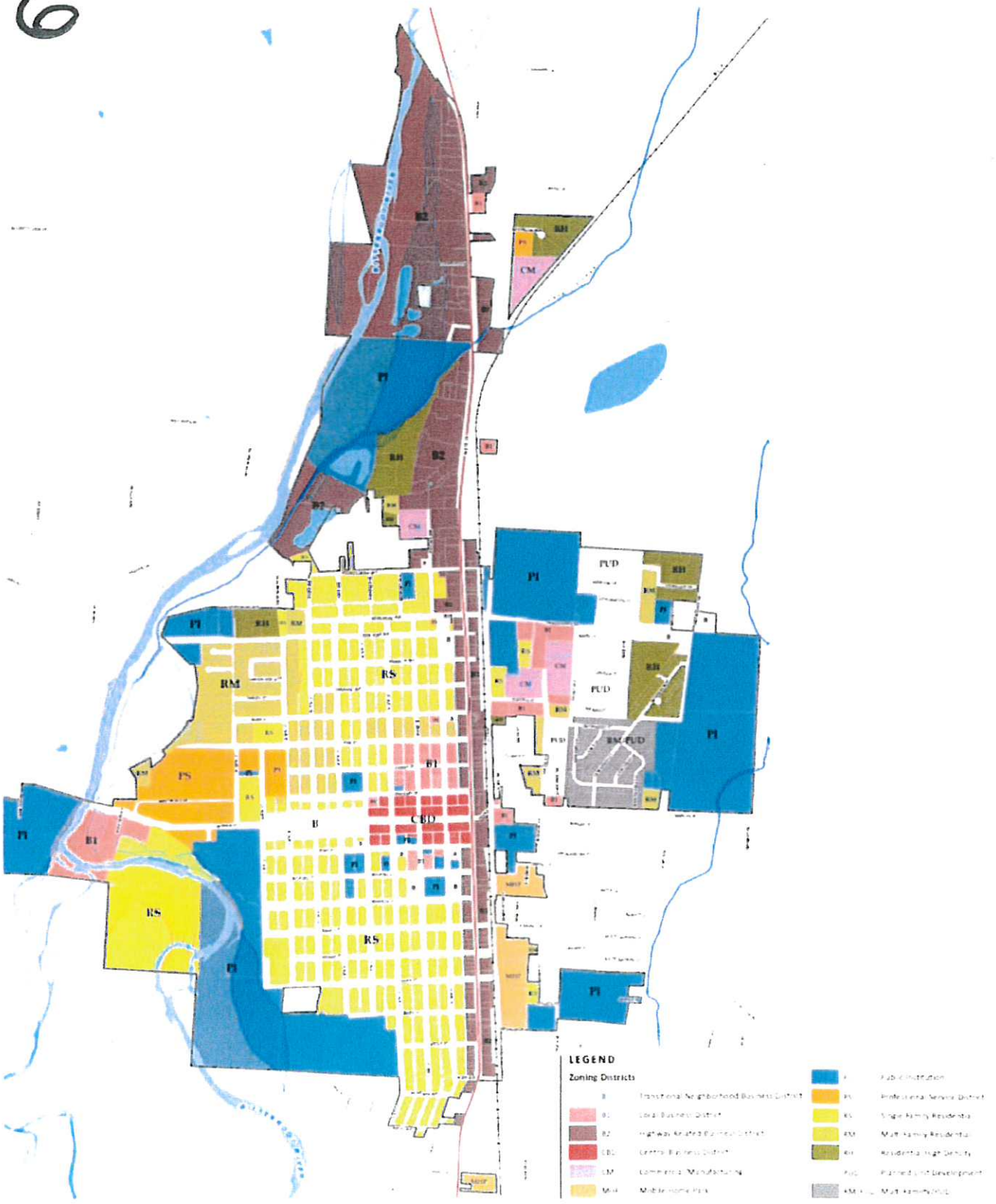
Figure 2
Actual and Projected Change in Nonfarm Earnings, Ravalli County, 2011-2018



Sources: Bureau of Business and Economic Research, University of Montana; Bureau of Economic Analysis, U.S. Department of Commerce.

Map 7: Hamilton Zoning Map

6



Hamilton Airport

Name on Tax Bill:	Hanger #	Tax ID #	RC Taxes	Schools	Other	TEDD
Hamilton Gun Glub		1510400	$ 112.27	$ 243.85	$ 153.67	$ 0.59
North Star Aviation Enterprises	237	1523830	$ 327.31	$ 710.84	$ 98.75	$ 1.71
O'Shant Trust	239	1505800	$ 113.38	$ 246.23	$ 34.20	$ 0.59
Choice Aviation	240	1523500	$ 469.48	$ 1,019.55	$ 141.61	$ 2.45
Dale Spieth	243	1505810	$ 190.01	$ 412.64	$ 57.33	$ 0.99
Steve Wolters	245	1523300	$ 238.03	$ 516.90	$ 71.80	$ 1.24
Philip Dyche	250	1522320	$ 166.40	$ 361.35	$ 50.20	$ 0.87
Larry Tucker	251	1523600	$ 184.07	$ 399.74	$ 55.52	$ 0.96
Moomba Asset Management	252	1522900	$ 152.32	$ 330.79	$ 45.95	$ 0.80
Kolad 5	253	1523840	$ 171.87	$ 373.24	$ 51.85	$ 0.90
Janet Turney	256	1523000	$ 134.17	$ 291.41	$ 40.47	$ 0.70
Frank Potter	259	1523710	$ 200.04	$ 434.37	$ 60.33	$ 1.04
Dietmar Habeck	260	1522200	$ 123.70	$ 268.65	$ 37.32	$ 0.65
Jeff Hutton	266	1523860	$ 210.34	$ 456.80	$ 63.45	$ 1.10
MTD Holdings	268	1523900	$ 188.14	$ 408.57	$ 56.74	$ 0.98
6131	269	1523890	$ 433.84	$ 942.10	$ 130.88	$ 2.27
Ron Kullick	272	1522300	$ 133.86	$ 290.72	$ 40.39	$ 0.70
Choice Aviation	274	1522310	$ 112.62	$ 244.52	$ 33.97	$ 0.59
AV8-Orr Helicopter Services	275	1523400	$ 466.66	$ 1,013.45	$ 140.76	$ 2.44
Gary Overbaugh	276	1509010	$ 135.90	$ 295.13	$ 41.01	$ 0.71
Richard Livingston	281	1523610	$ 455.72	$ 989.68	$ 137.46	$ 2.38
Jeffrey Nelson	286	1523880	$ 587.08	$ 1,274.94	$ 177.11	$ 3.07
Aspen Air	288	1523730	$ 450.09	$ 977.44	$ 135.77	$ 2.35
Bill Stewart	291	1523850	$ 997.13	$ 2,165.45	$ 300.79	$ 5.21
Tim & Marvin Betschart	294	1523720	$ 175.63	$ 381.40	$ 52.98	$ 0.92
JWE Family Trust	298/300	1523740	$ 590.05	$ 1,281.41	$ 177.99	$ 3.08
Maxwell Martz	303	1510300	$ 475.13	$ 1,031.77	$ 143.31	$ 2.48
Aspen Air	309	1523920	$ 324.98	$ 705.75	$ 98.02	$ 1.70
Framing Systems	315	1523930	$ 288.37	$ 626.27	$ 87.00	$ 1.51
Tin Bender Aviation	316	1508400	$ 65.04	$ 141.30	$ 19.63	$ 0.34
ISO Art LTD	317	1514100	$ 120.42	$ 261.51	$ 36.33	$ 0.63
Emil Schrader	319	1515500	$ 76.94	$ 167.10	$ 23.20	$ 0.40

Fred Burnham	322	1507400	$ 73.82	$ 160.30	$ 22.27	$ 0.39	
Mark Fournier Familty Trust	325	1508100	$ 93.21	$ 202.42	$ 28.11	$ 0.49	
Eric Huggans	326	1510100	$ 88.37	$ 191.88	$ 26.66	$ 0.46	
Craig & Shirley Perry	329	1507410	$ 57.07	$ 123.97	$ 17.22	$ 0.30	
Kenneth Chilcote	330	1516000	$ 74.29	$ 161.31	$ 22.41	$ 0.39	
Fred & Donna Hasskamp	333	1507700	$ 67.72	$ 147.06	$ 20.42	$ 0.35	
Bill Posten	336	1516010	$ 74.29	$ 161.31	$ 22.41	$ 0.39	
Michael Dyer	339	1508200	$ 33.77	$ 73.37	$ 10.19	$ 0.18	
Devlin Talkington	340	1507500	$ 105.40	$ 228.91	$ 31.79	$ 0.55	
Sylvia Osterbauer	343	1515700	$ 28.93	$ 62.84	$ 8.72	$ 0.15	
Kathryn Read	344	1516800	$ 67.88	$ 147.39	$ 20.47	$ 0.35	
Rodney & Beverly Hilton, % Tropis Expres	345	1512800	$ 28.93	$ 62.84	$ 8.72	$ 0.15	
Charles Rogler & Patricia Molinari Trust	346	1517800	$ 68.80	$ 149.44	$ 20.76	$ 0.36	
Alan Surges	347	1511900	$ 28.93	$ 62.84	$ 8.72	$ 0.15	
Sam Bruno	350	1517000	$ 80.39	$ 174.57	$ 24.24	$ 0.42	
Everett Barber	352	1510200	$ 45.51	$ 98.83	$ 13.74	$ 0.24	
Robert Murrill	354	1515100	$ 111.67	$ 242.49	$ 33.68	$ 0.58	
Clint Adkins	358	1523910	$ 177.66	$ 385.82	$ 53.59	$ 0.93	
James & Kathryn Greenfield	359	1506800	$ 60.20	$ 130.77	$ 18.16	$ 0.31	
MTD Holdings	364	1506300	$ 67.10	$ 145.69	$ 20.25	$ 0.35	
Douglas Cairns, Goose Meadow Engineeri	365	1506000	$ 119.02	$ 258.45	$ 35.90	$ 0.62	
Fox Lumber	370	1523100	$ 557.23	$ 1,210.07	$ 168.09	$ 2.91	
Hangar 374, Paul Ehlen	374	1523950	$ 1,001.20	$ 2,174.28	$ 302.02	$ 5.23	
Joe Rimensberger	375	1509500	$ 98.85	$ 214.63	$ 29.82	$ 0.52	
Dennis Hyatt	397	1523940	$ 272.11	$ 590.95	$ 82.10	$ 1.42	
Craig Byington	440	1508300	$ 28.93	$ 62.84	$ 8.72	$ 0.15	
Charles Petty	442	1507300	$ 28.93	$ 62.84	$ 8.72	$ 0.15	
Wayne Rusk	446	1512400	$ 28.93	$ 62.84	$ 8.72	$ 0.15	
Beatrice Evans, Salet Nicole Trust, Uekert	448	1508800	$ 33.77	$ 73.37	$ 10.19	$ 0.18	
Richard Milstead	452	1516900	$ 120.42	$ 261.51	$ 36.33	$ 0.63	
Clint Adkins	466	1506010	$ 89.78	$ 194.93	$ 27.08	$ 0.47	
Helo Pad For #374 Paul Ehlen							
Choice Aviation	508	1511000					no taxes recor
David Beckett	510	1518900	$ 138.41	$ 300.57	$ 41.74	$ 0.72	

North Star Aviation Enterprises, Choice A	516	1518700	$ 399.87	$ 868.43	$ 120.63	$ 2.09		
Choice Aviation	521 New							
Choice Aviation, Todd Simmons	524	1518720	$ 1,073.93	$ 2,332.20	$ 323.95	$ 5.61		
Ravalli County Airport Manager, Maint Bl	525							
Hamilton Aviation	528	1518710	$ 1,968.94	$ 4,275.87	$ 593.95	$ 10.29		
Ravalli County	533	610325	0	0	$ 482.20	$0.00	Forest Service	
Ravalli County	534							
Hamilton Aviation	594 New							
Hamilton Aviation	598 New							
			$ 16,265.25	$ 35,322.70	$ 5,508.48	$84.98	$ 57,181.41	