



City of Mora
Kanabec County, Minnesota
Meeting Agenda
Airport Board

Mora City Hall
101 Lake Street S
Mora, MN 55051

Tuesday, March 10, 2020

5:00 PM

Mora City Hall

<p><i>City of Mora Code of Ordinances, Chapter 32: The role of the Airport Board is to be a recommending advisory body to the City Council regarding all aspects of airport land use, airport operations, and airport capital improvements.</i></p>

1. Call to Order
2. Roll Call
3. Adopt Agenda
4. Minutes
5. Airport Master Plan and Airport Layout Plan
6. Young Eagles Program
7. Reports
8. Correspondence
 - a. AIRTAP Briefings
 - b. Minnesota Statewide Airport Economic Impact Study
9. Adjournment



City of Mora
Kanabec County, Minnesota
Background Information
Airport Board

Mora City Hall
101 Lake Street S
Mora, MN 55051

Tuesday, March 10, 2020

5:00 PM

Mora City Hall

City of Mora Code of Ordinances, Chapter 32: The role of the Airport Board is to be a recommending advisory body to the City Council regarding all aspects of airport land use, airport operations, and airport capital improvements.

1. Call to Order.
2. Roll Call. Jody Anderson, Karla Kastenbauer, Ryan Martens, Stefan Salmonson, and Nick Stafford.
3. Adopt Agenda. *(No item of business shall be considered unless it appears on the agenda for the meeting. Board members may add items to the agenda prior to adoption of the agenda.)*
4. Minutes. See attached minutes from the February 4, 2020 meeting.
5. Airport Master Plan and Airport Layout Plan. Lindsay Reidt of SEH will present the final draft Master Plan and Airport Layout Plan to the board and Airport Master Plan Committee and address questions and comments. SEH intends to finalize the documents and submit to MnDOT and FAA by the end of March 2020.
6. Young Eagles Program. The board will receive a verbal update on the possibility of hosting a Young Eagles event and will be asked to consider dates and the scheduling process.
7. Reports. *(Each board and staff member will be given the opportunity to share information.)*
8. Correspondence.
 - a. AIRTAP Briefings. See attached newsletter.
 - b. Minnesota Statewide Airport Economic Impact Study. See attached executive summary recently released by MnDOT Aeronautics.
9. Adjournment. The next regular meeting is scheduled for Tuesday, April 7, 2020 at 5:00 pm.

**City of Mora, MN
AIRPORT BOARD
Meeting Minutes**

February 4, 2020

Present: Jody Anderson, Karla Kastenbauer, Ryan Martens, Stefan Salmonson and Nick Stafford
Absent: None
Staff Present: Community Development Director Beth Thorp

1. Call to Order. The meeting was called to order at 5:00 p.m. by Chair Stafford.
2. Oath of Office. Karla Kastenbauer and Ryan Martens pledged the oath of office for three-year terms expiring on December 31, 2022.
3. Roll Call. All board members were present.
4. Adopt Agenda. Stafford requested that an item be added to the agenda to discuss snow removal at the airport. Motion by Martens, second by Kastenbauer to adopt the February 4, 2020 meeting agenda as amended. All present voted aye. Motion carried.
5. Minutes. Motion by Martens, second by Anderson to approve the December 10, 2019 meeting minutes as presented. All present voted aye. Motion carried.
6. Election of Officers. Motion by Martens, second by Kastenbauer to elect Stafford as Chair. All present voted aye. Motion carried. Motion by Martens, second by Salmonson to elect Kastenbauer as Vice Chair. All present voted aye. Motion carried. Motion by Martens, second by Salmonson to elect Thorp as Secretary. All present voted aye. Motion carried.
7. Airport Master Plan. Thorp stated that the final draft Airport Master Plan and Airport Layout Plan were provided to Airport Board members and members of the Airport Master Plan Committee on January 31, 2020 in preparation for discussion at the board's March 10, 2020 meeting. Board members were encouraged to review the documents and provide any comments and/or questions to SEH at the March meeting. Stafford stated that he will not be available to attend the March meeting; Thorp encouraged Stafford to submit any questions or comments prior to the meeting if possible.
8. Airport Land Encroachment. Thorp informed the board that city staff is currently working with attorney Fred Holm (representing Baehr) on a lease agreement for an accessory structure that encroaches on airport property. The city entered into a lease agreement with Kathleen Kawalek for this same structure in 2006 and annual lease payments have been made by Kawalek and current owner Baehr. Baehr is now selling the Highway 65 property and is seeking a new agreement from the city. Board members confirmed that the structure was existing at the time that the city purchased the land from Kawalek for the crosswind runway, including the land under the accessory structure, and that it is low enough as to not create a hazard to pilots. Board members discussed access around the building (entering onto airport property) and the potential for accumulation of

items (i.e., junk cars) around the structure and on city property. Thorp stated that the lease agreement may address access around the building and staff will look into it.

9. Snow Removal at Airport. Stafford stated that he was disappointed with the most recent snow removal effort at the airport and heard several complaints from fellow pilots. Stafford explained that the City Administrator instructed the snow plow driver not to plow in front of the hangars leaving it to melt over the weekend, which resulted in an 8-12” ridge of snow prohibiting hangar owners from getting their airplanes out. Stafford stated that he personally handled snow removal to get one pilot out. Stafford contacted Russ Kleven, Street Department, and after some discussion, Kleven arranged for the hangar area to be plowed over the weekend. Stafford explained that not plowing creates a liability for the city due to props being 6-8” off the ground, and added that he has pictures showing the ridge of snow. Thorp requested that Stafford send the pictures to her or the City Administrator. Stafford stated that he attempted to call City Administrator Crawford but she didn’t respond and he was told by a city hall staff member that Crawford would be at the board meeting. Thorp explained that Crawford was working away from the office all day and was not scheduled to attend the Airport Board meeting. Thorp added that Crawford is aware of the plowing concerns and is looking into it. Thorp stated that, in the Airport Manager’s absence, all questions and concerns should be directed to Crawford, and that Crawford is always available through email and text even when away from the office. Stafford explained that the Airport Manager has been very responsive, including assisting pilots with fuel and getting airplanes started. Board members acknowledged that the Airport Manager goes above and beyond the required duties of the role. Thorp stated that the City Administrator and other staff are looking into maintenance requirements at the airport. Stafford expressed concern that Crawford told the Street Department not to plow in an attempt to cut back on overtime and save money, adding that FAA funds are available for snow removal. Salmonson commented that this was the first snow plowing event with issues and that it isn’t a problem unless it continues. Martens suggested that Crawford should discuss standard airport snow plowing practices with staff before making any changes. Board members discussed reasons for plowing when the weather is warmer, to clear the ice and expose the asphalt. Thorp reminded the board that the Street Department is currently short one snow plow driver and stated that she does not believe changes were intentionally made to how snow is cleared at the airport. The discussion ended with Thorp again stating that Crawford is looking into the snow plowing concern and that staff will follow up with the board.
10. Reports. There were no reports from board members or staff.
11. Adjournment. Motion by Kastenbauer, second by Anderson to adjourn the meeting. All present voted aye. Meeting adjourned at 5:21 p.m.

Nick Stafford, Chair

Beth Thorp, Secretary

Briefings

A publication of the Airport Technical Assistance Program of the Center for Transportation Studies at the University of Minnesota

2020 Vol. 20, No. 1

Concurrent use and land release: risks, rewards, and what you should know

Small airports across Minnesota are often looking for new ways to cover their costs. One alternative revenue source might be right on the airport's property—in the form of excess or underutilized land. Perhaps that land was passed down or purchased years ago for a project that never materialized. Development could benefit the airport and surrounding community as a whole.

But first, if an airport is federally obligated, it will need FAA approval for non-aeronautical use.

During a session at the 2019 Minnesota Airports Conference, Stephanie Ward, manager of aviation planning at Mead & Hunt, discussed the process and offered advice for airports considering their options.

Land adjacent to or in the immediate vicinity of an airport must be compatible with normal airport operations. How the FAA defines non-aeronautical use can often dictate what an airport can and cannot do, Ward explained. "Put simply, if you propose a use and it needs the runway to function, then it's an aeronautical use. If you can close the runway tomorrow and that business can still exist, then it's non-aeronautical," she said.

First, it's critical that the airport references and understands what is shown on its airport layout plan (ALP) and its Exhibit A property map. A sponsor must determine if the property under consideration is federally obligated. "This could mean you've used federal funds to purchase the property, but it can also mean that if you've shown the property on either one of those documents inside your property line, then technically it's obligated," Ward said. Federal obligation means certain conditions and assurances must be met as a condition of the airport



Agricultural operations is one example of concurrent use.

accepting federal money.

The FAA has traditionally denied non-aeronautical use requests, Ward said. If property is designated for the airport, then it generally wants to reserve it for the airport; however, there are more and more demands from airports to generate revenue and land releases are becoming more frequent.

The FAA Reauthorization Act of 2018 (Section 163) could give airports more flexibility to develop non-aeronautical uses. The Act limits the FAA's authority to directly or indirectly regulate non-aeronautical property transactions at an airport except to ensure the safe and efficient operation of aircraft or the safety of people and property on the ground and to ensure the receipt of fair market value, Ward explained. But she cautioned that more guidance on implementing this is expected within the next few years from the FAA.

Airports considering a non-aeronautical use should be prepared to answer three key questions: 1) Should we do this? 2) Where could we do this? 3) How do we do this?

"The type of development is going to greatly change what you can and can't do. So you have to put a lot of thought into this," she said.

When considering non-aeronautical use, airports have three options:

a Section 163 request, concurrent land use, and land release. The Section 163 option is still untested and a bit ambiguous since there is no guidance on what to submit or the process that the FAA will use to consider the request, Ward said. Consequently, a concurrent land use or land release request might provide a more defined approach to a non-aeronautical use. There is no guarantee that the Section 163 will be faster or slower than the more traditional request process, nor is there any assurance that the requests will be approved for any of these three options.

Concurrent land use

Concurrent use is the use of dedicated airport property for a compatible non-aviation activity while simultaneously serving the primary purpose for which it was acquired. For example, portions of land needed for approach zone purposes could also be used for agriculture. Other concurrent uses include road right-of-way easements and utility easements.

"Concurrent use approval [for agricultural use] has historically been an area where few airports have asked for formal approval," Ward noted. "In Minnesota you may want to touch base with the FAA [Airport District Office] to confirm if it

Land use continued on page 2

wants a formal request to document what is being done.”

Concurrent use requires FAA approval, but no formal release is necessary.

Land release

Airports can also request from the FAA a release of land from obligations incurred under agreements with the federal government. Land may be released if it is no longer needed for aviation-related use, encroachment or approach protection, or noise compatibility. A release could then allow an

because surprises could surface upon closer examination, Ward continued. It will be important to know what the deed actually says, how the airport originally acquired the property, what state or federal requirements need to be carried forward in any agreements, what specific property or facilities are involved, and what the present condition of the property and its current use is. Federal surplus property and former military property are more complicated, she added.

Preparing financial information for a land release will require a fair market value

release? How long will FAA approval take—and will a developer wait for the process? Expect 12 months at a minimum, Ward said, and “Be prepared that the developer will be appalled at how long it will take.”

And there’s no guarantee the FAA will say “Yes.” The agency will consider if the request is reasonable and practical, how it will affect needed aeronautical facilities and future development, and whether it’s compatible with the needs of, and will benefit, the airport and civil aviation.

Finally, if an airport buys property without federal funding, it should think carefully about whether to show that property on its ALP, Ward cautioned. The airport could be tying federal obligations to something that wasn’t intended. “Whether it’s been federally funded or not, there’s going to be a criteria review on it... Do you want to obligate it? That could make a difference in how you go through this process.”

Airports should also consider that when they receive money for selling land, if applied toward a federally funded project, those funds usually cannot be used towards the local match of federal funds. The land release funds must be applied to the primary project costs, before federal funds are considered. A long-term lease might be a better option, Ward said, since funds generated by a lease can usually be used for operations and maintenance projects, as well as capital projects, which affords the airport more flexibility.

For more information:

- FAA grant assurances No. 4 (Good title), No. 5 (Preserving rights and powers), No. 21 (Compatible land use), No. 25 (Airport revenues), No. 29 (Airport layout plan/Exhibit “A”), and No. 31 (Disposal of Land)
- FAA Order 5190.6B: *Airport Compliance Manual*
- FAA Policy and Procedures Memo 5190.6, “Guidance for Leases, Use Agreements and Land Releases”
- ACRP Report 176: *Generating Revenue from Commercial Development on or Adjacent to Airports*

“The speed at which the land release process happens does not work at the speed of development. The days of a blanket release are well behind us.”

—Stephanie Ward, Mead & Hunt

airport to sell or lease property it owns for non-aeronautical use.

A land release can take significant time, effort, and money, Ward said. “It has to be shown on your ALP as unnecessary for aeronautical purposes first. It’s really focused on that long-term transition,” she said.

Twenty years ago it was a much different environment; now the FAA is looking for a specific use. “That really has become a challenge because the speed at which the land release process happens does not work at the speed of development,” Ward said. “The days of a blanket release are well behind us.”

There are two types of land release. In the “release from aeronautical use,” the airport retains ownership of the land, but the land is no longer required to be used for aeronautical purposes. With a “release and removal of dedicated property,” the airport usually sells land and is no longer responsible for maintaining it as dedicated airport property.

When requesting a release, an airport will need to address the proposed purpose, history of the property, environmental factors, and financial aspects. Based on her experience, Ward said the “why” and the “what” are most critical—*why* is the request being made (e.g., excess property), and *what* are the benefits of releasing it compared to the airport maintaining the property in its existing condition.

The history of the property is critical,

appraisal of the property, which can be expensive and time consuming. “We have lost more than one proposed developer because of the time it took,” Ward said. The airport will also need to evaluate the return on investment, what proceeds are expected, and how they will be used (e.g., for capital improvements or operations) and include a summary of intangible benefits (e.g., existing revenues, future revenues).

For the environmental aspects of land release, a categorical exclusion (CATEX) is usually sufficient, Ward said. However, FAA Standard Operating Procedure 5.0 has greatly increased the cost and time for a CATEX. Knowing as much as possible about the proposed land use will help address potential environmental impacts that can complicate the process.

Ward urged airports to determine what they’re trying to do before they get too far down a path. Key aspects to consider up front are:

- Documentation (location and review of historical documents; extent of environmental documentation necessary; agreement language and duration).
- Costs (benefits of the release vs. cost to obtain release). Determine who will pay for the release and the associated elements—for example, the airport or the developer.
- Timing. How early can you ask for the

AirTAP was developed through the joint efforts of the Minnesota Department of Transportation, the Minnesota Council of Airports, and the Center for Transportation Studies (CTS). AirTAP is housed within CTS at:

University of Minnesota
University Office Plaza, Suite 440
2221 University Avenue SE
Minneapolis, MN 55414
Web: www.airtap.umn.edu
Email: cts@umn.edu
Phone: 612-626-1077

Briefings is published quarterly in print and online.

AirTAP Director: Mindy Carlson
AirTAP Coordinator: Katherine Stanley

Editor/writer: Amy Friebe
Designer: Angela Kronebush
Contributing writers: Kelly Akhund, Ann Johnson
Photos: Shutterstock, Rochester International Airport

An airport's story: Rochester International

The city of Rochester, in southeastern Minnesota, is best known as the home of the world-renowned Mayo Clinic. So it's no surprise that many operations at Rochester International Airport (RST) involve medical services.

"While all airports provide access, RST is unique in the critical users we serve daily," says deputy airport director Kurt Claussen. "RST is one of the busiest air ambulance airports in the country, with operations occurring around the clock," he says. FedEx operates a Boeing 757 aircraft with the vast majority of cargo related to medical care. Commercial service allows patient travelers access into Rochester and the local business community the ability to travel efficiently. "And the corporate, political, and religious leaders from around the world seeking care at Mayo Clinic rely on access through RST," he says.

The airport provides an annual economic impact for the region of \$161 million dollars in annual output, 2,911 jobs, and \$73 million in annual payroll. Claussen says 2018 was a record year for total passengers in the history of RST, making it the second-busiest airport in the state. This record was achieved through strategic initiatives to increase community engagement and use of the local airport and to develop air service. "The whole RST team is incredibly proud of the new vibrancy surrounding the airport with such major growth in recent years," he says.

RST is owned by the City of Rochester and operated by the Rochester Airport Company, a subsidiary of Mayo Clinic. The airport was founded in southeast Rochester in 1928 by brothers William and Charles Mayo. At that time, it occupied 285 acres and was owned and operated by the Mayo Foundation. In 1960, the decision was made



to relocate the airport to accommodate the expansion needed to serve larger aircraft. The airport was moved to its present location on about 2,400 acres of land and called Rochester Municipal Airport. With the addition of the US customs facility in 1995, the airport was renamed Rochester International Airport.

The airport is also an important facility for general aviation (GA); businesses

Rochester continued on page 4



Top 20 tips for better snow removal

Winter's here and snow is falling on airports throughout the state. It's not too late to brush up on methods for safe and efficient snow removal with the following checklist—and it's not too early to take notes for next year!

1. Participate in pre-season planning and develop a detailed snow removal plan that specifies the priority areas to be cleared first, a timeline for snow removal, plowing methods, and equipment to be used.
2. Identify in the snow and ice control plan where cleared snow will be piled—areas where the ground will support the weight of the plow and snow can be pushed far back from the aircraft operating areas. Consider sightlines as well, and don't create snow banks in locations where visibility is important.
3. Share the snow removal plan with airport tenants so they know what to expect around their hangars.
4. Take the MnDOT eLearning course to get training on proper radio communication procedures with pilots and/or the air traffic control tower.
5. If the runway is unusable, file a NOTAM to close the runway.
6. If the runway is usable but needs clearing, file a NOTAM to notify pilots that snow removal equipment will be on the runway.
7. Listen to the radio carefully for traffic in the area and communicate your movements clearly.
8. Maintain situational awareness.
9. Use truck lights and rotating beacons to improve visibility.
10. Give aircraft the right-of-way at all times.
11. If an aircraft is circling to land and the runway is usable, leave the runway while it lands and then resume plowing.
12. Plow the main runway first, then plow other areas in this order: taxiways, aircraft loading area/ramp, public roadways, secondary runways and taxiways, hangar taxi lanes, and vehicle parking areas.
13. Never pile snow directly off the ends of the runway; always clear sufficient areas extending past the sides and ends of the runway to provide plenty of wingtip clearance and visibility of runway lights and other aircraft.
14. Do not put snow banks, mounds, or ridges exceeding two feet along the edges of the prescribed snow clearance areas designated in your airport's snow and ice control plan.
15. Clear around navaid equipment and other sensors to provide access for maintenance.
16. Note required clearances indicated on the snow removal maps in your airport's snow and ice control plan.
17. Use caution when plowing around aircraft tiedown rings, lights, signs, and navaid equipment. After plowing, check light/sign couplings and all other equipment to ensure they are intact and operating correctly.
18. Report any damage that might have occurred while plowing.
19. If you must stop before the plowing is complete, or are unable to plow certain areas, be sure to issue a NOTAM for the surfaces that have not been plowed.
20. Remove NOTAMs once plowing is complete.

For more information:

- FAA AC 150/5200-30D, Airport Field Condition Assessments and Winter Operations Safety
- Airport Snow and Ice Control Plan: airtap.umn.edu/publications/fact_sheets
- Snow and Ice Control Plan eLearning: dot.state.mn.us/onlinelearning/aeronautics/winterops/story_html5.html
- Airport Driving and Self Inspection eLearning: dot.state.mn.us/onlinelearning/aeronautics/selfinspection/story_html5.html

Resources and training opportunities

Airport Economic Impact Study: Methodology and Calculator Training

- Feb. 4, 2020: Brainerd
- Feb. 5, 2020: University of MN-Twin Cities
- Feb. 11, 2020: Mankato
- Feb. 12, 2020: Willmar
- Feb. 19, 2020: Thief River Falls
- Feb. 20, 2020: Virginia

Have you ever wondered how much annual economic activity is generated by your local airport? Would you like to know how this translates into jobs, earned income, and spending in the local economy? If so, please join us to learn more about how airports benefit communities throughout Minnesota.

In 2019, MnDOT conducted a statewide airport economic impact study, which culminated in a public economic impact calculator. In this training, you'll learn about the study methodology, the calculator, and media tools to help share the economic benefits of airports throughout the state.

Get more information about this free training at airtap.umn.edu/events/.

2020 Minnesota Airports Conference

- April 29–May 1, 2020: Rochester

The annual Minnesota Airports Conference delivers the most up-to-date and advanced information for aviation professionals and provides an opportunity for industry and government officials to exchange ideas on funding, trends, airport management, operations, maintenance, and best practices. Don't miss this year's learning and networking event in Rochester!

Keynote speaker Tim Eggebraaten will share his experiences from 30 years in law enforcement and talk (and sing!) about achieving success through balance and harmony. Another conference highlight will be Wednesday's drone workshop and demo.

To register, visit airtap.umn.edu/events/airportsconference/2020/.

2020 Wildlife Hazard Control Workshop

- May 5, 2020: Minneapolis–St. Paul International Airport

Check the AirTAP website for details coming soon.

Rochester from page 3

include Great Planes Aviation, Aviation Pathways, the Southeastern Minnesota Flying Club, and Private Jet Solutions. GA aircraft and pilot services are provided by fixed-base operator Signature Flight Support.

Glaussen says the aviation industry is facing a significant pilot shortage, and small non-hub commercial airports are in jeopardy of losing air service or the ability to grow. In 2018, RST partnered with Rochester Community & Technical College and Great Planes Aviation to launch the first-ever Aviation Pilot Program at RST. "RST's active role in this partnership will help address an issue within the aviation industry that is only predicted to become more prevalent," he says.

Claussen has been with the RST for nearly 30 years. "I'm energized by the variety of challenges we experience," Claussen says. "Working as a small team at an airport of our size allows us to collaborate, problem solve, and see the positive results of our hard work every day."



MORA MN 55051-1588 01
 101 LAKE ST S
 AIRPORT BOARD MEMBER
 CITY OF MORA
 STEFAN SALMONSON
 T1 P1
 *****AUTO**ALL FOR AADC 550

Airport Technical Assistance Program
 University of Minnesota
 University Office Plaza, Suite 440
 2221 University Avenue SE
 Minneapolis, MN 55414



MINNESOTA

Statewide Airport Economic Impact Study



2019

EXECUTIVE SUMMARY





Photo Credit: Emmanuel Canaan

TOTAL ANNUAL STATEWIDE ECONOMIC IMPACTS FOR ALL MINNESOTA PUBLIC AIRPORTS

ANNUAL TOTALS	STUDY AIRPORTS	MAC AIRPORTS	ALL PUBLIC AIRPORTS
Employment	13,147	80,890	94,037
Payroll	\$570.1 million	\$3.9 billion	\$4.4 billion
Spending	\$1.0 billion	\$12.8 billion	\$13.8 billion
Annual Economic Activity	\$1.6 billion	\$16.6 billion	\$18.2 billion

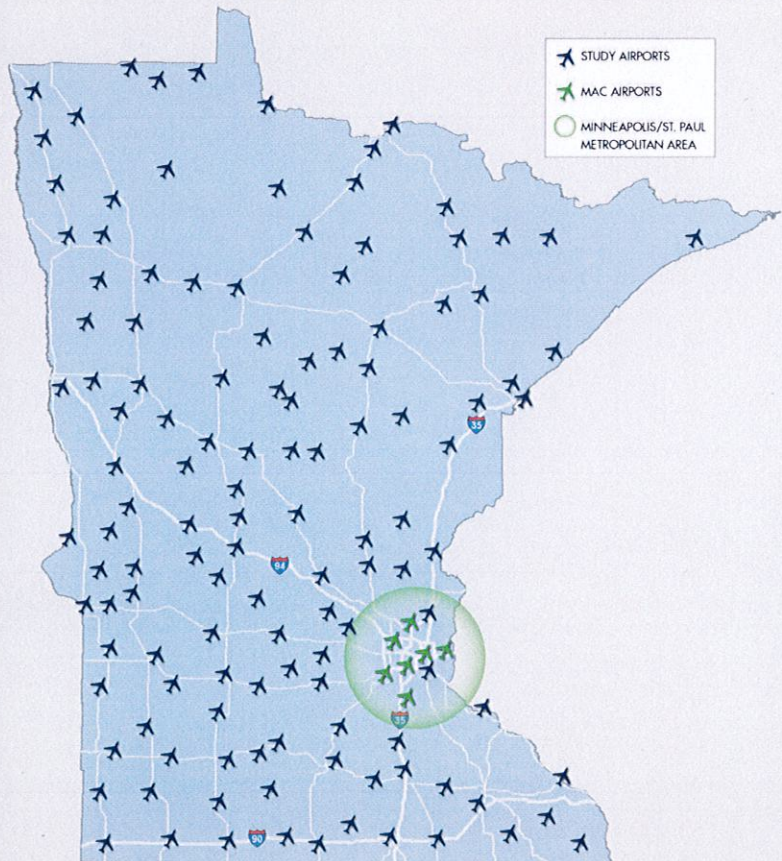
Note: For more information on the MAC studies, visit metroairports.org.

ECONOMIC IMPACTS FOR ALL PUBLIC AIRPORTS



STUDY & MAC AIRPORTS

This map shows the geographic location for study and MAC airports.



STUDY OVERVIEW

Minnesota is served by an extensive system of 133 public general aviation and commercial service airports that provide essential transportation links, support aviation services, and generate a significant amount of economic activity. Starting in late 2018, the Minnesota Department of Transportation's Office of Aeronautics studied 126 of these airports to measure their economic impact on the state economy. Throughout this document these 126 airports are referred to as "study airports."

Economic impact results from studies conducted by the Metropolitan Airports Commission (MAC), for their seven airports in the Minneapolis-Saint Paul Metropolitan Area, are incorporated to provide a comprehensive summary of the annual economic impacts generated by all 133 public airports. Since a similar approach was used to estimate impacts for the MAC airports, the findings from the two separate efforts are combined to produce an overall statewide total, as shown in the table on this page.

In addition to the economic impacts associated with the public airports, activities the airports support also contribute annually to state and local tax revenues. Study airports are estimated to contribute **\$66.3 million** in annual state and local tax revenues, while MAC airports contribute approximately **\$557 million** in state and local tax revenues.

STUDY PROCESS

The study used an approach consistent with the Federal Aviation Administration (FAA) guidelines to estimate annual economic impacts for study airports. Data was collected through interviews and surveys to estimate direct economic impacts. Direct impacts are the first stage of the economic cycle, in which airport impacts flow into other sectors of the state economy. The study estimates annual direct economic impacts associated with these categories: airport management, business tenants, capital investment, commercial visitor spending, and general aviation visitor spending.

An econometric input/output model, referred to in this document as IMPLAN, was used to estimate additional indirect and induced impacts, sometimes known as a multiplier effect, which trigger additional impacts. For this study, a statewide model was used to develop economic impact estimates. Indirect and induced impacts are experienced in the state economy as a result of the initial direct impacts. Indirect impacts result from industries purchasing from other industries, whereas induced impacts result from the expenditure of new household income associated with direct and indirect impacts. When summed, direct, indirect, and induced impacts equal total annual economic impacts.



ECONOMIC IMPACT CATEGORIES

AIRPORT MANAGEMENT

Activities associated with the daily operation of each airport

BUSINESS TENANTS

On-airport aviation-related businesses that generate revenue and have employment

CAPITAL INVESTMENT

Five-year average annual state, federal, airport, and private investment for airport improvements

GENERAL AVIATION VISITOR SPENDING

Expenditures by visitors to Minnesota who arrive on general aviation airplanes

COMMERCIAL VISITOR SPENDING

Expenditures by visitors to Minnesota who arrive on a scheduled commercial airline flight

STATE & LOCAL TAX REVENUES

Airport-supported sales and state income taxes



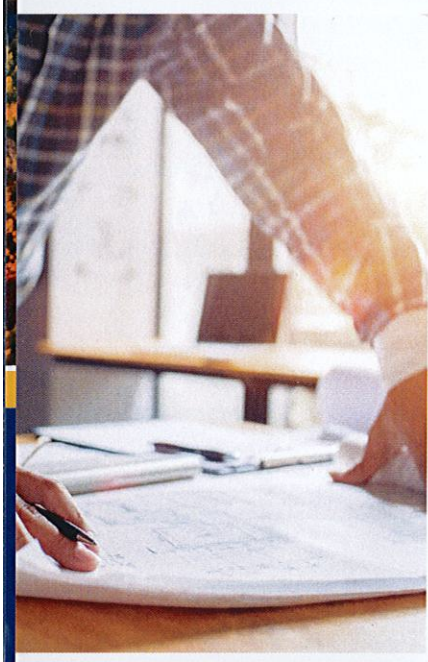
Photo Credit: David Gonzales

IMPACTS MEASUREMENTS

This study used the following measurements to estimate annual economic impacts for the 126 study airports:

- Annual Employment
- Annual Payroll
- Annual Spending
- Annual Economic Activity

In this analysis, annual economic activity is the sum of payroll and spending. Combined, these two measures represent the flow of dollars and jobs from airport-supported activities into the state economy. Total statewide annual economic impacts estimates associated with the 126 study airports are presented by impact category in the next sections.



AIRPORT MANAGEMENT

Most of the study airports have employees dedicated to managing and operating airports on a daily basis. These employees can be full-time, part-time or seasonal. For this analysis, all less than full-time jobs were converted to reflect full-time equivalent employment. For example, if two part-time employees each work 20 hours per week, these two part-time jobs equal one full-time equivalent employee. Depending on the number of hours worked, direct employment in airport management is sometimes less than one full-time equivalent job at some study airports.

Airports have annual spending to support their operations. Airport spending categories include, but are not limited to, items such as utilities, insurance, supplies, and routine maintenance. The table below shows total annual economic impacts associated with airport management at study airports.

AIRPORT MANAGEMENT ECONOMIC IMPACTS

IMPACT MEASURE	DIRECT	INDIRECT/ INDUCED	TOTAL
Employment	165	223	388
Payroll	\$8,110,020	\$6,108,180	\$14,218,200
Spending	\$19,498,140	\$24,852,870	\$44,351,010
Annual Economic Activity	\$27,608,160	\$30,961,050	\$58,569,210



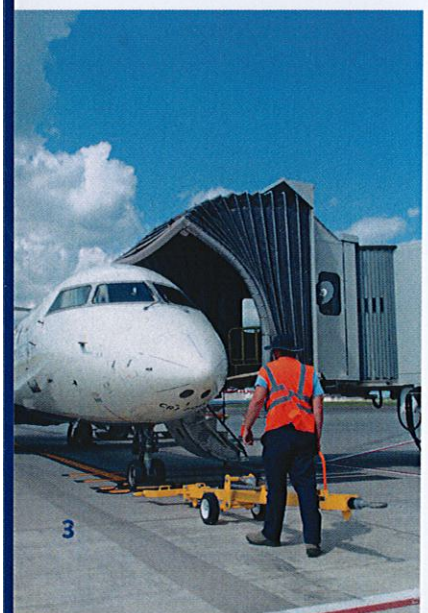
Photo Credit: USAF

BUSINESS TENANTS

Many of the study airports have business tenants that provide aviation-related services. A Fixed Base Operator (FBO) is one example of an airport business tenant that provides fueling, maintenance, and other services to aircraft and airport customers. Flight instructors, aerial applicators, corporate flight departments, airlines, TSA, and terminal concessionaires are other examples of business tenants that operate at airports. For a business tenant to be considered in this analysis, they need to be a business that provides aviation-related services with paid employees working at the airport. In this economic impact category, spending is equal to the expenditures each business has annually to support their operations. The table below shows total annual economic impacts associated with business tenants at study airports.

BUSINESS TENANTS ECONOMIC IMPACTS

IMPACT MEASURE	DIRECT	INDIRECT/ INDUCED	TOTAL
Employment	4,068	5,044	9,112
Payroll	\$221,853,620	\$213,687,850	\$435,541,470
Spending	\$457,607,010	\$242,559,800	\$700,166,810
Annual Economic Activity	\$679,460,630	\$456,247,650	\$1,135,708,280



CAPITAL INVESTMENT

Capital projects are undertaken using local, state, federal, and private funds to maintain, rehabilitate, and expand airports. Since the nature of capital improvement projects can be cyclical, for this analysis each airport's capital investment history over a five-year period was considered. Each airport's five-year average annual capital investment was used to estimate economic impacts in this category. Impacts take place when projects are being planned, permitted, designed, engineered, and implemented. Direct average annual capital investments for each study airport are entered into the IMPLAN model to estimate direct employment and payroll associated with the average annual investment. In this impact category, spending equates to the amount used to purchase materials and supplies to implement various capital improvement projects. The table below shows total annual economic impacts associated with capital investment at study airports.

CAPITAL INVESTMENT ECONOMIC IMPACTS

IMPACT MEASURE	DIRECT	INDIRECT/ INDUCED	TOTAL
Employment	326	517	843
Payroll	\$16,555,570	\$15,485,260	\$32,040,830
Spending	\$45,450,470	\$43,794,490	\$89,244,960
Annual Economic Activity	\$62,006,040	\$59,279,750	\$121,285,790



GENERAL AVIATION VISITOR SPENDING

The study concludes that approximately 80,000 general aviation aircraft bring an estimated 230,400 general aviation visitors to study airports annually. Visitors who arrive on general aviation aircraft come for both business- and leisure-related trips. General aviation is often selected for its efficiency, especially for business travel. Trips can be made in a day without an overnight stay. Surveys confirm that a high percentage of general aviation visitors stay only for the day. Study surveys indicate that average general aviation visitor spending for each airport per trip ranges from \$50 to \$270. General aviation spending estimates relate to the expenditures visitors have for things such as hotels, restaurants, ground transportation, entertainment, and retail purchases. These averages consider visitors who come for just the day and have very limited or no spending in the state, and they are used to estimate direct annual general aviation visitor spending. After direct visitor spending estimates by airport are developed, the IMPLAN model is used to determine the direct employment and payroll supported by visitor spending. The table below shows total annual economic impacts associated with general aviation visitor spending at study airports.

GENERAL AVIATION VISITOR SPENDING ECONOMIC IMPACTS

IMPACT MEASURE	DIRECT	INDIRECT/ INDUCED	TOTAL
Employment	946	420	1,366
Payroll	\$24,030,000	\$18,946,000	\$42,976,000
Spending	\$29,286,000	\$27,857,000	\$57,143,000
Annual Economic Activity	\$53,316,000	\$46,803,000	\$100,119,000





EIGHT COMMERCIAL STUDY AIRPORTS

- Bemidji Regional Airport
- Brainerd Lakes Regional Airport
- Duluth International Airport
- Range Regional Airport
- Falls International Airport
- Rochester International Airport
- St. Cloud Regional Airport
- Thief River Falls Regional Airport

COMMERCIAL VISITOR SPENDING

The study analyzed impacts related to commercial visitors arriving at the eight study airports with commercial service. A portion of each airport's annual enplanements (boarding passengers) are residents of the airport market area, and the remainder are visitors. The proportions of resident and visitor enplanements vary by airport. Information from the United States Department of Transportation is used to establish resident versus visitor enplanements for each commercial airport. Visitor enplanements, as a percent of each airport's total enplanements, ranges from 27 to 65 percent, depending on the airport.

Commercial airports throughout the state participated in the study by distributing surveys to departing visitors. Visitors provided information on length of stay and spending in categories including lodging, food, ground transportation, entertainment, and retail spending. Average length of stay and spending per trip vary by commercial airport. Study surveys indicate that most commercial airports also have visitors who come only for the day, limiting their spending. Airports with higher percentages of day-only visitors have lower average spending per trip. According to study surveys, average spending per commercial visitor trip ranges from \$236 to \$498. The table below shows total annual economic impacts associated with commercial visitor spending at study airports.

COMMERCIAL VISITOR SPENDING ECONOMIC IMPACTS

IMPACT MEASURE	DIRECT	INDIRECT/INDUCED	TOTAL
Employment	956	482	1,438
Payroll	\$24,427,000	\$20,882,000	\$45,309,000
Spending	\$62,392,000	\$56,630,000	\$119,022,000
Annual Economic Activity	\$86,819,000	\$77,512,000	\$164,331,000

TOTAL ANNUAL ECONOMIC IMPACTS FOR STUDY AIRPORTS

Total annual economic impact estimates for all study airports are summarized in the table below. The totals include direct impacts, identified through study research, and indirect/induced impacts estimated using the IMPLAN model. Economic Activity is the sum of Payroll and Spending for all economic impact categories.

	EMPLOYMENT	PAYROLL	SPENDING	ECONOMIC ACTIVITY
Airport Management	388	\$14,218,200	\$44,351,010	\$58,569,210
Airport Business Tenants	9,112	\$435,541,470	\$700,166,810	\$1,135,708,280
Capital Investment	843	\$32,040,830	\$89,244,960	\$121,285,790
General Aviation Visitors	1,366	\$42,976,000	\$57,143,000	\$100,119,000
Commercial Visitors	1,438	\$45,309,000	\$119,022,000	\$164,331,000
Total	13,147	\$570,085,500	\$1,009,927,780	\$1,580,013,280

TOTAL ANNUAL ECONOMIC IMPACTS FOR STUDY AIRPORTS

ANNUAL EMPLOYMENT	ANNUAL PAYROLL	ANNUAL SPENDING	ANNUAL ECONOMIC ACTIVITY
13,147	\$570.1 M	\$1.0 B	\$1.6 B

TAX REVENUE IMPACTS

The study airports are responsible for supporting certain activities that contribute to state and local tax revenues. For this analysis, state and local tax revenues estimates are based on employment, payroll, and spending associated with each of the direct impact categories. Tax rates in the analysis reflect Minnesota and local tax rates specific to each airport. Taxes considered in this analysis include:

- Sales tax collected on airport and business tenant expenditures needed to run an airport or an aviation-related business
- Sales tax paid on the taxable portion of materials/goods needed to implement capital projects
- Sales tax paid by all commercial and general aviation visitors arriving by air
- Sales tax paid by employees whose jobs are airport-supported or supported by visitor spending
- State income tax paid by employees whose jobs are airport-supported or supported by visitor spending

As the tables below reflect, when combined, annual sales tax and state income tax revenues from study airports are estimated at \$66.3 million.

ESTIMATED ANNUAL STATE AND LOCAL SALES TAX REVENUE FROM DIRECT SPENDING

SALES TAXES GENERATED BY:	SALES TAX
Airport Management	\$1,362,220
Airport Business Tenants	\$34,005,010
Airport Capital Investments	\$3,225,450
Commercial Visitor Spending	\$7,831,630
General Aviation Visitor Spending	\$4,425,580
Airport-Supported Employees*	\$3,804,950
Commercial/General Aviation Visitor-Supported Employees	\$758,950
Total Estimated Sales Tax	\$55,413,790

* Each airport-supported employee uses a portion of their income to purchases goods and other subject to a sales tax.

ESTIMATED ANNUAL STATE INCOME TAX REVENUE FROM DIRECT PAYROLL

AVIATION-RELATED EMPLOYEES STATE INCOME TAX	STATE INCOME TAX
Airport Employees	\$288,510
Business Tenant Employees	\$9,038,610
Employees Supported by Capital Investment	\$623,960
Employees Supported by Commercial Visitor Spending	\$471,950
Employees Supported by General Aviation Visitor Spending	\$459,920
Total Estimated State Income Tax	\$10,882,980

InterVISTAS conducted a separate study using the IMPLAN model to estimate state and local tax revenues for the MAC airports. State and local tax revenues for the MAC airports are reported as follows: \$546 million for Minneapolis-St. Paul International and over \$11 million for the six reliever airports. Due to the different methodology, specific local and state tax revenue inputs and outputs for MAC airports are not available.

INDIVIDUAL AIRPORT ANNUAL ECONOMIC IMPACTS

The total annual economic impact for each of Minnesota's 133 public general aviation and commercial service airports, along with each airport's state and local tax revenues, are presented on the following pages. Each airport's total annual economic impact is a sum of its estimated payroll and spending impacts. Tax revenues are a standalone category showing other benefits associated with public airports. Reported annual economic impacts for each airport are a snapshot in time with results representing conditions and activities at the airport when the study was conducted.

MINNESOTA PUBLIC AIRPORTS



ASSOCIATED CITY	AIRPORT NAME	TOTAL EMPLOYMENT	TOTAL PAYROLL	TOTAL SPENDING	TOTAL ANNUAL ECONOMIC ACTIVITY	TOTAL STATE AND LOCAL TAX REVENUES
COMMERCIAL STUDY AIRPORTS						
Bemidji	Bemidji Regional Airport	459	\$19,995,550	\$37,732,000	\$57,727,550	\$2,442,770
Brainerd	Brainerd Lakes Regional Airport	275	\$12,186,490	\$18,779,680	\$30,966,170	\$1,267,980
Duluth	Duluth International Airport	6,230	\$277,319,300	\$483,257,380	\$760,576,680	\$32,852,810
Hibbing	Range Regional Airport	263	\$10,719,820	\$25,386,580	\$36,106,400	\$1,426,080
International Falls	Falls International Airport	180	\$6,401,320	\$21,887,870	\$28,289,190	\$984,680
Rochester	Rochester International Airport	1,624	\$63,097,460	\$126,754,960	\$189,852,420	\$9,242,680
St. Cloud	St. Cloud Regional Airport	395	\$16,187,470	\$32,993,740	\$49,181,210	\$1,914,760
Thief River Falls	Thief River Falls Regional Airport	93	\$3,529,800	\$5,471,360	\$9,001,160	\$355,810
GENERAL AVIATION STUDY AIRPORTS						
Ada	Norman County/Ada/Twin Valley Airport	1	\$25,500	\$76,080	\$101,580	\$3,260
Aitkin	Aitkin Municipal Airport - Steve Kurtz Field	14	\$531,720	\$1,098,460	\$1,630,180	\$55,390
Albert Lea	Albert Lea Municipal Airport	80	\$2,486,560	\$3,633,320	\$6,119,880	\$276,420
Alexandria	Alexandria Municipal Airport - Chandler Field	140	\$5,984,880	\$8,568,480	\$14,553,360	\$569,570
Appleton	Appleton Municipal Airport	23	\$1,080,660	\$1,724,230	\$2,804,890	\$103,890
Austin	Austin Municipal Airport	47	\$3,820,850	\$4,979,150	\$8,800,000	\$386,720
Backus	Backus Municipal Airport	1	\$28,700	\$126,630	\$155,330	\$4,350
Bagley	Bagley Municipal Airport	3	\$72,820	\$164,360	\$237,180	\$7,580
Baudette	Baudette International Airport	17	\$586,070	\$1,152,290	\$1,738,360	\$62,600
Benson	Benson Municipal Airport - Veterans Field	11	\$576,360	\$1,198,060	\$1,774,420	\$64,460
Big Falls	Big Falls Municipal Airport	<1	\$4,880	\$10,550	\$15,430	\$480
Bigfork	Bigfork Municipal Airport	1	\$34,830	\$81,300	\$116,130	\$3,070
Blue Earth	Blue Earth Municipal Airport	13	\$569,510	\$1,168,560	\$1,738,070	\$57,960
Bowstring	Bowstring Airport	2	\$58,790	\$137,670	\$196,460	\$6,300
Brooten	Brooten Municipal Airport/John O. Bohmer Field	9	\$346,630	\$328,280	\$674,910	\$23,490
Buffalo	Buffalo Municipal Airport	59	\$1,995,160	\$3,353,690	\$5,348,850	\$208,030
Caledonia	Houston County Airport	10	\$435,700	\$685,300	\$1,121,000	\$37,100
Cambridge	Cambridge Municipal Airport	14	\$528,740	\$752,840	\$1,281,580	\$47,960
Canby	Canby Municipal Airport - Myers Field	18	\$773,960	\$1,645,390	\$2,419,350	\$80,400
Clarissa	Clarissa Municipal Airport	<1	\$12,300	\$12,660	\$24,960	\$790
Cloquet	Cloquet-Carlton County Airport	23	\$924,820	\$1,157,700	\$2,082,520	\$81,390
Cook	Cook Municipal Airport	4	\$117,370	\$284,550	\$401,920	\$12,910
Crookston	Crookston Municipal Airport - Kirkwood Field	39	\$1,430,630	\$2,248,650	\$3,679,280	\$145,680
Detroit Lakes	Detroit Lakes Municipal Airport	53	\$1,871,840	\$3,702,140	\$5,573,980	\$217,650
Dodge Center	Dodge Center Municipal Airport	12	\$567,260	\$968,610	\$1,535,870	\$57,800
Duluth	Duluth Sky Harbor Airport	52	\$2,360,730	\$2,780,830	\$5,141,560	\$199,810



ASSOCIATED CITY	AIRPORT NAME	TOTAL EMPLOYMENT	TOTAL PAYROLL	TOTAL SPENDING	TOTAL ANNUAL ECONOMIC ACTIVITY	TOTAL STATE AND LOCAL TAX REVENUES
East Gull Lake	East Gull Lake Airport	2	\$56,420	\$62,560	\$118,980	\$3,680
Elbow Lake	Elbow Lake Municipal Airport -Pride of the Prairie	32	\$950,220	\$1,652,510	\$2,602,730	\$88,860
Ely	Ely Municipal Airport	51	\$1,761,600	\$3,720,190	\$5,481,790	\$183,210
Eveleth	Eveleth-Virginia Municipal Airport	59	\$1,024,980	\$2,217,110	\$3,242,090	\$108,330
Fairmont	Fairmont Municipal Airport	30	\$1,144,290	\$2,764,630	\$3,908,920	\$148,500
Faribault	Faribault Municipal Airport-Liz Wall Strohfus Field	72	\$2,962,750	\$3,661,940	\$6,624,690	\$242,590
Fergus Falls	Fergus Falls Municipal Airport-Einar Mickelson Field	42	\$1,733,770	\$4,619,270	\$6,353,040	\$279,440
Fertile	Fertile Municipal Airport	2	\$62,500	\$93,460	\$155,960	\$4,970
Forest Lake	Forest Lake Airport	31	\$1,093,290	\$1,906,460	\$2,999,750	\$109,750
Fosston	Fosston Municipal Airport - Anderson Field	7	\$372,980	\$731,870	\$1,104,850	\$41,470
Glencoe	Glencoe Municipal Airport - Vernon Perschau Field	14	\$511,250	\$1,222,350	\$1,733,600	\$56,520
Glenwood	Glenwood Municipal Airport	26	\$1,082,270	\$1,153,970	\$2,236,240	\$75,800
Grand Marais	Grand Marais-Cook County Airport	35	\$941,380	\$2,266,800	\$3,208,180	\$122,650
Grand Rapids	Grand Rapids/Itasca Co-Gordon Newstrom Field	57	\$2,229,040	\$3,337,950	\$5,566,990	\$207,880
Granite Falls	Granite Falls Muni-Lenzen-Roe-Fagan Memorial Field	61	\$2,537,950	\$3,931,370	\$6,469,320	\$212,450
Grygla	Grygla Municipal Airport- Mel Wilkens Field	1	\$19,450	\$239,880	\$259,330	\$7,100
Hallock	Hallock Municipal Airport	23	\$601,540	\$2,399,760	\$3,001,300	\$103,190
Hawley	Hawley Municipal Airport	10	\$314,020	\$853,090	\$1,167,110	\$40,380
Hector	Hector Municipal Airport	14	\$802,810	\$1,070,970	\$1,873,780	\$65,760
Henning	Henning Municipal Airport	2	\$99,920	\$148,940	\$248,860	\$8,350
Herman	Herman Municipal Airport	4	\$166,920	\$428,560	\$595,480	\$22,560
Hill City	Hill City-Quadna Mountain Airport	1	\$38,710	\$38,940	\$77,650	\$2,050
Hutchinson	Hutchinson Municipal Airport - Butler Field	43	\$1,937,170	\$3,657,830	\$5,595,000	\$223,390
Jackson	Jackson Municipal Airport	25	\$850,020	\$1,409,310	\$2,259,330	\$91,050
Karlstad	Karlstad Municipal Airport	<1	\$18,990	\$81,460	\$100,450	\$2,770
Le Sueur	Le Sueur Municipal Airport	52	\$2,024,910	\$3,296,380	\$5,321,290	\$189,790
Litchfield	Litchfield Municipal Airport	17	\$574,990	\$1,273,860	\$1,848,850	\$69,420
Little Falls	Little Falls-Morrison County Airport	10	\$370,440	\$1,042,710	\$1,413,150	\$55,930
Littlefork	Littlefork Municipal - Hanover Airport	2	\$44,450	\$17,890	\$62,340	\$1,430
Long Prairie	Long Prairie Municipal Airport - Todd Field	7	\$224,430	\$647,810	\$872,240	\$29,800
Longville	Longville Municipal Airport	5	\$180,330	\$494,140	\$674,470	\$22,660
Luverne	Luverne Municipal Airport - Quentin Aanenson Field	52	\$2,058,920	\$4,355,410	\$6,414,330	\$233,850
Madison	Lac Qui Parle County Airport - Bud Frye Field	12	\$684,510	\$1,549,140	\$2,233,650	\$83,770
Mahnomen	Mahnomen County Airport	9	\$298,070	\$633,220	\$931,290	\$29,750
Mankato	Mankato Regional Airport - Sohler Field	221	\$11,424,510	\$13,346,550	\$24,771,060	\$1,011,190

ASSOCIATED CITY	AIRPORT NAME	TOTAL EMPLOYMENT	TOTAL PAYROLL	TOTAL SPENDING	TOTAL ANNUAL ECONOMIC ACTIVITY	TOTAL STATE AND LOCAL TAX REVENUES
Maple Lake	Maple Lake Municipal - Bill Mavencamp Sr. Field	3	\$84,260	\$203,590	\$287,850	\$10,060
Marshall	Southwest Minnesota Regional-Marshall/Ryan Field	108	\$5,670,920	\$12,981,280	\$18,652,200	\$810,060
McGregor	McGregor - Isedor Iverson Airport	2	\$52,870	\$80,000	\$132,870	\$3,670
Milaca	Milaca Municipal Airport	3	\$116,360	\$228,720	\$345,080	\$12,240
Montevideo	Montevideo-Chippewa County Airport	13	\$466,420	\$790,550	\$1,256,970	\$47,360
Moorhead	Moorhead Municipal Airport	51	\$2,129,800	\$3,211,420	\$5,341,220	\$215,090
Moose Lake	Moose Lake-Carlton County Airport	14	\$507,790	\$943,990	\$1,451,780	\$57,840
Mora	Mora Municipal Airport	27	\$879,150	\$1,282,270	\$2,161,420	\$74,740
Morris	Morris Municipal Airport - Charlie Schmidt Field	16	\$622,780	\$1,558,000	\$2,180,780	\$69,950
New Ulm	New Ulm Municipal Airport	45	\$1,649,330	\$4,006,810	\$5,656,140	\$221,100
Northome	Northome Municipal Airport	3	\$61,400	\$79,590	\$140,990	\$3,510
Olivia	Olivia Regional Airport	21	\$1,236,690	\$3,477,240	\$4,713,930	\$150,940
Orr	Orr Regional Airport	2	\$79,280	\$305,680	\$384,960	\$12,080
Ortonville	Ortonville Municipal Airport - Martinson Field	3	\$114,260	\$319,430	\$433,690	\$13,740
Owatonna	Owatonna Degner Regional Airport	71	\$2,307,660	\$3,557,190	\$5,864,850	\$243,580
Park Rapids	Park Rapids Municipal Airport - Konshok Field	119	\$4,654,400	\$8,497,920	\$13,152,320	\$509,600
Paynesville	Paynesville Municipal Airport	5	\$210,140	\$344,320	\$554,460	\$19,040
Pelican Rapids	Pelican Rapids Municipal Airport - Lyon's Field	2	\$44,690	\$139,680	\$184,370	\$5,910
Perham	Perham Municipal Airport	4	\$129,740	\$225,890	\$355,630	\$12,690
Pine River	Pine River Regional Airport	12	\$475,820	\$703,560	\$1,179,380	\$41,750
Pinecreek	Piney-Pinecreek Border Airport	1	\$33,380	\$79,340	\$112,720	\$3,810
Pipestone	Pipestone Municipal Airport	21	\$813,950	\$1,400,470	\$2,214,420	\$82,240
Preston	Preston - Fillmore County Airport	9	\$312,990	\$542,310	\$855,300	\$31,190
Princeton	Princeton Municipal Airport	81	\$2,960,540	\$3,235,110	\$6,195,650	\$209,830
Red Lake Falls	Red Lake Falls Municipal Airport	31	\$1,564,340	\$3,201,330	\$4,765,670	\$179,800
Red Wing	Red Wing Regional Airport	216	\$7,323,400	\$11,322,530	\$18,645,930	\$645,990
Redwood Falls	Redwood Falls Municipal Airport	68	\$4,411,540	\$3,731,420	\$8,142,960	\$302,290
Remer	Remer Municipal Airport	1	\$25,320	\$25,470	\$50,790	\$1,310
Roseau	Roseau Municipal Airport - Rudy Billberg Field	10	\$351,270	\$719,450	\$1,070,720	\$36,310
Rush City	Rush City Regional Airport	34	\$1,374,000	\$2,142,060	\$3,516,060	\$124,910
Rushford	Rushford Municipal Airport - Robert W. Bunke Field	11	\$456,290	\$971,180	\$1,427,470	\$54,410
Sauk Centre	Sauk Centre Municipal Airport	16	\$661,780	\$1,216,930	\$1,878,710	\$64,700
Slayton	Slayton Municipal Airport	1	\$55,170	\$127,820	\$182,990	\$5,150
Sleepy Eye	Sleepy Eye Municipal Airport	6	\$305,040	\$670,450	\$975,490	\$38,240
South St. Paul	South St. Paul Municipal Airport - Fleming Field	507	\$31,105,980	\$34,081,880	\$65,187,860	\$2,409,520

ASSOCIATED CITY	AIRPORT NAME	TOTAL EMPLOYMENT	TOTAL PAYROLL	TOTAL SPENDING	TOTAL ANNUAL ECONOMIC ACTIVITY	TOTAL STATE AND LOCAL TAX REVENUES
Springfield	Springfield Municipal Airport	2	\$78,510	\$228,800	\$307,310	\$10,550
St. James	St. James Municipal Airport	8	\$280,120	\$1,307,230	\$1,587,350	\$48,830
Staples	Staples Municipal Airport	16	\$716,290	\$981,140	\$1,697,430	\$62,220
Starbuck	Starbuck Municipal Airport	3	\$66,320	\$207,080	\$273,400	\$7,830
Stephen	Stephen Municipal Airport	20	\$1,086,140	\$2,235,170	\$3,321,310	\$126,390
Tower	Tower Municipal Airport	13	\$388,250	\$521,790	\$910,040	\$32,120
Tracy	Tracy Municipal Airport	6	\$175,020	\$293,980	\$469,000	\$15,860
Two Harbors	Two Harbors Municipal - Richard B. Helgeson Field	11	\$316,160	\$381,800	\$697,960	\$27,370
Tyler	Tyler Municipal Airport	4	\$121,420	\$284,000	\$405,420	\$13,510
Wadena	Wadena Municipal Airport	5	\$197,030	\$562,100	\$759,130	\$26,050
Walker	Walker Municipal Airport	8	\$275,160	\$509,730	\$784,890	\$33,120
Warren	Warren Municipal Airport	12	\$705,390	\$1,133,250	\$1,838,640	\$67,200
Warroad	Warroad International Memorial Airport	44	\$2,725,130	\$7,296,140	\$10,021,270	\$387,810
Waseca	Waseca Municipal Airport	25	\$811,070	\$1,518,950	\$2,330,020	\$85,490
Waskish	Waskish Municipal Airport	6	\$288,040	\$575,780	\$863,820	\$34,410
Wells	Wells Municipal Airport	11	\$445,830	\$888,940	\$1,334,770	\$48,040
Wheaton	Wheaton Municipal Airport	19	\$751,420	\$1,313,080	\$2,064,500	\$69,830
Willmar	Willmar Municipal Airport - John L. Rice Field	87	\$4,341,150	\$7,574,040	\$11,915,190	\$484,940
Windom	Windom Municipal Airport	14	\$607,390	\$1,742,960	\$2,350,350	\$85,200
Winona	Winona Municipal Airport - Max Conrad Field	73	\$3,653,550	\$7,144,140	\$10,797,690	\$407,460
Winsted	Winsted Municipal Airport	2	\$68,110	\$231,860	\$299,970	\$8,950
Worthington	Worthington Municipal Airport	25	\$874,970	\$1,959,300	\$2,834,270	\$106,020
STUDY AIRPORT TOTALS		13,147	\$570.1 million	\$1.0 billion	\$1.6 billion	\$66.3 million
MAC AIRPORTS						
Minneapolis	Airlake Airport	38	\$3,500,000	\$9,700,000	\$13,200,000	\$57,000
Minneapolis	Anoka County/Blaine Airport - Janes Field	460	\$22,000,000	\$96,000,000	\$118,000,000	\$1,000,000
Minneapolis	Crystal Airport	250	\$14,000,000	\$57,000,000	\$71,000,000	\$700,000
Minneapolis	Flying Cloud Airport	1,040	\$52,000,000	\$117,000,000	\$229,000,000	\$2,600,000
Minneapolis	Minneapolis - Saint Paul International Airport	77,800	\$3,700,000,000	\$12,200,000,000	\$15,900,000,000	\$546,000,000
St. Paul	Lake Elmo Airport	42	\$2,300,000	\$10,500,000	\$12,800,000	\$49,000
St. Paul	St. Paul Downtown Airport - Holman Field	1,260	\$70,000,000	\$242,000,000	\$312,000,000	\$6,700,000
MAC AIRPORT TOTALS		80,890	\$3.9 billion	\$12.8 billion	\$16.6 billion	\$557 million
TOTAL ALL PUBLIC AIRPORTS (STUDY & MAC)		94,037	\$4.4 billion	\$13.8 billion	\$18.2 billion	*See note below

Source: Jviation, MAC

*Note: Results include the 126 commercial service and general aviation study airports plus the 7 MAC airports. Reporting of the impacts for the MAC has been adjusted to be consistent with the impact measurement terminology used in the state study. In the MAC study, payroll was classified as earnings and annual economic activity as economic output. Different methodologies were used in the state and MAC studies to estimate tax impacts; the two results for this particular impact measure are not considered additive.

BUSINESS USE OF AVIATION AND JOBS THAT BENEFIT FROM AIRPORT USE

Minnesota businesses rely on airports to improve their efficiency. The study identified countless examples of employers in communities around the state that rely on aviation as a business tool. Businesses use aviation to tie together offices in multiple domestic and international locations, oversee large-scale development projects, expand their market areas, reduce employee travel time, provide convenient access for their customers, and ship and receive products and supplies.

The Minnesota Department of Employment and Economic Development (DEED) indicates that accessibility to transportation infrastructure, such as public airports, is a very important factor to where businesses locate in Minnesota. Many businesses would not be able to compete domestically and in some instances globally without access to a nearby airport.

Minnesota airports promote greater efficiency throughout numerous sectors of the economy and help increase productivity for non-aviation industries. The IMPLAN model estimates that 55,740 additional jobs throughout Minnesota gain efficiencies by using Minnesota airports. These 55,740 jobs (2% of Minnesota employment) are in addition to the previously identified 94,037 (3% of Minnesota employment) airport-supported jobs.

SAMPLE OF BUSINESSES THAT USE STUDY AIRPORTS

- GLACIAL GRAINS SPIRITS
- ANI PHARMACEUTICALS
- RELCO
- TEAM INDUSTRIES
- BENSON TECHNICAL WORKS (BTW)
- OUTLAND ENERGY SERVICES
- DIGI-KEY
- CIRRUS AIRCRAFT
- PAGE 1 PRINTERS
- SAGEGLASS
- DAIKIN INDUSTRIES
- FARIBAULT FOODS
- BERGQUIST
- 3M
- HORMEL
- SENECA FOODS
- FORM-A-FEED
- SCHWAN'S
- RAPAT
- MATTRACKS
- MILLERBERND
- CAMBRIA
- CLEVELAND CLIFFS
- NORTHLAND PROCESS PIPING
- MINNESOTA RUBBER AND PLASTICS
- AGCO
- TAYLOR
- SUPERIOR INDUSTRIES
- FASTENAL
- TRW AUTOMOTIVE
- RED WING SHOES
- MARVIN WINDOWS AND DOORS
- DAKTRONICS
- COBORN'S
- MCNEILUS TRUCK
- ARCTIC CAT

More information on businesses using study airports can be found in Individual Airport Reports at MnDOT.gov/aero

CASE STUDIES

Airports support many different uses and users. Six different case studies document the importance of airports to businesses, air cargo, aerial firefighting, agriculture, and medical/healthcare services. The excerpts below from two of the case studies illustrate how the medical/healthcare and agricultural industries rely on airports. All six case studies can be found in their entirety in Chapter 11 of the Technical Report.

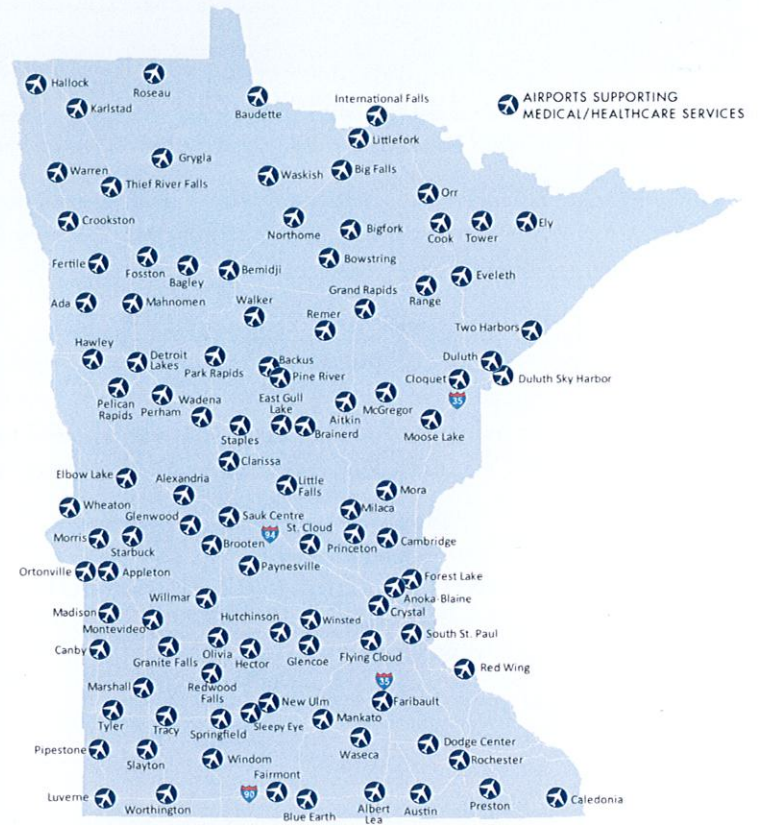
MEDICAL/HEALTHCARE SERVICES

Minnesota's hospitals, rural health clinics, and emergency medical services (EMS) providers are strong economic engines. The airport system is a critical component to efficiently deliver services that support search and rescue, patient transfers, tissue and organ transport, physician access to small hospitals in need of specialists, and medical-related express packages and air freight.

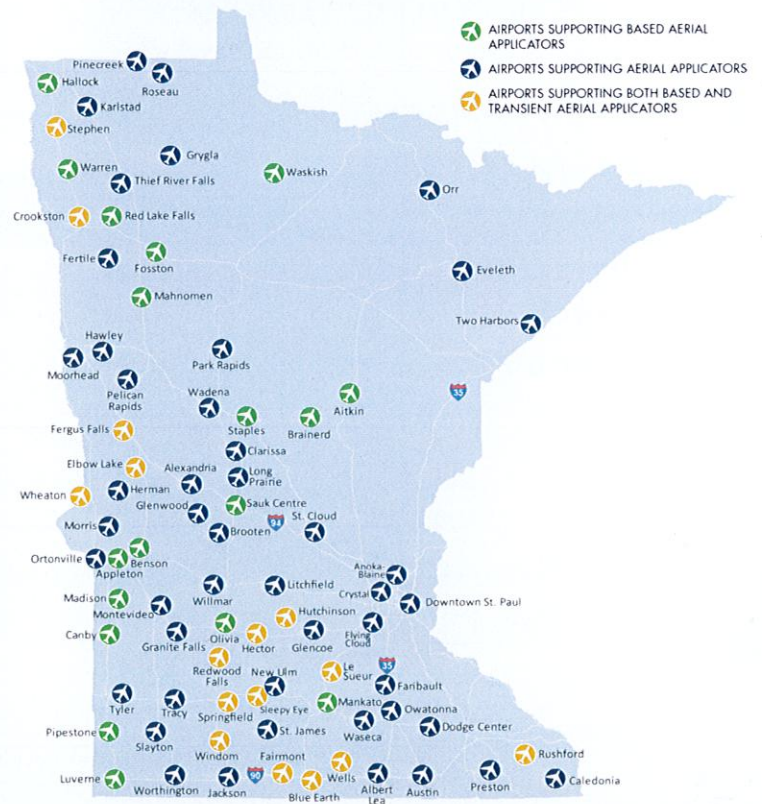
AGRICULTURAL SUPPORT SERVICES

Agriculture accounts for 51 percent of the state's land area and contributes \$17 billion annually to the state economy. Many agricultural producers benefit from aerial applicators that depend on access to public airports. Aerial applicators spray fields to prevent crop disease, which helps support higher crop yields. Many public airports have aerial applicators that are based at the airport, while others have aerial applicators that operate on a transient or visiting basis. Either way, the airports that support aerial applicators provide an important service to agricultural interests throughout the state.

AIRPORTS THAT SUPPORT HEALTHCARE AND MEDICAL SERVICES



AIRPORTS THAT SUPPORT AERIAL APPLICATORS



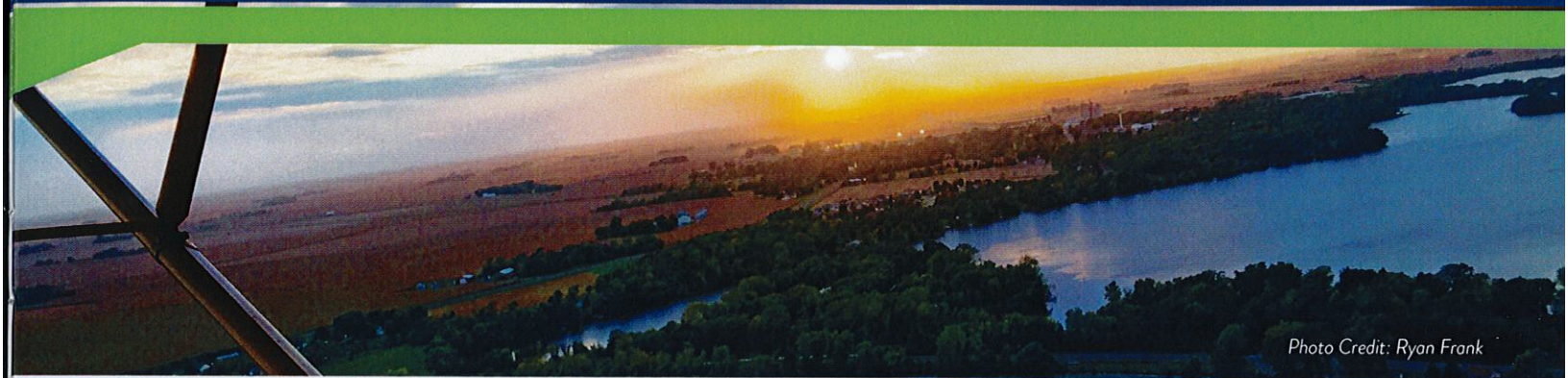


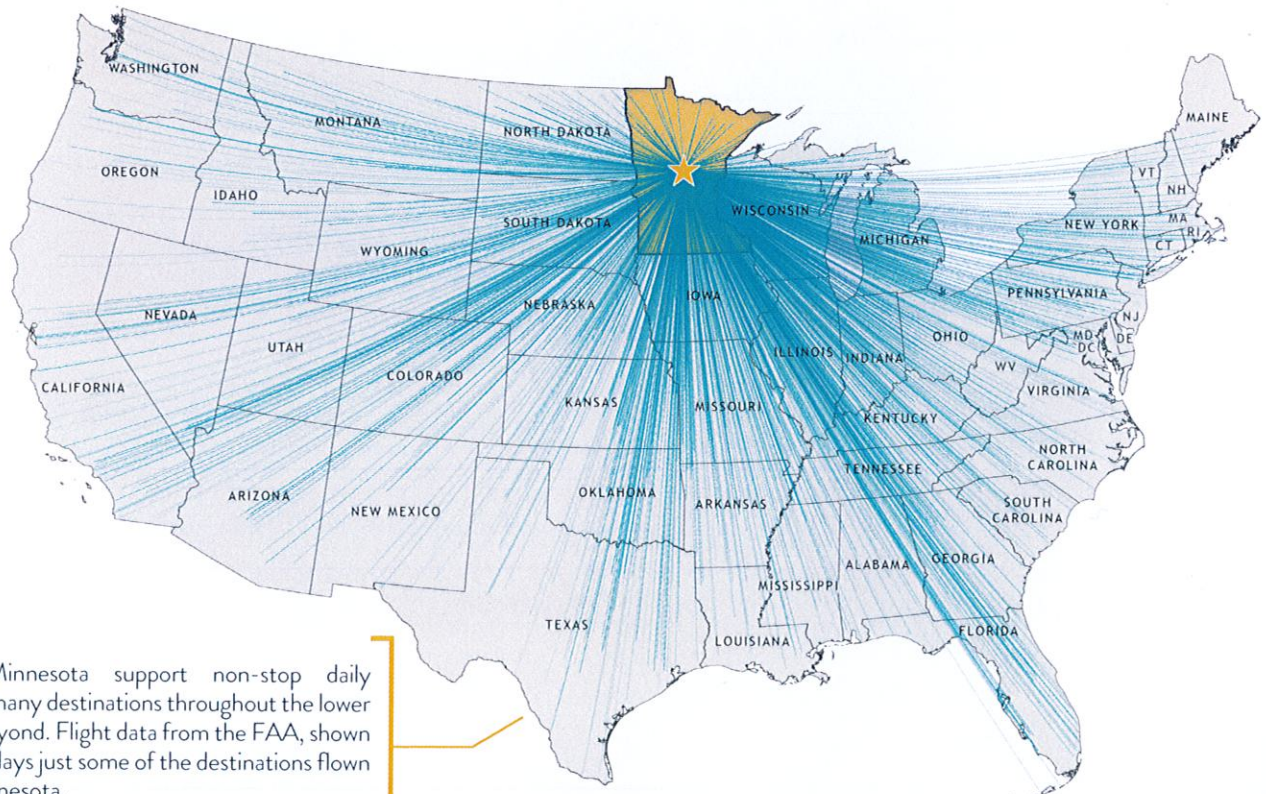
Photo Credit: Ryan Frank

STUDY CONCLUSIONS

Minnesota's 133 public airports provide significant annual economic impacts, and help support approximately 94,000 jobs. There are another 55,740 jobs that benefit from improved efficiencies that public airports provide. Study airports generate approximately \$66.3 million in annual state and local tax revenues, while MAC airports generate an estimated at \$557 million in state and local tax revenues. Statewide, total annual payroll and spending for all public airports supports an estimated \$18.2 billion in annual economic activity --this represents almost 5% of Minnesota's Gross State Product of \$368 billion.

Aviation enables Minnesota-based businesses to expand their market areas and facilitate easy access for customers and suppliers who need to visit our state. On a daily basis, commercial and general aviation flights departing Minnesota airports connect our businesses and residents to hundreds of domestic and international destinations. These flights are commerce in action, and Minnesota airports are a key contributor to the state economy.

MINNESOTA AIRPORTS CAN TAKE YOU ANYWHERE!



Airports in Minnesota support non-stop daily connectivity to many destinations throughout the lower 48 states and beyond. Flight data from the FAA, shown on this map, displays just some of the destinations flown to and from Minnesota.

MINNESOTA

Statewide Airport Economic Impact Study

MNDOT.GOV/AERO

MINNESOTA OFFICE OF AERONAUTICS
222 PLATO BLVD. EAST | ST. PAUL, MN 55107 | 651.234.7200

PREPARED BY:
AVIATION