

MIDWEST NATIONAL AIR CENTER

SYSTEM SUMMARY REPORT



In 2015, the Mid-America Regional Council (MARC) completed a regional aviation system plan (RASP) for a nine-county study area focused on the Kansas City Region. The study area included counties in both Kansas and Missouri and considered 13 general aviation airports, including the Midwest National Air Center. This report focuses on two important topics: individual finding and recommendations in the system plan for this facility; and various benefits the airport provides/supports in the study area.

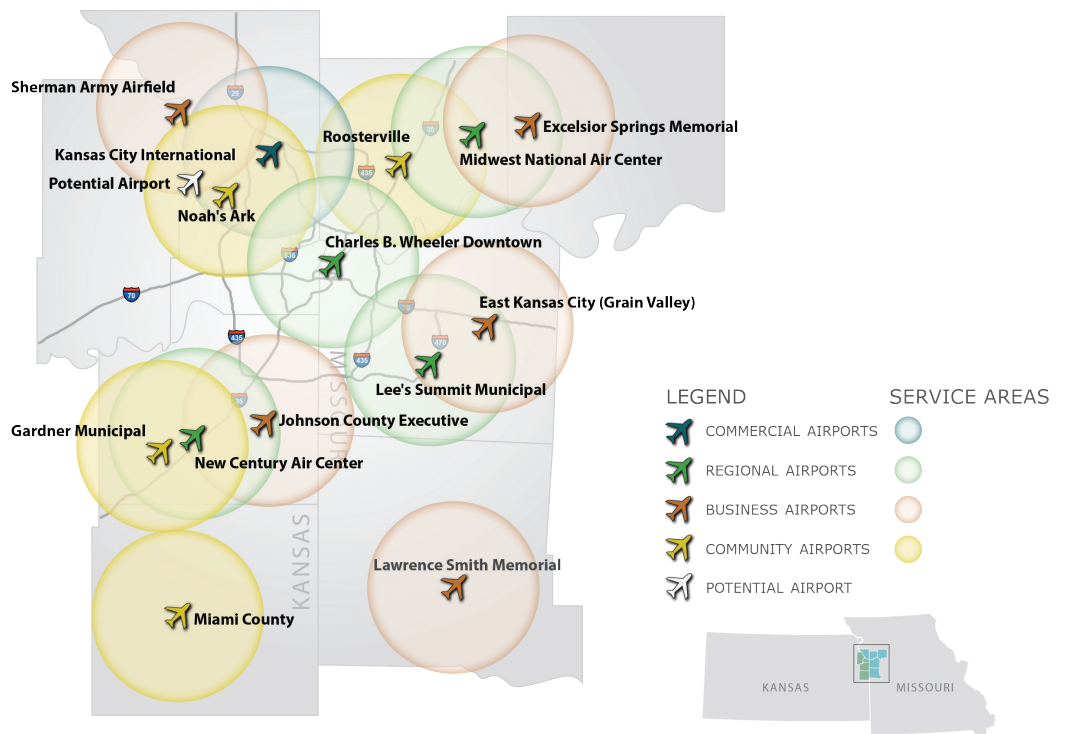
Aviation system plans are top-down studies that must still be implemented from the bottom up by individual study airports. The ultimate success of the plan depends on each airport implementing recommendations from the study and following through on any identified improvement actions. Individual airport improvements will result in the enhancement of overall system performance.

As the map below shows, within the regional system, the Midwest National Air Center is designated a Regional

Airport. Within the system plan, a Regional Airport is described as follows: Regional Airports accommodate a wide range of general aviation users and support regional economic activities. Some but not all system airports also have federal role definitions from the FAA as part of their ASSET Study. Within the FAA's national airport system, the Midwest National Air Center is also designated as a Regional Airport.

The Midwest National Air Center is a well-developed and well-maintained airport. Facility and service objectives identified for airports included in the system plan are considered minimum objectives only; based on specific local needs associated with each airport, it may be necessary to exceed these objectives. Further, airport specific master plans and capital improvement plans may identify additional projects that are needed to address each airport's individual requirements. Projects and actions needed at the Midwest National Air Center, in order for the airport to be fully compliant with all system plan objectives, are shown on the airport's report card.

RASP RECOMMENDED AIRPORT SYSTEM



SERVICE AREA CHARACTERISTICS

The system plan uses a 10-mile radius around each airport to examine current and future population and employment characteristics. The table below shows this information for the Midwest National Air Center. GIS analysis completed in the study shows that the Midwest National Air Center ranks in the lower third, among all study airports, for its concentrations of both current population and employment. Between now and 2040, the rate of increase for population in the 10-mile radius around the airport is expected to be in the middle third for all airports, while the airport's service area rate of growth for employment will be the lowest third among all system airports.

Population and Employment						
Airport	Role	Owner-ship	Total Population within Service Area (2011)	Rate of Population Growth within Service Area (2011)	Total Employment within Service Area (2011)	Rate of Employment Growth within Service Area (2011)
Midwest National Air Center	Regional	Public	76,644	41%	25,499	19%

FUTURE AVIATION DEMAND

Projections of aviation demand were developed for all study airports. These projections considered service area characteristics, actual historic growth, and FAA projections for the general aviation industry (as contained in FAA's most current National Aerospace Forecast).

Forecasts were developed for both based aircraft and annual operations. Annual operations reflect takeoffs and landings performed by aircraft that are based permanently stored at the airport and aircraft that are visiting or transient in nature.

According to the system plan's projections, based aircraft at the airport are expected to increase from 67 to 75, a 12 percent increase over the period. Single-engine planes at the airport are expected to actually decrease from 54 to 50, but based jet aircraft are expected to reach 14, up from a current level of 3, by the end of planning period. This change in fleet mix indicates that the airport should see increased business use over the forecast period.

Historic Changes in Based Aircraft									
Airport	2000	2005	2010	2015	2000-2015		2010-2015		
					Change	CAGR	Change	CAGR	
Midwest National Air Center	0	47	53	67	67	NA	14	4.8%	

* CAGR - Compound Average Annual Rate of Growth

Projected Aviation Demand					
Midwest Nation Air Center	2015	2020	2025	2035	2015-2035 CAGR
Forecast of Based Aircraft	67	68	69	75	12%
Forecast of Annual Operations	12,100	12,650	13,800	14,800	22%

Based Aircraft Fleet Mix 2035					
Airport	Single Engine	Multi Engine	Jet	Rotor	Other
Midwest National Air Center	50	10	14	0	1

RASP IDENTIFIED ACTIONS AND IMPROVEMENTS

As part of the system plan, facility and service objectives were developed for each of the three airport roles: Regional, Business, and Community. The table to the right shows the ability of current facilities and services at the Midwest National Air Center to meet the objectives for a Regional Airport. If the system plan analysis determined that actions were needed to improve the airport to make it fully compliant with its specific objectives, planning level cost estimates were developed for these projects. Costs by recommended improvement are shown in the table to the right.

As shown, the anticipated cost to improve the airport to meet all of its facility, service and performance measure objectives is estimated at less than \$70,000. The Midwest National Air Center is eligible for local funding from the both a local General Fund and a special Enterprise Fund. Further, projects at the airport are eligible to compete for MoDOT state funding, and federal funding from the FAA to address most identified improvement costs. It is important to note that costs shown in this report are not all inclusive of additional projects that the airport may need to implement as part of its individual capital improvement plan, nor does the cost estimate include maintenance and replacement costs that the airport will incur over the planning period.

In addition to facility and service needs, airports in the system plan were evaluated for their ability to meet financial, environmental, and social sustainability performance measures. Actions needed to make Midwest National Air Center fully compliant with all sustainability objectives include:

- Work with remaining municipalities around the airport to enact height zoning following Part 77.
- Work with remaining municipalities around the airport to adopt land use controls to prevent airport encroachment.
- Develop a noise contour to identify areas surrounding the airport that lie within the noise contour.

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- Conduct a wildlife hazard assessment.
- Develop a spill prevention and control plan.
- Establish a plan to promote the efficient use of water and to promote the efficient use of energy in buildings.
- Establish a plan to reduce the generation of solid waste.
- Improve public signage from area roadways.
- Have access to public transit.
- Improve airport entrance road.

Some of these actions have an associated cost, while others do not. Any associated costs to meet sustainability performance measures are included in the airport's report card.

Midwest National Air Center Report Card					GPH
AIRPORT NAME: Midwest National Air Center			CITY: Mosby, KS		
AIRPORT CODE: GPH			AIRPORT ROLE: Regional		
Actions Needed to Meet Facility and Service Objectives					
	Actual	Minimum Objective	Compliant	Improvement Needed	Estimated Cost
ARC	C-II	B-II	Yes		
Runway Length	5,504 feet	5,000 Feet	Yes		
Runway Width	100 feet	75 - 100 Feet	Yes		
Taxiway	Full Parallel	Full Parallel	Yes		
PCI	70	70 or Greater	Yes		
Navigational Aids					
Rotating Beacon	Rotating Beacon	Rotating Beacon	Yes		
Wind Sock	Lighted Wind Sock	Lighted Wind Sock/Segmented Circle	Yes		
REILs	REIL/REIL	REILs	Yes		
VGSI	PAPI/PAPI	VGSI (VASIs/PAPIs)	Yes		
Approach Type	ILS	APV	Yes		
Lighting	HIRL/MITL	MIRL/MITL with ALS; HIRL/HITL Desired	No*		
Weather	AWOS-III	ASOS or AWOS	Yes		
Hangar Storage	84 spaces	100% of Based Aircraft	Yes		
Apron Tie-Downs	14 spaces	20% of Busy Day Transient Aircraft	Yes		
Terminal/Admin Building	3,220 sq. ft. with Restrooms, Conference Room, and Pilots' Lounge	2,500 square feet with Restrooms, Conference Room, and Pilots' Lounge	Yes		
Auto Parking	87 spaces	1.5 Spaces per Based Aircraft Departures on Average Day in Peak Month	Yes		
Ground Communications	Public Phone, WiFi	Public Phone, WiFi and GCO/RCO or ATCT	No	Install GCO/RCO	\$44,000
Services					
Fuel	AvGas and Jet A	AvGas and Jet A	Yes		
FBO	Full Service	Full Service	Yes		
Maintenance	Full Service	Full Service	Yes		
Rental Cars	Rental Cars	Available	Yes		
Additional Actions Needed to Meet System Performance Measure Objectives					
Project Description					Estimated Cost
Develop Noise Contours					\$10,000
Energy Efficient Building Plan					\$10,000
Improve Airport Entrance Road					\$5,000
Work w/Surrounding Municipalities to Enact Height Zoning Following Part 77					*
Work w/Surrounding Municipalities to Adopt Land Use Controls to Prevent Airport Encroachment					*
Establish a Plan to Promote the Efficient Use of Water					*
Establish a Plan to Reduce the Generation of Solid Waste					*
Improve Public Signage for Area Roadways					*
Provide Access to Public Transit					*
Estimated RASP Project Costs					\$69,000

Note: * Airport evaluations indicate that an ALS is not feasible due to terrain constraints and nearby railroad.

** No fixed cost needed

Acronyms defined in Technical Report Glossary

AIRPORT BENEFITS

General aviation airports are often part of the infrastructure needed to attract and retain jobs and to support the vibrancy of the local and/or regional economy. General aviation airports, however, can also support other benefits.

As part of a prior statewide study conducted by MoDOT (completed in 2012) the positive annual economic impacts of the Midwest National Air Center were estimated. While the data that this estimate is based on is not current, the results still help to show the airport's annual positive economic impact.

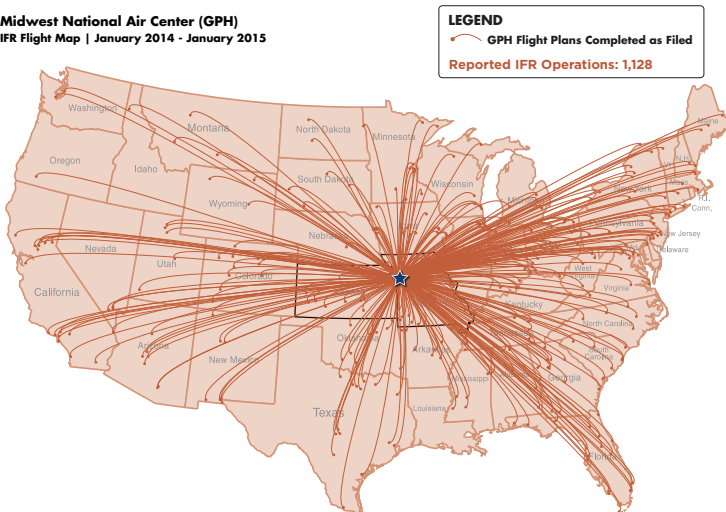
Total annual economic impacts for the airport are attributed to one or more of the following four economic activity centers: airport management, airport tenants, average annual capital investment, and spending by visitors who arrive on general aviation aircraft. Total impacts represent both direct and indirect impacts. Indirect impacts result from re-circulating direct impacts, once the direct impacts enter the economy being studied. Indirect impacts were estimated using an input/output model. Since economic impacts are a "snapshot" in time of airport conditions that existed when the study was completed, it is possible that annual economic impacts for the airport have changed.

Estimated Annual Economic Impact			
Airport	Total Jobs	Total Payroll	Total Output
Midwest National Air Center	30	\$1,140,000	\$4,403,000

The map below shows how the Midwest National Air Center supports non-stop flights on general aviation aircraft to many destinations around the U.S. These instrument flight rule (IFR) flights were obtained from FAA data and represent only an estimated 3 percent of all of the airport's annual operations. This map shows how the airport ties the Kansas City area to other cities around the country.

MIDWEST NATION AIR CENTER PROVIDES NON-STOP FLIGHTS TO ANYWHERE!

Midwest National Air Center (GPH)
IFR Flight Map | January 2014 - January 2015



USER OUTREACH

As part of the system plan, outreach was completed through an online survey to collect additional information of how the study area relies on and benefits from general aviation airports. This survey, that was advertised through a press release sent to all media outlets in the study area, enabled airport users and employers to provide input on how they use the airports.

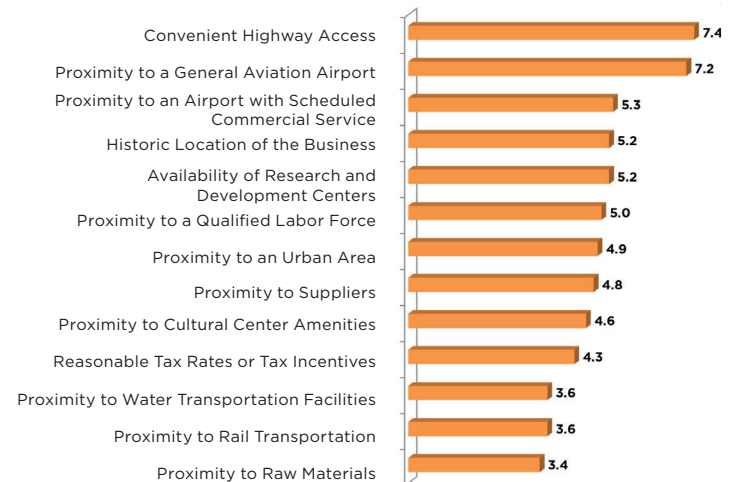
Survey responses from area employers show that the types of employers that most frequently rely on general aviation aircraft for travel and improved efficiency include:

- Government
- Professional Services
- Construction
- Retail Trade
- Health Care
- Real Estate
- Technical Support
- Finance and Insurance
- Social Services

Employer responses often indicated that more than 50 percent of their employees in the study area improve their job efficiency by using general aviation. Since this survey was geared to gather information from users/employers that benefit from general aviation, the high employee reliance is not surprising.

For businesses that rely on general aviation, the online survey also gathered information on how important the proximity of a general aviation airport is to their business location. Again, since general aviation-dependent businesses were targeted as the respondents for this survey, the high rating given to general aviation airport proximity is not unexpected. Nevertheless, for those employers in the study area that do rely on and benefit from one of the general aviation airports, only proximity to highway access is more important to the location of their business in the nine-county study area.

IMPORTANCE OF LOCATION FACTORS TO LOCAL BUSINESSES



By improving general aviation airports in the study area, such as the Midwest National Air Center, the Kansas City metropolitan area will be able to continue to realize economic and other benefits.