

GARDNER MUNICIPAL AIRPORT

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 Gardner Municipal Airport. 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.

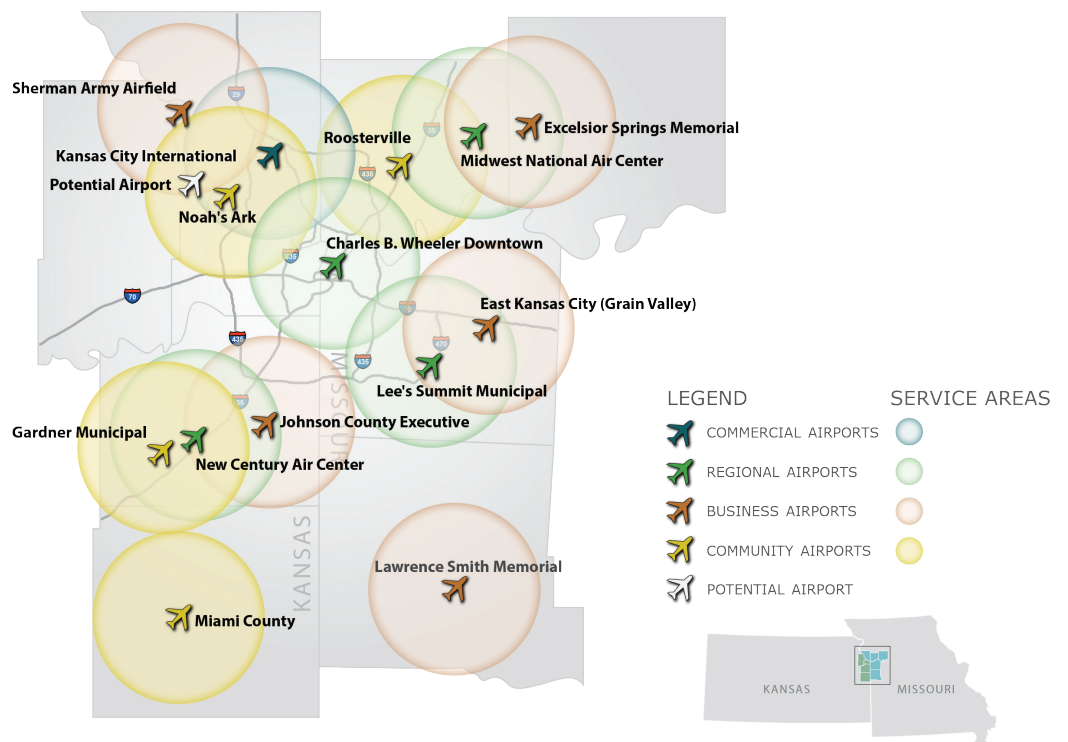
Aviation system plans are top-down studies that must still be implemented from the bottom up by individual study airports. The ultimate success of the plan depends on each airport implementing recommendations from the study and following through on any identified improvement actions. Individual airport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

As the map below shows, within the regional system, a role as a Community

Airport has been recommended for the Gardner Municipal Airport. Within the regional system, a Community Airport is described as primarily supporting personnel and recreational flying. Community Airports, of course, also accommodate various types of business activity. Within the Kansas State Aviation System Plan, the Gardner Municipal Airport is also classified as a Community Airport. The airport is also a federal airport, included in the FAA's National Plan of Integrated Airport Systems (NPIAS). As part of FAA's ASSET Study, the Gardner Municipal Airport is classified as a Local Airport. This federal classification is consistent with the airport's classification in both the regional and the state airport systems.

As the system plan is being concluded, Gardner Municipal Airport is conducting an update to its airport layout plan (ALP). This effort will best determine how to best position the airport to meet local needs, while considering the airport's role in the regional system.

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 Gardner Municipal Airport. GIS analysis completed in the system plan shows that the Gardner Municipal Airport has some of the highest concentrations of both employment and population. Between now and 2040, the rate of increase for population in the 10-mile radius is expected to be the highest among all system plan airports. The rate of increase for employment in the airport's 10-mile service area is expected to be the fourth highest among all airports examined in the regional aviation system plan.

Population and Employment						
Airport	Role	Ownership	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)
Gardner Municipal	Community	Public	101,935	86%	37,666	83%

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 take-offs and landings performed not only by aircraft that are based, or permanently stored at the airport, but also aircraft that are visiting or transient in nature.

As the table below shows, the number of based aircraft reported at the airport in 2010 was lower than it was in 2000. Part of this change is undoubtedly related to FAA changes for reporting/counting based aircraft, rather than to an actual decline in the number of planes based at the airport. Perhaps most importantly, between 2010 and 2015 the airport shows a 7.9 percent increase in based aircraft.

Based aircraft at the airport are expected, according to system plan projections, to increase from 104 to 116, a 12 percent increase over the period. Aircraft based at the airport will continue to be smaller single-engine planes. Annual operations at the airport are expected to increase from 26,000 to 31,750 by 2035.

Historic Changes in Based Aircraft								
Airport	2000	2005	2010	2015	2000-2015		2010-2015	
					Change	CAGR	Change	CAGR
Gardner Municipal	94	96	71	104	10	0.7%	33	7.9%

* CAGR - Compound Average Annual Rate of Growth

Projected Aviation Demand					
Gardner Municipal	2015	2020	2025	2035	2015-2035 CAGR
Forecast of Based Aircraft	104	105	108	116	12%
Forecast of Annual Operations	26,000	27,150	29,500	31,750	22%

Based Aircraft Fleet Mix 2035					
Airport	Single Engine	Multi Engine	Jet	Rotor	Other
Gardner Municipal	94	1	0	0	20

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 Gardner Municipal Airport to meet the objectives for a Community Airport. If system plan analysis determined that actions were desirable to improve the airport to make it fully compliant with its specific objectives, planning level cost estimates were developed for these projects. Costs by improvement are shown in the table to the right.

As shown, the anticipated cost to improve the airport to meet all of its facility and service and performance measure objectives is estimated at roughly \$3.5 million. A significant portion of this cost is associated with providing the airport with a wider and longer runway, an improved taxiway system, improved airfield lighting, and additional hangar storage. The Gardner Municipal Airport is

GARDNER MUNICIPAL AIRPORT

SYSTEM SUMMARY REPORT

eligible for local funding from the City's General Fund, KDOT state funding, and FAA funding. As noted, the airport is in the process of updating its own individual master plan. Final development needs and costs identified in that plan may be different than those shown here.

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. The Gardner Municipal Airport has already taken many steps related to long-term sustainability that are recommended in the regional aviation system plan. Remaining actions needed to make the Gardner Municipal Airport fully compliant with all sustainability objectives from the system plan follow:

- Work with surrounding municipalities to enact height zoning following Part 77.
- Develop a spill prevention and control plan.
- Establish a program to promote recycling.

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.

Gardner Municipal Airport Report Card					K34
AIRPORT NAME: Gardner Municipal Airport			CITY: Gardner, KS		
AIRPORT CODE: K34			AIRPORT ROLE: Community		
Actions Needed to Meet Facility and Service Objectives					
	Actual	Minimum Objective	Compliant	Improvement Needed	Estimated Cost
ARC	A-I	A-I	Yes		
Runway Length	2,960	3,200 Feet	No	Add 240 feet runway length	\$368,296
Runway Width	39 Feet	60 Feet	No	Add 21 feet runway width	\$833,672
Taxiway	None	Turnarounds on Each Runway End	No	Construct turnarounds	\$365,677
PCI	92	70 or Greater	Yes		
Navigational Aids					
Wind Sock	Lighted Wind Sock, Rotating Beacon	Wind Sock	Yes		
Approach Type	Visual	NPA, LPV Desired	No	Install NPA approach (LPV if possible)	\$72,765
Lighting	NSTD	MIRL	No	Install MIRLs	\$254,361
Weather	----	ASOS or AWOS Desired	Yes		
Hangar Storage	99 spaces	100% of Based Aircraft	No	Add 16 additional hangar spaces	\$1,601,091
Apron Tie-Downs	15 spaces	20% of Busy Day Transient Aircraft	Yes		
Terminal/Admin Building	400 sq ft with Restrooms, Conference Room, and Pilots' Lounge	Pilots' Lounge and Restroom	Yes		
Auto Parking	118 spaces	1.5 Spaces per Based Aircraft Departures on Average Day in Peak Month	Yes		
Ground Communications	Public Phone, WiFi	Public Phone, WiFi	Yes		
Services					
Ground Transportation	Access to Rental Cars	Link to Ground Transportation	Yes		
Additional Actions Needed to Meet System Performance Measure Objectives					
Project Description					Estimated Cost
Spill Prevention, Control, and Countermeasure Plans					\$10,000
Work w/Surrounding Municipalities to Enact Height Zoning Following Part 77					*
Establish a Program to Promote Recycling					*
Estimated RASP Project Costs					\$3,505,862

Note: * No fixed cost needed
Acronyms defined in Technical Report Glossary

As of December 2015, Gardner Municipal is in the middle of a major planning project that is seeking to address compliance concerns as well as evaluate its runway system. It is possible that the recommendations from this planning effort could result in additional and/or different improvements needed at the airport with associated costs that are higher or lower than what have been identified in the MARC Regional Aviation System Plan.

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 KDOT (completed in 2009) the positive annual economic impacts of the Gardner Municipal Airport were estimated. While the data is not current, the results still help to show the airport's annual positive economic impact. It is worth noting that KDOT is in the process of updating the airport's estimated economic impact.

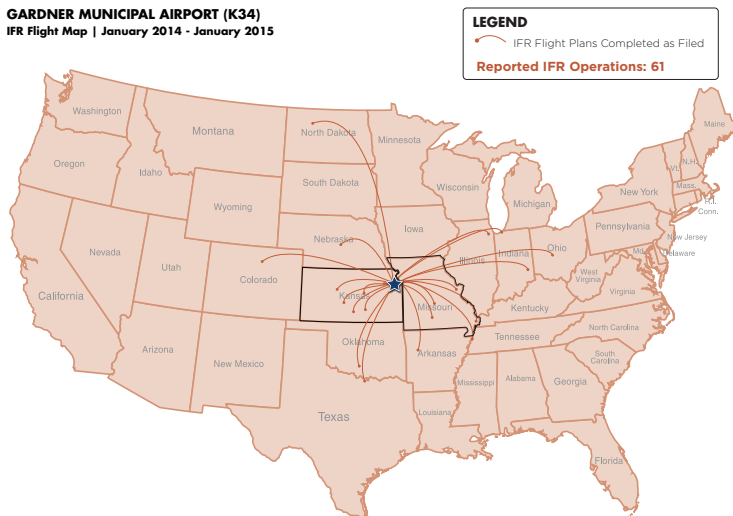
Total annual economic impacts for the airport are attributed to one or more of the following four economic activity centers: airport management, airport tenants, average annual capital investment, and spending by visitors who arrive on general aviation aircraft. Total impacts represent both direct and 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
Gardner Municipal	15	\$282,400	\$1,008,800

The accompanying map shows how the Gardner Municipal Airport supports non-stop flights on general aviation aircraft to 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.

GARDNER MUNICIPAL AIRPORT PROVIDES NON-STOP FLIGHTS TO ANYWHERE!

GARDNER MUNICIPAL AIRPORT (K34)
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 on 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.

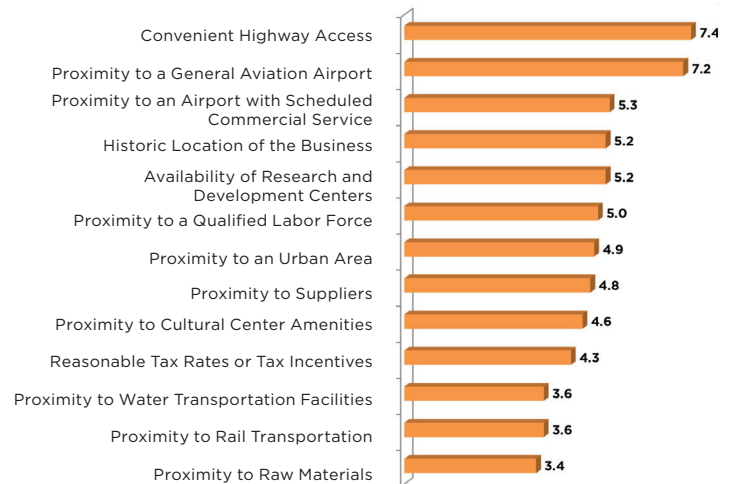
Survey responses from area employers show that the types of employers that most frequently rely on general aviation aircraft for travel and improved efficiency include:

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

Employer responses 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 who 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 Gardner Municipal Airport, the Kansas City metropolitan area will be able to continue to realize economic and other benefits.