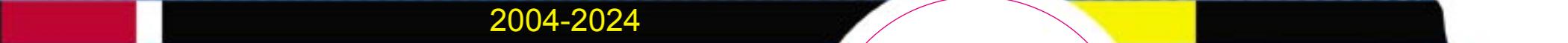


The logo features the word "LAWA" in a stylized font. The "L" is a vertical red bar. The "A" is a white triangle. The "W" is a white shape with a red gradient. The "A" is a white triangle. Below the letters is a red swoosh that curves under the "L" and "W". A red circle is positioned behind the "L" and "W", containing a white silhouette of an airplane in flight. Below the swoosh, the text "aviation system plan" is written in a white, sans-serif font.

LAWA
aviation system plan

A horizontal bar with a black background. On the left, there is a red segment followed by a white segment. On the right, there is a yellow segment followed by a black segment. The text "2004-2024" is centered in the black portion of the bar in a yellow, sans-serif font.

2004-2024

Introduction

The Iowa Department of Transportation (DOT), working closely with the Federal Aviation Administration (FAA), strives to ensure that Iowa's system of public airports is positioned to meet the needs of businesses, residents, and visitors to our state. Airports must be accessible and positioned to safely meet different levels of aviation activity.

In partnership with the FAA and various cities, counties, and airport authorities, the Iowa DOT helps to direct the systematic development of public airports. This report is a summary of a more comprehensive technical report that outlines a strategic plan for improving the performance of airports in Iowa over the next 20 years. More information on the technical report and on individual reports prepared for each of the public airports can be obtained from the Iowa DOT, Office of Aviation website at www.iawings.com.

The Iowa Aviation System Plan provides the Iowa DOT with an important tool to monitor the ability of airports to meet customer needs. The plan also provides a means to measure the effects of investment on the performance of the Iowa Aviation System. Over the next 20 years, federal, state, local, and private funding will be needed to ensure that the aviation system meets goals established in this study. It is estimated that at least \$821 million will be needed over the next 20 years if airports in Iowa are to respond to objectives set by the system plan.

In future years, the plan will enable the Iowa DOT to measure system performance. By tracking key indicators for the airport system, it will be possible for the Iowa DOT and the FAA to formulate strategies for responding to Iowa's air transportation needs. The Iowa Aviation System Plan provides a guide for the state and its communities to ensure that the vision established for the Iowa Aviation System can be achieved.





Vision For Iowa Aviation System

To have safe, quality facilities and services that support transportation demands while meeting economic and quality of life needs in the state.

Study Process

The Iowa Aviation System Plan was completed using a process that is consistent with FAA's advisory circular on airport system planning. The Iowa Aviation System Plan includes the following:

- Establishment of a system vision and goals
- Projection of future demand
- Identification of system adequacies and deficiencies
- Documentation of study findings

The Iowa Aviation System Plan was developed in collaboration with the System Plan Advisory Committee that represented airports, businesses, transportation planners, and other aviation interest groups. Development of the plan was also supported through exchanges with all system airports and through outreach to the general public.

Planning Elements



Looking To The Future

For Iowa to achieve the vision for its aviation system, it is important to establish current demand levels and then to determine how demand is likely to increase over the 20-year planning horizon. Historic Iowa-specific as well as regional and national trends in general aviation and commercial aviation were considered in the development of demand projections.

It is important to have an understanding of areas in Iowa that are expected to have growing aviation demand. All aviation demand indicators reviewed in this study are projected to experience growth over the next 20 years. An understanding of where population and employment growth are projected helps to set the course for determining which airports in Iowa could benefit from improved facilities and services or where new airports might be needed.



Airports in Iowa will need to be positioned to accommodate over 500 additional based general aviation aircraft and 400,000 more annual aircraft operations by 2024. An estimated 88 percent of all aircraft operations in Iowa are attributable to general aviation aircraft. By 2024, one million more passengers will be boarding commercial airline flights each year in Iowa.

Statewide Aviation Demand In Iowa

| | current | 2024 |
|--|-------------|-------------|
| Total Aircraft Operations | 1.3 million | 1.7 million |
| Based Aircraft at Public Airports | 2,364 | 2,877 |
| Enplaned Commercial Airline Passengers | 1.5 million | 2.6 million |

Iowa Airports Support Different Users

Airports in Iowa serve different types of demand and meet the needs of different users. Some airports should be more highly developed to meet the needs of a full range of general aviation and at least some commercial aircraft. Other airports are adequate with more limited facilities and services to meet the needs of smaller general aviation aircraft.

Working with the System Plan Advisory Committee and the Iowa DOT, a process was developed to help establish roles for all public airports in Iowa. Public airports in Iowa were assigned to one of the following roles:

- Commercial Service
- Enhanced Service
- General Service
- Basic Service
- Basic Service II

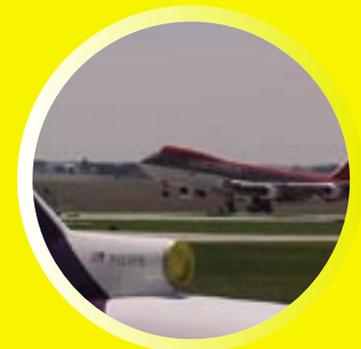


Commercial Service Airports

Within Iowa, there are eight airports that are served by scheduled commercial airlines. Two of these commercial airports are served by multiple airlines; the other six have service by a single carrier.

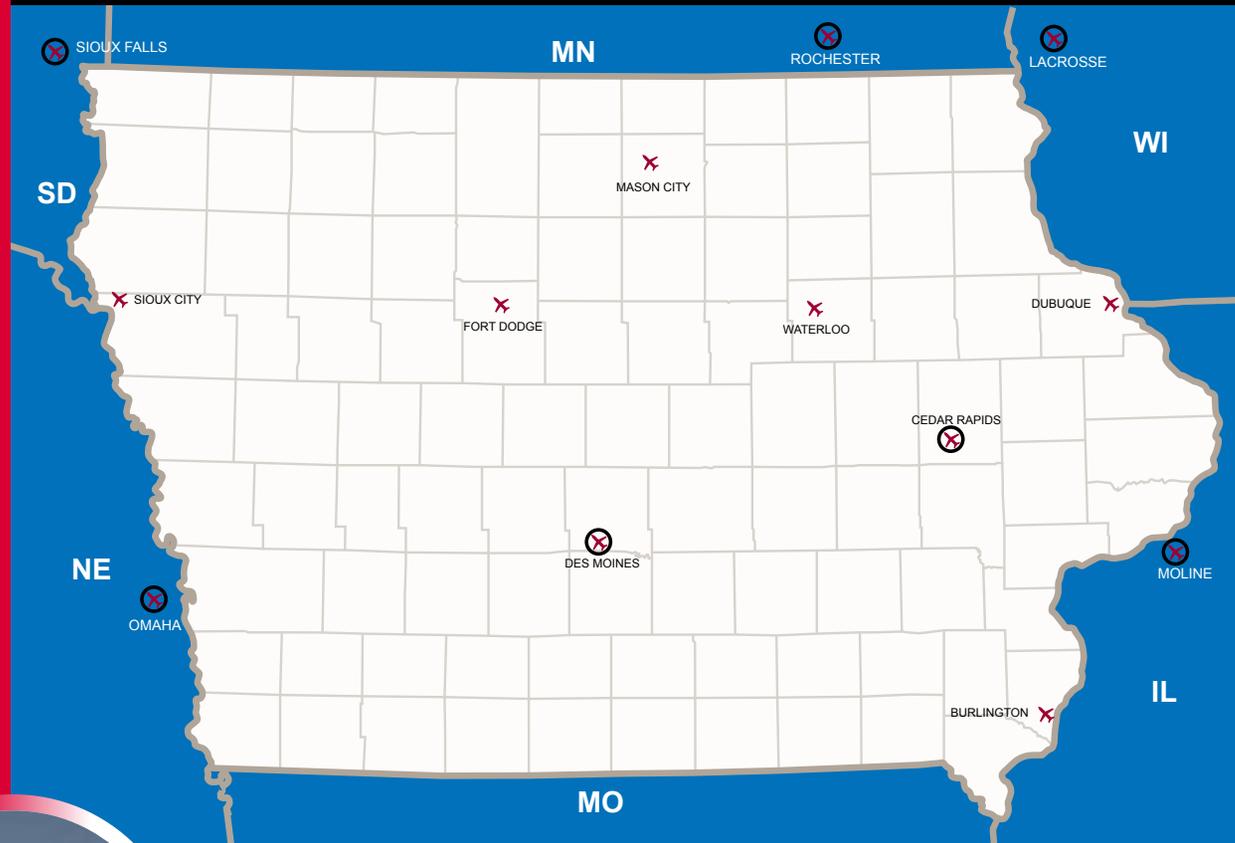
Iowa is somewhat unique in the number of additional commercial airports that are in close proximity in nearby states. When all airports are considered, over 99 percent of all Iowa residents are within 120 minutes or less of one or more commercial airports.

The Iowa DOT recognizes the value of commercial service airports providing an efficient means of passenger travel and cargo transportation to Iowans. Convenient access to commercial service airports enables Iowa businesses to remain competitive in an increasingly global economy.



Commercial Service

Commercial Service airports in Iowa should be capable of serving the needs of commercial aircraft that are matched to community demand. Commercial Service airports should also be equipped to serve a full range of business type general aviation aircraft. Airport specific master plans are the best source for information on individual types of facilities and services that are needed to meet commercial passenger and commercial aircraft demand at these system airports. While the system plan does not specifically address facility and service objectives for Commercial Service airports, they should meet or exceed the facility and service objectives identified for Enhanced Service airports to meet the needs of corporate and general aviation users.



- ✕ Commercial Service Airports
- Airports Served by Multiple Carriers

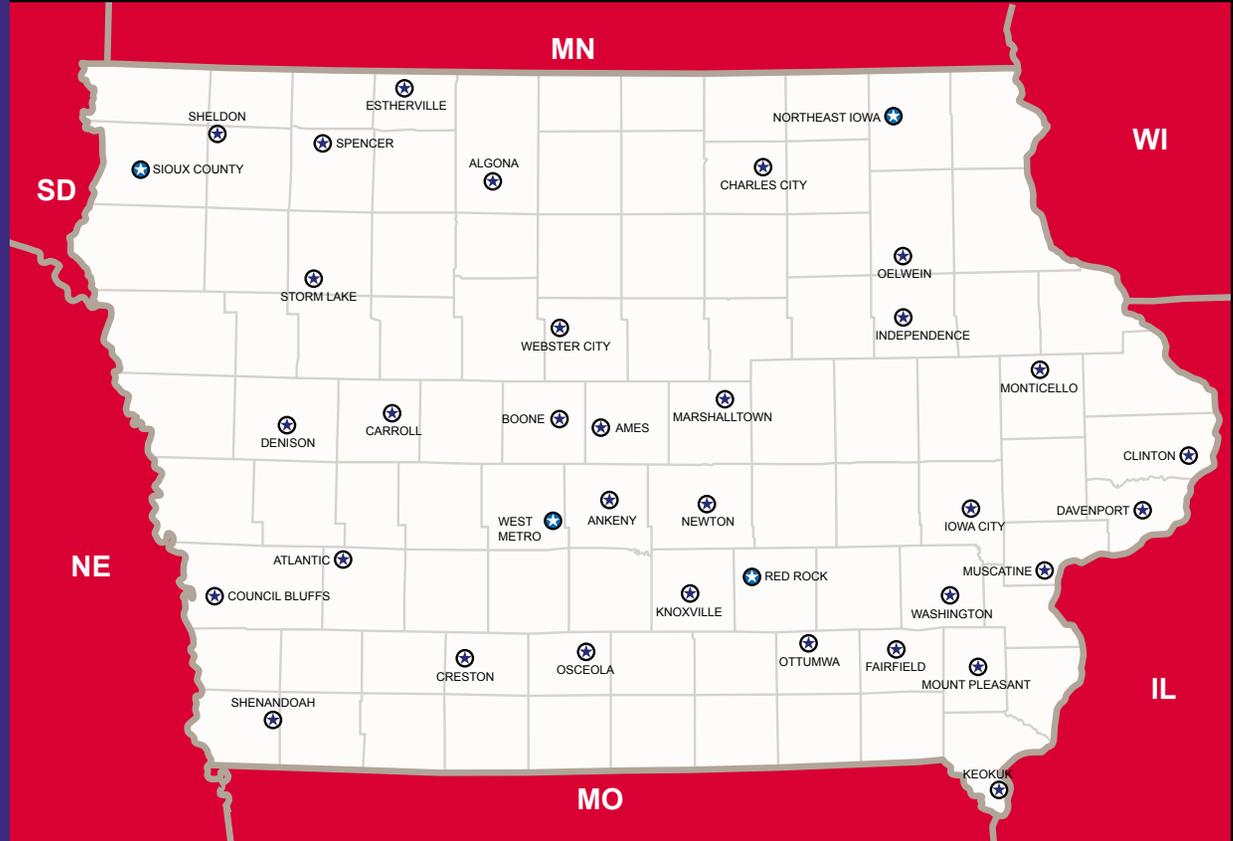


Enhanced Service Airports

Enhanced Service

These airports are important links in the state's transportation and economic systems. Airports in the Enhanced Service category should ideally have facilities and services that can accommodate the full range of general aviation aircraft. The Iowa Aviation System Plan set the following facility and service objectives for airports in the Enhanced Service category.

- Primary runway at least 5,500 feet by 100 feet
- Parallel taxiway
- Precision instrument approach on one runway end
- Medium intensity runway and taxiway lighting
- Approach lighting system
- Precision approach path indicators and runway end identifier lights for all runway ends
- On-site weather reporting
- Covered aircraft storage and auto parking spaces for 100% of based aircraft
- Apron area to serve 100% of daily transient aircraft
- 100LL and Jet A fuel
- Full service FBO with 24 hour on call service
- Public terminal/pilot lounge
- Access to ground transportation services
- Appropriate security lighting, fencing, and controlled airfield access
- Snow removal



- ★ Enhanced Service Airports
- ★ Eligible for Federal Funding
- ★ New Enhanced Service Airports

The system plan identified 36 airports to be included in the Enhanced Service category. This number includes the possible addition of up to four new airports in this category.

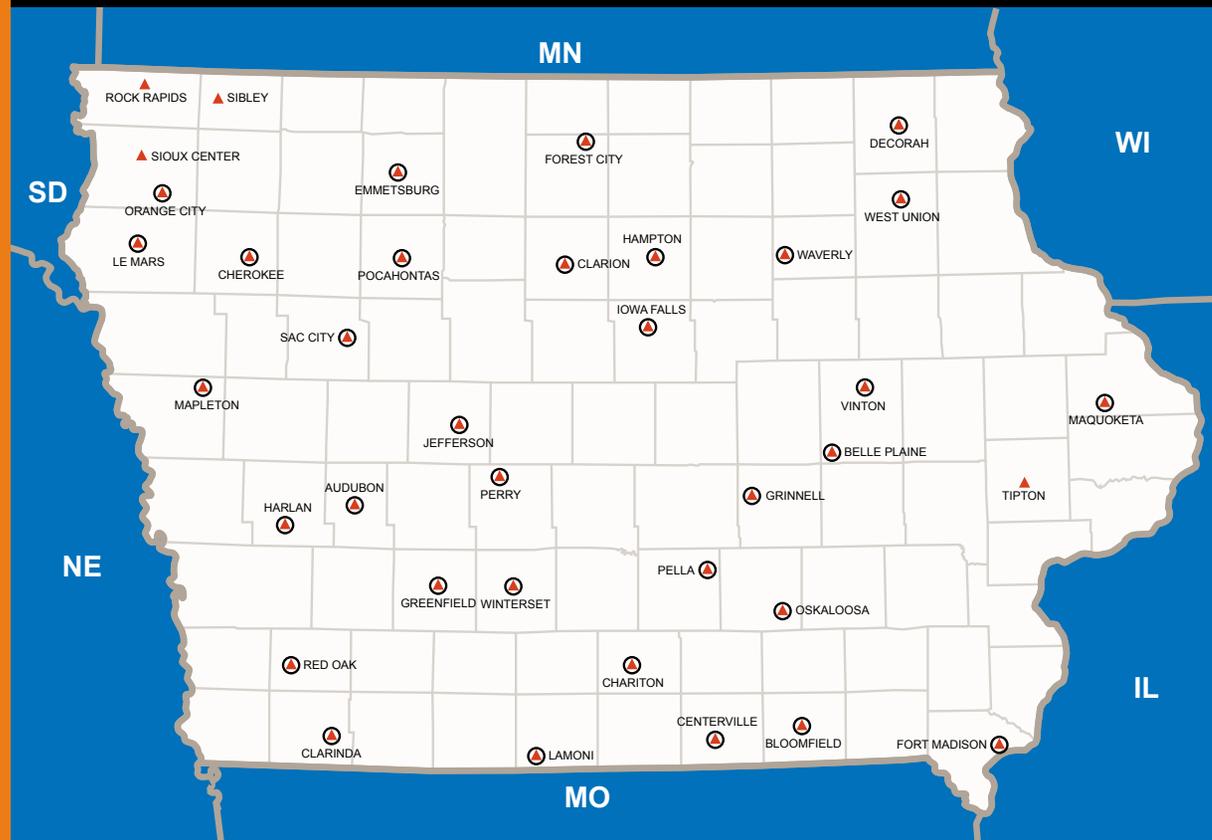
the majority of the facility and service objectives for this type of airport, more than 84 percent of the state's population would be within 30 minutes or less of one or more Commercial Service or Enhanced Service airports.

When airports included in the Enhanced Service category are developed or are upgraded to meet

General Service

These airports play an important role in meeting regional and interstate transportation needs. General Service airports are also important to local economic initiatives. General Service airports should ideally have facilities and services to meet the needs of most types of general aviation activity, including use by twin engine aircraft and business jets. The Iowa Aviation System Plan set the following facility and service objectives for airports included in the General Service category:

- Primary runway at least 4,000 feet by 75 feet
- Partial taxiway or turnarounds
- Non-precision approach
- Medium intensity runway lighting
- Low intensity taxiway lighting
- Precision approach path indicators and runway end identifier lights for all runway ends
- On-site weather reporting (AWOS/ASOS) in some instances
- Covered aircraft storage spaces for 100% of the based aircraft
- Apron area sufficient to serve 50% of the airport's daily transient aircraft
- Auto parking spaces equal to 75% of the airport's based aircraft
- 100LL and Jet A fuel to meet demand
- FBO services
- Public terminal/pilot lounge
- Access to ground transportation services
- Appropriate security lighting, fencing, and controlled airfield access
- Snow removal



- ▲ General Service Airports
- Eligible for Federal Funding

The system plan identified 37 airports to be included in the General Service category. When the General Service airports are combined with the airports included in the Commercial Service and the Enhanced Service categories, the result is 77 airports in the Iowa system of public airports that would have a runway that is at least 4,000 feet long.

If this objective is reached during the 20-year planning period, 95 percent of all residents in Iowa would be within 30 minutes or less driving time of one or more airports that have a minimum runway length of 4,000 feet.

General Service Airports

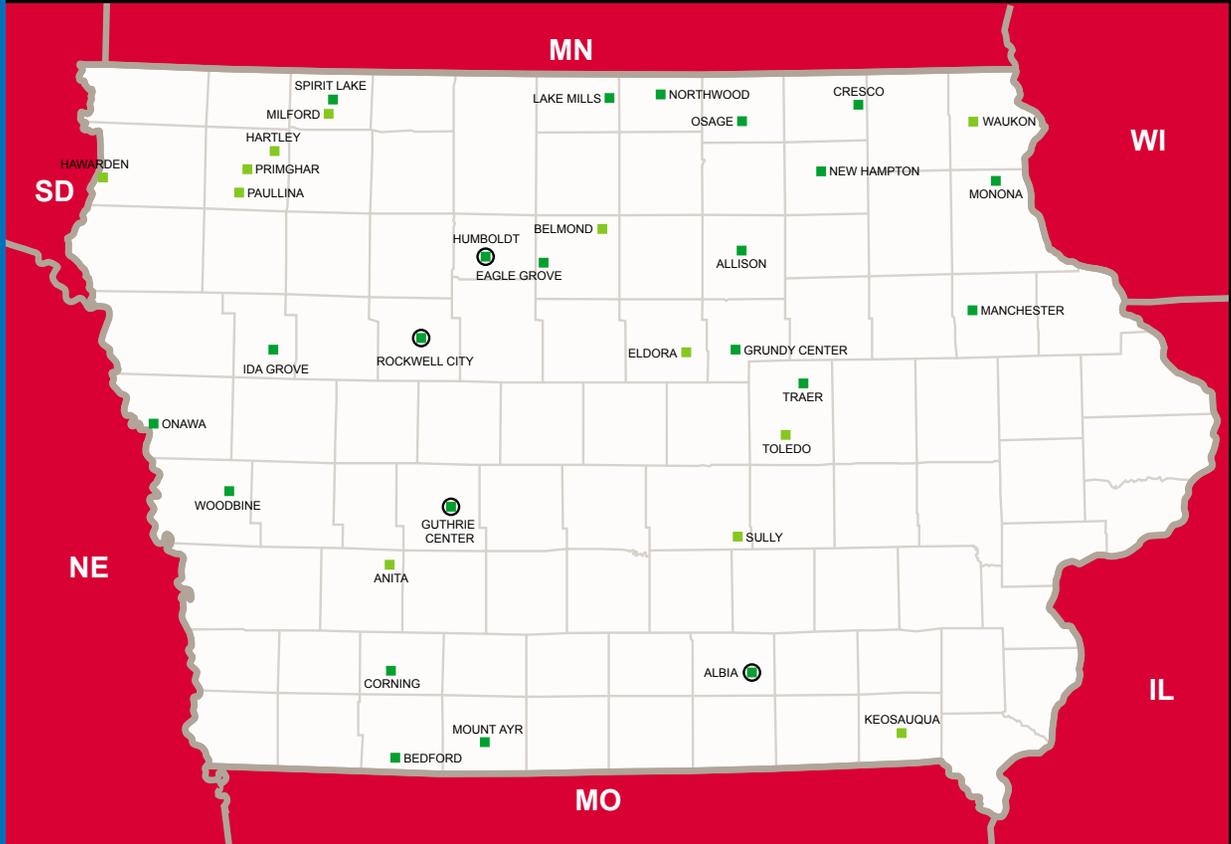
Basic Service

Basic Service airports support local air transportation needs, recreational flying, special use aviation, and limited business flying. They should ideally have facilities and services that enable them to support primarily single engine general aviation activity. The system plan set the following facility and service objectives for Basic Service airports:

- Runways (if paved) that are 3,000 feet by 60 feet
- Runways (if turf) that are 2,500 feet by 120 feet
- Pilot controlled low intensity runway lighting
- Lighted wind indicator and wind sock
- 100 LL fuel
- Covered storage spaces for 100% of based aircraft
- Apron area for 50% of daily transient aircraft
- Auto parking spaces for 50% of based aircraft
- Public phone and restrooms
- Appropriate security lighting, fencing, and controlled airfield access

Basic Service II

Basic Service II airports serve essentially the same role as Basic Service airports, but may be in close proximity to other airports. No facility and service objectives were identified for Basic Service II airports. They should be maintained to meet minimum state safety standards.



■ Basic Service Airports ○ Eligible for Federal Funding
 ■ Basic Service II Airports

Basic Service and Basic Service II airports serve the needs of smaller general aviation aircraft. By virtue of the volume and the type of aviation demand at these airports, their facilities and services are more limited in scope. These airports meet pleasure and personal flying needs, and they support limited business flying such as agricultural

spraying. These airports supplement the Iowa airport system. Because of their proximity to other system airports, Basic Service II airports should be maintained as opposed to developed in the near term.

Using The Plan

Facility and service objectives outlined in this plan are just that, objectives. Development is driven by local needs, and development decisions are made at the local level.

The Iowa DOT and the FAA both recognize that funds may not be available to act on all objectives outlined in the system plan. By identifying facilities and services that are considered desirable for airports in Iowa, the Iowa DOT and the FAA are not committing development funds.

In many instances, before further action is taken on facility and/or service objectives outlined in the system plan, an airport master plan, Airport Layout Plan (ALP), and/or an environmental assessment could be needed. Local conditions at some airports may also warrant development that is in excess of the facility and service objectives outlined in the system plan.



Sustainable Planning

The Iowa DOT plans to re-visit the findings from the system plan at regular intervals. Monitoring performance over time will identify gaps and assist in developing strategies to meet the ongoing needs of the aviation system. As the system is monitored, further refinement to airport roles, as assigned in this plan, may be warranted.



System Performance

The system plan evaluates how well the aviation system is performing. With a baseline report card established, it is possible to determine how to improve airports in Iowa over the next 20 years.

Using goals and performance measures adopted for use in the Iowa Aviation System Plan, the next few pages of this report summarize findings from the report card that was prepared for the aviation system. The report card provides insight into how the system is currently performing relative to objectives and targets that were set during the preparation of the plan. The report card was used to identify actions that can be considered to raise the performance of the aviation system over the next several years.



Goal: Iowa's aviation system should meet current and future customer needs.

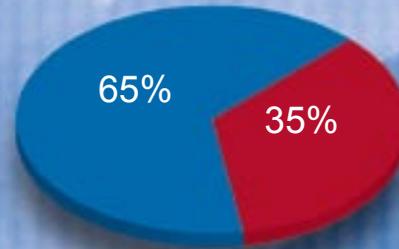
Performance Objectives

Current Performance

Hangars

- Provide aircraft storage for 100% of all current and future based aircraft at all airports.

65% of all system airports now report that they have covered storage for 100% of their based aircraft.

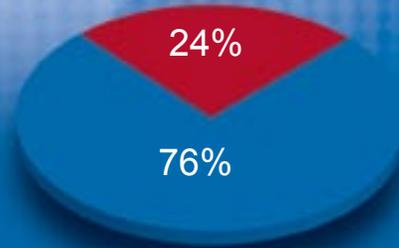


Airports with 100% storage
Airports without 100% storage

PCI

- Maintain a pavement condition index (PCI) of 70 or greater on all paved runways at all airports.

76% of all paved primary runways at airports have a pavement condition index rating of 70 or greater.

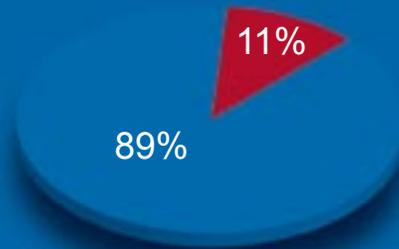


Airports with PCI of 70
Airports without PCI of 70

Current Plans

- Maintain current master plans or airport layout plans for airports: Commercial and Enhanced Service airports are current within a 7-year time frame; General Service airports are current within a 10-year time frame; Basic Service and Basic Service II airports as demand warrants.

89% of all system airports have a master plan or airport layout plan that is current with objectives established in the system plan.



Airports with current plan
Airports without current plan

Compatible Land Use Planning

- Encourage actions that result in compatible land use around all system airports.

81% of all system airports report they have taken steps to promote compatible land use planning.



Airports with some compatible land use planning
Airports without compatible land use planning

Performance Measure: Development

Goal: Iowa should promote a system of airports that supports and enhances the state's economy.

Performance Measure: Economic Support

| | Current Performance | Performance Objectives |
|--|---|---|
| <p>Airports with jet fuel</p> <p>Airports without jet fuel</p> | <p>Jet Fuel</p> <p><i>75% of all Commercial, Enhanced, and General Service airports now have jet fuel.</i></p> | <ul style="list-style-type: none"> Have jet fuel available at all Commercial and Enhanced Service airports, and at General Service airports as needed. |
| <p>Airports with 5,500-foot runway</p> <p>Airports without 5,500-foot runway</p> | <p>5,500-Foot Runway</p> <p><i>52% of all Commercial and Enhanced Service airports have runways that are at least 5,500 feet or longer.</i></p> | <ul style="list-style-type: none"> Have runways that are at least 5,500 feet long at all Commercial and Enhanced Service airports. |
| <p>Airports with 24-7 fueling</p> <p>Airports without 24-7 fueling</p> | <p>24-7 Fueling</p> <p><i>87% of all Commercial, Enhanced, and General Service airports have 24-7 fueling.</i></p> | <ul style="list-style-type: none"> Have 24-7 fueling available at all Commercial, Enhanced, and General Service airports. |
| <p>Airports with rental car access</p> <p>Airports without rental car access</p> | <p>Rental Cars</p> <p><i>77% of all Commercial, Enhanced, and General Service airports provide their customers with access to rental cars.</i></p> | <ul style="list-style-type: none"> Have access to rental cars at all Commercial, Enhanced, and General Service airports. |
| <p>Airports with air cargo activity</p> <p>Airports without air cargo activity</p> | <p>Air Cargo Activity</p> <p><i>23% of all airports report they support some type of air cargo activity.</i></p> | <ul style="list-style-type: none"> Encourage reasonable access to airports that support air cargo services. |

Goal: Iowa should promote a safe and secure system of airports.

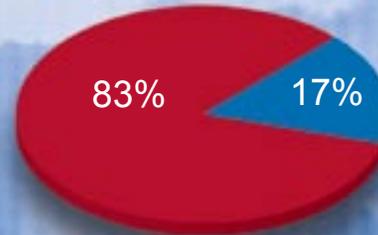
Performance Objectives

Current Performance

Primary Runway Obstructions

- Have approaches to all primary runway ends at all airports that are clear of obstructions.

17% of all airports report that they have no obstructions on either end of their primary runway.

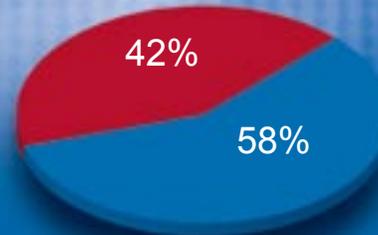


Report no obstructions
Report at least one obstruction

Emergency Response Plans

- Have emergency response plans at all Commercial, Enhanced, and General Service airports.

58% of all Commercial, Enhanced, and General Service airports report having an emergency response plan.

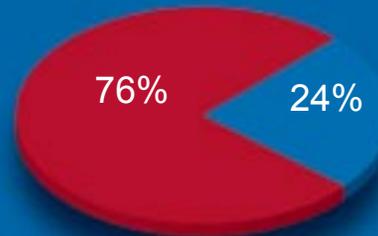


Have emergency response plans
Do not have emergency response plans

Wildlife Management Plans

- Have wildlife management plans at all Commercial, Enhanced, and General Service airports.

24% of all Commercial, Enhanced, and General Service airports report having a wildlife management plan.

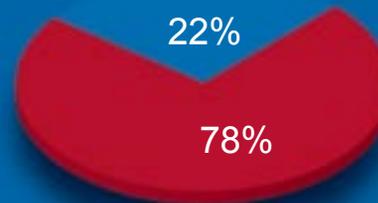


Have wildlife management plans
Do not have wildlife management plans

Security Plans

- Have appropriate security plans at all airports; the Iowa DOT has taken industry leading steps to help general aviation airports meet Transportation Security Administration (TSA) guidelines.

22% of all airports report they currently have a security plan.

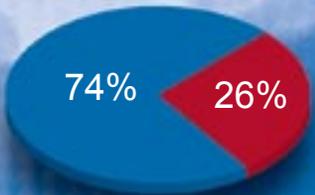
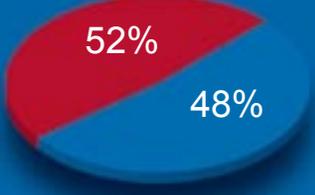
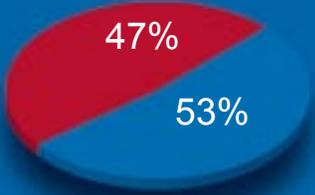


Have Security Plan
Do not have Security Plan

Performance Measure: Safety and Security

Goal: Airports in Iowa should be accessible from both the ground and the air.

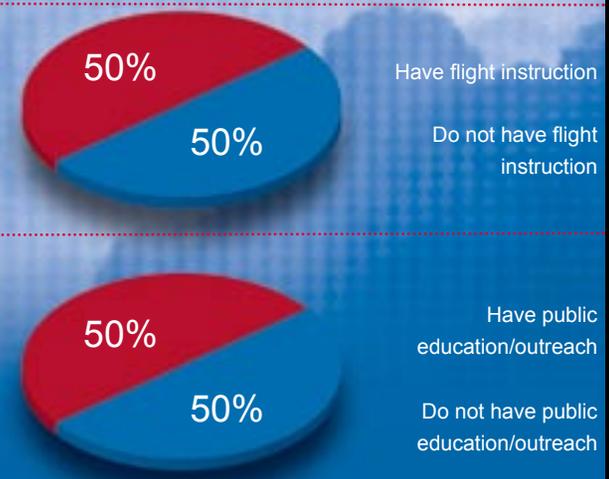
Performance Measure: Accessibility

| | Current Performance | Performance Objectives |
|--|--|---|
| <p>Population within 30 minutes of airports</p> <p>Population not within 30 minutes of airports</p>  | <p>Population Within 30 Minutes of Commercial/Enhanced Service Airports</p> <p><i>74% of Iowa's population is now within 30 minutes of one or more Commercial or Enhanced Service airports.</i></p> | <ul style="list-style-type: none"> Have a high percentage of Iowa's population within a 30 minute drive of a Commercial or Enhanced Service airport. |
| <p>Population within 120 minutes or less of commercial airline service</p> <p>Population not within 120 minutes or less of commercial airline service</p>  | <p>Population Within 120 Minutes or Less of an Airport Served by a Commercial Carrier</p> <p><i>99% of Iowa's Population is now within 120 minutes or less of one or more airports served by commercial airlines.</i></p> | <ul style="list-style-type: none"> Have a high percentage of Iowa's population within 120 minutes or less of an airport that is served by commercial airlines. |
| <p>Population within 30 minutes of weather reporting</p> <p>Population not within 30 minutes of weather reporting</p>  | <p>Population Within 30 Minutes of an Airport with On-Site Weather Reporting</p> <p><i>86% of Iowa's population is now within a 30 minute drive of at least one airport with on-site weather reporting equipment.</i></p> | <ul style="list-style-type: none"> Have a high percentage of Iowa's population within a 30 minute drive time of an airport with on-site weather reporting equipment. |
| <p>Airports with precision approach and approach lighting system</p> <p>Airports without precision approach and approach lighting system</p>  | <p>Precision Approach and ALS</p> <p><i>48% of all Commercial and Enhanced Service airports have both a precision approach and an ALS. All but one of the General Service airports have a non-precision approach.</i></p> | <ul style="list-style-type: none"> Have both a precision approach and an approach lighting system (ALS) at all Commercial and Enhanced Service airports and at least a non-precision approach to all General Service airports. |
| <p>Population within 30 minutes of airports with precision approach</p> <p>Population not within 30 minutes of airports with precision approach</p>  | <p>Population Within 30 Minutes of an Airport with a Precision Approach</p> <p><i>53% of Iowa's population is within 30 minutes of at least one airport with a precision approach.</i></p> | <ul style="list-style-type: none"> Have a high percentage of Iowa's population that is within 30 minutes of an airport with a precision approach. |

Goal: Iowa should have airports that provide educational/career opportunities, promoting an understanding of the benefits of Iowa's air transportation system.



| Performance Objectives | Current Performance |
|---|--|
| <p>Flight Instruction</p> <ul style="list-style-type: none"> Support a good geographic distribution of airports where flight instruction is provided. | <p><i>50% of all airports report they have flight instruction.</i></p> |
| <p>Public Education Outreach</p> <ul style="list-style-type: none"> Encourage all airports to have organized public outreach and educational programs that involve their host communities and the general public. | <p><i>50% of all airports report they have some type of established outreach or educational program.</i></p> |



Performance Measure: Education

Future Funding

General cost estimates developed as part of the system plan showed that at least \$821 million could be needed over the next 20 years if airports in Iowa are going to meet established objectives.

The first graph shows how funds are needed to meet objectives by airport role/category. The second graph shows by type of project where funds could be needed to respond to objectives set by the plan.

Iowa has 77 airports that are included in the National Plan of Integrated

Airport Systems (NPIAS) and are eligible for projects funded by the Federal Airport and Airways Trust Fund. This aviation trust fund is funded exclusively from aviation user fees.

On average over the last seven years, total annual federal, state, and local investment in airports in Iowa averaged \$36.6 million each year. Based on historic funding levels and average annual needs of approximately \$42 million over the next 20 years, a funding shortfall of approximately \$108 million can be expected.





Summary

Airports are critical transportation and economic resources to the state and to communities throughout Iowa. Airports are important economic catalysts, and they are critical to business development and retention. For Iowa to meet the vision that has been established for its system of public airports, there are many actions that may be considered. The Iowa Aviation System Plan provides the FAA, the Iowa DOT, and airports and communities throughout the state with a blueprint for the future. By responding to performance measures and objectives identified in this plan, Iowa will have a flight plan that will take the aviation system through the next twenty years.



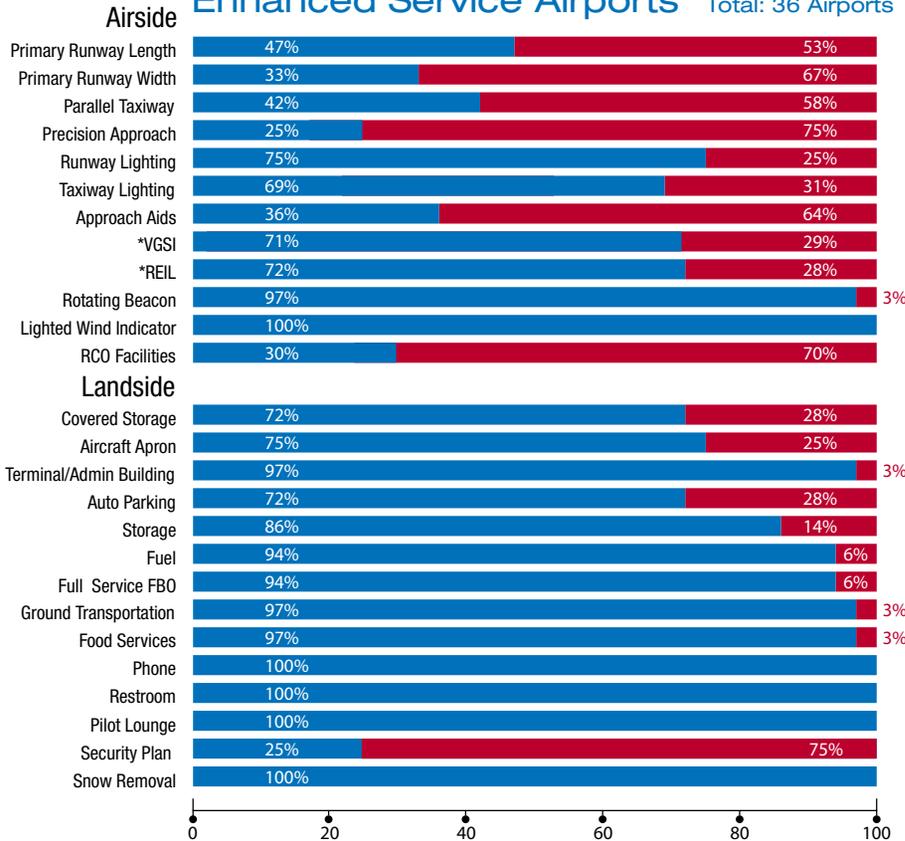
Study Findings

For airports in Iowa to best fulfill their designated system roles, actions to meet facility and service objectives established in the system plan are desirable. Facility and service objectives should be used by airports to balance local and statewide airport development objectives. The facility and service objectives for each airport provide a guide on how each airport can most logically be developed over time to best fulfill its designated role in the Iowa aviation system.

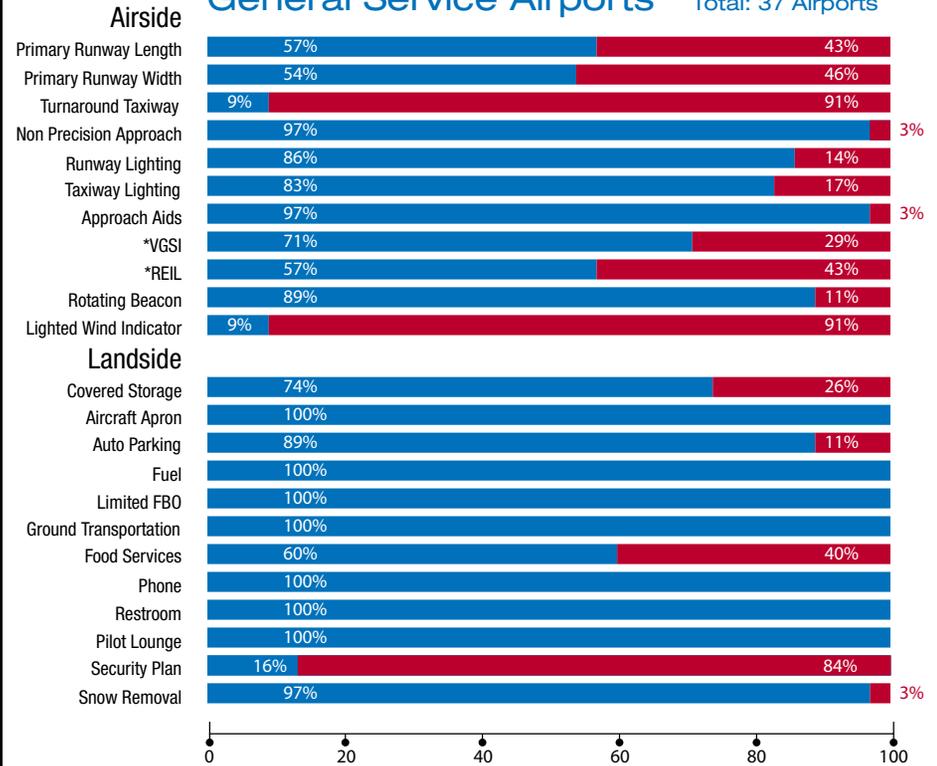
The Iowa Aviation System Plan provides a twenty-year outlook for the state's airport needs. As airports in Iowa continue to evolve to respond to changes in the communities they serve, the facility and service objectives established in this plan should serve as a general guide and frame of reference for balanced development. The accompanying charts show by airport role improvements by type of facility and service that would be optimal to enable all airports in Iowa to fully meet all established objectives.

Report Card: Facility & Service Objectives

Enhanced Service Airports Total: 36 Airports



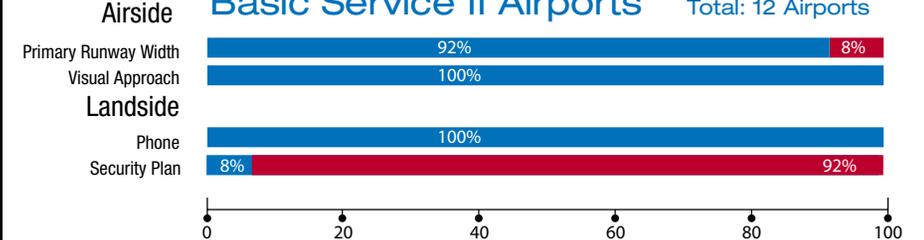
General Service Airports Total: 37 Airports



Basic Service Airports Total: 22 Airports



Basic Service II Airports Total: 12 Airports



■ Percent Meeting System Objectives
 ■ Percent Not Meeting System Objectives

* Visual Guide Slope Indicator (VGSI) and Runway End Identifier Lighting (REIL)



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