Afton-Lincoln County Municipal Airport Camp Guernsey Army Airfield Cheyenne Regional Airport **Cokeville Municipal Airport Converse County Airport** Dixon Airport **Dubois Municipal Airport** Evanston-Uinta County Burns Field Fort Bridger Airport Gillette-Campbell County Airport Greater Green River Intergalactic Spaceport Hot Springs County-Thermopolis Municipal Airport Hulett Municipal Airport Hunt Field Jackson Hole Airport Johnson County Airport Kemmerer Municipal Airport Laramie Regional Airport Lusk Municipal Airport Medicine Bow Airport Miley Memorial Field Mondell Field Natrona County International Airport North Big Horn County Airport Phifer Field Pine Bluffs Municipal Airport Powell Municipal Airport Ralph Wenz Field Rawlins Municipal/Harvey Field Riverton Regional Airport Rock Springs-Sweetwater County Airport Sheridan County Airport Shively Field Shoshoni Municipal Airport South Big Horn County Airport Thomas Memorial Airport Torrington Municipal Airport Upton Municipal Airport Worland Municipal Airport Yellowstone Regional Airport

Wyoming Statewide Airport Inventory and Implementation Plan

MINI AM

WYOMING

**Executive Summary** 

Acknowledgements This document was produced under the auspices of the:

Wyoming Department of Transportation

John Cox, Director

## Aeronautics Division

Dennis Byrne, Administrator

#### Wyoming Aeronautics Commission

Vincenzo L. Tomassi, Chairman – District 2 Jeffrey L. Rose, Vice-Chairman – District At-Large Charles Ksir – District 1 Carrol P. Orrison – District 3 Raymond Lee – District 4 Peter G. Schoonmaker – District 5 Doyle R. Vaughan – District At-Large

# NTRODUCTION

The Wyoming Aviation System is a vital transportation link consisting of 40 publicly owned, public use airports varying in size and function from small general aviation airports to larger facilities with commercial air service. Forecasts prepared for this study indicate that by the planning year 2027, as many as 700,000 commercial service passengers and 570,000 aircraft operations may move

through the state's airports each year.

This study was prepared to guide Aeronautics and other key stakeholders on a course of action for airport development to prepare for the forecasted growth and to reach for the shared vision and goals established for the Wyoming Aviation System. This study will be used in the development of the National Plan of Integrated Airport System (NPIAS) report, the Wyoming Aviation Capital Improvement Plan (WACIP), other state system planning initiatives and individual airport master plans.

The most recent study of similar scope was the Wyoming State Airport System Plan Update published in 1985. Since 1985, Aeronautics has added new components and completed various updates to sections of the system plan such as the Economic Impact Analysis, Design Standards Inventory, and Rates and Charges Guide. However, strategic system analysis has not been re-visited until now. This study provides a new and custom approach specific to the needs and uniqueness of the Wyoming Aviation System. A purpose of this study was to develop consensus between the various stakeholders on how the state airport system should be developed in the long-term with emphasis on the unique role each airport fulfills in its community and region. It is intended that this study be updated on a regular basis.

# Study overview

The primary purpose of this study was to establish a vision, goals and objectives for the Wyoming Aviation System and to provide Aeronautics with an implementation plan to determine the type, location and programming costs associated with airport development projects to meet the established vision, goals and objectives.

The primary study objectives were as follows:

- Define a new Wyoming airport classification system
- Inventory existing airport facilities, major users, and activity levels
- Determine each airport's contribution to the overall system
- Establish ways to enhance the current system of airports
- Identify potential overlaps or gaps in the existing system
- Identify facility and service goals and objectives by airport classification
- Establish performance measures, target performance goals and report cards for each airport and the entire state aviation system
- Develop programming project costs to meet goals and objectives
- · Establish a framework for future investments
- Analyze existing air service in the state and make recommendations for enhancement opportunities
- Develop a method to monitor progress through a Geographic Information System database

A Task Force was assembled by Aeronautics to serve in an advisory and steering capacity for this study and included representatives from various agency perspectives and a cross section of airport interests throughout Wyoming.

#### Wyoming Aviation System Vision

"To provide a consistent, safe and effective aviation system that maximizes services and facilities while creating value and economic benefit in a responsible manner."





# STUDY VALUE

The study allows Aeronautics to track trends and uniformly assess the viability of implementing system goals. These goals can be measured at both the statewide and individual airport level. Aeronautics will use this study as a tool to "filter" project funding requests.

The study assists the FAA in programming federal funds for airport improvement projects and helps bridge the gap between individual airport master plans and the Federal National Plan of Integrated Airport System.

Airport owner and sponsors may use this study as a guide for local airport planning initiatives and to support the airport budgeting process. Through this study, sponsors are able to compare airport facilities on a systemwide basis, understand an individual airport's existing and future performance relative to airport classifications and roles and assess the actions, or proposed priority of projects and associated programming costs.

## Wyoming Aviation System Goals

For the purpose of this study, seven core goals for the Wyoming Aviation System were established early in the planning process and were used to guide recommendations for development.

- Goal Provide a safe and secure integrated aviation system for its users and the general public.
- **Goal** Maintain an aviation system to support current and future demand while optimizing public and private investment.
- Goal Provide accessible, cost effective and reliable transportation options.
- Goal Develop a statewide aviation system that enhances economic activity.
- Goal Promote an aviation system that is environmentally responsible.
- Goal Promote educational activities and raise public awareness of the aviation system and its value.
- **Goal** Sustain and provide a system of commercial service airports that provides convenient and reliable access to the national transportation system at a competitive price.

## EXISTING AIRPORT CLASSIFICATION SYSTEM

The existing Wyoming Aviation System includes 40 publicly owned airports currently classified as either a Commercial Service or General Aviation Airport.

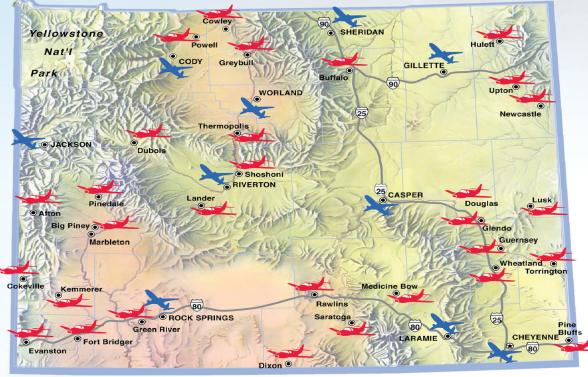
## Snapshot of the Existing Aviation System

- 10 Commercial Service Airports
- 30 General Aviation Airports
- 495,739 Enplaned Passengers
- 964 Based Aircraft
- 425,581 Total Operations
- 57% of Total Based Aircraft are at Commercial Service Airports
- 67% of Total Operations occur at Commercial Service Airports
- Over 70 miles of Runways (Paved and Non-Paved)
- 7 Precision Instrument Approaches
- 2,220 FAA Registered Pilots

It was determined that two classifications did not adequately represent the roles of the existing airports. Therefore, a new classification system was developed.







Source: WYDOT Aeronautics

# New AIRPORT CLASSIFICATION SYSTEM

Four new airport classifications were developed to more accurately represent the current and future roles of each airport in the Wyoming Aviation System.

The new classification system is important as a means to:

- · Align airports with similar physical facility and service attributes.
- Assign roles for each airport classification based on services they provide and users they serve.
- Define the types of facilities and services needed at each functional group of airports to meet the existing and future needs of the State of Wyoming.
- Establish facility and service objectives by classification of airport to meet the system vision and goals established for this study.

The new classifications are as follows:

**Commercial Service Airports** serve major populations, economic centers, and areas of tourism providing a connection to national and global economies and are designed to accommodate commercial air service and business general aviation activity consistent with user demand.

**Business Airports** serve multi-county areas and economic centers providing a connection to state and national economies and are intended to accommodate larger business jet activity and support tourism and recreational demand.

**Intermediate Airports** serve counties and medium to small communities to support local economies and are intended to accommodate medium to small business jet activity and recreational users.

**Local Airports** serve smaller communities and have the basic facilities intended to accommodate recreational users and support emergency use.



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City

#### **Commercial Service Airports**

Airport

Casper Natrona County International Airport Cheyenne. Cheyenne Regional Airport Cody Yellowstone Regional Airport Gillette. Gillette-Campbell County Airport lackson Jackson Hole Airport Laramie Laramie Regional Airport **Riverton Regional Airport** Riverton. Rock Springs.... Rock Springs-Sweetwater County Airport Sheridan Sheridan County Airport Worland Worland Municipal Airport

#### **Business Airports**

CityAirportAfton.Afton-Lincoln County Municipal AirportDouglasConverse County AirportEvanstonEvanston-Uinta County Burns FieldGreybullSouth Big Horn County AirportPinedaleRalph Wenz FieldSaratogaShively Field

#### Intermediate Airports

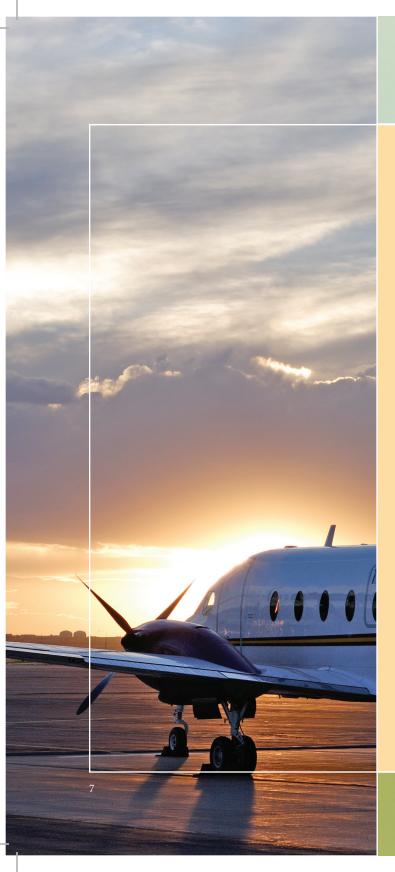
City	Airport
Big Piney	Miley Memorial Field
Buffalo	Johnson County Airport
Guernsey	Camp Guernsey Army Airfield
Kemmerer	Kemmerer Municipal Airport
Lander	Hunt Field
Newcastle	Mondell Field
Powell	Powell Municipal Airport
Rawlins	Rawlins Municipal/Harvey Field
Torrington	Torrington Municipal Airport
Wheatland	Phifer Field

#### Local Airports

City	Airport
Cokeville	Cokeville Municipal Airport
Cowley	North Big Horn County Airport
Dixon	Dixon Airport
Dubois	Dubois Municipal Airport
Fort Bridger	Fort Bridger Airport
Glendo	Thomas Memorial Airport <sup>†</sup>
Green River	Greater Green River Intergalactic Spaceport <sup>†</sup>
Hulett	Hulett Municipal Airport
Lusk	Lusk Municipal Airport
Medicine Bow	Medicine Bow Airport <sup>†</sup>
Pine Bluffs	Pine Bluffs Municipal Airport
Shoshoni	Shoshoni Municipal Airport <sup>†</sup>
Thermopolis	Hot Springs County-Thermopolis Municipal Airport
Upton	Upton Municipal Airport <sup>†</sup>

<sup>†</sup> Non-paved





# Forecasts

Forecasts assist in verifying the roles in the individual airports in the Wyoming Aviation System and help determine whether existing facilities are adequate to accommodate future demand.

## National Trends

Several trends play a role in the outlook for Wyoming aviation activity:

- The worldwide credit crisis has and will spillover into every sector of economic activity, including aviation.
- For the airline industry, intense competition and high fuel prices has sent numerous carriers into bankruptcy. The airlines have aggressively cut costs and restructured debt. Available options to further reduce operating costs are probably limited.
- Historically, when the going is tough, airlines cut service to smaller airports first.
- Tight capital markets and slow approval of new technology have slowed down the development, production, and expected use of very light jets.
- An aging general aviation fleet and the cost of fuel will continue to dampen the extent of recreational flying.

## Wyoming

Despite a difficult operating environment, Wyoming commercial air service has experienced growth. Aeronautics has developed several programs to raise awareness of the state's airports and to increase enplanements.

In addition, the Wyoming Legislature passed legislation in 2003 called the Wyoming Air Service Enhancement Act which created a grant program to provide funds to Commercial Service Airports for revenue guarantees, local marketing and administrative and technical support for air service development. Implementation of this legislation has aided in the increase in aircraft operations and enplanements.

Since 1997 total based aircraft in the state have increased by 8 percent and total operations have increased from 405,000 to over 425,000 annual operations. The forecast for Wyoming anticipates further increases once the recession of 2008 and 2009 ends. Forecasts were prepared using 2007 as a base year and 2012, 2017 and 2027 as the forecast reference years.

#### Enplanements

Wyoming enplanements appear to represent, at least through 2007, a steady level of growth (and service) within the state. Wyoming did not experience as significant a drop in enplanements following the tragic events of September 11, 2001 (9-11). Starting in 2004 the U.S., including Wyoming, began to recover. However, Wyoming enplanements grew rapidly from 2004 to 2008 when, like the rest of the country, Wyoming enplanements declined in response to a worldwide recession.

The enplanement forecasts offer a moderate and high growth rate. Over the 20 year forecast period, Wyoming enplanements are expected to grow at an average annual rate of between 1.25 and 2.0 percent with the understanding that some years may be higher or lower depending on economic conditions.

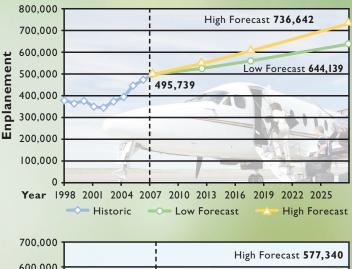
#### **Operations**

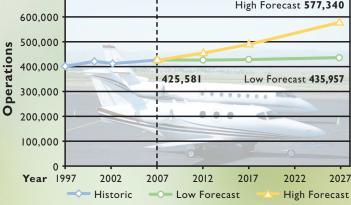
General aviation operations did not appear to decline after 9-11 although total operations at Commercial Service Airports declined by approximately 4 percent from 2000 to 2002. In 2007, operations at Commercial Service Airports increased significantly in large part because of increases in scheduled service. General aviation operations did decline from 2002 to 2007 because high fuel costs reduced recreational flying and the general aviation fleet of aircraft is aging and on average flying fewer hours.

The forecast for aircraft operations is highly dependent on levels of air service. At the low end, operations will increase by approximately 10,000. Almost two thirds of aircraft operations take place at Wyoming's Commercial Service Airports. If air service remains at current levels, operations will grow slightly over the forecast period. A revival of general aviation and/or expanded air service will lead to greater increases in operations by approximately 152,000 over the 20 year forecast period.

#### **Based Aircraft**

The number of based aircraft was growing slightly until 9-11. Since 2002, total based aircraft have remained essentially unchanged. However, there are some significant changes in the number of based aircraft at individual airports. Over the forecast period, based aircraft are not expected to grow substantially. Some of the based aircraft will be retired and may be replaced. Incrementally at the low end, less than 20 aircraft may be added to the Wyoming fleet. At the high end, as many as 446 aircraft are in the 20 year forecast. If trends persist, most of the aircraft added will be based at Commercial Service Airports.



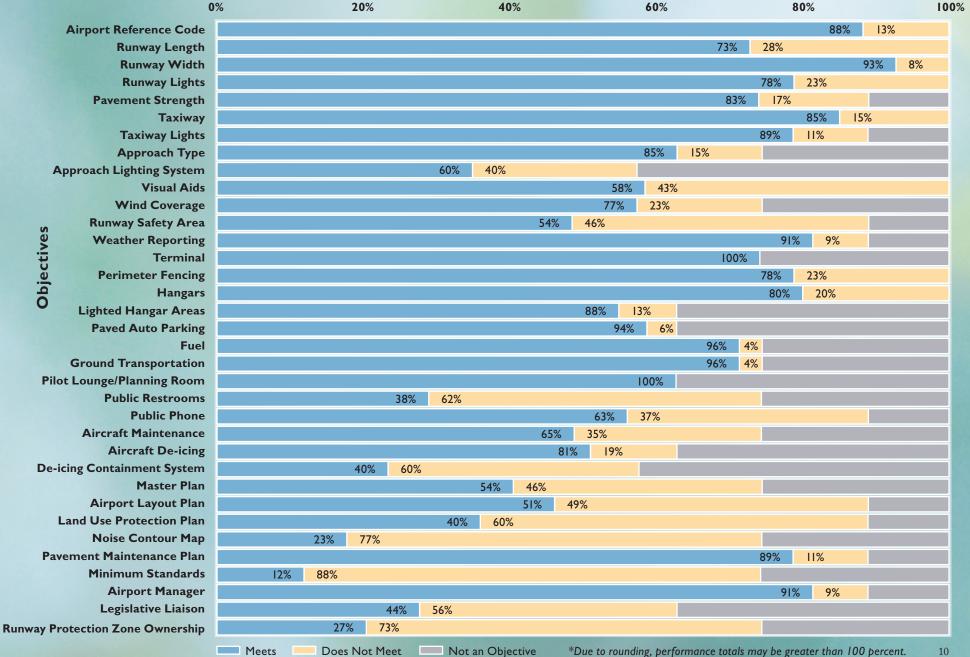




# System objectives

Facilities and services available at an airport largely define the types of aircraft and users able to operate at an airport. In keeping with the vision, goals and objectives for the Wyoming Aviation System and in an effort to provide consistency across the system, 37 minimum facilities and service objectives by classification of airport were established. It was determined that airports in the Local Airport classification needed to be subdivided into paved and non-paved facilities. As such, facility and service objectives were developed for both of these subclassifications within the Local Airport classification. A sample of the 37 objectives by airport classification are shown below. The entire system performance for all objectives is shown on the adjacent page.

	Commercial Service Airport	Business Airport	Intermediate Airport		ocal port
				Paved	Non-paved
ARC	C-II	C-II	B-II	B-II	A-II
Runway Length	75% of Aircraft at 60% Useful Load	75% of Aircraft at 60% Useful Load	95% of Small Aircraft	Maintain Existing Length	
Approach Type	Precision	Non-Precision	Non-precision	Not an Objective	
Hangar Facilities	100% of Based Aircraft in Hangars	100% of Based Aircraft in Hangars	75% of Based Aircraft in Hangars	50% of Based Aircraft in Hangars	
Services Jet A/100LL On-Airport Rental Car Public Phone/ Restrooms		Jet A/100LL Courtesy Car Public Phone/ Restrooms	100LL Courtesy Car Public Phone/ Restrooms	Public Phone	



## System Performance

Objectives

# System goals and performance

In addition to the 37 objectives, multiple measures for each system goal were established. The adjacent tables show the current system performance and the target performance for each measure.

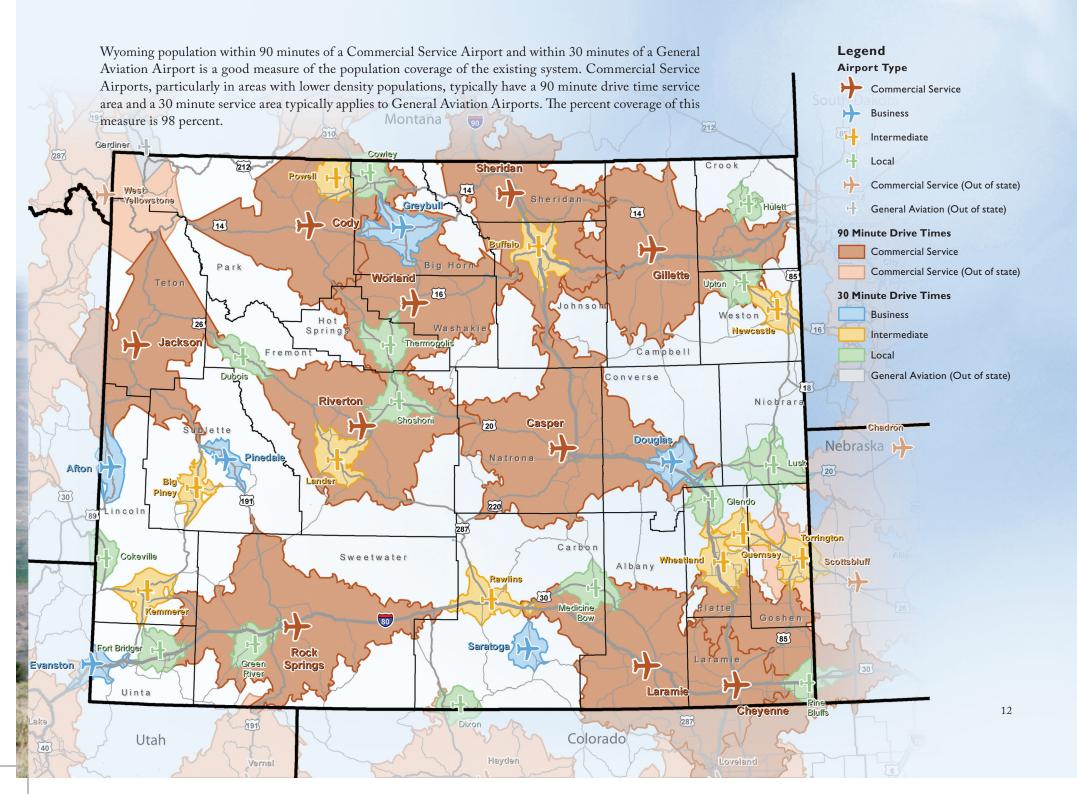
Measure	Current Performance	Target
	Ferformance	Performance
Percent of airports meeting the Runway Safety Area objective	54%	100%
Percent of airports meeting the runway edge lighting objective	78%	80%
Percent of airports meeting the perimeter fencing objective	78%	75%
Percent of airports meeting the weather reporting facilities objective	91%	100%
Percent of airports meeting the weather reporting facilities connected to National Airspace Data Interchange Network	60%	75%
Percent of airports meeting the Runway Protection Zone objective	27%	50%
Percent of airports meeting the visual aids objective	58%	75%
Percent of airports meeting the hangar area lighting objective	88%	86%

# **Goal:** Maintain an aviation system to support current and future demand while optimizing public and private investment

Measure	Current Performance	Target Performance
Percent of paved airports with an average Pavement Condition Index rating of "acceptable"	86%	100%
Percent of paved airports meeting the pavement management plan objective	89%	100%
Percent of airports meeting all facility and service objectives by classification	0%	20%
Percent of airports meeting both the Master Plan and Airport Layout Plan objective	s 46%	55%
Percent of Commercial Service and Business Airports with an economic impact study on record with Aeronautics	75%	100%

#### **Goal:** Provide accessible, cost-effective, and reliable transportation options

Measure	Current Performance	Target Performance
Percent of Wyoming population within 90 minutes of a Commercial Service Airport and within 30 minutes of a General Aviation Airport	98%	95%
Percent of Wyoming population within a 90 minute drive time of an airport offering Air Charter Service	87%	85%
Percent of economic centers located within 60 minutes of a Commercial Service or Business Airport	90%	100%
Percent of Commercial Service, Business and Intermediate Airports meeting the primary runway instrument approach objective	85%	80%



# System goals and performance

HTTTE

TIPIT

#### Goal: Develop a statewide aviation system that enhances economic activity

Measure	Current Performance	Target Performance
Percent of Commercial Service/Business Airports meeting 6 out of 7 Full Service Attributes	38%	50%
Percent of Airports meeting the Terminal Building Objective	100%	100%
Percent of Airports meeting the Fuel Objective	96%	90%

#### Goal: Promote an aviation system that is environmentally responsible

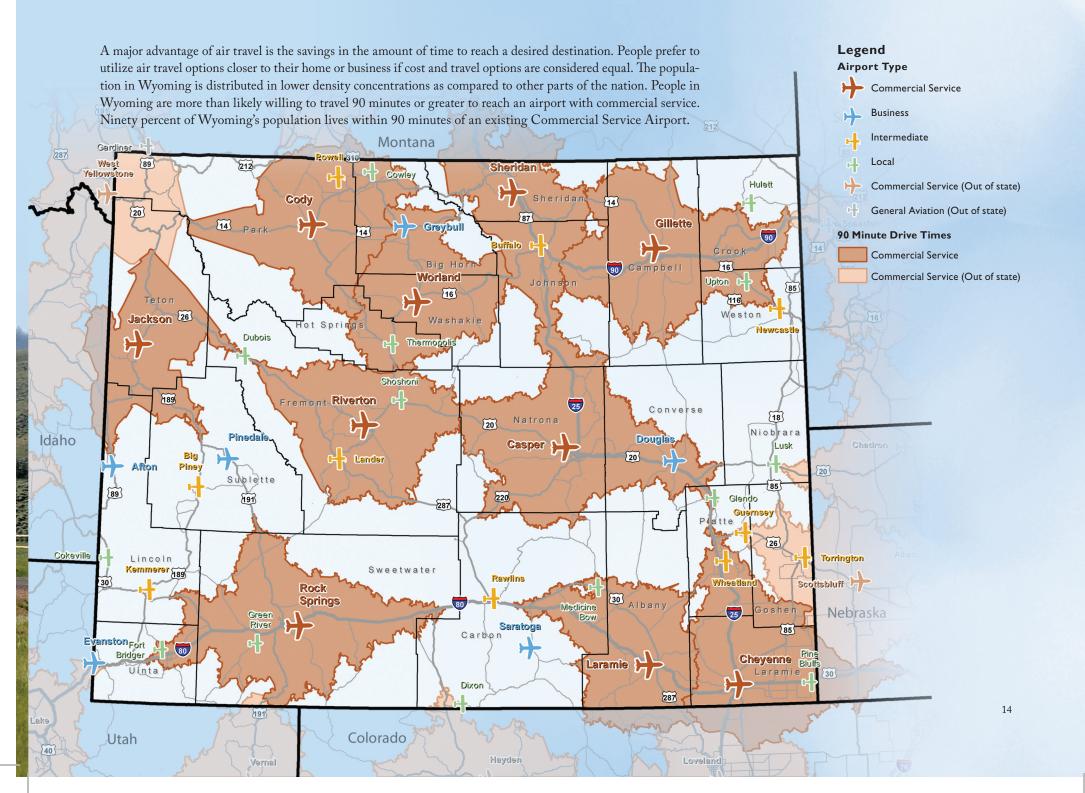
Measure	Current Performance	Target Performance
Percent of Airports meeting the Land Use Protection Plan Objective	40%	85%
Percent of Commercial Service Airports meeting the Deicing System Containment Objective	40%	50%
Percent of Airports meeting the Noise Contour Map Objective	23%	100%

Goal: Promote educational activities and raise public awareness of the aviation system and its value

Measure	Current Performance	Target Performance
Percent of Commercial Service/Business Airports with Web Site or a dedicated page on a Sponsor Web Site	63%	75%
Percent of Airports with Annual Air Show, Fly-In, or Other Public Event	38%	40%

## **Goal:** Sustain and provide a system of Commercial Service Airports that provides convenient and reliable access to the National Transportation System at a competitive price

1. 25		Current rformance	Target Performance
温泉	Percent of Population within 90 minutes of a Commercial Service Airport	90%	90%
	Percent of Commercial Service Airports that average three daily frequencies	90%	90%
	Percent of Commercial Service Airports with service to two or more hub airports	50%	50%
	Percent of Commercial Service Airports growing or retaining annual seats (3 year average	e) 80%	60%
	Percent of Commercial Service Airports growing or retaining the number of enplaned passengers when compared with an average of the three previous years	80%	60%
	Percent of Commercial Service Airports that meet the FAA entitlement thresholds to qualify as a primary airport	90%	90%
,	Percent of Affirmative response rates to airport awareness questions in WYDOT customer satisfaction surveys	71%	60%
No.	Percent of Commercial Service Airports with restrooms in the secure passenger area	30%	80%

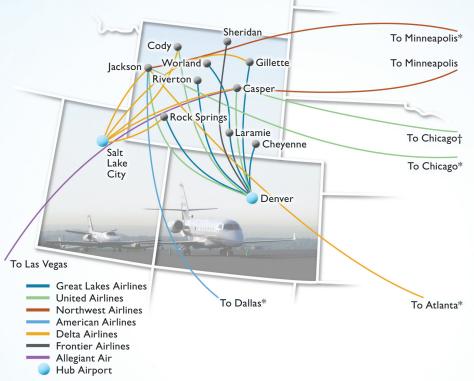


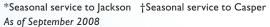
# AIR SERVICE

The State of Wyoming places a high priority on a system of commercial service airports that provides convenient and reliable access to the national transportation system at a competitive price. These attributes of air service guide efforts to sustain and improve air service in the state.

### Accomplishments

The Wyoming Legislature and WYDOT Aeronautics have actively pursued improvements in air service. The Air Service Enhancement Program and the Fly Wyoming campaign put in place resources to support marketing, advertising and air service development initiatives. Many initial performance measures of the air service goal have been met.

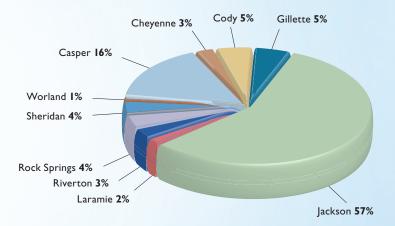




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## Wyoming Commercial Air Service

The Wyoming system of commercial service airports consists of ten airports throughout the state. Two large hub airports outside the state, Salt Lake City International and Denver International provide regional service to Wyoming airports and access to the national transportation system. Jackson and Casper, the largest airports in the state, also support service to several other destinations. Below are the enplanements for Wyoming airports as of 2007.



15

Since 2003, the combination of support from the Air Service Enhancement Program, increased recognition of Wyoming airports through the Fly Wyoming campaign and a robust economy contributed to significant expansions in air service and in airport use. Total enplaned (boarding) passengers have grown by 34 percent from 2003-2007. Capacity as measured by seats has also grown.

	2003	2004	2005	2006	2007	Change 2003-2007
Enplanements (outbound passengers)	369,758	392,207	449,470	483,497	495,739	34%
Seats	662,274	626,423	692,059	737,678	783,435	18%
Departures	19,071	18,431	18,520	17,786	19,596	3%
Seats/Departure	35	34	37	41	40	15%



## Challenges Ahead

Mineral development is an important and integral component of the Wyoming economy. Consequently, employment and economic activity in the state closely track conditions in the United States. High oil and gas prices in 2006-2008 resulted in greatly expanded mineral activity and aviation demand in Wyoming. Demand for oil, gas and coal, however, changes rapidly. In addition, the state experiences seasonal variations in tourism and construction activity. These factors combined make it challenging to sustain consistent levels of air service.

Associated City	2008 Retention Rates	2008 Enplanements	2008 Enplanement Potential (100% Retention)
Jackson	81%	304,019	375,330
Casper	40%	73,048	182,620
Cheyenne	13%	14,823	114,020
Cody	38%	25,865	68,070
Gillette	<b>49</b> %	28,009	57,160
Sheridan	35%	17,654	50,440
Riverton	47%	16,837	35,820
Worland	24%	3,002	12,510
Laramie*	27%	9,518	NA
Rock Springs*	35%	24,585	NA
Wyoming Total	48%	517,360	1,068,720

Nationally, the airline industry is reducing capacity in many markets, especially in smaller cities. Low cost carriers (LCCs) are one of the few areas of growth. In larger cities, LCCs are increasing market share and the ability to set price. At Denver International, Southwest, Frontier and JetBlue handled over 40 percent of passengers in 2008 and are establishing lower price points for air travel at Denver. Wyoming passengers have historically experienced a higher cost for air travel. The presence of LCCs at both Denver and Salt Lake increases the challenge to keep Wyoming air service priced competitively. In 2008, Wyoming airports retained approximately 48 percent of passengers originating from within the state. However, the state generates over 1 million passenger enplanements each year.

Continuation of the Air Service Enhancement Program, fare monitoring and frequent meetings with the air carriers that serve Wyoming are critical to retention of existing air service and development of new services that will attract and serve the Wyoming passenger base.

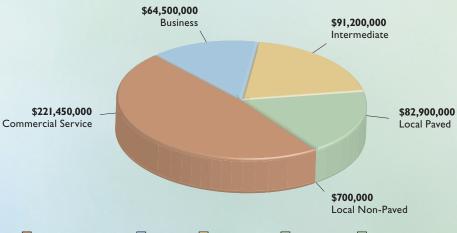
\* Sabre's MIDT database is not reporting Laramie and Rock Springs tickets sold by zip code.

## MPLEMENTATION PLAN

The Implementation Plan is based on both the facility and service objectives and measures outlined for each classification of airport and each individual airport's costs identified in the Wyoming Aviation Capital Improvement Program (WACIP). The WACIP includes projects identified at the local level for each airport. The costs associated with this study are referred to as the Airport Inventory and Implementation Plan (AIIP) costs. The WACIP costs, in addition to those identified in the AIIP, comprise the Implementation Plan.

To develop AIIP costs, the facility and service objectives not met at each airport were evaluated to generate an estimate of the cost for the proposed development in order for the airport to meet that objective. Individual airports may have greater local objectives based on airport specific users, but each should strive to meet the minimum objectives set for their individual classification. The minimum objectives have been established to provide adequate and safe facilities and services to meet the roles and attributes established for each classification.

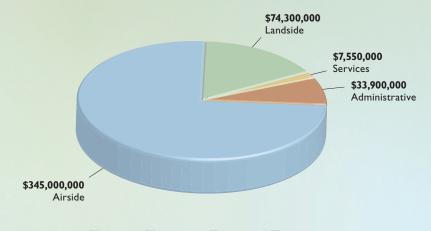
The total Implementation Plan costs for each classification of airport (which include AIIP and WACIP costs) are shown below:



Commercial Service Business Intermediate Local Paved Local Non-Paved

It is interesting to note that, the majority of the Implementation Plan costs (over \$345 million) for the 20-year planning period are from airside projects. Landside costs make up the next largest cost, followed by administrative (pavement maintenance plan, minimum standards, airport master plan, etc.) and services respectively.

Total Implementation Plan costs needed to meet facility and service objectives total over \$460 million. Projects that were identified at the local level as well as in the AIIP are accounted for only once in the Implementation Plan totals. The total Implementation Plan costs by project type are shown below.



Airside Landside Services Administrative

Given current annual funding levels of approximately \$9 million state and \$22 million federal, it will take approximately 15 years to accomplish the projects outlined in the Implementation Plan.

# Major study outcomes

Development of a new airport classification system.

Development of a Geographic Information System database to assess and monitor various system-wide conditions and performance.

Ninety percent of the Wyoming population lives within 90 minutes of a Commercial Service Airport.

Air Service in Wyoming has outpaced national trends.

Forecasted use of the Wyoming Aviation System includes increases in passenger enplanements, based aircraft and aircraft operations.

Over \$460 million is needed within the next 20 years to meet the minimum facility and service objectives set for each classification of airport.

# Sheridan Powe Codv Gillette Worland Thermopolis Idaho Dubois Jackson Falls Regional Shoshoni Riverton Casper Big Piney Rawlins Rock Springs Treat Lakes KRAMER aerotek .... SEH

## SAFETY

integrated system Value fiscally responsible

> "To provide a consistent, safe and effective aviation system that maximizes services and facilities while creating value and economic benefit in a responsible manner."

The Wyoming Department of Transportation Aeronautics Division 5300 Bishop Blvd. Cheyenne, WY 82009

Phone (307) 777-3956 | Fax (307) 637-7352

www.dot.state.wy.us/wydot/aeronautics www.flywyoming.org