6.0 System Goals/Performance

6.1 System Goals

System goals were established early in the planning process of this project, were presented in **Chapter 1** and are restated below and in the following subsections. With each goal, measures have been established as a means to evaluate the system performance related to each goal. Data gathered throughout the study has been used to measure the system performance. For each measure, current and target system performances have been noted. The Wyoming Aviation System Goals are as follows:

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.

6.1.1 Goal: Provide a Safe and Secure Integrated Aviation System for its Users and the General Public

Seven measurements of this goal have been established and each is discussed in the following subsections. The measurements are as follows:

- Percent of airports meeting the RSA objective
- Percent of airports meeting the runway lighting objective
- Percent of airports meeting the perimeter fencing objective
- Percent of airports meeting the weather reporting facilities objective
- Percent of airports meeting the RPZ objective
- Percent of airports meeting the visual aids objective
- Percent of airports meeting the hangar area lighting objective

6.1.1.1 Measure: Percent of Airports Meeting the RSA Objective

As stated in **Chapter 5**, the RSA is non-paved area surrounding the runway constructed in such a way to support aircraft and reduce the risk of damage should the aircraft veer from the runway during landing, takeoff or taxi. The area should be prepared in such a way to support the full weight of the aircraft, graded to the appropriate slope and be free of all obstructions that could potentially damage an aircraft.

Three of the system airports appear to have easily fixable RSA issues such as infrangible objects, gopher holes, rocks, and manhole covers located in the RSA, and if these were removed, these airports would meet the RSA objective. These airports include Riverton, Pinedale and Lusk. The other non-compliant airports have somewhat more challenging issues such as fences, roads, ponds, and non-standard grading of the RSA. These airports may require more planning and design and incur more cost to correct the non-standard RSA.

Table 6-1 shows the current system performance and establishes a system target performance of 100% for this measure.

Table 6-1
RSA - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (35)	54%	100%
Commercial Service (10)	80%	100%
Business (6)	33%	100%
Intermediate (10)	40%	100%
Local Paved (9)	56%	100%
Local Non-Paved (5)	Not an Objective	
Note: ( ) indicates the total number of airports included in analysis		

6.1.1.2 Measure: Percent of Airports Meeting the Primary Runway Edge Lighting Objective

The primary runway lighting objective includes HIRL installation at Commercial Service Airports, MIRL for Business, Intermediate, and Local Paved Airports and runway edge markers for Local Non-Paved Airports. This is an important objective especially for the Commercial Service Airports with precision approaches. The runway lighting objective is tied to the type of approach installed at the airport. The Commercial Service Airport should have precision instrumentation which is typically combined with a HIRL lighting system at FAR Part 139 Airports. When these airports are upgraded to precision instrumentation, HIRL installation should be combined with the precision upgrade. Precision instrumentation with HIRL installation adds to the usability, safety and reliability of an airport. Therefore, a target performance of 80% has been established for this measure. **Table 6-2** shows the current and target performances.

Table 6-2
Primary Runway Edge Lighting - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (40)	78%	80%
Commercial Service (10)	70%	100%
Business (6)	100%	100%
Intermediate (10)	100%	75%
Local Paved (9)	89%	50%
Local Non-Paved (5)	0%	100%
Note: ( ) indicates the total number of airports included in analysis		

6.1.1.3 Measure: Percent of Airports Meeting Perimeter Fencing Objective

A perimeter fence adds to the safety and security of the airport by protecting the airport environment from wildlife hazards and other unwanted activities. Perimeter fencing is also necessary to separate landside from airside activities keeping automobiles and the general public out of and away from aircraft movement areas. Commercial Service Airports should have security or wildlife fencing. Business, Intermediate and Local Paved Airports should have wildlife fencing and Local Non-Paved Airports should have field fence (four-strand barbed wire) fencing. **Table 6-3** shows how the system is performing and sets a system target performance of 75%. The Wyoming Aviation System currently exceeds the target performance.

Table 6-3
Perimeter Fencing - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (40)	78%	75%
Commercial Service (10)	100%	100%
Business (6)	83%	100%
Intermediate (10)	80%	75%
Local Paved (9)	67%	50%
Local Non-Paved (5)	40%	50%
Note: ( ) indicates the total number of airports included in analysis		

6.1.1.4 Measure: Percent of Airports Meeting Weather Reporting Facilities Objective

The weather reporting objective includes an AWOS/ASOS for the Commercial Service, Business Airports and Intermediate Airports. These types of weather reporting equipment are used by pilots planning a flight and pilots already in flight. These systems provide vital information to the pilot such as temperature and dew point, wind speed and direction, visibility, cloud coverage and cloud ceiling information and altimeter settings.

Inclement weather is a contributing factor in many aircraft accidents. Although the ultimate decision to fly or land at an airport is at the pilot's discretion, availability of current weather data can greatly increase the safety and usability of a facility.

Table 6-4 shows how the current system is performing along with target performance of 100% for this measure. Only three airports in the system do not meet this objective and they include Wheatland, Cokeville and Thermopolis.

Table 6-4
Weather Reporting - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (35)	91%	100%
Commercial Service (10)	100%	100%
Business Airport (6)	100%	100%
Intermediate Airport (10)	90%	100%
Local Paved(9)	78%	100%
Local Non-Paved (5)	Not an Objective	
Note: ( ) indicates the total number of airports included in analysis		

6.1.1.5 Measure: Percent of Airports with Weather Reporting Facilities Connected to the National Airspace Data Interchange Network

The National Airspace Data Interchange Network (NADIN) is an important computer system which collects and distributes valuable aviation information to not only airport users but government agencies as well. Some of the agencies that regularly subscribe to information available through NADIN include the National Weather Service (NWS) and the Departments of Defense and Homeland Security. NADIN also transmits information to the International Civil Aviation Organization.

All federally installed systems (all ASOS and some AWOS) and some locally owned systems are connected to NADIN. There are several different classifications of AWOS. Locally owned facilities can connect to NADIN through a third party service. Although this is not new technology, it has become increasingly more economical to connect these facilities to NADIN. Therefore, more and more airports have established connections to NADIN.

Currently, 60% of the system airports have weather facilities connected to the NADIN. As shown in **Chapter 3, Table 3-11**, all ten Commercial Service Airports, four Business, six Intermediate and one Local Paved Airport have weather facilities connected to the NADIN. Individual performance of this measure is included in **Appendix A**. It is recommended that when an airport without a weather reporting facility installs an AWOS or ASOS, that a connection to NADIN be established. The target performance for this measure is 75% and is presented in **Table 6-5**.

Table 6-5
Weather Reporting Facilities Connected to NADIN - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (35)	60%	75%
Commercial Service (10)	100%	100%
Business Airport (6)	67%	100%
Intermediate Airport (10)	60%	75%
Local Paved (9)	11%	75%
Local Non-Paved (5)	Not an Objective	
Note: ( ) indicates the total number of airports included in analysis		

6.1.1.6 Measure: Percent of Airports Meeting RPZ Ownership Objective

Ownership of all existing federal RPZs is an objective of both the FAA and Aeronautics. Ownership of the RPZ through fee or easement provides a means to control these areas and provide a safe landing and takeoff environment. Ownership of the RPZ also serves to protect people on the ground by ensuring that the RPZ is used in a way compatible with aeronautical purposes and helps to maintain this area clear of obstructions, providing for a safer runway environment. Ownership of the RPZ is an objective for 26 of the 40 system airports. Ownership of the RPZ is not an objective for Local Airports.

For several of the system airports, roads, railroads and/or national parks are located in the RPZ, and fee ownership of these areas may be difficult if possible at all. At times, ownership of the RPZ can be challenging, and in these situations, land use protection or easements should be pursued. Typically, as airports enjoy more frequent and higher use, encroachment of the facility also increases. Therefore, control of the RPZ and adoption of a Land Use Protection Plan for the land surrounding the airport prior to encroachment helps avoid potential future conflicts.

Table 6-6 shows how the system is performing relating to this measure and also establishes a Target Performance of 50% for the system. The Target Performance assumes one Commercial Service Airport, one Business Airport and four Intermediate Airports can meet the RPZ objective in addition to those airports already meeting the objective. A lower system target performance is established here because fee ownership of the RPZ for some airports like Jackson, located within Teton National Park, may be very difficult to obtain if possible at all. Purchase of land in railroad right of ways is another example of land which is difficult to purchase or control. However, it may be easier for Business and Intermediate Airports to control this land as they commonly have non-precision approaches and thus smaller RPZs than Commercial Service Airports with precision approaches. More aggressive target performance measures have been set for these classifications.

Table 6-6
RPZ - System/Target Performance

Classification	Current Performance (Own All RPZ)	Target Performance
Wyoming Aviation System (26)	27%	50%
Commercial Service (10)	50%	60%
Business (6)	33%	50%
Intermediate (10)	0%	40%
Local Paved (9)	Not an Objective	
Local Non-Paved (5)	Not an Objective	
Note: ( ) indicates the total number of airports included in analysis		

6.1.1.7 Measure: Percent of Airports Meeting the Visual Aids Objective

Visual Aids to an airport are important to pilots using an airport for several reasons. Visual aids such as an *Airport Beacon* provide a means for pilots to locate the desired airport on the horizon as well as determine if weather conditions are such that the pilot should be flying using VFRs or IFRs. Once the pilot reaches the airport and to pilots taking off from the airport, the *Wind Cone* provides information regarding wind direction and velocity allowing the pilot to determine the preferred runway direction for landing or takeoff. The *PAPI and VASI* provide visual approach guidance to the selected runway. *REILS* identify the runway end. The visual aids serve both the VFR and IFR pilots and significantly increase the all weather usability and reliability of an airport and add substantially to the safety of the facility.

Table 6-7 shows the current system performance. A target system performance of 75% has been established for this measure. **Table 5-72** in **Chapter 5** indicates which airports are not meeting this objective and what facilities are needed to meet the objective.

Table 6-7
Visual Aids - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (40)	58%	75%
Commercial Service (10)	100%	100%
Business (6)	50%	100%
Intermediate (10)	30%	75%
Local Paved (9)	67%	50%
Local Non-Paved (5)	20%	50%
Note: ( ) indicates the total number of airports included in analysis		

6.1.1.8 Measure: Percent of Airports Meeting Hangar Lighting Objective

Adding outside lighting to dark areas increases the safety and security of those areas. Exterior hangar lighting also reduces insurance premiums for based aircraft owners and hangar owners. This objective calls for outside lighting of hangar areas. This is an objective for the Commercial Service and Business Airports. Only two airports in the system, Cheyenne and Saratoga do not meet this objective. A target performance of 86% has been set for this measure. As shown in **Table 6-8,** the system currently meets the target performance.

Table 6-8
Hangar Lighting - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (16)	88%	86%
Commercial Service (10)	90%	90%
Business (6)	83%	80%
Intermediate (10)	Not an Objective	
Local Paved (9)	Not an Objective	
Local Non-Paved (5)	Not an Objective	
Note: ( ) indicates the total number of airports included in analysis		

6.1.2 Goal: Maintain an Aviation System to Support Current and Future Demand while Optimizing Public and Private Investment

Five measurements of this goal have been established and each is discussed in the following subsections. The measurements are as follows:

- Percent of paved airports with an average PCI rating of "acceptable"
- Percent of paved airports meeting the pavement management plan objective
- Percent of airports meeting facility and service objectives by classification
- Percent of airports meeting both the MP and ALP objective
- Percent of Commercial Service and Business Airports with an economic impact study on record with Aeronautics

6.1.2.1 Measure: Percent of Airports Meeting PCI Rating of "Acceptable"

The Pavement Condition Index (PCI) is applicable to all pavement surfaces on an airport. PCI is divided into seven ratings as shown in **Table 6-9**. Airport pavements are evaluated using ASTM standard methods and PCI values are calculated using the Army Corps of Engineers PAVER software program. Pavements are reevaluated on a three year rotation cycle.

Table 6-9
Pavement Condition Index

PCI Rating	Pavement Description
100	Excellent
85	Very Good
70	Good
55	Fair
40	Poor
25	Very Poor
10	Failed

Aeronautics' strategic performance measures identify a pavement PCI rating of 70 or greater to be "acceptable" pavement condition. "Acceptable" is defined as pavement which meets the condition needs for most aircraft usage. Below 70, the potential for aircraft damage from Foreign Object Debris (FOD), due to pavement condition, begins and therefore is considered unacceptable. Pavement at PCI of 70 or above is considered adequate to support airport operations with regular maintenance such as crack sealing. Below 70, a pavement becomes a candidate for rehabilitation/overlay. Below 50, a pavement becomes a candidate for replacement.

For the purposes of this study, airports with an average PCI rating of 70 or greater for the total paved area are rated as "acceptable". PCI ratings were determined for each airport using a weighted average method, based on area of each pavement section. Maintaining an average rating of "acceptable" ensures that the airport is able to support the current and future demand of the facility.

A total of five airports in the system did not meet the "acceptable" rating for 2007. These airports include: Greybull, Wheatland, Cokeville, Cowley, and Thermopolis as shown in **Appendix A**. Target Performance for this measure has been set at 100% as shown in **Table 6-10**.

Table 6-10
PCI Rating - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (35)	86%	100%
Commercial Service (10)	100%	100%
Business (6)	83%	100%
Intermediate Airport (10)	90%	100%
Local Paved (9)	67%	100%
Local Non-Paved (5)	Not an Objective	

Note: ( ) indicates the total number of airports included in analysis

6.1.2.2 Measure: Percent of Airports with a Paved Runway with a Pavement Management Plan

Pavement Management Plans for each airport are a joint effort between the airport sponsor, their consultant, FAA, and Aeronautics. Plans are typically developed by the Aeronautics Division and take into account Pavement Condition Inspections performed on a three year cycle, engineering judgment, historical information, and input from the FAA, the sponsor, and the airport's consultant. The plans are developed using the Army Corps of Engineer's Paver Program. The plans are developed based on a 5-year projection for maintenance and a 10-year projection for rehabilitation and reconstruction. They are re-evaluated every three years, after the PCI inspection. Once approved, each plan is incorporated into the Capital Improvement Program by Aeronautics and the FAA.

Table 6-11 shows that the current system is performing at 89%. The PCI performance of all airports is shown in **Appendix A.** The target performance for this measure has been set at 100%.

Table 6-11
Pavement Management Plan - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (35)	89%	100%
Commercial Service (10)	90%	100%
Business (6)	100%	100%
Intermediate (10)	80%	100%
Local Paved(9)	89%	100%
Local Non-Paved (5)	Not an Objective	
Note: ( ) indicates the total number of airports included in analysis		

6.1.2.3 Measure: Percent of Airports Meeting All Facility and Service Objectives

As stated in **Chapter 5**, minimum airport objectives were determined for each classification of airport. In order for these airports to obtain the characteristics of these classifications, all airport objectives should be met.

None of the airports in the system currently meet all facility and service objectives. A target system performance of 20% has been set for this measure. Some of the system airports may be able to meet this objective with minimal effort such as sending documents to Aeronautics, updating planning documents, etc. Other airports may require greater effort with longer term projects and more costly deficiencies such as insufficient runway lengths, instrument approach types, insufficient RSA and/or lack ownership of their RPZ.

Table 6-12 shows how the current system is performing and sets the target performance level of 20% for this measure.

Table 6-12
Facility and Service Objectives - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (40)	0%	20%
Commercial Service (10)	0%	20%
Business (6)	0%	20%
Intermediate (10)	0%	20%
Local Paved (9)	0%	20%
Local Non-Paved (5)	0%	20%
Note: ( ) indicates the total number of airports included in analysis		

6.1.2.4 Measure: Percent of Airports Meeting Both the MP and ALP Objective

An Airport MP provides documentation of an airport regarding existing facilities, aviation demand projections, demand/capacity analysis, proposed airport facility upgrades based on current and future demand, environmental overview of the proposed facility upgrades and an implementation plan including cost estimates of the proposed facility improvements. The MP is typically written for a 20-year planning period with development distributed over the 20-year period.

The ALP accompanies the MP and graphically displays facility upgrades and includes an airport layout plan sheet showing all overall development, FAR Part 77 imaginary surfaces surrounding all airports, existing and future approach plan and profiles sheets identifying approach paths to the airport as well as obstructions to these approaches, terminal area design including hangar locations, taxilane improvements, etc., a land use protection plan, noise contour map and airport property map.

The objective for the system is that Commercial Service Airports, Business and Intermediate Airports have on record with Aeronautics the most recent MP and ALP and that the MP is less than 10 years old and the ALP less than five years old.

Revisions and potential upgrades to the ALP occur more frequently than is necessary to update the MP which accounts for the difference in updating timeframes.

As shown in **Chapter 5**, **Chart 5-17**, 54% of the system airports meet the MP Objective. **Chart 5-1** shows that 51% of the system meets the ALP objective. When these objectives are combined, 46% of the system airports meet both objectives. Many have updated MPs but do not have an associated ALP on record with Aeronautics. It is anticipated that the system performance can be improved if sponsors submit currently approved documents to Aeronautics. In addition, several airports are currently updating their ALP and Master Plan. **Tables 5-7** and **5-39** show which airports are not meeting these objectives.

Forty-six percent of the system airports currently meet this objective as shown in **Table 6-13**. A target performance level of 55% has been set for this measure.

Table 6-13
MP and ALP Objective - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (35)	46%	55%
Commercial Service (10)	30%	75%
Business (6)	17%	75%
Intermediate (10)	40%	50%
Local Paved (9)	89%	50%
Local Non-Paved (5)	Not an Objective	
Note: ( ) indicates the total number of airports included in analysis		

6.1.2.5 Measure: Percent of Commercial Service and Business Airports with an Economic Impact Study on Record with Aeronautics

Statewide economic impact analysis is performed by Aeronautics on a 5-year schedule. In addition, airport sponsors occasionally perform their own Economic Impact Study directly related to their airport. This measure examined how many airports in the system have an Economic Impact Study for their airport and how many have this study on record with Aeronautics. As shown in **Table 6-14** and **Appendix A**, 75% of the system airports have an economic study and have it on record with Aeronautics.

Table 6-14
Economic Impact Study - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (16)	75%	100%
Commercial Service (10)	70%	100%
Business Airport (6)	83%	100%
Intermediate Airport (10)	Not an Objective	
Local Paved (9)	Not an Objective	
Local Non-Paved (5)	Not an Objective	
Note: ( ) indicates the total number of airports included in analysis		

System performance would be 100% if the statewide economic impact analysis were completed for all airports. As such, a target performance level of 100% has been set for this measure. If sponsors complete their own economic impact study for their airport, they are encouraged to submit this document to Aeronautics.

6.1.3 Goal: Provide Accessible, Cost-Effective, and Reliable Transportation Options

Four measurements of this goal have been established and each is discussed in the following subsections. Each drive time measurement assumes use of existing roads and published speed limits. The measurements are as follows:

- Percent of Wyoming population within 90 minutes of a Commercial Service Airport and within 30 minutes of a General Aviation Airport
- Percent of Wyoming population within a 90 minute drive time of an airport offering Air Charter Service
- Percent of economic centers located within 60 minutes of a Commercial or Business Airport
- Percent of Commercial Service, Business and Intermediate Airports meeting the primary runway instrument approach objective

For those measures involving population, data discussed in **Chapter 3** was again used for this analysis. The 2008 population forecast of Wyoming was obtained from the Wyoming Department of Administration and Information, Economic Analysis Division and was forecast based on 2000 Census data. GIS data points were linked to 2000 Census data from a broad state total down to the nearest city block. However, population forecasts were included as city and county totals only and were not tied to individual block data points as is the 2000 census. Therefore, the 2000 census data point totals were used to estimate the distribution of the 2008 estimated data to be used to determine the percent of population served by any given drive time measure. Population data is shown for counties and cities with an airport and larger cities (population over 1,000) located within those counties. This data was previously presented in **Chapter 3**, **Table 3-1** and was used along with a GIS system to analyze the population measures.

6.1.3.1 Measure: Percent of Wyoming Population Within 90 Minutes of a Commercial Service Airport and 30 Minutes of all Other System Airports

This is a good measure of the population coverage of the existing system. Commercial Service Airports, particularly in areas with lower density populations, typically have a 90 minute drive time service area and a 30 minute service area typically applies to General Aviation Airports.

Ninety-eight percent of the Wyoming population lives within 90 minutes of a Commercial Service Airport and within 30 minutes of all other system airports when out of state airports are also included. A target performance of 95% has been established for this measure. As indicated, the existing system currently exceeds the target performance by 3%. The system and target performance for this measure is shown in **Table 6-15** and graphically displayed in **Figure 6-1**.

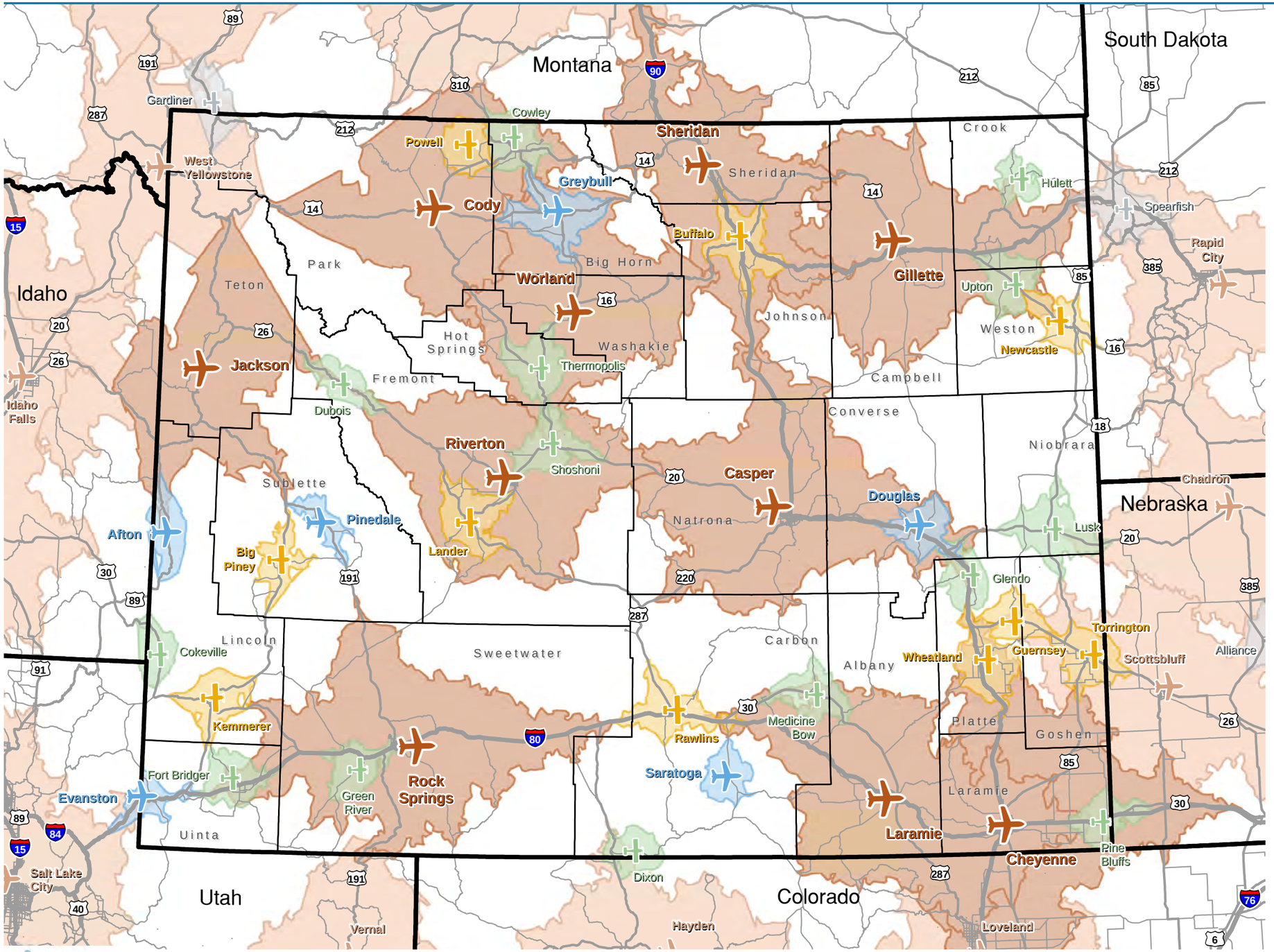
Table 6-15
Wyoming Population Within 90 Minutes of a Commercial Service Airport and 30 Minutes of all Other System Airports

	Percent Coverage
Target Performance	95%
System Performance	98%

6.1.3.1.1 Potential System Redundancy

Approximately 2% of the population is not located within 90 minutes of a Commercial Service Airport or 30 minutes of all other system airports. However, there are some areas in the state where service areas of airports overlap. In these areas, the population may be served by two or more airports and these areas may represent potential airport redundancy in the system.

For overlapping service areas, characteristics of the airports were examined and are presented in the following sections. It is important to note that although some overlaps may exist between airport service areas, each airport service area may serve a different role and/or different types of users or offer facilities and services that draw users from other airport service areas or areas beyond the study airport's service area.



Legend

Airport Type

- Commercial
- Business
- Intermediate
- Local
- Commercial (Out of state)
- General Aviation (Out of state)

90 Minute Drive Times

- Commercial
- Commercial (Out of state)

30 Minute Drive Times

- Business
- Intermediate
- Local
- General Aviation (Out of state)

Road Classification

- Interstates
- Highways
- Secondary Roads

0 25 50 Miles

Source: Census 2000, ESRI, SEH, WYGISC Digital WY Atlas, WY Dept of A&I

Figure 6-1 - Commercial Service Airports 90 Minute Service Areas and General Aviation 30 Minute Service Areas

6.1.3.1.2 Potential System Redundancy - Commercial Service Airports

The overlapping 90 minute service areas for Commercial Service Airports are shown in **Figure 6-2** and summarized in **Table 6-16**. Out of state airports overlapping with Wyoming Airports have been excluded from this analysis because the State of Wyoming does not have control over these airports, and service area overlaps are considered small. An exception to this is the overlap between the Fort Collins-Loveland Airport (Loveland) located in Colorado with the Cheyenne and Laramie service areas. This area is large and has therefore been analyzed and is shown in **Table 6-16.**

Table 6-16
Commercial Service Airports - Overlapping 90 Minute Service Areas

City	Overlapping Service Areas			Figure 6-2 Identifier
Casper	Riverton	Sheridan		B, F
Cheyenne	Laramie	Loveland		A
Cody	Worland			C
Gillette	Sheridan			D
Laramie	Cheyenne	Loveland		A
Riverton	Casper	Worland		B, G
Sheridan	Casper	Gillette	Worland	F, D, E
Worland	Cody	Riverton	Sheridan	C, G, E

Although a 90 minute drive time is appropriate for analyzing sufficient air service in rural areas and states with lower density populations such as Wyoming, a main benefit of air travel is time savings. Therefore, potential Commercial Service Airport redundancy was only considered if service area overlaps occurred within a 60 minute service area of two or more Commercial Service Airports. When a 60 minute service area was applied to the Commercial Service Airports, only the service areas of Gillette/Sheridan and Laramie/Cheyenne/Loveland overlap as shown in **Table 6-17** and **Figure 6-3**.

Table 6-17
60 Minute Drive Time Commercial Service Overlapping Service Areas

City	Overlapping Service Areas		Figure 6-3 Identifier
Cheyenne	Laramie	Loveland	A
Gillette	Sheridan		D
Laramie	Cheyenne	Loveland	A
Sheridan	Gillette		D

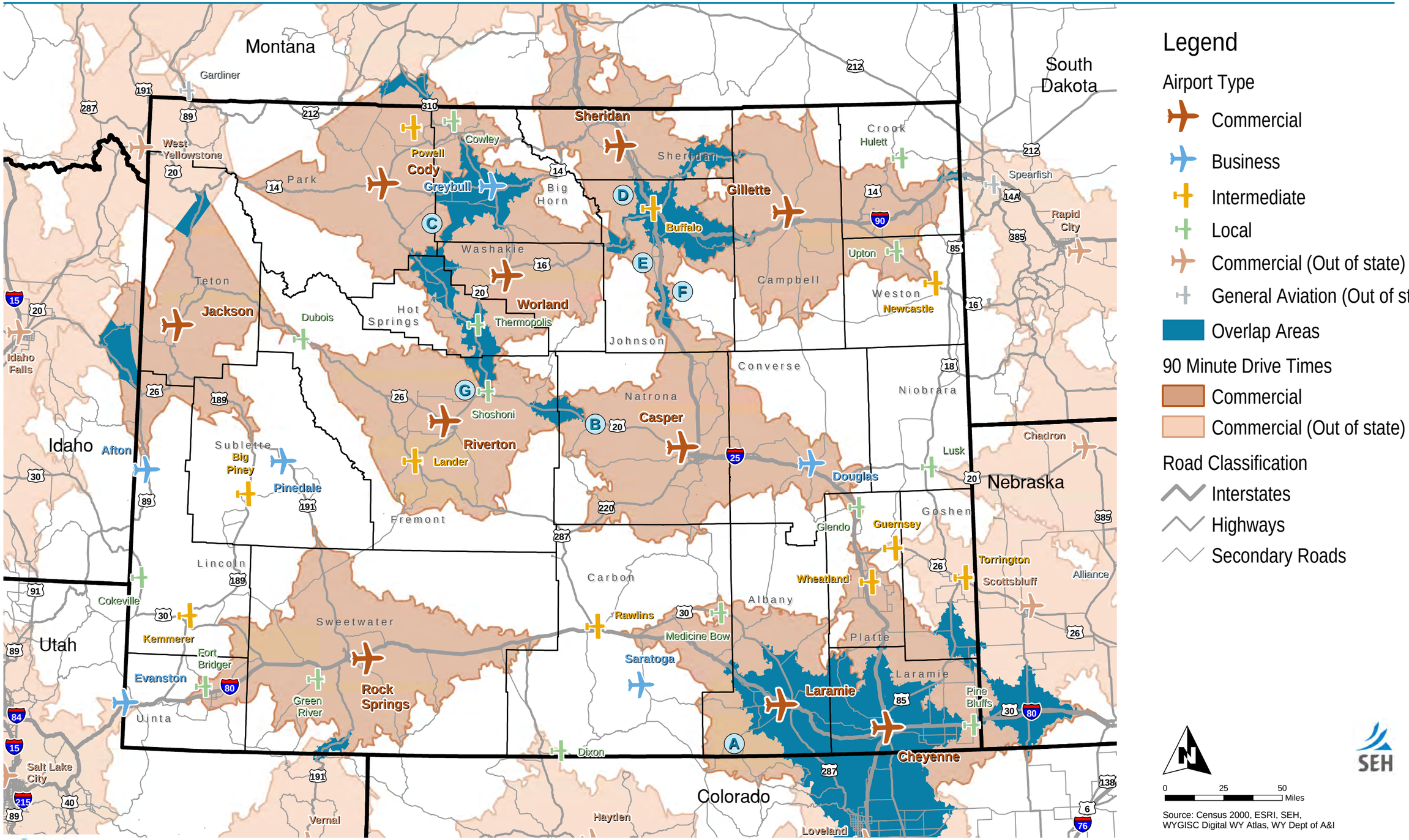
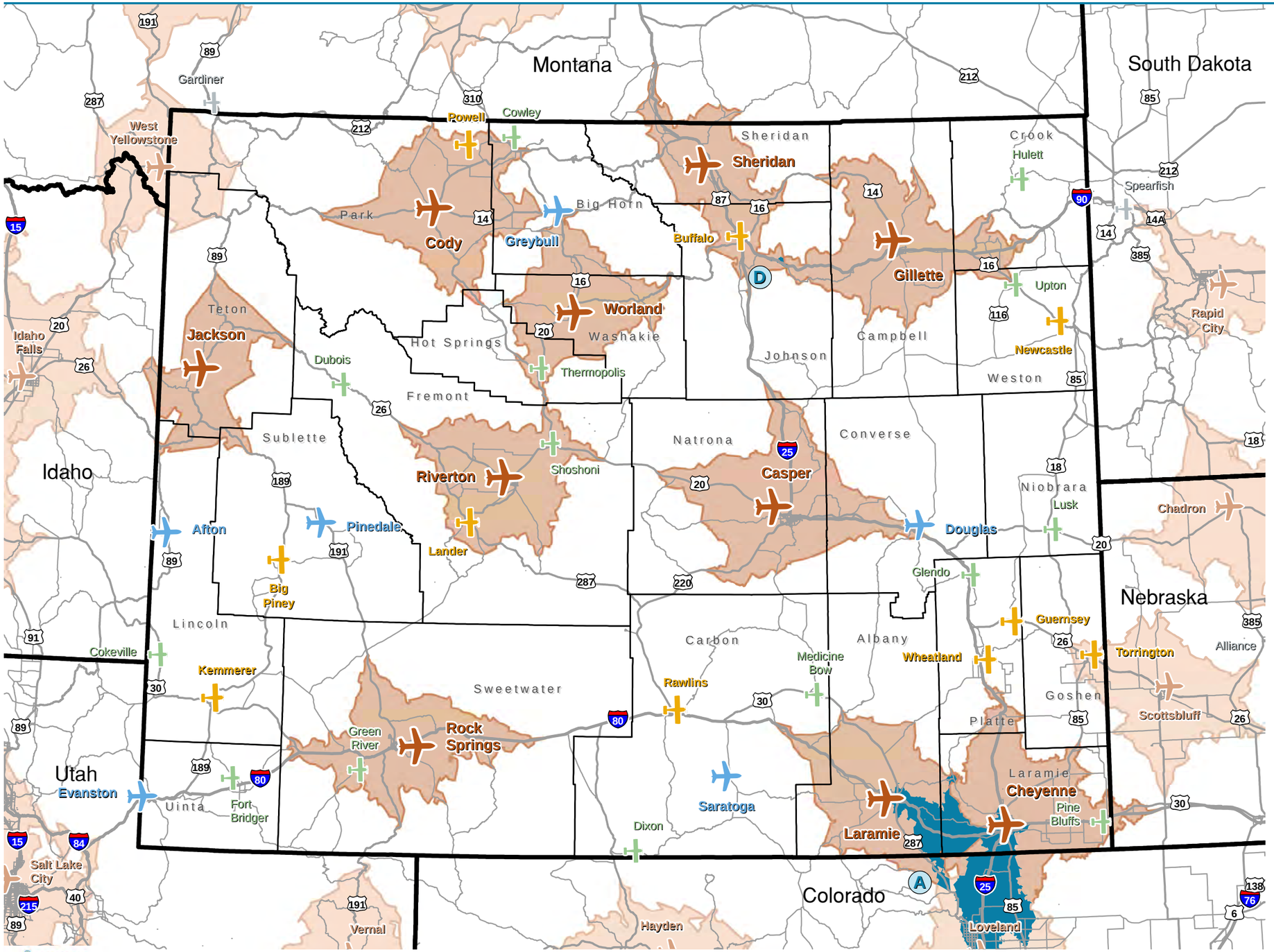


Figure 6-2 - Commercial Service Airports - Overlapping 90 Minute Service Areas



Legend

Airport Type

- Commercial
- Business
- Intermediate
- Local
- Commercial (Out of state)
- General Aviation (Out of state)
- Overlapping Service Areas

60 Minute Drive Times

- Commercial
- Commercial (Out of state)

Road Classification

- Interstates
- Highways
- Secondary Roads

0 25 50 Miles

Source: Census 2000, ESRI, SEH, WYGISC Digital WY Atlas, WY Dept of A&I

Figure 6-3 - Commercial Service Airports - Overlapping 60 Minute Service Areas

a. Gillette – Sheridan – (D)

The 60 minute service areas of Gillette and Sheridan overlap and encompass an unpopulated area of approximately 13 square miles. Approximately 40,901 people live within 60 minutes of Gillette and 34,958 live within 60 minutes of Sheridan. Because the overlap area is unpopulated, the same numbers apply when people are assumed to drive to the closest airport.

Both airports are serving a city which has been identified as a major economic center as defined in **Chapter 3,** and both are EAS designated airports with neither receiving the subsidy in 2006. This means these airports are maintaining a level of air service where a subsidy has not been required. In addition, both airports are experiencing similar levels of passenger enplanements and these levels support the fact that both airports are being utilized to the FAA entitlement level. FAA entitlement funding for Commercial Service Airports requires that these airports enplane 10,000 passengers annually. Although these service areas overlap, the area is very small and contains no people. Therefore, the Gillette/Sheridan service area overlap does not appear to represent an area of redundancy in the Wyoming Aviation System. This data is summarized in **Table 6-18.**

Table 6-18
Gillette - Sheridan Analysis

Airport	Total Annual Enplanements	Total Annual Operations	(A) Total Population Within 60 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by Both Airports (B/A)
Gillette	25,647	19,105	40,901	40,901	0 People	0%
Sheridan	20,978	37,230	34,958	34,958	13 Square Miles	0%

b. Laramie – Cheyenne – Loveland, CO – (A)

The 60 minute service areas of Laramie, Cheyenne and Loveland overlap for approximately 1,637 square miles and include 106,482 people of Wyoming's population. This number does not consider Colorado population. The 60 minute service areas of Cheyenne and Laramie each encompass the other city center. Meaning, one can drive from the Laramie Regional Airport and reach the city center of Cheyenne within 60 minutes and visa versa. The same applies to the Cheyenne and Loveland service areas. The drive time from the Laramie city center to Fort Collins-Loveland Airport is closer to 90 minutes.

Approximate Wyoming population within 60 minutes of Laramie includes 97,986 people, Cheyenne, 115,465 people and Loveland, 77,268 people. When the service areas are split to assume that facility and services are equal and the Wyoming population will travel to the closest airport, Laramie serves approximately 31,242 Wyoming residents, Cheyenne serves 86,982 and Loveland serves 0.

Although all three of these airports offer commercial service, they offer different types of services. Laramie and Cheyenne are similar in that they both are served by Great Lakes Airlines and offer flights to and from Denver where passengers can connect with other airlines and worldwide destinations. Loveland offers service on Allegiant Air with flights to and from Las Vegas where passengers can also connect to other airlines and other worldwide destinations although fewer options exist when compared to flights connecting through Denver. In addition, the Loveland-Las Vegas segment is a much longer flight time compared to the Laramie or Cheyenne to Denver first flight segment. Therefore, the overlapping service area of Loveland with Cheyenne and Laramie is not viewed as competing but rather as offering complementary service options. This data is summarized in **Table 6-19**.

Table 6-19
Laramie - Cheyenne - Loveland Analysis

Airport	Total Population Served Within 60 Minutes	Total Wyoming Population Served When People Drive to Closest Airport	Overlapping Service Areas
Laramie	97,986	31,242	106,482 People 1,637 Square Miles
Cheyenne	115,465	86,982	
Loveland, CO	77,268	0	

Cheyenne and Laramie however, offer similar service and serve a large portion of the same population. The 2007 annual enplanements at Laramie totaled 9,939 and 16,766 were recorded at Cheyenne. Both Laramie and Cheyenne are EAS designated airports with only Laramie receiving the subsidy in 2006. Both airports are serving a city which has been identified as an economic center.

Approximately 97,986 people live within 60 minutes of Laramie and 115,465 live within 60 minutes of Cheyenne. When service areas are split to assume people will travel to the closest airport, Laramie serves 31,242 and Cheyenne serves 86,982.

Approximately 97% of the people within 60 minutes of Laramie are also within 60 minutes of Cheyenne and approximately 82% of the people within 60 minutes of Cheyenne are also within 60 minutes of Laramie.

Although there is a large population near Laramie and Cheyenne, their proximity to the Denver hub means that many people may elect to drive to Denver for flight options rather than flying from Laramie or Cheyenne and connecting to a final destination through the Denver Airport.

Due to the high number of people living within the overlap area of Laramie and Cheyenne and because the majority of these people could also be served by either airport, there is potential for commercial service overlap between these two airports. This data is summarized in **Table 6-20.** More in depth analysis of these airports, the markets and airport users they serve should be analyzed through a separate study or addressed through each airport's master plan during the master planning process.

Table 6-20
Laramie - Cheyenne Analysis

Airport	Total Annual Enplanements	Total Annual Operations	(A) Total Population Within 60 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by Both Airports (B/A)
Laramie	9,939	10,090	97,986	31,242	95,231 People	97%
Cheyenne	16,766	58,853	115,465	86,982	651 Square Miles	82%

6.1.3.1.3 Potential System Redundancy – General Aviation Airports

A 30 minute service area is related to general aviation activity only and does not consider commercial service or military operations. However, commercial service and/or military operations at an airport can contribute to airport and airspace congestion which can be a deterrent to general aviation users. A 30 minute service area is appropriate for airports serving the general aviation community as these types of users generally use an airport within 30 minutes of their residence or business. Also, federal criteria supports that NPIAS airports should be located a distance of at least 30 minutes drive time of another NPIAS airport.

In addition to proximity, airport users select an airport for use by the types of facilities and service available. These may include runway length, instrument approach capabilities, fuel types available as well as price, general airport condition, hangar availability and prices to lease or rent, aircraft maintenance and FBO services. Other factors considered may include ease of airport use (ie. air traffic congestion or lack thereof), existence of an air traffic control tower, weather systems available, etc. The importance of any one of these items is user specific but these are typically the types of facilities and services users consider when selecting an airport for general aviation use. Generally, when selecting an airport, a user will balance the availability of facilities and services against the geographic location of an airport and the proximity of the airport to their residence or business.

If the roles of the airports are the same and facilities and services are similar, users generally select the closest airport to their residence or business or the airport where they have an established relationship with the service provider. Although a 30 minute service area has been analyzed, it should also be noted that users may elect to drive a distance greater than 30 minutes to obtain the types of facilities they require or the services or service provider they prefer.

Overlapping 30 minute service areas of all airports in the system are shown in **Figure 6-4,** identified in **Table 6-21** and generally discussed in the following subsections. For this analysis, a 30 minute drive time has been applied to each airport including Commercial Service Airports. Commercial Service Airports may also serve general aviation aircraft and can function in a similar capacity to a Business or Intermediate Airport. When service areas of airports with the same or similar roles overlap, there may be potential for system redundancy. Each area of overlap has been analyzed in general detail in the following subsections. When comparing airports, based aircraft and total annual operations have been noted. Based aircraft can be considered an indicator of local airport use and total annual operations can be considered an indicator of local and itinerant usage levels. Additional, more in depth analysis may be required through the local master planning process or through special studies to determine if system redundancy exists.

Table 6-21
All Airports - Overlapping 30 Minute Service Areas

City	Overlapping Service Areas			Figure 6-4 Identifier
Cheyenne	Laramie	Pine Bluffs		Q, P
Cody	Powell			J
Laramie	Cheyenne			Q
Riverton	Lander	Shoshoni		C, D
Rock Springs	Green River			B
Sheridan	Buffalo			K
Worland	Greybull	Thermopolis		G, F
Douglas	Glendo			M
Evanston	Fort Bridger			A
Greybull	Worland	Cowley		G, H
Buffalo	Sheridan			K
Guernsey	Torrington	Wheatland	Glendo	O, N
Lander	Riverton			C
Newcastle	Upton			L
Powell	Cody	Cowley		J, I
Torrington	Guernsey			O
Wheatland	Guernsey	Glendo		N
Cowley	Greybull	Powell		H, I
Fort Bridger	Evanston			A
Glendo (non-paved)	Douglas	Wheatland	Guernsey	M, N
Green River (non-paved)	Rock Springs			B
Pine Bluffs	Cheyenne			P
Shoshoni (non-paved)	Riverton	Thermopolis		D, E
Thermopolis	Worland	Shoshoni		F, E
Upton (non-paved)	Newcastle			L

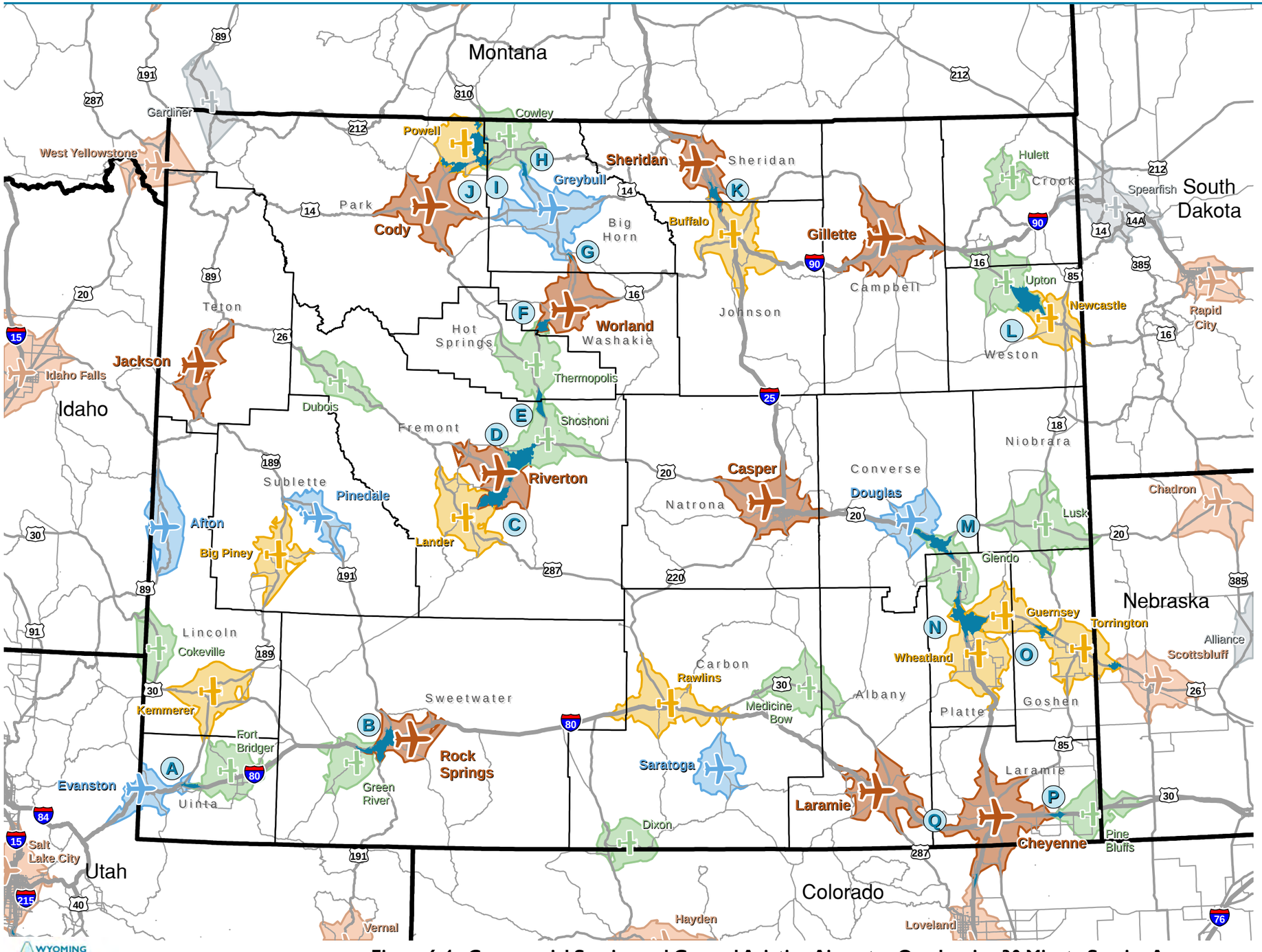


Figure 6-4 - Commercial Service and General Aviation Airports - Overlapping 30 Minute Service Areas

a. Evanston – Fort Bridger – (A)

Evanston, a Business Airport, serves a total of 13,697 people within a 30 minute service area, while Fort Bridger, a Local Paved Airport, serves a total of 5,544 people. The 30 minute service areas of both airports overlap for approximately 8 square miles and it is estimated that no people live in this area. This overlapping service area is relatively small when compared to the overall service areas of both airports. In addition, the two airports serve a different role and different types of airport users. Evanston has 18 based aircraft and 6,080 annual operations compared with 10 based aircraft and 3,500 annual operations for Fort Bridger. The based aircraft and operation levels support that demand for both airports exists. **Table 6-22** summarizes this data.

Table 6-22
Evanston - Fort Bridger Analysis

Airport	Based Aircraft	Total Annual Operations	(A) Total Population Within 30 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by Both Airports (B/A)
Evanston	18	6,080	13,697	13,697	0 People	0%
Fort Bridger	10	3,500	5,544	5,544	8 Square Miles	0%

b. Rock Springs – Green River – (B)

The 30 minute service areas of Rock Springs, a Commercial Service Airport, and Green River, a Local Non-Paved Airport, overlap for approximately 60 square miles covering a population of approximately 22,810 people. Approximately 25,282 people live within 30 minutes of Rock Springs and approximately 35,488 people live within 30 minutes of Green River.

Approximately 90% of the population within the 30 minute service area of Rock Springs also lives within 30 minutes of Green River and 64% of the population within the 30 minute service area of Green River also lives within 30 minutes of Rock Springs.

When the service areas are split to assume people will travel to the closest airport, Rock Springs serves 23,948 people while Green River serves 14,017 people. Rock Springs has 49 based aircraft and Green River has zero. This data is summarized in **Table 6-23**.

Table 6-23
Rock Springs - Green River Analysis

Airport	Based Aircraft	Total Annual Operations	(A) Total Population Within 30 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by Both Airports (B/A)
Rock Springs	49	17,017	25,282	23,948	22,810 People	90%
Green River (non-paved)	0	34	35,488	14,017	60 Square Miles	64%

Although 90% of the population served by Rock Springs is also served by Green River, the facilities and services at Rock Springs are greater than those of Green River and most users would likely elect to use Rock Springs.

Both Rock Springs and Green River are major economic centers. Although it may appear that the Green River Airport is not of high use, the airport still functions as an emergency landing location to itinerant users. State funds used to maintain a Local Non-Paved Airport are minimal compared to the value of the facility as a potential emergency landing site.

c. Lander – Riverton – (C)

The 30 minute service areas of Riverton, a Commercial Service Airport, and Lander, an Intermediate Airport, overlap for approximately 54 square miles covering a population of approximately 1,271 people. Approximately 15,016 people live within 30 minutes of Lander and approximately 18,841 people live within 30 minutes of Riverton.

Approximately 8% of the population within the 30 minute service area of Lander also lives within 30 minutes of Riverton and 7% of the population within the 30 minute service area of Riverton also lives within 30 minutes of Lander.

When the service areas are split to assume people will travel to the closest airport, Lander serves a total of 14,426 people while Riverton serves 17,994 people. This data is summarized in **Table 6-24**.

Table 6-24
Lander - Riverton Analysis

Airport	Based Aircraft	Total Annual Operations	(A) Total Population Within 30 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by Both Airports (B/A)
Lander	55	11,180	15,016	14,426	1,271 People	8%
Riverton	34	8,423	18,841	17,994	54 Square Miles	7%

Users of Lander could elect to use Riverton as Riverton offers a greater variety of facilities and services. However, Lander currently has 55 based aircraft and it can therefore be assumed that the Lander Airport is fulfilling a role for these users as well as itinerant user and that they prefer to utilize the Lander Airport. It is further assumed that the Lander preference may be due to the use of the Riverton Airport by commercial airlines that may contribute to a lack of ease of use of the Riverton Airport. Both Lander and Riverton are defined as major economic centers.

d. Riverton – Shoshoni - (D)

The 30 minute service areas of Riverton, a Commercial Service Airport, and Shoshoni, a Local Non-Paved Airport, overlap for approximately 74 square miles covering a population of approximately 8,627 people. Approximately 18,841 people live within 30 minutes of Riverton and approximately 9,511 people live within 30 minutes of Shoshoni.

Approximately 46% of the population within the 30 minute service area of Riverton also lives within 30 minutes of Shoshoni and 91% of the population within the 30 minute service area of Shoshoni also lives within 30 minutes of Riverton.

When the service areas are split to assume people will drive to the closest airport, Riverton serves a total of 17,994 people while Shoshoni serves 1,258 people. This data is summarized in **Table 6-25**.

Table 6-25
Riverton - Shoshoni Analysis

Airport	Based Aircraft	Total Annual Operations	(A) Total Population Within 30 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by Both Airports (B/A)
Riverton	34	8,423	18,841	17,994	8,627 People 74 Square Miles	46%
Shoshoni (non-paved)	3	75	9,511	1,258		91%

Similar to the Riverton – Lander discussion, airport users of Shoshoni could elect to use Riverton as Riverton offers a greater variety of facilities and services. However, Riverton with 34 based aircraft is a Commercial Service Airport while Shoshoni, with 3 based aircraft, is a Local Non-Paved facility. Both of these airports serve very different roles and it is assumed that the users of Shoshoni prefer the use of a non-paved runway and more than likely the quieter nature of use of this airport. Although it may appear that Shoshoni is not of high use, the airport does function to serve local users and as a potential emergency landing location to both local and itinerant users. State funds used to maintain a Local Non-Paved Airport are minimal compared to the value of the facility as a potential emergency landing site.

e. Shoshoni – Thermopolis – (E)

In addition to overlapping with the Riverton 30 minute service area to the south, Shoshoni, a Local Non-Paved Airport also overlaps with the Local Paved Airport Thermopolis' service area to the north. This area encompasses approximately 20 square miles covering an estimated population of 9 people. Approximately 9,511 people live within 30 minutes of Shoshoni and 4,506 people live within 30 minutes of Thermopolis.

Less than 1% of the population within the 30 minute service area of Shoshoni also lives within 30 minutes of Thermopolis and visa versa. Shoshoni has 3 based aircraft and 75 annual operations compared to 8 based aircraft and 2,580 annual operations for Thermopolis.

When the service areas of Shoshoni and Thermopolis are split to assume people will drive to the closest airport, Shoshoni serves a total of 1,258 people while Thermopolis serves 4,474 people. This data is summarized in **Table 6-26**.

Table 6-26
Shoshoni - Thermopolis Analysis

Airport	Based Aircraft	Total Annual Operations	(A) Total Population Within 30 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by Both Airports (B/A)
Shoshoni (non-paved)	3	75	9,511	1,258	9 People 20 Square Miles	Less Than 1%
Thermopolis	8	2,580	4,506	4,474		Less Than 1%

Only 9% (875) of the population currently served by Shoshoni is not served by Riverton or Thermopolis' 30 minute service area. If people drive to the closest airport, both Riverton and Thermopolis' 30 minute service area serve the majority of people in this area and effectively reduce the population served in Shoshoni's service area from 9,511 to 1,258 people.

Activity levels at both airports are considered low when compared to other airports of similar size. The state investment in a non-paved airport is minimal compared to the benefit it can serve as a potential emergency landing facility.

f. Thermopolis – Worland – (F)

In addition to overlapping with the Shoshoni 30 minute service area to the south, Thermopolis also overlaps with the Commercial Service Airport Worland's service area to the north for approximately 16 square miles covering a population of 55 people. Total population within 30 minutes of Thermopolis is 4,506 and 7,191 people live within 30 minutes of Worland. When the drive times are split to assume people will drive to the closest airport, Thermopolis serves a total of 4,474 people while Worland serves 7,060 people.

Approximately 1% of the population within the 30 minute service area of Thermopolis also lives within 30 minutes of Worland and less than 1% of the population within 30 minutes of Worland also lives within 30 minutes of Thermopolis. This data is summarized in **Table 6-27**.

Table 6-27
Thermopolis - Worland Analysis

Airport	Based Aircraft	Total Annual Operations	(A) Total Population Within 30 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by Both Airports (B/A)
Thermopolis	8	2,580	4,506	4,474	55 People 16 Square Miles	1%
Worland	13	4,180	7,191	7,060		Less Than 1%

When considering Thermopolis' overlap with both Shoshoni and Worland, 99% of the population served by Thermopolis is within 30 minutes of Thermopolis only. Thermopolis has 8 based aircraft and Worland has 13 and both experience similar operation levels.

Thermopolis users could use the Worland Airport as Worland has a greater variety of facilities and services available although their drive time would be greater than 30 minutes. Although Worland has commercial airline service, it accounts for approximately 1% of the total passenger enplanements and experiences the least amount of total annual operations of all Commercial Service Airports in the State of Wyoming. Due to limited commercial airline use, Worland likely functions in a similar capacity to a Business Airport and would be capable of serving the needs of Thermopolis.

g. Worland – Greybull - (G)

In addition to overlapping with Thermopolis to the south, Worland also overlaps with the Business Airport Greybull's service area to the north for approximately 2 square miles covering a population of approximately 105 people. Approximately 7,191 people live within 30 minutes of Worland and 5,309 people live within 30 minutes of Greybull.

Approximately 1% of the population within the 30 minute service area of Worland also lives within 30 minutes of Greybull and 2% of the population within 30 minutes of Greybull also lives within 30 minutes of Worland.

When considering Worland's overlap with the service areas of both Thermopolis and Greybull, approximately 98% (7,031) of the population within 30 minutes of Worland is only served by Worland.

When the drive times are split to assume people will drive to the nearest airport, Worland serves a total of 7,060 people while Greybull serves 5,308 people. This data is summarized in **Table 6-28**.

Table 6-28
Worland - Greybull Analysis

Airport	Based Aircraft	Total Annual Operations	(A) Total Population Within 30 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by Both Airports (B/A)
Worland	13	4,180	7,191	7,060	105 People	1%
Greybull	27	4,175	5,309	5,308	2 Square Miles	2%

Worland has 13 based aircraft and Greybull has 27. Both airports account for similar number of annual operations, both have similar facilities except Worland's primary runway is about 700 feet longer than the primary runway at Greybull.

The service area overlaps are very small, both airports are utilized and both are serving a population base that no other airport is serving. Although Worland is a Commercial Service Airport, commercial activity makes up a small percentage of the use of the airport and its function is probably closer to that of a Business Airport. Therefore, Worland and Greybull likely serve similar roles and types of users.

h. Greybull – Cowley – (H)

In addition to overlapping with the Worland 30 minute service area to the south, Greybull also overlaps with the 30 minute service area of Cowley to the northwest for approximately 8 square miles of unpopulated area. Approximately 5,309 people live within 30 minutes of Greybull and 5,928 people live within 30 minutes of Cowley.

When considering Greybull's overlap with the service areas of both Worland and Cowley, approximately 98% (5,204) of the population within 30 minutes of Greybull is only served by Greybull.

When the drive times are split to assume people will drive to the nearest airport, Greybull serves a total of 5,308 people while Cowley serves 5,700 people. This data is summarized in **Table 6-29.**

Table 6-29
Greybull - Cowley Analysis

Airport	Based Aircraft	Total Annual Operations	(A) Total Population Within 30 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by Both Airports (B/A)
Greybull	27	4,175	5,309	5,308	0 People	0%
Cowley	10	4,175	5,928	5,700	8 Square Miles	0%

The overlapping service areas of Greybull and Cowley are relatively small when compared to the overall service areas of both airports. In addition, the two airports serve a different role and different types of airport users, are located in the same county and administered by the same airport board. Greybull has 27 based aircraft and Cowley has 10 supporting the fact that demand currently exists for both airports.

i. Cowley – Powell – (I)

In addition to overlapping with the Greybull 30 minute service area to the south, Cowley also overlaps with the Intermediate Airport Powell's service area to the west for approximately 59 square miles covering a population of 466 people. Cowley serves a total of 5,928 people within the 30 minute service area while Powell serves 8,987 people.

Approximately 8% of the population within the 30 minute service area of Cowley also lives within 30 minutes of Powell and approximately 5% of the population within 30 minutes of Powell also lives within 30 minutes of Cowley.

When considering Cowley's overlap with the service areas of both Greybull and Powell, approximately 92% (5,462) of the population within 30 minutes of Cowley is only served by Cowley.

When their service areas are split to assume that people will drive to the closest airport, Cowley serves 5,700 people and Powell serves 8,828. This data is summarized in **Table 6-30**.

Table 6-30
Cowley - Powell Analysis

Airport	Based Aircraft	Total Annual Operations	(A) Total Population Within 30 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by Both Airports (B/A)
Cowley	10	4,175	5,928	5,700	466 People	8%
Powell	17	3,130	8,987	8,828	59 Square Miles	5%

Both airports experience similar usage levels and have similar facilities and services. However, Powell is also recognized as a major economic center. Although the overlap of their service areas is large, both airports are still serving a large portion of the population who live within 30 minutes of each airport and demand currently exists for both airports.

j. Powell – Cody – (J)

In addition to overlapping with the Cowley 30 minute service area to the east, Powell also overlaps with the Commercial Service Airport Cody's service area to the southwest for approximately 24 square miles covering a population of 4,806 people. Approximately 53% of the population served by Powell is also served by Cody and approximately 25% of the population served by Cody is also served by Powell.

When considering Powell's overlap with the service areas of both Cowley and Cody, 41% (3,715) of Powell's service area population is only served by Powell.

When the respective drive times are split to assume people will travel to the closest airport, Powell serves a total of 8,828 people while Cody serves 14,840 people. This data is summarized in **Table 6-31**.

Table 6-31
Powell - Cody Analysis

Airport	Based Aircraft	Total Annual Operations	(A) Total Population Within 30 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by Both Airports (B/A)
Powell	17	3,130	8,987	8,828	4,806 People	53%
Cody	57	38,285	19,272	14,840	24 Square Miles	25%

Both airports serve different roles, are currently utilized and serve major economic centers. They offer different facilities and services and experience different activity levels. These differences may be contributing factors in a user's preference for airport use as some prefer more facilities and services and others prefer a smaller facility with less activity.

k. Sheridan – Buffalo – (K)

The 30 minute service areas of Sheridan, a Commercial Service Airport, and Buffalo, an Intermediate Airport, overlap for approximately 22 square miles covering a population of approximately 181 people. Approximately 24,423 people live within 30 minutes of Sheridan and 7,753 people live within 30 minutes of Buffalo. When service areas are split to assume people will drive to the closest airport, Sheridan serves 24,346 people and Buffalo serves 7,643.

Less than 1% percent of the population served by Sheridan is also served by Buffalo and 2% of the population served by Buffalo is also served by Sheridan. This data is summarized in **Table 6-32.**

Table 6-32
Sheridan - Buffalo Analysis

Airport	Based Aircraft	Total Annual Operations	(A) Total Population Within 30 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by Both Airports (B/A)
Sheridan	88	37,230	24,423	24,346	181 People 22 Square Miles	Less Than 1%
Buffalo	20	7,320	7,753	7,643		2%

Both airports serve different roles, are currently utilized and the majority of people within the 30 minute service area of each airport are exclusively served by that airport. In addition, both Sheridan and Buffalo have been identified as major economic centers.

l. Newcastle – Upton – (L)

The 30 minute service area of Newcastle, an Intermediate Airport, overlaps with Upton, a Local Non-Paved Airport's 30 minute service area for approximately 77 square miles covering a population of 692 people. Approximately 5,334 people live within 30 minutes of Newcastle and approximately 2,519 people live within 30 minutes of Upton.

Approximately 13% of the population served by Newcastle is also served by Upton, and 27% of the population served by Upton is also served by Newcastle. When the respective drive times are split to assume people will travel to the closest airport, Newcastle serves a total of 4,922 people while Upton serves 2,355. This data is summarized in **Table 6-33.**

Table 6-33
Newcastle - Upton Analysis

Airport	Based Aircraft	Total Annual Operations	(A) Total Population Within 30 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by Both Airports (B/A)
Newcastle	11	5,000	5,334	4,922	692 People 77 Square Miles	13%
Upton (non-paved)	1	60	2,519	2,355		27%

Both airports serve different roles and have significantly different activity levels. The state investment in a non-paved airport is minimal compared to the benefit it can serve as a potential emergency landing facility.

m. Douglas – Glendo – (M)

Douglas, a Business Airport, serves approximately 8,340 people within a 30 minute service area; Glendo, a Local Non-Paved Airport, serves approximately 2, 325. The 30 minute service areas for both airports overlap for approximately 52 square miles and include a population of approximately 1,751 people.

Approximately 21% of the population served by Douglas is also served by Glendo and approximately 75% of the population served by Glendo is also served by Douglas. When the respective drive times are split to assume people will travel to the closest airport, Douglas serves a total of 8,234 people while Glendo serves 606. This data is summarized in **Table 6-34**.

Table 6-34
Douglas - Glendo Analysis

Airport	Based Aircraft	Total Annual Operations	(A) Total Population Within 30 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by Both Airports (B/A)
Douglas	37	5,585	8,340	8,234	1,751 People 52 Square Miles	21%
Glendo (non-paved)	0	450	2,325	606		75%

The town of Glendo lies approximately 5 miles beyond the Douglas 30 minute service area. Douglas has been identified as a major economic center in Wyoming. Both airports serve different roles and types of users and usage levels vary significantly. State investment in a non-paved airport is minimal compared to the benefit it can serve as a potential emergency landing facility.

n. Glendo – Wheatland – Guernsey – (N)

In addition to overlapping with the Douglas 30 minute service area to the northwest, Glendo also overlaps with the Intermediate Airports Wheatland and Guernsey's service area to the south and southeast for approximately 86 square miles covering a population of 90 people. Approximately 2,325 people live within 30 minutes of Glendo, 6,338 within 30 minutes of Wheatland and 2,080 within 30 minutes of Guernsey. When service areas are split to assume people travel to the closest airport, Glendo serves 606 people, Wheatland serves 6,315 people and Guernsey serves 1,855 people.

When considering Glendo's overlap with the service areas of Douglas, Wheatland and Guernsey, approximately 21% of the population within Glendo's 30 minute service area is only served by Glendo.

Approximately 4% of the population with a 30 minute service area of Glendo is also served by Wheatland or Guernsey, 1% of the population served by Wheatland is also served by Glendo or Guernsey and 4% of the population served by Guernsey is also served by Glendo or Wheatland. This data is summarized in **Table 6-35.**

Table 6-35
Glendo - Wheatland - Guernsey Analysis

Airport	Based Aircraft	Total Annual Operations	(A) Total Population Within 30 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by Both Airports (B/A)
Glendo (non-paved)	0	450	2,325	606	90 People 86 Square Miles	4%
Wheatland	14	3,820	6,338	6,315		1%
Guernsey	6	3,900	2,080	1,855		4%

Glendo, a Non-Paved Local Airport functions in a very different capacity when compared to the Intermediate Airports, Wheatland and Guernsey. Although the use of Glendo is low, the state investment in a Non-Paved Local Airport is minimal compared to the benefit it can serve as a potential emergency landing facility.

Although Wheatland and Guernsey are both classified as an Intermediate Airport, they are currently functioning differently. Wheatland functions as more of a typical general aviation facility serving both itinerant and local operations while Guernsey supports a large military operation and less itinerant and local activity. The military operation includes use by large C-130 military aircraft and is home to the Camp Guernsey Joint Training Center of the Wyoming Army National Guard located adjacent to the airport. Military use, especially large military aircraft activity can sometimes be a deterrent to general aviation activity. A breakdown of total annual operations by type is shown in **Table 3-18**.

There are a small number of people living in the overlap areas of these airports and each is fulfilling a different role in the Wyoming Aviation System.

o. Guernsey – Torrington – (O)

In addition to overlapping with Wheatland and Glendo, the 30 minute service area of Guernsey also overlaps with the 30 minute service area of Torrington, an Intermediate Airport. The Guernsey-Torrington overlap includes an area of approximately 14 square miles covering a population of 231 people. Guernsey, an Intermediate Airport, serves a total of 2,080 people within its 30 minute service area and Torrington serves 10,289. When service areas are split to assume people will travel to the closest airport, Guernsey serves 1,855 people while Torrington serves 10,221 people.

Approximately 11% of the population within Guernsey's 30 minute service area is also within the 30 minute service area of Torrington and 2% of the population within the 30 minute service area of Torrington is also within the 30 minute service area of Guernsey.

Taking into consideration Guernsey's overlapping service areas with Wheatland, Glendo and Torrington, approximately 85% of the population within the 30 minute service area of Guernsey is only served by Guernsey. This data is summarized in **Table 6-36.**

Table 6-36
Guernsey - Torrington Analysis

Airport	Based Aircraft	Total Annual Operations	(A) Total Population Within 30 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by both airports (B/A)
Guernsey	6	3,900	2,080	1,855	231 People 14 Square Miles	11%
Torrington	27	4,431	10,289	10,221		2%

Both airports have similar operation levels. Torrington however, is more utilized from a local perspective in terms of a higher number of based aircraft. Both airports have identified major users as business and the military. Torrington offers more services when compared to Guernsey, but Guernsey has an Air Traffic Control Tower which is operated during the day. In addition, Guernsey supports a large military operation and less itinerant and local activity. The military operation includes use by large C-130 military aircraft and is home to the Camp Guernsey Joint Training Center of the Wyoming Army National Guard located adjacent to the airport. Military use, especially large military aircraft activity can sometimes be a deterrent to general aviation activity. For that reason, users in the overlap may elect to use Torrington.

The overlap area of these airports is relatively small and both airports are fulfilling a different role in the Wyoming Aviation System.

p. Cheyenne – Pine Bluffs – (P)

The 30 minute service area of Cheyenne, a Commercial Service Airport, and Pine Bluffs, a Local Airport with a future expected classification change to an Intermediate Airport, overlap for approximately 8 square miles covering a population of 53 people. Cheyenne serves 82,385 people within 30 minutes while Pine Bluffs serves 2001.

When the respective service areas are split to assume people will drive to the nearest airport, Cheyenne serves a total of 82,364 while Pine Bluffs serves 1,970. This data is summarized in **Table 6-37**.

Table 6-37
Cheyenne - Pine Bluffs Analysis

Airport	Based Aircraft	Total Annual Operations	(A) Total Population Within 30 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by Both Airports (B/A)
Cheyenne	77	58,853	82,385	82,364	53 People	Less Than 1%
Pine Bluffs	9	8,000	2001	1,970	8 Square Miles	3%

Considering that less than 1%, (53 people) of the total 82,385 people served by Cheyenne are also served by Pine Bluffs and approximately 3% of the population served by Pine Bluffs is also served by Cheyenne, this area of overlap is not considered significant. In addition, both airports serve different types of users. Cheyenne has military and airline operations which are sometimes a deterrent to general aviation users. Therefore, some users may prefer Pine Bluffs over Cheyenne. Also, Pine Bluffs is outside the Class D airspace surrounding Cheyenne Regional Airport which may be an attractant to some recreational airport users.

q. Cheyenne – Laramie – (Q)

In addition to overlapping with Pine Bluffs, Cheyenne's 30 minute service area also overlaps with that of Laramie, a Commercial Service Airport, for approximately 1 square mile and includes 2 people. Laramie's 30 minute service area includes a total of 29,477 people compared to Cheyenne's service area which includes 82,385 people. When the respective service areas are split to assume people will drive to the nearest airport, Cheyenne serves a total of 82,364 people while Laramie serves 29,564 people.

Less than one percent of each airport's population served is also served by the other airport's 30 minute service area.

When considering Cheyenne's overlap with Pine Bluffs, nearly 100% (82,332 people) of those served by Cheyenne are only served by Cheyenne. This data is summarized in **Table 6-38**.

Table 6-38
Cheyenne - Laramie Analysis

Airport	Based Aircraft	Total Annual Operations	(A) Total Population Within 30 Minutes	Total Population Served When People Drive to Closest Airport	(B) Overlapping Service Areas	% of (A) Served by both airports (B/A)
Cheyenne	77	58,853	82,385	82,364	2 People	Less Than 1%
Laramie	39	10,090	29,477	29,474	1 Square Mile	Less Than 1%

Both airports have a large number of based aircraft and experience an active number of annual operations. When considering the use of these airports as general aviation facilities and the small amount of overlap of their service areas, there is little potential for redundancy between these two airports in terms of general aviation use.

r. Conclusions

Although service area overlaps exist, airports within the state serve different roles and in most cases, different types of users. In general, the higher the percentage of population served by both airports, the more likelihood that one airport could serve the entire area making an airport in the overlap area potentially redundant. However, before any airport is considered redundant, a specialized local study should be initiated to study the exact contributions of each airport in the overlap area to the Wyoming Aviation System.

6.1.3.2 Measure: Percent of Wyoming Population Within a 90 Minute Drive Time of an Airport Offering Air Charter Service

Air Charter is an important component of accessible and reliable air transportation options. Air Charter is typically used by businesses when air travel is necessary and when time constraints and commercial airline schedules do not allow the flexibility often required by this type of user. The 90 minute drive time was selected as the greatest distance people would most likely travel to use this type of service.

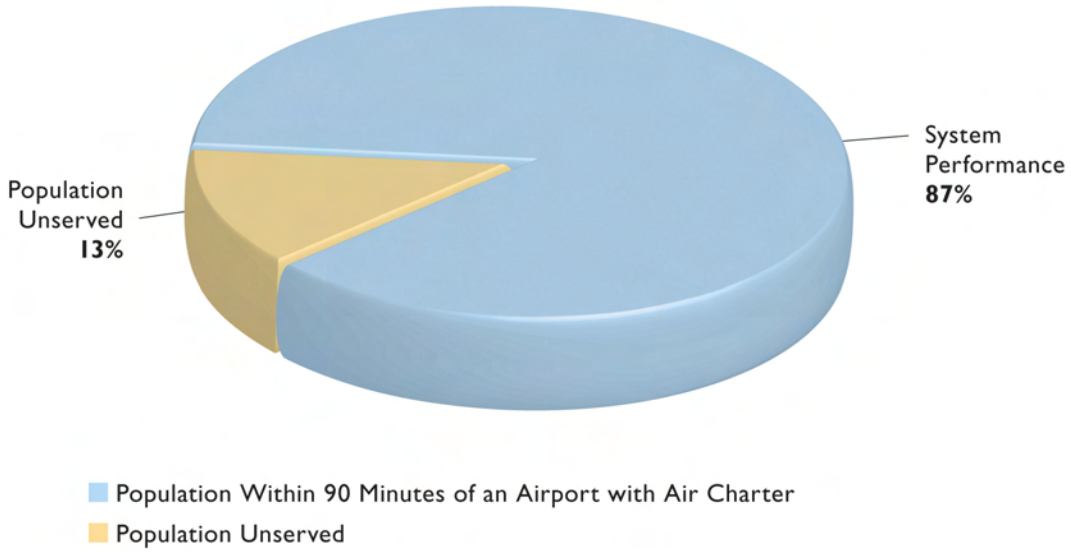
Eight Commercial Service Airports and one Intermediate Airport in Wyoming currently offer Air Charter Service. Using only Wyoming Airports, 81% of Wyoming's population lives within 90 minutes of a Wyoming Airport offering Air Charter Service. A target performance of 85% has been set for this measure.

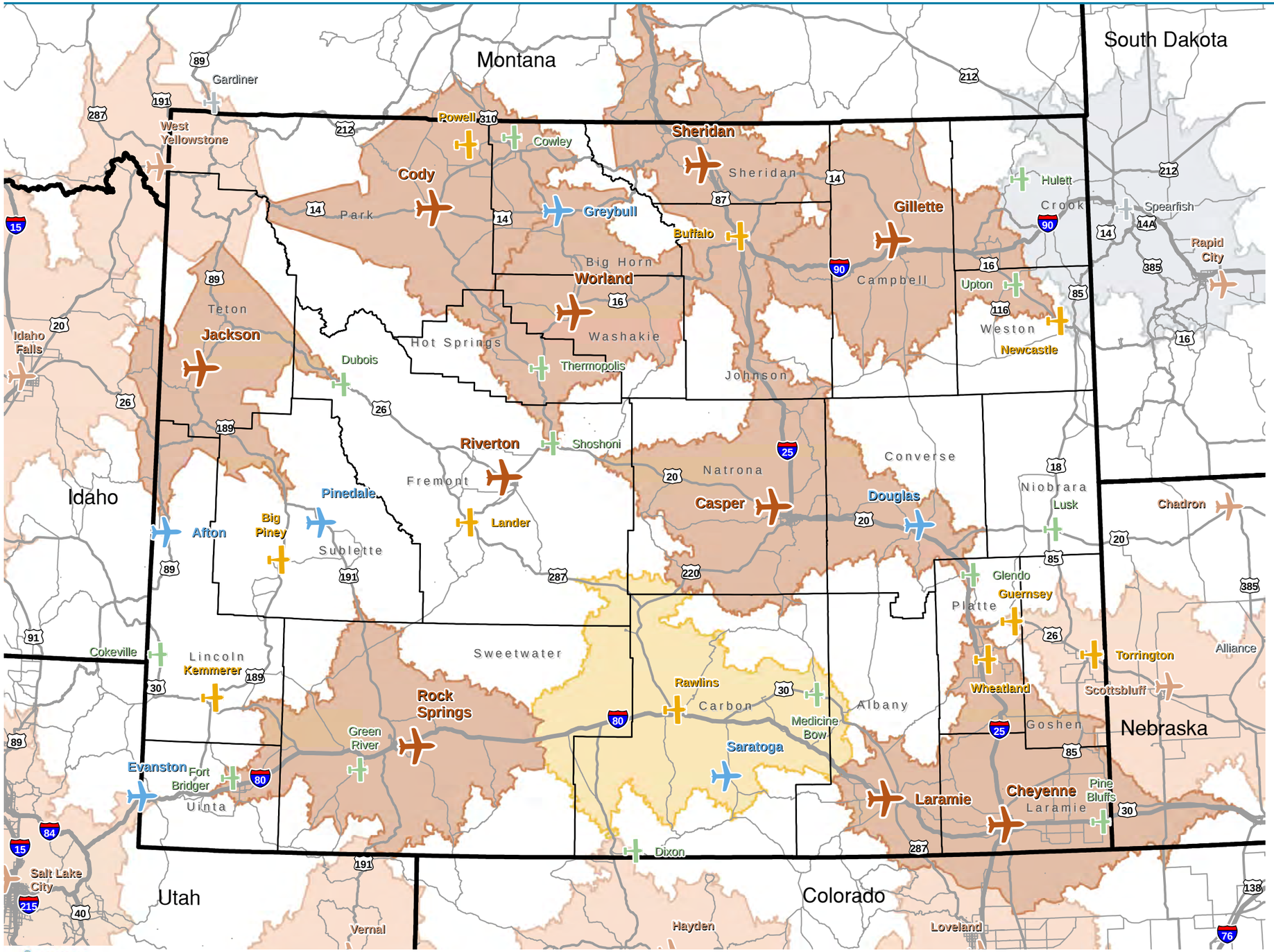
Six out of state airports with Air Charter Service have 90 minute service areas extending into Wyoming thereby also serving portions of the Wyoming population. These airports include: Western Nebraska Regional Airport located in Scottsbluff, Nebraska; Black Hills Airport located in Spearfish, South Dakota; Salt Lake City International Airport located in Salt Lake City, Utah; Vernal Regional Airport located in Vernal, Utah; Yampa Valley Regional Airport located in Hayden, Colorado; and Yellowstone Airport located in West Yellowstone, Montana. When the out of state airports are added to this measure, the percent coverage increases to 87%. This is the current system performance for this measure. **Table 6-39** shows all airports offering Air Charter Service to Wyoming residents, total estimated population served by each airport and total system coverage for this measure. It was assumed that Air Charter Service is equal at these airports, drive time service areas would not overlap or compete, people would not discriminate between a Wyoming Airport and an out of state airport, would travel at published speed limits and would elect to drive to the airport closest to their residence or business. **Figure 6-5** shows the 90 minute service area from the Wyoming and out of state airports currently offering Air Charter Service. **Chart 6-1** portrays the system performance graphically.

Table 6-39
Wyoming Population Within 90 Minutes of an Airport with Air Charter Service

Airport	2008 Population	
	Population	%
Cheyenne	124,309	23.50%
Casper	86,209	16.30%
Rock Springs	44,804	8.47%
Gillette	44,438	8.40%
Sheridan	35,595	6.73%
Cody	33,273	6.29%
Jackson	25,362	4.80%
Worland	18,188	3.44%
Rawlins	15,145	2.86%
Scottsbluff, NE	12,673	2.40%
Salt Lake City, UT	12,327	2.33%
Spearfish, SD	8,291	1.57%
Hayden, CO	695	0.13%
West Yellowstone, MT	244	0.05%
Vernal, UT	15	0.00%
System Total	**461,566**	**87.27%**
Population Unserved	**67,334**	**12.73%**

Chart 6-1
Percentage of Wyoming Population Within 90 Minutes of an Airport with Air Charter Service





Legend

Airport Type

- Commercial
- Business
- Intermediate
- Local
- Commercial (Out of state)
- General Aviation (Out of state)

90 Minute Drive Times

- Commercial
- Intermediate
- Commercial (Out of state)
- General Aviation (Out of state)

Road Classification

- Interstates
- Highways
- Secondary Roads

0 25 50 Miles

Source: Census 2000, ESRI, SEH, WYGISC Digital WY Atlas, WY Dept of A&I

Figure 6-5 - Airports Currently Offering Air Charter Service - 90 Minute Service Areas

A large gap in coverage of airports with Air Charter Service can be seen between Riverton and Pinedale along the US Highway 26 and 287 corridor and US Highway 191. If Riverton and Pinedale were to add Air Charter as a service offered at their airport, the system performance for this measure would increase to 95% when including out of state airports.

The existing coverage and the target performance for this measure are shown collectively in **Table 6-40.** The potential increase in coverage is shown graphically in **Figure 6-6** by adding the Riverton and Pinedale airports.

Table 6-40
Air Charter Service and 90 Minute Coverage

	Percent Coverage
Target Performance	85%
System Performance	87%

As seen from the data presented, the existing system currently meets the target performance for this measure.

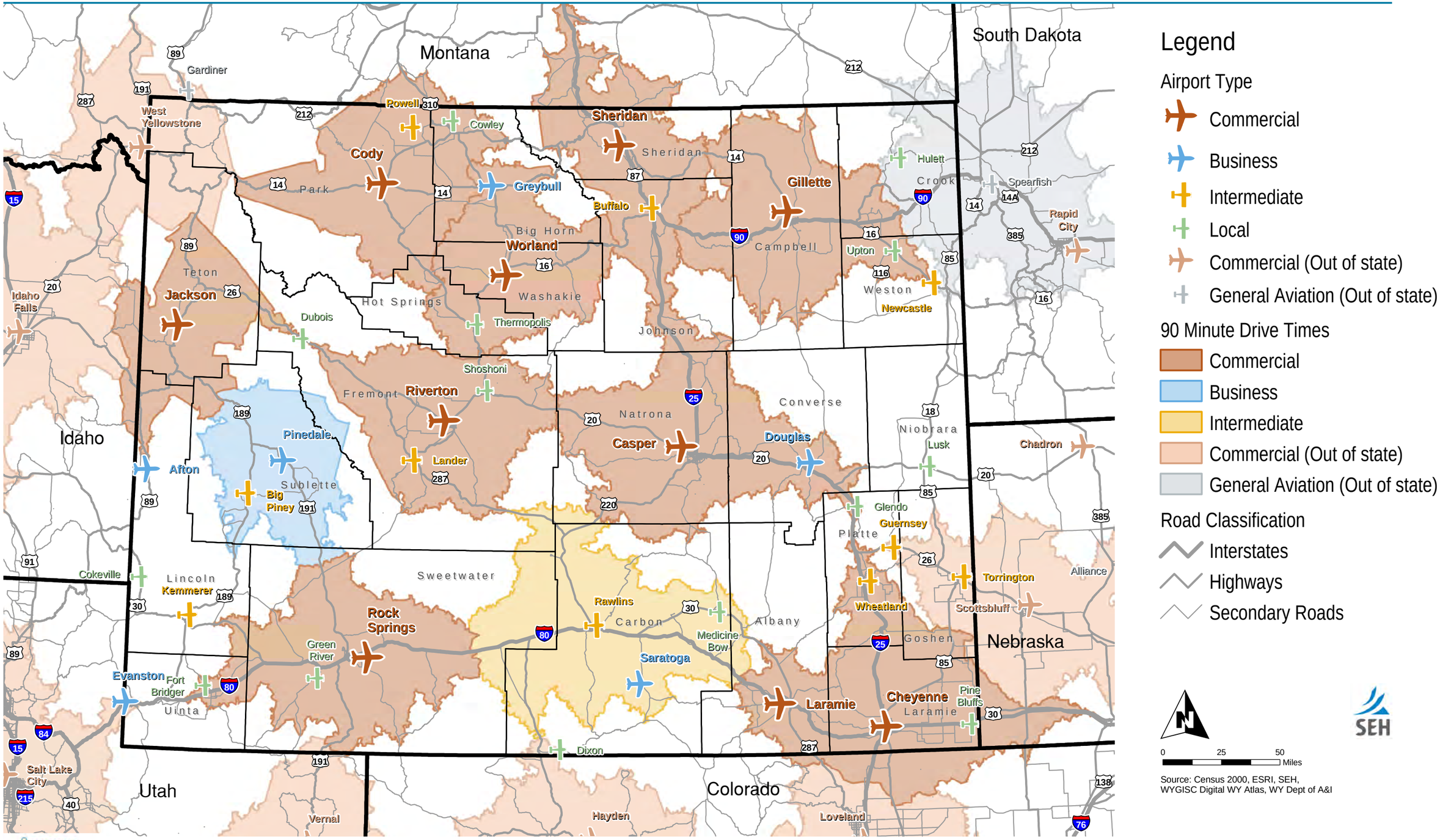


Figure 6-6 - Airports Currently Offering Air Charter Service Including Potential Addition of Riverton and Pinedale - 90 Minute Service Areas

6.1.3.3 Measure: Percent of Economic Centers Located Within 60 Minutes of a Commercial Service or Business Airport

Economic Centers were discussed in **Chapter 3, Section 3.1.** For the purposes of this study, major economic centers are defined as cities/towns with over 100 million dollars in estimated taxable retail sales. A drive time of 60 minutes was used for this measure in order to represent the frequent use of airports located near economic centers for business purposes. Businesses would typically use a nearby airport for the shipment of products (cargo) and also for executive and employee travel. It is recognized that business travel is generally more time sensitive when compared to leisure travel. For businesses, the amount of time required to reach an airport can translate into higher or lower costs depending on the time involved to reach an airport. For these reasons, a 60 minute drive time was selected for this measure. **Table 6-41** shows these economic centers which include 21 cities/towns located in 16 counties across the State of Wyoming and the Commercial Service or Business Airport currently located within 60 minutes of these economic centers. **Figure 6-7** displays this measure graphically.

Table 6-41
Economic Centers and Commercial Service and Business Airports Within 60 Minutes

Economic Center	County	City Population Estimate[1]		Estimated Taxable Retail Sales[1]	Commercial Service or Business Airport located within 60 minutes
		2008	2020		
Gillette	Campbell	24,822	31,832	$1,687,601,314	Gillette – CS [2]
Casper	Natrona	54,079	60,433	$1,497,513,660	Casper – CS
Rock Springs	Sweetwater	19,952	21,801	$919,131,433	Rock Springs – CS
Cheyenne	Laramie	56,829	61,330	$789,073,317	Cheyenne – CS
Green River	Sweetwater	12,561	13,725	$580,131,717	Rock Springs – CS
Pinedale	Sublette	1,903	2,905	$456,317,100	Pinedale – Business
Jackson	Teton	9,360	10,566	$394,106,767	Jackson – CS
Laramie	Albany	26,334	26,705	$375,193,050	Laramie – CS
Rawlins	Carbon	8,816	8,748	$326,792,050	Saratoga – Business
Sheridan	Sheridan	16,861	18,303	$287,033,717	Sheridan – CS
Evanston	Uinta	11,820	12,200	$251,664,200	Evanston – Business
Marbleton	Sublette	962	1,469	$232,682,925	Pinedale - Business
Cody	Park	9,355	9,660	$205,739,550	Cody – CS
Riverton	Fremont	9,760	10,340	$202,162,925	Riverton – CS
Buffalo	Johnson	4,666	5,749	$184,632,960	Sheridan – CS
Lander	Fremont	7,154	7,580	$149,114,150	Riverton – CS
Douglas	Converse	5,766	6,239	$147,985,360	Casper – CS Douglas – Business
Big Piney	Sublette	542	828	$131,853,650	Pinedale – Business
Powell	Park	5,456	5,634	$125,120,375	Cody – CS
Kemmerer	**Lincoln**	**2,871**	**3,515**	**$121,761,800**	**Closest - Evanston – Business**
Wright	**Campbell**	**1,591**	**2,041**	**$112,323,295**	**Closest – Gillette – CS**

Notes: [1] WY Department of Administration and Information, WY Economic Analysis Division and WY Department of Revenue
[2] CS – Commercial Service
Bold – Economic Centers not within 60 minutes drive time of a Commercial or Business Airport

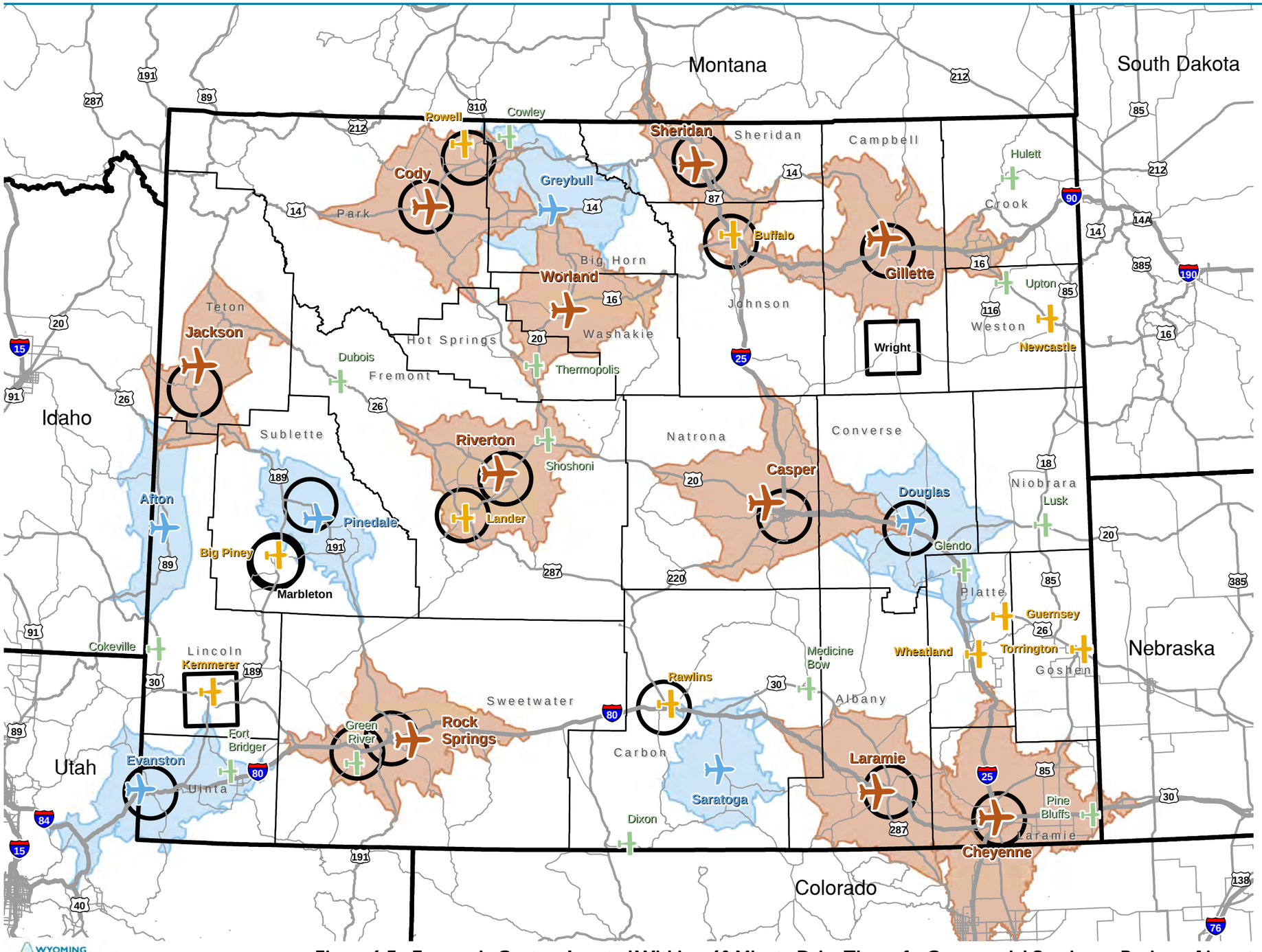


Figure 6-7 - Economic Centers Located Within a 60 Minute Drive Time of a Commercial Service or Business Airport

Of the 21 identified economic centers, Kemmerer, located in Lincoln County, and Wright, located in Campbell County, are not within 60 minutes drive time of a Commercial Service or Business Airport. This represents a system performance for this measure of 90%. Target performance for this measure is 100%.

Although Kemmerer and Wright are not within 60 minutes of a Commercial Service or Business Airport, they are located within four and eight miles respectively of the 60 minute service area of the Evanston and Gillette airports. The city of Kemmerer is located approximately 62 minutes from Evanston and Wright is located approximately 72 minutes from Gillette.

Kemmerer has its own Intermediate Airport and Wright does not have an airport. As presented in **Chapter 2**, Kemmerer is expected to change classification to a Business Airport within the 20-year planning period. During the master planning process for Kemmerer, an analysis to determine if the airport is meeting the economic needs of this economic center should be evaluated as well as the distance from Evanston. It may be determined that the Kemmerer Airport should be upgraded to a Business Airport. It may also be determined that the economic needs of Kemmerer do not require aviation or that the needs can be served by the Business Airport, Evanston.

Similar to Kemmerer, Wright is also not within 60 minutes of a Commercial Service or Business Airport. However, unlike Kemmerer, Wright does not have an airport. This economic center may be enhanced with the support of an airport located nearer to this economic center. In addition, Wright is located within Campbell County which is forecast to increase by the largest number in terms of real population by the year 2020. A study to analyze and validate how a new airport might serve the economic center of Wright and the surrounding area should be initiated as this could be a potential gap in the current system. The need and the type of airport that may be required in Wright should be evaluated and justified through a separate planning document.

It should also be noted that if the Kemmerer Airport is upgraded to Business and if an airport is developed in Wright, the 60 minute service area of these airports would overlap with the existing airports Evanston and Gillette respectively. In addition, the population base within 60 minutes of Kemmerer is 4,976 and Wright has 2,250 individuals. These numbers assume that the service areas do not overlap with existing airports and that people would elect to drive to the nearest facility.

Adding at least a Business Airport in Wright and changing the classification of Kemmerer to a Business Airport would increase the performance of this measure to 100%.

All Commercial Service Airports are currently serving economic centers, as defined for the purposes of this study, with the exception of Worland. The closest economic centers to Worland are Cody and Riverton, both served by their own airport. However, although Worland does not have over one million dollars in estimated taxable retail sales to qualify as a major economic center for the purpose of this study, the estimated taxable retail sales of Worland approximates eighty million dollars which should still be considered substantial.

It should be noted that the Business Airport in Pinedale is able to serve three economic centers located in Sublette County: Pinedale, Marbleton and Big Piney. Three additional Business Airports Douglas, Evanston and Saratoga, also serve economic centers. If the economic development associated with Pinedale, Douglas, Evanston and Saratoga can benefit from the use of a Business Airport, focus on the development of these four Business Airports should be a priority when compared with the two remaining Business Airports. However, like Worland, the estimated taxable retail sales of the Business Airport Afton is also around eighty million dollars, making this area a substantial economic contributor as well.

The target and system performance for this measure are shown in **Table 6-42**.

Table 6-42
Economic Centers and 60 Minute Coverage

	Percent Coverage
Target Performance	100%
System Performance	90%

The top 50 economic centers were shown previously in **Chapter 3**, **Table 3-2**.

6.1.3.4 Measure: Percent of Commercial Service, Business and Intermediate Airports Meeting the Primary Runway Instrument Approach Objective

Precision and non-precision instrument approaches increase the all-weather usability of an airport. Four airports in the system do not meet their objective for a primary runway instrument approach and include: Cody, Laramie, Worland and Lander. **Table 6-43** shows that the current system is performing at 85% and shows an established target performance of 80% for this measure. Worland's runway/taxiway separation standards are not adequate to support a precision approach with lower than ¾ statue mile visibility. Until such a time that the airport's use increases, it is unlikely that a precision approach with lower than ¾ statue mile visibility will be established at this location.

Table 6-43
Primary Runway Instrument Approach - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (26)	85%	80%
Commercial Service (10)	70%	90%
Business Airport (6)	100%	80%
Intermediate Airport (10)	90%	70%
Local Paved (9)	Not an Objective	
Local Non-Paved (5)	Not an Objective	
Note: ( ) indicates the total number of airports included in analysis		

6.1.4 Goal: Develop a Statewide Aviation System That Enhances Economic Activity

Three measurements of this goal have been established and each is discussed in the following subsections. The measurements are as follows:

- Percent of Commercial Service and Business Airports meeting six out of seven full service attributes (full service attributes: 24-hour fuel availability, FBO, aircraft maintenance, charter service, flight training, deicing facilities, aircraft rental)
- Percent of airports meeting the terminal building objective
- Percent of airports meeting the fuel objective

6.1.4.1 Measure: Percent of Commercial Service/Business Airports Meeting 6 out of 7 Full Service Attributes (24-hour Fuel, FBO, Aircraft Maintenance, Charter Service, Flight Training, Deicing Facilities, Aircraft Rental)

Airports with these types of full service attributes support commercial and business operations at the airport. Full service attributes attract these users not only to the airport but to the region and communities the airports serve. This measurement applies to only Commercial Service and Business Airports. **Table 6-44** shows which airports are currently meeting this measure and the full service attributes needed by the airports not meeting this measure.

Table 6-44
Airports and Full Service Attributes

Airport	24-hour Fuel	FBO	Aircraft Maintenance	Charter Service	Flight Training	Deicing Facilities	Aircraft Rental	Attribute Needed
Casper	X	X	X	X	X	X	X	None
Cheyenne	X	X	X	X	X	X	X	None
Cody	-	X	X	X	X	X	X	None
Gillette	X	X	X	X	X	X	X	None
Jackson	**-**	**X**	**X**	**X**	**-**	**X**	**X**	**24-HF, FT**
Laramie	**-**	**X**	**-**	**-**	**-**	**X**	**X**	**24-HF, AM, CS, FT**
Riverton	**X**	**X**	**X**	**-**	**-**	**X**	**X**	**CS, FT**
Rock Springs	**X**	**-**	**-**	**X**	**-**	**X**	**X**	**FBO, AM, FT**
Sheridan	-	X	X	X	X	X	X	None
Worland	**X**	**X**	**X**	**X**	**-**	**-**	**-**	**FT, DF, AR**
Afton	X	X	X	-	X	X	X	None
Douglas	**-**	**X**	**X**	**-**	**-**	**-**	**-**	**24-HF, CS, FT, DF, AR**
Evanston	**-**	**X**	**X**	**-**	**X**	**X**	**X**	**24-HF, CS**
Greybull	**X**	**X**	**X**	**-**	**-**	**-**	**-**	**CS, FT, DF, AR**
Pinedale	**X**	**X**	**X**	**-**	**-**	**X**	**-**	**CS, FT, AR**
Saratoga	**-**	**X**	**-**	**-**	**-**	**X**	**-**	**24-HF, AM, CS, FT, AR**

Notes: 24-hour Fuel (24-HF), Fixed Based Operator (FBO), FAA Certified Aircraft Maintenance (AM), Charter Service (CS), Flight Training (FT), Deicing Facilities (DF), Aircraft Rental (AR)
Bold – Airports not meeting 6 of 7 Full Service Attributes

Source: 2007 SEH Airport Survey

As shown in **Table 6-44**, six of the sixteen airports included in this measure have six of the seven full service attributes. This represents a system performance of 38%. A target performance of 50% has been set for this measure. It is understood that many of these services are not under the control of the system airports and depend on availability of businesses in the region to offer these services. However, it is important for airports to support business operations and strive to offer these services when possible. **Table 6-45** shows the current and target performance for this measurement.

Table 6-45
Full Service Attributes - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (16)	38%	50%
Commercial Service (10)	50%	50%
Business (6)	17%	50%
Intermediate (10)	Not an Objective	
Local Paved (9)	Not an Objective	
Local Non-Paved (5)	Not an Objective	
Note: ( ) indicates the total number of airports included in analysis		

6.1.4.2 Measure: Percent of Airports Meeting the Terminal Building Objective

In order to provide consistent facilities across the Wyoming Aviation System, it is a goal of Aeronautics to have some type of terminal facility at Commercial, Business and Intermediate Airports. A terminal building can provide a space for airline operations, offer shelter from the elements, a place to conduct business, plan a flight, and/or a place to rest.

As shown in **Table 6-46,** 100% of the Commercial Service, Business and Intermediate airports currently have some type terminal facility at their airport. A target performance of 100% has been set for this measure.

Table 6-46
Terminal Building - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (26)	100%	100%
Commercial Service (10)	100%	100%
Business Airport (6)	100%	100%
Intermediate Airport (10)	100%	100%
Local Paved (9)	Not an Objective	
Local Non-Paved (5)	Not an Objective	
Note: ( ) indicates the total number of airports included in analysis		

6.1.4.3 Measure: Percent of Airports Meeting the Fuel Objective

Fuel facilities, types of fuel offered and price are a main attractant that brings transient aircraft operators to a particular airport. Attracting airport operators to a facility, area and region can potentially increase the economic stimulus. Also, when choosing an airport to base an aircraft, fuel services serves as an attractant to potential based aircraft. As a reminder, the fuel objective for Commercial Service and Business Airports is to have Jet A and 100LL. Intermediate Airports should have 100LL and this was not an objective for Local Airports.

Table 6-47 shows that 96% of the current system is meeting this measurement. As fuel availability is a major attractant to business use of a facility, a target performance goal of 90% has been set for this measure.

Table 6-47
Fuel Objective - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (26)	96%	90%
Commercial Service (10)	100%	100%
Business Airport (6)	100%	100%
Intermediate Airport (10)	90%	75%
Local Paved (9)	Not an Objective	
Local Non-Paved (5)	Not an Objective	
Note: ( ) indicates the total number of airports included in analysis		

6.1.5 Goal: Promote an Aviation System that is Environmentally Responsible

Three measurements of this goal have been established and each is discussed in the following subsections. The measurements are as follows:

- Percent of airports meeting the land use protection plan objective
- Percent of airports meeting the deicing containment objective
- Percent of airports meeting the noise contour map objective

6.1.5.1 Measure: Percent of Airports Meeting the Land Use Protection Plan Objective

A land use protection plan provides protection of people and property in the air and on the ground. When proper land use planning is in place and enforced, it can prevent activities near the airport that would be non-compatible with airport operations.

System Performance of this measure is 40%. System and target performances are presented in **Table 6-48**. In some areas, enacting a land use protection plan may be difficult. However, to protect the people and property in the air and on the ground and well as the public investment in the airport, proper land use protection is recommended. A target performance for the system of 85% has been established.

Table 6-48
Land Use Protection Plan - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (35)	40%	85%
Commercial Service (10)	60%	100%
Business Airport (6)	50%	100%
Intermediate Airport (10)	10%	75%
Local Paved (9)	44%	75%
Local Non-Paved (5)	Not an Objective	
Note: ( ) indicates the total number of airports included in analysis		

6.1.5.2 Measure: Percent of Commercial Service Airports Meeting the Deicing System Containment Objective

Airplane deicing operations typically involve chemical ethylene glycol or propylene glycol. These chemicals have high biological oxygen demand and can have a significant environmental impact on area waters. Therefore, some type of containment and disposal of deicing agents is recommended.

As can be seen in **Table 6-49,** 40% of the Commercial Service Airports meet the deicing system containment objective and include: Casper, Cheyenne, Gillette and Sheridan. All other Commercial Service Airports in Wyoming, with the exception of Worland, have deicing facilities but do not have an associated containment system. It is unknown what type of chemical agents, if any, these airports use. A target performance of 50% has been established for this measure.

Table 6-49
De-icing Containment - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (10)	40%	50%
Commercial Service (10)	40%	50%
Business Airport (6)	Not an Objective	
Intermediate Airport (10)	Not an Objective	
Local Paved (9)	Not an Objective	
Local Non-Paved (5)	Not an Objective	
Note: ( ) indicates the total number of airports included in analysis		

6.1.5.3 Measure: Percent of Airports Meeting the Noise Contour Map Objective

Noise Contour Maps depict the area of potential noise impacts of airport operations on both airport and surrounding property and are generally updated and included as part of an ALP update. Airports use noise contour maps to identify and evaluate areas that warrant noise control actions.

A goal of Aeronautics is to have an aviation system that is environmentally responsible. According to FAA guidelines, noise exposure is considered significant if the 65 Day/Night Average Sound Level (DNL) or greater encroaches on any noise sensitive area. A Noise Contour Map helps identify noise sensitive areas that may be impacted by airport operations and require mitigation actions.

As presented in **Chapter 5**, a Noise Contour Map is an objective for Commercial Service, Business and Intermediate Airports. Twenty out of twenty-six airports do not meet this objective. It is anticipated that all twenty-six airports should have a Noise Contour Map developed and/or updated within the next five years as part of the airport layout plan/master planning process. As such, a performance target of 100% has been set for this measure as shown in **Table 6-50**.

Table 6-50
Noise Contour Map - System Performance/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (26)	23%	100%
Commercial Service (10)	30%	100%
Business Airport (6)	33%	100%
Intermediate Airport (10)	10%	100%
Local Paved (9)	Not an Objective	
Local Non-Paved (5)	Not an Objective	
Note: ( ) indicates the total number of airports included in analysis		

6.1.6 Goal: Promote Educational Activities and Raise Public Awareness of the Aviation System and its Value

Two measurements of this goal have been established and each is discussed in the following subsections. The measurements are as follows:

- Percent of Commercial Service and Business Airports with websites or a dedicated web page on a sponsor web site
- Percent of airports with an annual air show, fly-in, or other public event

6.1.6.1 Measure: Percent of Commercial Service/Business Airports with Web Site or a Dedicated Page on a Sponsor Web Site

Web sites help to promote an airport and provide airport information to the local community and airport users. Web sites can also be used to promote local aviation events.

Current system performance of this measure is 63%. Airports with web sites have either a dedicated airport site or a page on the sponsor's web site. It is recommended that Commercial Service and Business Airports have an airport web site.

A target system performance of 75% has been set for this measure. The existing system performance and the target performance are shown collectively in **Table 6-51** and **Appendix A.**

Table 6-51
Web Site - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (16)	63%	75%
Commercial Service (10)	90%	100%
Business Airport (6)	17%	50%
Intermediate Airport (10)	Not an Objective	
Local Paved (9)	Not an Objective	
Local Non-Paved (5)	Not an Objective	
Notes: ( ) indicates the total number of airports included in analysis		

6.1.6.2 Measure: Percent of Airports with Annual Air Show, Fly-In, or Other Public Event

Public events at an airport or hosted by an airport can include annual air-shows, fly-ins, open houses and other similar events. These events help not only to promote aviation but to educate the local community on the benefit of the airport and the economic impact an airport can have on the local and state economy.

Air shows and fly-ins provide an opportunity for members of a community to visit an airport and to learn about aviation, aircraft and the local airport. These events sometimes include other community events such as pancake breakfasts, hangar dances or airport open houses. Such events also help bring local community members into an airport and can serve an educational purpose. Often, these events partner with other local organizations such as a Chamber of Commerce.

The Experimental Aircraft Association's Young Eagles Program events are events focused on introducing children to aviation. Through these events, local pilots volunteer to provide airplane rides free of cost to local youth. Through these and other airport public events, increased public awareness of aviation and the local airport can, in turn, help to raise the awareness of the state aviation system and the benefits it provides to the local and state economy.

Currently, 38% percent of the airports in the system have a public event at their airport. A target performance for this measure has been set at 40%. The existing and target performance of this measure are shown collectively in **Table 6-52**. System performance is also summarized in **Appendix A.**

Table 6-52
Public Event - System/Target Performance

Classification	Current Performance	Target Performance
Wyoming Aviation System (35)	38%	40%
Commercial Service (10)	60%	50%
Business Airport (6)	17%	50%
Intermediate Airport (10)	50%	50%
Local Paved (9)	33%	20%
Local Non-Paved (5)	Not an Objective	
Note: ( ) indicates the total number of airports included in analysis		

6.1.7 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

Performance of this goal will be evaluated through measures of service quality, airport convenience, public awareness, and statewide commercial service trends. Six measurements of this goal have been established and each is discussed in the following subsections. The measurements are as follows:

- Percent of Population within 90 minutes of a Commercial Service Airport
- Percent of Commercial Service Airports that average three daily frequencies
- Percent of Commercial Service Airports with service to two or more hub airports
- Percent of Commercial Service Airports growing or retaining annual seats when compared with an average of the three previous years
- Percent of Commercial Service Airports growing or retaining the number of enplaned passengers when compared with an average of the three previous years
- Percent of Commercial Service Airports that meet the FAA enplanement thresholds to qualify as a primary airport
- Percent of affirmative response rates to airport awareness questions in WYDOT Customer Satisfaction Surveys
- Percent of Commercial Service Airports with restrooms in the secure passenger area

6.1.7.1 Measure: Percent of Population Within 90 Minutes of a Commercial Service Airport

A major advantage of air travel is the savings in the amount of time to reach a desired destination. As such, people prefer to utilize air travel options closer to their home or business if cost and travel options are considered equal. The 60 minute drive time is a typical measure for system analysis. A 90 minute drive time is appropriate for more rural areas or where population density is less compact and people may be willing to drive further to access air transportation options. The population in Wyoming is distributed in lower density concentrations as compared to other parts of the nation, and as such, people in Wyoming are more than likely willing to travel 90 minutes or greater to reach an airport with commercial

service. Typical drive time for a hub airport can be as high as 120 minutes or greater as these types of facilities offer a large number of flight and carrier options, a greater number of travel destinations and services, non-stop flights and generally a savings in airline ticket fares.

For the purpose of this study, a 90 minute service area has been selected for this measure. Forecast population data for 2008 was used for this analysis. Approximately 90% of Wyoming's population lives within a 90 minute service area of a Commercial Service Airport including out of state airports. For comparison purposes, both the 60 and 90 minute service areas have been shown in **Table 6-53**. A target performance of 90% has been established for this measure.

Table 6-53
Wyoming Population Served by a Commercial Service Airport

City	60 Minute Drive Time		90 Minute Drive Time	
	Estimated Population Served	Percent	Estimated Population Served	Percent
Cheyenne	86,982	16.45%	94,171	17.80%
Casper	82,763	15.65%	86,218	16.30%
Gillette	41,151	7.78%	46,686	8.80%
Rock Springs	38,908	7.36%	45,146	8.50%
Riverton	35,018	6.62%	35,754	6.80%
Sheridan	35,001	6.62%	35,595	6.70%
Cody	31,931	6.04%	33,273	6.30%
Laramie	31,242	5.91%	32,820	6.20%
Jackson	20,374	3.85%	25,362	4.80%
Worland	16,478	3.12%	17,449	3.30%
Scottsbluff, NE	9,747	1.84%	12,661	2.40%
Salt Lake City, UT	-	-	12,327	2.30%
Hayden, CO	-	-	695	0.10%
West Yellowstone, MT	94	0.02%	244	0.00%
Rapid City, SD	-	-	104	0.00%
Chadron, NE	-	-	63	0.00%
Vernal, UT	-	-	15	0.00%
System Performance	**429,688**	**81%**	**478,584**	**90%**
Population Unserved	**99,212**	**19%**	**50,316**	**10%**

The airports were again considered to have equal services and non-competing service areas, and it was assumed that people would drive to the airport closest to their residence or business. **Table 6-53** shows each of the Wyoming Commercial Service Airports and the seven out of state airports serving Wyoming and their respective 60 and 90 minute service areas. **Charts 6-2** and **6-3**, respectively, graphically show the percentage of Wyoming Population within 60 and 90 minutes of a Commercial Service Airport.

Chart 6-2
Wyoming Population Within 60 Minutes of a CS Airport

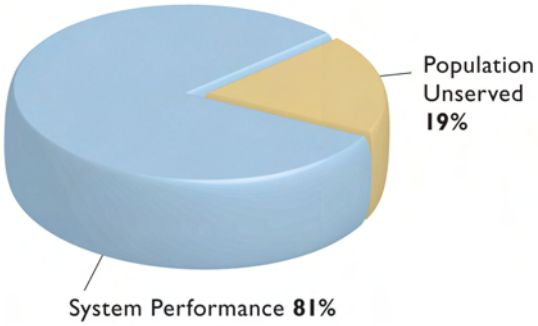
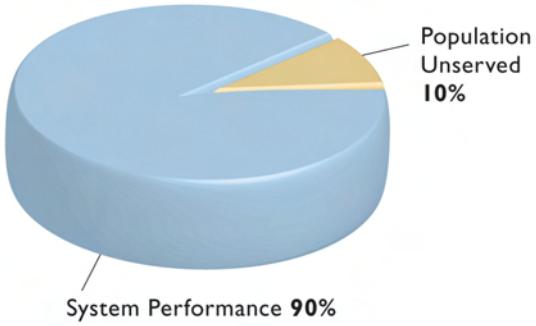


Chart 6-3
Wyoming Population Within 90 Minutes of a CS Airport



Population Served by a Commercial Service Airport
Population Unserved

Wyoming population not covered by these measures live in rural areas and the addition of another Commercial Service Airport to capture a higher percentage of the population would be costly without a great deal of added benefit.

Table 6-54 shows the coverage and target performance for these measurements and **Figures 6-8** and **6-9** presents the 60 and 90 minute drive times associated with the Commercial Service Airports.

Table 6-54
Wyoming Population within 90 minutes of a Commercial Service Airport

	Percent Coverage
Target Performance	90%
System Performance	90%

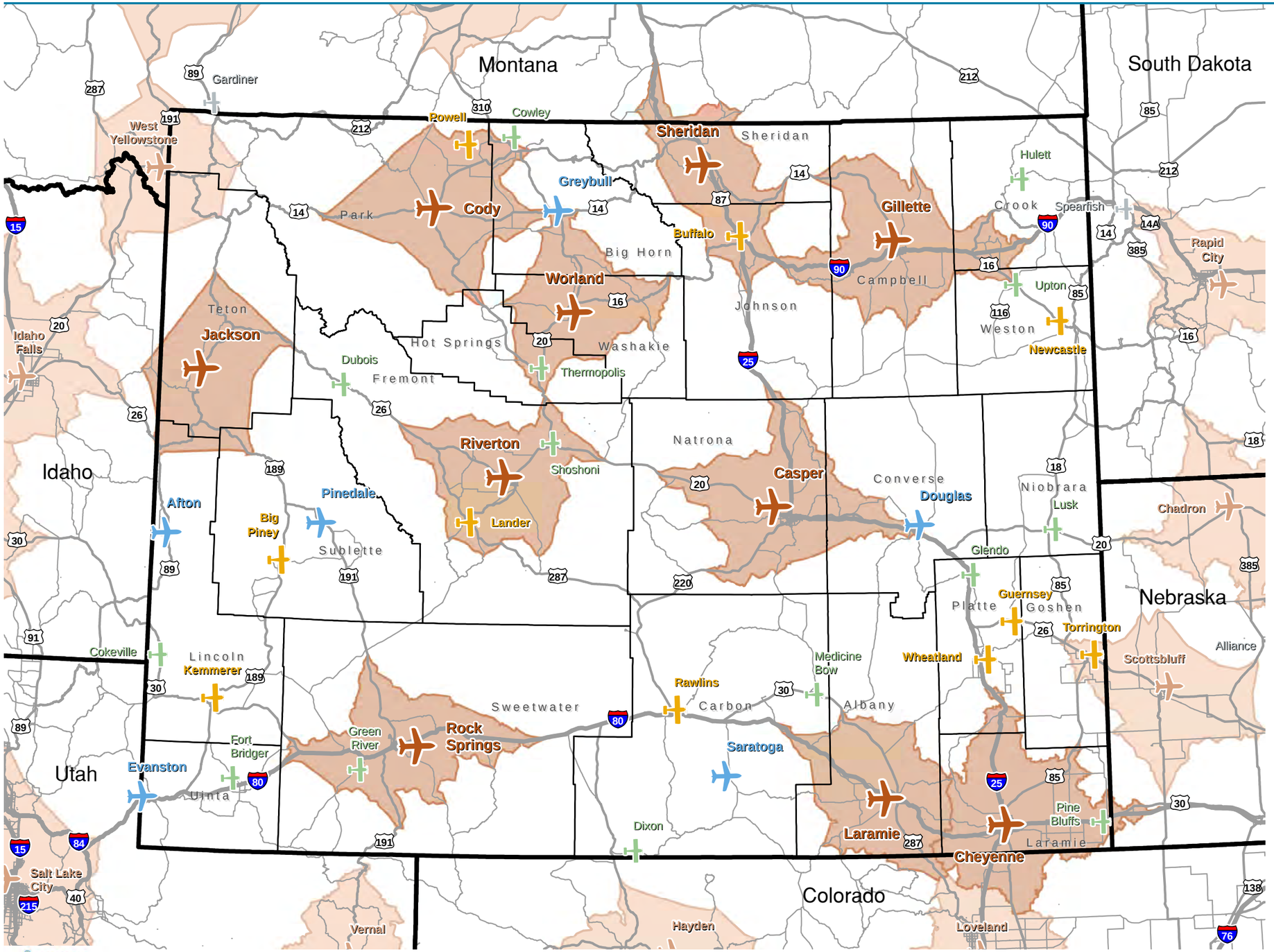
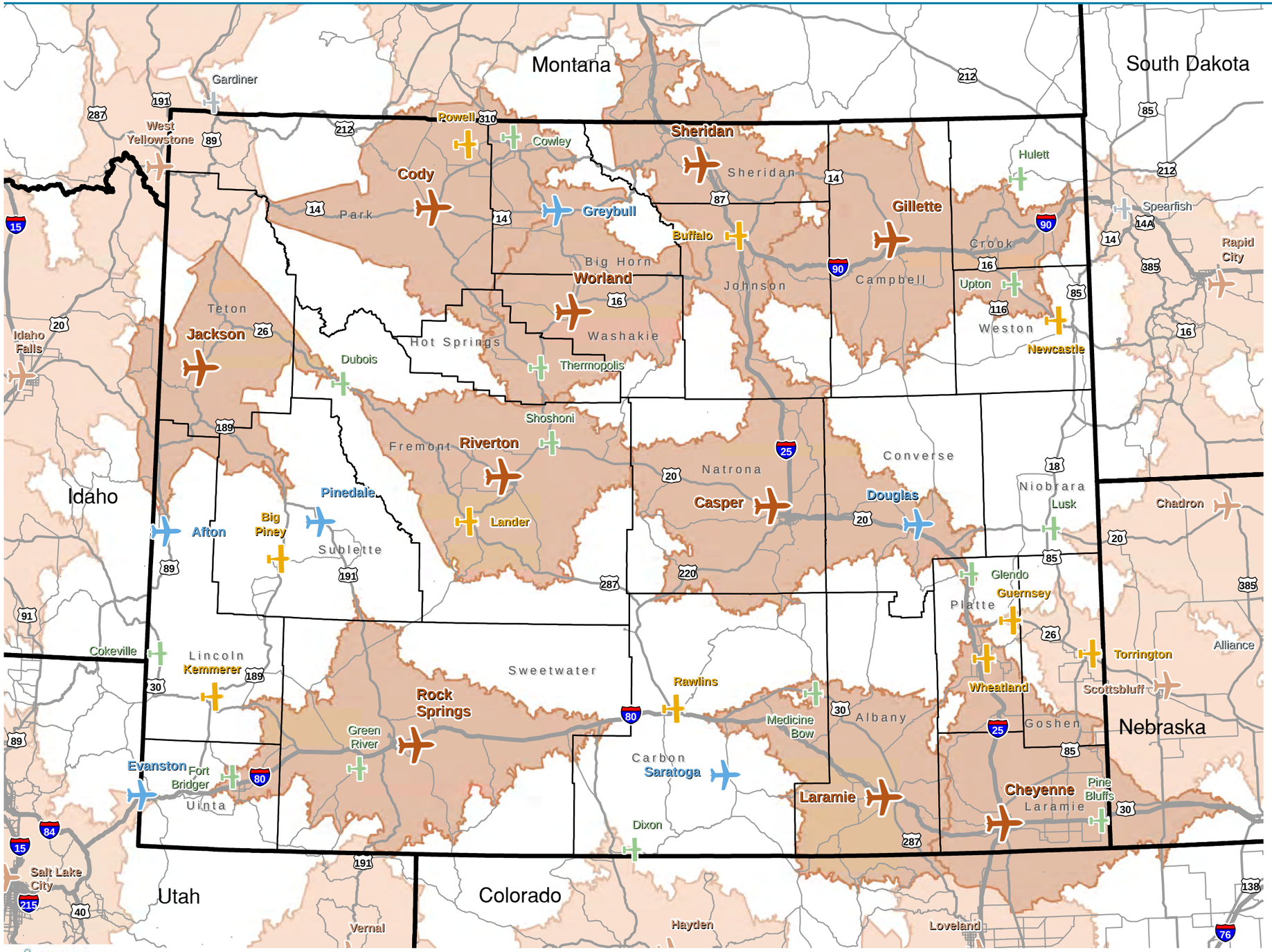


Figure 6-8 - Commercial Service Airports - 60 Minute Service Areas



Legend

Airport Type

- Commercial
- Business
- Intermediate
- Local
- Commercial (Out of state)
- General Aviation (Out of state)

90 Minute Drive Times

- Commercial
- Commercial (Out of state)

Road Classification

- Interstates
- Highways
- Secondary Roads

0 25 50 Miles

Source: Census 2000, ESRI, SEH, WYGISC Digital WY Atlas, WY Dept of A&I

Figure 6-9 - Commercial Service Airports - 90 Minute Service Areas

6.1.7.2 Measure: Percent of Commercial Service Airports that Average Three Daily Frequencies

The goal for Commercial Service Airports is to provide convenient and reliable access to the national transportation system. To achieve this goal requires a minimum level of air carrier service. The quality of that service is measured here in scheduled frequencies per day. Meaning, how many times per day does the airport have a scheduled departure or arrival of air service. **Table 6-55** shows average daily departures for each of the Commercial Service Airports over the following time periods: February, 2007, August 2007, February 2008 and August 2008. These time frames are selected to represent mid-winter and mid-summer schedules.

Table 6-55
Average Daily Departures

Origin	Average Daily Departures			
	February 2007	August 2007	February 2008	August 2008
Casper	10	11	9	9
Cheyenne	6	7	6	7
Cody	3	5	3	4
Gillette	4	5	5	8
Jackson	10	13	9	19
Laramie	3	3	3	3
Riverton	3	3	4	4
Rock Springs	4	5	4	7
Sheridan	4	7	3	4
Worland	1	2	2	2
Total Wyoming	**48**	**60**	**48**	**67**

Source: US DOT T100 database and Official Airline Guide, June 2008

Nine out of the ten Commercial Service Airports currently meet the benchmark of three daily flights. The only Commercial Service Airport not meeting this benchmark is Worland which is an Essential Air Service airport and has two frequencies per day. As shown in **Table 6-56**, target performance of this measure has been set at 90%. The Wyoming Aviation System currently meets the target performance for this measure.

Table 6-56
Average of Three Daily Frequencies System/Target Performance

Classification	Current Performance	Target Performance
Commercial Service (10)	90%	90%
Note: ( ) indicates the total number of airports included in analysis		

6.1.7.3 Measure: Percent of Commercial Service Airports with Service to Two or More Hub Airports

Service to two or more hubs typically offers a community air carrier choices and often competitive fares. Service to different hubs for Wyoming airports also provides the possibility of shorter travel times as the passenger has directional choices for itineraries.

Wyoming airports have made noticeable improvements in this measure from 2007 to 2008. In 2007, three airports (30%) had service to two or more hubs, and in 2008, five airports (50%) had service to two or more hubs. **Table 6-57** shows the 2008 service to two or more hubs followed by the performance related to this measure.

Table 6-57
Service to Two or More Hubs

Associated City	Hubs Served		Meets Objective	
	2007	2008	2007	2008
Casper	DEN, MSP, SLC,	DEN, MSP, SLC, ORD,	Yes	Yes
Cheyenne	DEN	DEN	No	No
Cody	DEN, SLC	DEN, SLC	Yes	Yes
Gillette	DEN	DEN, SLC	No	Yes
Jackson	ATL, ORD, DFW, DEN, MSP, SLC	ATL, ORD, DFW, DEN, MSP, SLC	Yes	Yes
Laramie	DEN	DEN	No	No
Riverton	DEN	DEN	No	No
Rock Springs	DEN	DEN, SLC	No	Yes
Sheridan	DEN	DEN	No	No
Worland	DEN	DEN	No	No
Note: Although Casper has service to Las Vegas, it is not considered service to a hub because service is provided by Allegiant Air				

Source: US DOT T100 database and Official Airline Guide, June 2008

Table 6-58 shows the system performance as well as the target performance. In the current industry environment, retention of service is a worthy goal. The target performance for this measure has been set at 50%.

Table 6-58
Airports with Service to Two or More Hub Airports System/Target Performance

Classification	2007 System Performance	2008 System Performance	Target Performance
Commercial Service (10)	30%	50%	50%
Note: ( ) indicates the total number of airports included in analysis			

6.1.7.4 Measure: Percent of Commercial Service Airports Growing or Retaining Annual Seats When Compared with an Average of the Three Previous Years

The number of seats offered from a particular airport is a measure of the capacity in a market. Typically as demand increases, an airline has the choice to substitute a larger aircraft or increase the frequency of flight options. In Wyoming, the typical sequence of increasing the size of an aircraft starts from a 19 seat aircraft to a 30 seat aircraft and then to a 50 or more seat regional jet.

Of course the particular aircraft choice depends on the air carrier serving the market. For example, Great Lakes Airlines operates Beech 1900s and Embraer Brasilia aircraft. Great Lakes Airlines deploys only these aircraft. As demand increases, the airline evaluates its fleet and deploys either the larger aircraft or increases frequency. Thus, the measure of seats is a way to indicate how capacity has increased.

In this performance measure, the goal is to retain or increase the number of seats. A three year average was chosen for the baseline to smooth out year to year fluctuations. For Wyoming, annual seats have grown over the last three years by 14% percent statewide. Only Riverton and Worland have not retained the same number of seats.

The annual seats at each airport are presented in **Table 6-59**.

Table 6-59
Annual Seats

Associated City	Seats 2004	Seats 2005	Seats 2006	3 Year Average	2007	Retain or Exceed Number of Seats
Casper	110,755	133,445	116,746	120,315	129,491	Yes
Cheyenne	45,467	42,482	43,451	43,800	51,453	Yes
Cody	40,259	43,473	44,122	42,618	43,979	Yes
Gillette	25,783	26,913	32,126	28,274	44,118	Yes
Jackson	287,273	326,949	374,041	329,421	371,089	Yes
Laramie	19,550	27,826	29,885	25,754	29,665	Yes
Riverton	**36,271**	**25,982**	**27,533**	**29,929**	**24,464**	**No**
Rock Springs	21,266	24,725	29,570	25,187	34,630	Yes
Sheridan	23,668	28,921	28,747	27,112	43,374	Yes
Worland	**16,131**	**11,343**	**11,457**	**12,977**	**11,172**	**No**
Wyoming Total	626,423	692,059	737,678	685,387	783,435	Yes
Note: **Bold:** indicates airports not meeting benchmark						

Source: US DOT T100 database and Official Airline Guide, June 2008

The existing system is currently performing at 80%. The target performance for this measure has been established at 60% as shown in **Table 6-60**. Therefore, the existing system is meeting the target performance.

Table 6-60
Airports Growing or Retaining Annual Seats (3 Year Average)
System/Target Performance

Classification	Current Performance	Target Performance
Commercial Service (10)	80%	60%
Note: ( ) indicates the total number of airports included in analysis		

6.1.7.5 Measure: Percent of Commercial Service Airports Growing or Retaining the Number of Enplaned Passengers When Compared with an Average of the Three Previous Years

Passengers have a choice to use their local airport, drive to another airport, or drive to their destination. The State of Wyoming has invested in the development of air service and in campaigns to raise awareness about air service as an available transportation option within the state. One performance measure of the effectiveness of these investments is the number of passengers that board aircraft at Wyoming airports (enplaned passengers). **Table 6-61** shows the number of enplaned passengers at Wyoming airports from 2004 until 2007. The benchmark is that 2007 enplanements exceed or are equal to the average number of enplanements in the three prior consecutive years. As with the previous measure, a three year average was applied to round out any unusual events that might take place in a particular year.

Table 6-61
Annual Enplaned Passengers

Associated City	2004	2005	2006	3 Year Average	2007	Retain or Exceed
Casper	**70,441**	**90,992**	**80,469**	**80,634**	**76,908**	**No**
Cheyenne	16,173	14,372	16,657	15,734	16,766	Yes
Cody	**26,700**	**28,404**	**28,486**	**27,863**	**26,799**	**No**
Gillette	14,269	15,748	21,879	17,299	25,647	Yes
Jackson Hole	214,138	248,338	277,681	246,719	277,361	Yes
Laramie	10,225	8,552	9,427	9,401	9,939	Yes
Riverton	12,785	12,781	14,763	13,443	15,831	Yes
Rock Springs	12,035	14,393	17,625	14,684	21,791	Yes
Sheridan	12,830	13,697	13,655	13,394	20,978	Yes
Worland	2,611	2,193	2,855	2,553	3,719	Yes
Total Enplaned Passengers	392,207	449,470	483,497	441,725	495,739	
Note: **Bold:** indicates airports not meeting benchmark						

Source: WYDOT Aeronautics

As **Table 6-62** shows, 80% of Commercial Service Airports have exceeded their prior three year average and meet the target performance of 60%.

Table 6-62
Airports Growing or Retaining Annual Enplanements (3 Year Average) System/Target Performance

Classification	Current Performance	Target Performance
Commercial Service (10)	80%	60%
Note: ( ) indicates the total number of airports included in analysis		

6.1.7.6 Measure: Percent of Commercial Service Airports that Meet the FAA Entitlement Thresholds to Qualify as a Primary Airport

The federal Airport Improvement Program (AIP) is an important federal program offering finance options for airport projects. Select projects at public use airports serving civil aviation are eligible for AIP funding. The amount of funding available to an airport depends on the type and amount of activity at an airport. Primary airports are Commercial Service Airports enplaning more than 10,000 passengers per year. The amount of apportionment funding that an airport receives is based on the number of enplanements at the airport. However, once an airport exceeds 10,000 enplanements, the minimum amount needed to receive federal entitlement funding of $1 million, the maximum an airport can receive annually is $26 million.

With a combination of commercial scheduled service and charter service, nine of Wyoming's Commercial Service Airports were classified primary airports in 2007. As shown in **Table 6-63** Worland was the only Commercial Service Airport not reaching the 10,000 passenger enplanement threshold.

Table 6-63
Passenger Enplanements - 2007

Associated City	2007 Commercial Enplanements
Jackson	277,361
Casper	76,908
Cody	26,799
Gillette	25,647
Rock Springs	21,791
Sheridan	20,978
Cheyenne	16,766
Riverton	15,831
Laramie	9,939[1]
Worland	3,719
Total Enplanements	**495,739**
Notes: Although Laramie Commercial Enplanements are below 10,000, when Air Charter Enplanements are added to the total the airport exceeds 10,000 enplanements	

Source: WYDOT Aeronautics

System performance of this measure is 90%. As shown in **Table 6-64**, a target performance of 90% has been set for this measure.

Table 6-64
Commercial Service Airports Meeting FAA Entitlement Thresholds for a Primary Airport System/Target Performance

Classification	Current Performance	Target Performance
Commercial Service (10)	90%	90%
Note: ( ) indicates the total number of airports included in analysis		

6.1.7.7 Measure: Percent of Affirmative Response Rates to Airport Awareness Questions in WYDOT Customer Satisfaction Surveys

In 2007, Aeronautics conducted a Fly Wyoming airport awareness campaign. The campaign was funded through a consortium of all ten Commercial Service Airports, Aeronautics and the USDOT Small Community Air Service Development Program. The campaign included development of a Fly Wyoming brand, a web site and an advertising campaign. As part of this effort, airport awareness both before and after the campaign was measured and is shown in **Table 6-65**. As a follow up to this effort, Aeronautics plans to distribute a customer satisfaction survey and tabulate the responses to determine if advertising continues to be effective. A target performance of 60% has been set for this measure.

Table 6-65
Percentage of Affirmative Response Rates to Airport Awareness Questions in WYDOT Customer Satisfaction Surveys System/Target Performance

Airport Awareness	Performance (Pre Fly Wyoming Campaign)	Performance (Post Fly Wyoming Campaign)	Target Performance
Positive Response Rates	43%	71%	60%

6.1.7.8 Measure: Percent of Commercial Service Airports with Restrooms in the Secure Passenger Area

With increase security measures required at Commercial Service Airports in the post 9-11 era, passengers spend more time in the secure passenger area once passing through security. This change in passenger movement increases the need for restrooms and other amenities in the secure passenger area. In addition, some commercial flights make stops at multiple airports en-route to a hub airport. In these cases, passengers may leave the plane to use the restrooms without leaving the secure passenger area.

Thirty percent of Commercial Service Airports in Wyoming have restrooms in the secure passenger area. A target performance of 80% has been set for this measure as shown in **Table 6-66.**

Table 6-66
Percent of Commercial Service Airports with Restrooms in the Secure Passenger Area

Classification	Current Performance	Target Performance
Commercial Service (10)	30%	80%
Note: ( ) indicates the total number of airports included in analysis		

7.0 Future System Performance

As identified in **Chapter 2,** and again shown in **Table 7-1**, four airports are planned to change classification during the 20-year planning period. Those airports include: Kemmerer, Rawlins, Dubois and Hulett. This chapter evaluates the future performance of these airports relative to a classification change and evaluates each against the objectives determined for those classifications. Future performance of the remaining airports whose classification is not expected to change in the planning period are not evaluated in this chapter as the objectives for these airports remain as evaluated in **Chapter 5.**

Table 7-1
Wyoming Airport Classification System

Airport	WYDOT Classification (2008)	WYDOT Classification (Future)
Casper	Commercial	Commercial
Cheyenne	Commercial	Commercial
Cody	Commercial	Commercial
Gillette	Commercial	Commercial
Jackson	Commercial	Commercial
Laramie	Commercial	Commercial
Riverton	Commercial	Commercial
Rock Springs	Commercial	Commercial
Sheridan	Commercial	Commercial
Worland	Commercial	Commercial
Afton	Business	Business
Douglas	Business	Business
Evanston	Business	Business
Greybull	Business	Business
Pinedale	Business	Business
Saratoga	Business	Business
Big Piney	Intermediate	Intermediate
Buffalo	Intermediate	Intermediate
Guernsey	Intermediate	Intermediate
Kemmerer ⇧	Intermediate	Business
Lander	Intermediate	Intermediate
Newcastle	Intermediate	Intermediate
Powell	Intermediate	Intermediate
Rawlins ⇧	Intermediate	Business
Torrington	Intermediate	Intermediate
Wheatland	Intermediate	Intermediate

Table 7-1 (Continued)
Wyoming Airport Classification System

Airport	WYDOT Classification (2008)	WYDOT Classification (Future)
Cokeville	Local	Local
Cowley	Local	Local
Dixon	Local	Local
Dubois ⇧	Local	Intermediate
Fort Bridger	Local	Local
Glendo	Local	Local
Green River	Local	Local
Hulett ⇧	Local	Intermediate
Lusk	Local	Local
Medicine Bow	Local	Local
Pine Bluffs	Local	Local
Shoshoni	Local	Local
Thermopolis	Local	Local
Upton	Local	Local
Notes: ⇧ Indicates a future change in WYDOT airport classification Thermopolis future information for proposed new airport		

Source: Wyoming Airport Classification per Aeronautics and Task Force input

7.1 Future Report Cards

Future report cards were generated for each of the four airports whose classification is planned to change and have been included along with the existing report cards in **Chapter 9**. When projects are planned at these airports and when project justification is in line with the future classification and objectives, then the future objectives should be applied. Projects need to be shown on a current ALP with justification provided in a current planning document. In some cases, it may make sense to apply some of the future classification objectives, or none at all, when planning future airport development. Each objective should be evaluated locally through the master planning process.

The following sections evaluate the future performance of each objective at these four airports. Descriptions and discussion of each objective is found in **Chapter 5** and are not repeated in this chapter. Throughout this chapter, each of the four airports has been evaluated against the future objectives and those not meeting the future objectives are identified in **bold** type.

7.2 Future Objectives

7.2.1 Airport Layout Plan

Two of the four airports do not meet the future ALP objective as shown in **Table 7-2**.

Table 7-2
Future System Performance - Airport Layout Plan

Airport	Existing	Existing Objective	Future Objective
Kemmerer	2005	On Record and Less than 5 Years Old	On Record and Less than 5 Years Old
Rawlins	**2001***	**On Record and Less than 5 Years Old**	**On Record and Less than 5 Years Old**
Dubois	**1999***	On Record and Less than 10 Years Old	**On Record and Less than 5 Years Old**
Hulett	2004	On Record and Less than 10 Years Old	On Record and Less than 5 Years Old
Note: *ALP update in progress			

7.2.2 Airport Reference Code

The future system performance for ARC is shown in **Table 7-3**. Two of the four airports (Kemmerer and Rawlins) will need to upgrade their ARC when they change classification in order the meet the objective.

Table 7-3
Future System Performance - ARC

Airport	Existing ARC	Existing Objective	Future Objective
Kemmerer	**B-II**	B-II	**C-II**
Rawlins	**B-II**	B-II	**C-II**
Dubois	B-II	B-II	B-II
Hulett	B-II	B-II	B-II

7.2.3 Primary Runway Approach Lighting System

All of the four airports whose classification may change during the planning period meet the primary runway approach lighting system objective as shown in **Table 7-4**. As discussed in **Chapter 5**, a primary runway Approach Lighting System (ALS) is only an objective for Commercial Service Airports.

Table 7-4
Future System Performance - Primary Runway Approach Lighting Systems

Airport	Existing Approach Lighting	Existing Objective	Future Objective
Kemmerer	None	Not an Objective	MALSR Suggested
Rawlins	None	Not an Objective	MALSR Suggested
Dubois	None	Not an Objective	Not an Objective
Hulett	None	Not an Objective	Not an Objective

7.2.4 Primary Runway Instrument Approach Type

Three of the four airports meet the future primary runway instrument approach type objective and are listed in **Table 7-5**. Those airports include: Kemmerer, Rawlins and Hulett. In order to meet the future objective, Dubois must upgrade from a visual to a non-precision approach.

Table 7-5
Future System Performance - Primary Runway Instrument Approach Type

Airport	Existing Approach	Existing Objective	Future Objective
Kemmerer	Non-Precision	Non-Precision	Non-Precision
Rawlins	Non-Precision	Non-Precision	Non-Precision
Dubois	**Visual**	Not an Objective	**Non-Precision**
Hulett	Non-Precision	Not an Objective	Non-Precision

7.2.5 Paved Auto Parking

All four of the airports meet the future paved auto parking objective as shown in **Table 7-6**.

Table 7-6
Future System Performance - Paved Auto Parking

Airport	Existing	Existing Objective	Future Objective
Kemmerer	Paved Auto Parking	Suggested	Paved Auto Parking
Rawlins	Paved Auto Parking	Suggested	Paved Auto Parking
Dubois	Unpaved	Suggested	Suggested
Hulett	Paved Auto Parking	Suggested	Suggested

7.2.6 Deicing

Rawlins and Kemmerer do not have any aircraft deicing and therefore do not meet the future objective. Future system performance of the deicing objective is shown in **Table 7-7**.

Table 7-7
Future System Performance - Deicing

Airport	Existing Facility	Existing Deicing Objective	Future Deicing Objective
Kemmerer	**No Aircraft Deicing**	Not an Objective	**Aircraft Deicing**
			Containment System Suggested
Rawlins	**No Aircraft Deicing**	Not an Objective	**Aircraft Deicing**
			Containment System Suggested
Dubois	No Aircraft Deicing	Not an Objective	Not an Objective
Hulett	No Aircraft Deicing	Not an Objective	Not an Objective

7.2.7 Perimeter Fencing

All four of the airports meet the future fencing objective. Future system performance of this objective is shown in **Table 7-8**.

Table 7-8
Future System Performance - Perimeter Fencing

Airport	Existing Perimeter Fencing	Existing Objective	Future Objective
Kemmerer	Wildlife Fence	Wildlife Fence	Wildlife Fence
Rawlins	Wildlife Fence	Wildlife Fence	Wildlife Fence
Dubois	Wildlife Fence	Wildlife Fence	Wildlife Fence
Hulett	Wildlife Fence	Wildlife Fence	Wildlife Fence

7.2.8 FBO

As stated in **Chapter 5**, FBO is suggested for Intermediate and Business Airports. Therefore, no future system performance of this objective is included in this chapter.

7.2.9 Food Choices

As shown in **Table 7-9**, all four airports meet the future objective for food choices.

Table 7-9
Future System Performance - Food Choices

Airport	Existing Perimeter Fencing	Existing Objective	Future Objective
Kemmerer	Vending Machines	Vending Machines Suggested	Vending Machines Suggested
Rawlins	Vending Machines	Vending Machines Suggested	Vending Machines Suggested
Dubois	Vending Machines	Not an Objective	Vending Machines Suggested
Hulett	None	Not an Objective	Vending Machines Suggested

7.2.10 Fuel

Future system performance of the fuel objective is presented in **Table 7-10**.

Table 7-10
Future System Performance - Fuel

Airport	Existing	Existing Objective	Future Objective
Kemmerer	Jet A and 100LL	100LL	Jet A and 100LL
Rawlins	Jet A and 100LL	100LL	Jet A and 100LL
Dubois	100LL	Suggested	100LL
Hulett	100LL	Suggested	100LL

7.2.11 Ground Transportation

All four airports meet the future ground transportation objective as shown in **Table 7-11**.

Table 7-11
Future System Performance - Ground Transportation

Airport	Existing	Existing Objective	Future Objective
Kemmerer	Courtesy Car	Courtesy Car	Courtesy Car
Rawlins	Courtesy Car, Taxi Service	Courtesy Car	Courtesy Car
Dubois	Courtesy Car, Bus	Suggested	Courtesy Car
Hulett	Courtesy Car	Suggested	Courtesy Car

7.2.12 Hangars

Future system performance of the hangar objective is shown in **Table 7-12**.

Table 7-12
Future System Performance - Hangars

Airport	Percentage of Based Aircraft in Hangars		
	Existing	Existing Objective	Future Objective
Kemmerer	100%	75%	100%
Rawlins	100%	75%	100%
Dubois	100%	50%	75%
Hulett	100%	50%	75%

7.2.13 Lighted Hangar Area

One of the four airports does not meet the existing and future lighted hangar area objective as shown in **Table 7-13**.

Table 7-13
Future System Performance - Lighted Hangar Area

Airport	Existing	Existing Objective	Future Objective
Kemmerer	**None**	Suggested	**Lighted Hangar Area**
Rawlins	Lighted Hangar Area	Suggested	Lighted Hangar Area
Dubois	None	Not an Objective	Suggested
Hulett	Lighted Hangar Area	Not an Objective	Suggested

7.2.14 Land Use Protection Plan

One of the four airports does not meet the future Land Use Protection Plan objective as shown in **Table 7-14**.

Table 7-14
Future System Performance - Land Use Protection Plan

Airport	Existing	Existing Objective	Future Objective
Kemmerer	On-Record	On Record with Aeronautics	On Record with Aeronautics
Rawlins	**None**	**On Record with Aeronautics**	**On Record with Aeronautics**
Dubois	On Record	On Record with Aeronautics	On Record with Aeronautics
Hulett	On Record	On Record with Aeronautics	On Record with Aeronautics

7.2.15 Legislative Liaison

All but one of the four airports meets the future Legislative Liaison objective as shown in **Table 7-15**.

Table 7-15
Future System Performance - Legislative Liaison

Airport	Existing	Existing Objective	Future Objective
Kemmerer	Legislative Liaison	Suggested	Legislative Liaison
Rawlins	**None**	Suggested	**Legislative Liaison**
Dubois	Legislative Liaison	Suggested	Suggested
Hulett	Legislative Liaison	Suggested	Suggested

7.2.16 Aircraft Maintenance

Three of the four airports do not meet the future aircraft maintenance objective as shown in **Table 7-16**.

Table 7-16
Future System Performance - Aircraft Maintenance

Airport	Existing	Existing Objective	Future Objective
Kemmerer	**None**	**Minor A & P**	**Major A & P**
Rawlins	Major A & P	Minor A & P	Major A & P
Dubois	**None**	Not an Objective	**Minor A & P**
Hulett	**None**	Not an Objective	**Minor A & P**

7.2.17 Airport Manager

All four of the airports meet the future Airport Manager objective as shown in **Table 7-17**.

Table 7-17
Future System Performance - Airport Manager

Airport	Existing	Existing Objective	Future Objective
Kemmerer	Airport Manager	Airport Manager	Airport Manager
Rawlins	Airport Manager	Airport Manager	Airport Manager
Dubois	Airport Manager	Airport Manager	Airport Manager
Hulett	Airport Manager	Airport Manager	Airport Manager

7.2.18 Airport Master Plan

One of the eight airports does not meet the future Airport Master Plan objective as shown in **Table 7-18**.

Table 7-18
Future System Performance - Airport Master Plan

Airport	Existing	Existing Objective	Future Objective
Kemmerer	On record, 2005	On Record and Less than 10 Years Old	On Record and Less than 10 Years Old
Rawlins	On record, 2001*	On Record and Less than 10 Years Old	On Record and Less than 10 Years Old
Dubois	On record, 1999*	Suggested on record and less than 15 years old	On Record and Less than 10 Years Old
Hulett	**On record, Unknown**	Suggested on record and less than 15 years old	**On Record and Less than 10 Years Old**
Note: *MP update in progress			

7.2.19 Minimum Standards

Three of the four airports do not meet the future Minimum Standards objective as shown in **Table 7-19**.

Table 7-19
Future System Performance - Minimum Standards

Airport	Existing	Existing Objective	Future Objective
Kemmerer	**Not On Record with Aeronautics**	**On Record with Aeronautics**	**On Record with Aeronautics**
Rawlins	**None**	**On Record with Aeronautics**	**On Record with Aeronautics**
Dubois	**None**	Suggested	**On Record with Aeronautics**
Hulett	**None**	Suggested	**On Record with Aeronautics**

7.2.20 Noise Contour Map

None of the four airports meet the future Noise Contour Map objective as shown in **Table 7-20**.

Table 7-20
Future System Performance - Noise Contour Map

Airport	Existing	Existing Noise Contour Map Objective	Future Noise Contour Map Objective
Kemmerer	**None**	**On Record and Less than 10 Years Old**	**On Record and Less than 10 Years Old**
Rawlins	**None**	**On Record and Less than 10 Years Old**	**On Record and Less than 10 Years Old**
Dubois	**None**	Suggested	**On Record and Less than 10 Years Old**
Hulett	**On Record, Date Unknown**	Suggested	**On Record and Less than 10 Years Old**

7.2.21 Pavement Management Plan

Three of the eight airports meet the future Pavement Management Plan objective as shown in **Table 7-21**.

Table 7-21
Future System Performance - Pavement Management Plan

Airport	Existing	Existing Objective	Future Objective
Kemmerer	On Record with Aeronautics	On Record with Aeronautics	On Record with Aeronautics
Rawlins	On Record with Aeronautics	On Record with Aeronautics	On Record with Aeronautics
Dubois	On Record with Aeronautics	On Record with Aeronautics	On Record with Aeronautics
Hulett	**Not On Record with Aeronautics**	**On Record with Aeronautics**	**On Record with Aeronautics**

7.2.22 Public Telephone

The future public telephone performance is shown in **Table 7-22**. One out of the four airports does not meet this future objective.

Table 7-22
Future System Performance - Public Telephone

Airport	Existing	Existing Objective	Future Objective
Kemmerer	Public Phone 24/7	Public Phone 24/7	Public Phone 24/7
Rawlins	**None**	**Public Phone 24/7**	**Public Phone 24/7**
Dubois	Public Phone 24/7	Public Phone 24/7	Public Phone 24/7
Hulett	Public Phone 2/47	Public Phone 24/7	Public Phone 24/7

7.2.23 Pilot Lounge and Planning Room

As shown in **Table 7-23**, all four airports meet the pilot lounge and planning room objective.

Table 7-23
Future System Performance - Pilot Lounge & Planning Room

Airport	Existing	Existing Objective	Future Objective
Kemmerer	Pilot Lounge & Planning Room	Pilot Lounge & Planning Room	Pilot Lounge & Planning Room
Rawlins	Pilot Lounge & Planning Room	Pilot Lounge & Planning Room	Pilot Lounge & Planning Room
Dubois	Pilot Lounge & Planning Room	Pilot Lounge & Planning Room Suggested	Pilot Lounge & Planning Room
Hulett	Pilot Lounge & Planning Room	Pilot Lounge & Planning Room Suggested	Pilot Lounge & Planning Room

7.2.24 Public Restroom

One airport does not meet the future public restroom objective as shown in **Table 7-24**.

Table 7-24
Future System Performance - Public Restroom

Airport	Existing	Existing Objective	Future Objective
Kemmerer	Public Restroom 24/7	Public Restroom 24/7	Public Restroom 24/7
Rawlins	**Public Restroom not 24/7**	**Public Restroom 24/7**	**Public Restroom 24/7**
Dubois	Public Restroom 24/7	Public Restroom Suggested	Public Restroom 24/7
Hulett	Public Restroom 24/7	Public Restroom Suggested	Public Restroom 24/7

7.2.25 Primary Runway Length

As shown in **Table 7-25**, none of the airports meet the future runway length objective with their existing runway lengths. However, Kemmerer's existing runway length is within 500' of the objective runway length. In addition, both Kemmerer and Dubois have planned primary runway lengths that would meet or exceed the future objective.

Table 7-25
Future System Performance - Primary Runway Length

Airport	Runway Length (Feet)			
	Existing Runway Length	Planned[1] Runway Length	Existing Objective	Future Objective
Kemmerer	**8,208**	**8,700**	**8,500**	**8,500[2]**
Rawlins	**7,008**	**8,150**	**8,200**	**8,200**
Dubois	**6,100**	**8,610**	6,100	**8,400**
Hulett	**5,500**	**6,500**	5,500	**6,700**

Notes:
[1] From Approved Airport Layout Plans
[2] Objective Runway Length within 500 feet of Existing Runway Length

7.2.26 Primary Runway Edge Lighting

As shown in **Table 7-26**, all airports meet the future primary runway edge lighting objective.

Table 7-26
Future System Performance - Primary Runway Edge Lighting

Airport	Existing Runway Lighting	Existing Objective	Future Objective
Kemmerer	MIRL	MIRL	MIRL
Rawlins	MIRL	MIRL	MIRL
Dubois	MIRL	MIRL	MIRL
Hulett	MIRL	MIRL	MIRL

7.2.27 Runway Protection Zone Ownership

Three of the four airports do not meet the RPZ objective as shown in **Table 7-27**.

Table 7-27
Future System Performance - Runway Protection Zone Ownership

Airport	Existing	Existing Objective	Future Objective
Kemmerer	**All Not Owned in Fee or Easement**	**Fee or Easement Ownership of RPZ**	**Fee or Easement Ownership of RPZ**
Rawlins	**All Not Owned in Fee or Easement**	**Fee or Easement Ownership of RPZ**	**Fee or Easement Ownership of RPZ**
Dubois	All Owned in Fee or Easement	Suggested	Fee or Easement Ownership of RPZ
Hulett	**All Not Owned in Fee or Easement**	Suggested	**Fee or Easement Ownership of RPZ**

7.2.28 Runway Safety Areas

Three out of the four airports do not meet the future RSA objective of a standard RSA on all paved runways. Future system performance of the RSA objective is shown in **Table 7-28**.

Table 7-28
Future System Performance - Runway Safety Areas

Airport	Runway	Existing RSA	Existing and Future Objective
Kemmerer	**04/22**	**Non-Standard Grade**	**Standard RSA on all paved Runways**
Rawlins	**10/28**	**Non-Standard Grade**	**Standard RSA on all paved Runways**
Dubois	10/28	Standard RSA on all paved Runways	Standard RSA on all paved Runways
Hulett	**13/31**	**Non-Standard Grade**	**Standard RSA on all paved Runways**

7.2.29 Primary Runway Strength

Two airports, Kemmerer and Hulett, do not meet the future runway strength objective as shown in **Table 7-29**.

Table 7-29
Future System Performance - Primary Runway Strength

Airport	Existing Strength	Existing Objective	Future Objective
Kemmerer	**18,000 SWG**	**20,000 SWG**	**30,000 SWG**
Rawlins	60,000 DWG	20,000 SWG	30,000 SWG
Dubois	24,000 SWG	12,500 SWG	20,000 SWG
Hulett	**12,500 SWG**	12,500 SWG	**20,000 SWG**

7.2.30 Primary Runway Width

Table 7-30 shows each of the four airports' existing primary runway width along with the existing and future objectives. All airports except Kemmerer and Dubois have existing primary runway widths that meet or exceed the future objective.

Table 7-30
Future System Performance - Primary Runway Width (Feet)

Airport	Existing Width	Existing Objective	Future Objective
Kemmerer	**75**	75	**100**
Rawlins	100	75	100
Dubois	**60**	**75**	**75**
Hulett	75	75	75

7.2.31 Taxiway Type and Width

One of the four airports (Kemmerer) does not meet the future taxiway objective as shown in **Table 7-31**.

Table 7-31
Future System Performance - Taxiway Type and Width

Airport	Existing	Existing Objective	Future Objective
Kemmerer	**Connector – 21'**	**Partial Parallel/Connector/ Turn Around – 35'**	**Full Parallel – 35'**
Rawlins	Full Parallel – 35'	Partial Parallel/Connector/ Turn Around – 35'	Full Parallel – 35'
Dubois	Connector – 35'	Maintain Existing Taxiway	Partial Parallel/Connector/ Turn Around – 35'
Hulett	Full Parallel – 35'	Maintain Existing Taxiway	Partial Parallel/Connector/ Turn Around – 35'

7.2.32 Taxiway Lighting

One of the four airports does not meet the future taxiway lighting objective as shown in **Table 7-32**.

Table 7-32
Future System Performance - Taxiway Lighting

Airport	Existing	Existing Objective	Future Objective
Kemmerer	MITL	MITL	MITL
Rawlins	MITL	MITL	MITL
Dubois	MITL	Reflectors (MITL Suggested)	MITL
Hulett	**Reflectors**	Reflectors (MITL Suggested)	**MITL**

7.2.33 Terminal Building

Future system performance of the terminal building objective is shown in **Table 7-33**.

Table 7-33
Future System Performance - Terminal Building

Airport	Existing	Existing Objective	Future Objective
Kemmerer	Terminal Building	Terminal Building	Terminal Building
Rawlins	Terminal Building	Terminal Building	Terminal Building
Dubois	Terminal Building	Not an Objective	Terminal Building
Hulett	Terminal Building	Not an Objective	Terminal Building

7.2.34 Visual Aids

Future system performance of the visual aids objective is shown in **Table 7-34.**

Table 7-34
Future System Performance - Visual Aids

Airport	Existing	Existing Objective	Future Objective
Kemmerer	Beacon, Lighted Wind Cone, PAPI Both Ends, REIL Both Ends	Beacon, Lighted Wind Cone, PAPI/VASI Both Ends, REIL Both Ends	Beacon, Lighted Wind Cone, PAPI/VASI Both Ends, REIL Both Ends
Rawlins	Beacon, Lighted Wind Cone, VASI Both Ends, REIL One End	Beacon, Lighted Wind Cone, PAPI/VASI Both Ends, **REIL Both Ends**	Beacon, Lighted Wind Cone, PAPI/VASI Both Ends, **REIL Both Ends**
Dubois	Beacon, Lighted Wind Cone, PAPI One End, No REIL	Beacon, Lighted Wind Cone, PAPI/VASI One End, **REIL One End (Both ends suggested)**	Beacon, Lighted Wind Cone, **PAPI/VASI Both Ends, REIL Both Ends**
Hulett	Beacon, Lighted Wind Cone, PAPI Both Ends, REIL One End	Beacon, Lighted Wind Cone, PAPI/VASI One End, REIL One End (Both ends suggested)	Beacon, Lighted Wind Cone, PAPI/VASI Both Ends, **REIL Both Ends**

7.2.35 Weather Reporting Facilities

All four airports expected to change classification in the planning period meet the future weather reporting facility objective. Future system performance of this objective is shown in **Table 7-35**.

Table 7-35
Future System Performance - Weather Reporting Facilities

Airport	Existing Facility	Existing Objective	Future Objective
Kemmerer	AWOS	AWOS/ASOS	AWOS/ASOS
Rawlins	ASOS	AWOS/ASOS	AWOS/ASOS
Dubois	AWOS	AWOS/ASOS	AWOS/ASOS
Hulett	AWOS	AWOS/ASOS	AWOS/ASOS

7.2.36 Wind Coverage

Three of the four airports do not meet the future objective for wind coverage. As noted in **Table 7-36**, existing wind coverage for Kemmerer and Dubois is unknown. Analysis of the wind coverage at these two airports may show that these airports meet the objective.

Table 7-36
Future System Performance - Wind Coverage

Airport	Existing	Existing Objective	Future Objective
Kemmerer	**99.58% (13 knots) Unknown (16 knots)**	≥ 95% @ 13 knots	**≥ 95% @ 16 knots**
Rawlins	98.44% (13 knots) 99.48% (16 knots)	≥ 95% @ 13 knots	≥ 95% @ 16 knots
Dubois	**Unknown**	≥ 95% Suggested	**≥ 95% @ 13 knots**
Hulett	**93.30% (13 knots)**	≥ 95% Suggested	**≥ 95% @ 13 knots**

8.0 Air Service

A fully developed commercial air system in Wyoming supports the economy as well as the mobility, safety and quality of life of its citizens and visitors. Wyoming has made great strides to fulfill its air service goal and measures. However, air service remains a top priority and work in progress.

8.1 Air Service Goal, Measures and Issues

8.1.1 Goal

As discussed in **Chapter 6**, the Wyoming Aviation System Goal for air service is:

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.

The operative words in the goal are: convenient, reliable access, and competitive price. These attributes of air service shape current and future efforts to sustain and improve commercial air service in the state. Already, many of the initial measures of this goal have been met.

8.1.2 Measures

As identified in **Chapter 6**, the goal for air service is supported by measures that track progress on how well the system of commercial service airports is providing convenient, reliable access to the national transportation system at a competitive price. Each measure identified in **Chapter 6** and its current performance is summarized in **Table 8-1**.

Table 8-1
Air Service Measure Performance

	Measure	Current Performance
1	Percent of population within 90 minutes of a Commercial Service Airport.	90% of population currently served.
2	Percent of Commercial Service Airports that average three daily frequencies.	90% of the Commercial Service Airports or nine out of ten airports have three or more daily frequencies.
3	Percent of Commercial Service Airports with service to two or more hub airports.	50% or five out of ten airports have service to two or more hub airports.
4	Percent of Commercial Service Airports growing or retaining annual seats when compared with an average of the three previous years.	As of June 2008, 80% or eight of ten Commercial Service Airports have retained or grown capacity, measured by the number of annual seats.
5	Percent of Commercial Service Airports growing or retaining the number of enplaned passengers when compared with an average of the three previous years.	As of December 2007, 80% or eight of ten airports have retained or increased enplanements over an average of the previous three years
6	Percent of Commercial Service Airports that meet the FAA entitlement thresholds to qualify as a primary airport.	90% of the Commercial Service Airports meet this requirement. Worland is the only airport which did not meet the FAA entitlement thresholds.
7	Percent of affirmative response rates to airport awareness questions in WYDOT Customer Satisfaction Surveys.	Response rate for airport awareness following the Fly Wyoming campaign was 71%.
8	Percent of Commercial Service Airports with restrooms in the secure passenger area.	30% of the Commercial Service Airports have a restroom in the secure passenger area.

The evaluation included in **Chapter 6** indicates that system performance meets or exceeds most air service measures. In areas not meeting the measures, substantial gains have been made toward meeting the air service measures. Wyoming residents have good access to commercial service airports. However, sustaining adequate levels of service at a competitive price requires on-going attention by individual airports and Aeronautics.

8.1.3 Issues

Although many of the air service measures are met, there are persisting air service issues in the state. These issues are shaped by the structure of the airline industry, current economic conditions, and by the unique characteristics of Wyoming.

The cost of air service in the state remains high. The commercial air service system in Wyoming is served predominantly by an aging fleet of turboprop aircraft. The natural resource and tourist based components of the economy inject seasonality and fluctuations in the demand for air service. Other factors have also shaped the service patterns and demand for air service. The most important of these include the following:

- Wyoming has a small population base that is geographically dispersed. The state has the second lowest population density in the U.S. (Alaska is the lowest.) Using estimates of population for 2007 there are 5.4 persons in Wyoming per square mile. To provide a regional perspective, Montana has 6.5 and Colorado has 46.9 persons per square mile.
- Wyoming has exceptional terrain, particularly in the northwest part of the state that is a focal point for tourism and is a destination for many air travelers coming to ski in the winter or to visit in the summer.
- Natural resource extraction is a major component of Wyoming's economy that can contribute to rapid fluctuations in air demand.
- Nine of Wyoming's ten Commercial Service Airports are eligible to participate in the Essential Air Service Program (EAS) and several have in the past. Currently, Laramie and Worland participate in the program. The EAS program determines the minimum level of service required at each eligible community (typically two daily round-trips, six days per week.). Where necessary, the U.S. Department of Transportation pays a subsidy to a carrier to ensure that the specified level of service is provided.
- The Wyoming state legislature, the Wyoming Department of Transportation Aeronautics Division, and the ten Commercial Service Airports have made air service a priority and have invested time and funding toward the enhancement and retention of air service.
- Wyoming air service is also shaped by (a) the carriers that serve the state, notably Great Lakes Airlines, United Airlines, and the combined Delta-Northwest Airlines; (b) the aircraft types deployed for each service, (c) and the service agreements that the network carriers have with regional affiliates that serve the state.

- Air service in Wyoming is part of the national system of transportation and influenced by the economic conditions that are challenging the aviation industry throughout the country. Increased volatility of fuel prices and demand has recently put pressure on the carriers to respond to rapid changes in conditions and to quickly adjust the supply of air service.

The purpose of this chapter is (1) to analyze the key components of Wyoming air service and its development over the last five years; (2) to evaluate the local, regional, and national factors that may influence Wyoming air service; and (3) to set a course for retention and development of air service at Wyoming's Commercial Service Airports to assist in fulfillment of the air service goal.

8.2 Recent Gains in Air Service

During the last five years, the State of Wyoming has experienced an expansion of air service at a time when many other areas of the country, particularly small communities, have experienced declines or total loss of air service. A strong state economy and an active suite of air service development programs have contributed to positive results for Wyoming.

In 2003, a statewide air service study was sponsored by the Wyoming Business Council for Enhanced Air Service and conducted by the consulting firm SH&E. This study examined the market for air service in Wyoming and serves as a good benchmark to measure progress.

Total enplaned (boarding) passengers in the state have grown from 369,758 to 495,739 or by 34% from 2003 to 2007. Seats, a measure of capacity, are up by 18%, the number of departures is up by 3% and the average size aircraft (seats per departure) has grown by 15%.

Table 8-2 summarizes the changes in Wyoming air service at a statewide level from 2003 to 2007. Each of the measures shows outbound totals only. Total activity (in and out) would be approximately twice the numbers shown in **Table 8-2**.

Table 8-2
Changes in Outbound Passengers, Seats and Departures, 2003-2007

	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%

Source: WYDOT Aeronautics, US DOT T100

The SH&E study established passenger enplanement goals for each Wyoming airport. The goals were based on an evaluation of demand and service potential as well as the availability of community financial support to the airlines for air service development. No goal was set for Jackson because it is a destination market and consequently highly influenced by advertising in cities where passengers originate. Jackson's traffic is also influenced by the availability and pricing of vacation packages.

Table 8-3 shows actual 2003 and 2007 enplanements per day and compares them with the 2003 goal set by SH&E. The results are positive. Each Commercial Service Airport in Wyoming has increased daily enplanements. Five out of nine airports have exceeded their 2003 enplanement goals.

Table 8-3
Enplanements per Day at Wyoming Airports, 2003-2007

Associated City	Enplanements Per Day					
	2003 (Actual)	2007 (Actual)	SH&E Report Goal	Goal Increase in Enplanements Per Day	Actual Increase in Enplanements Per Day	Percent Increase 2003-2007
Casper	170	211	192	22	41	24%
Cheyenne	38	46	119	81	8	21%
Cody	56	73	84	28	18	32%
Gillette	37	70	59	22	33	89%
Jackson	596	760	NA	NA	164	28%
Laramie	24	27	33	9	3	12%
Riverton	30	43	51	21	14	46%
Rock Springs	24	60	39	16	36	154%
Sheridan	31	58	51	20	26	83%
Worland	8	10	8	0.4	2	28%
Total Enplanements	**1,013**	**1,358**	**NA**	**NA**	**345**	**34%**

Source: WYDOT Aeronautics, Report to Wyoming Business Council, Enhancing Airline Service, 2003

The 2003 study also established seat capacity goals. **Table 8-4** shows trends in daily seat capacity from 2003-2007. The number of daily seats has increased at every airport except Riverton and Worland. The largest absolute increases in daily seats were at Jackson, Casper, Sheridan and Rock Springs.

Table 8-4
Daily Seat Capacity, 2003-2007

Associated City	Seats per Day				
	2003 (Actual)	2007 (Actual)	2003 Goal	Actual Increase in Seats Per Day	Percent Increase 2003-2007
Casper	298	355	320	57	19%
Cheyenne	104	141	199	37	35%
Cody	98	121	140	22	23%
Gillette	104	121	98	17	17%
Jackson	907	1,017	NA	110	12%
Laramie	51	81	55	31	60%
Riverton	70	67	85	-3	-4%
Rock Springs	50	95	65	45	90%
Sheridan	56	119	86	63	112%
Worland [1]	78	31	14	-47	-61%
Wyoming Total	**1,814**	**2,146**		**332**	**18%**

Note: [1] Worland daily capacity includes daily flight to and from Laramie

Source: WYDOT Aeronautics, Report to Wyoming Business Council, Enhancing Airline Service in the State of Wyoming, 2003

Since many of the 2003 goals for passengers and seats were achieved, it is reasonable to ask what's next for Wyoming Commercial Service Airports. Building upon what has already been accomplished and to support the air service measures established for this plan, the near term air service objectives include the following:

- Maintain a base level of service at Wyoming Commercial Service Airports of three or more frequencies per day.
- Retain connecting service to both Denver and Salt Lake City for those airports that have nonstop access to two hubs.
- For those airports that have service to one hub airport, increase use of existing service and when feasible expand service to both Denver and Salt Lake City.
- Monitor annual enplanements and the number of annual seats offered at each commercial service airport to determine if enplanements and seats are growing, remaining constant or declining.
- Monitor air fares at Wyoming Commercial Service Airports and continually work with the airlines to achieve air fares that are reasonable and competitive with nearby larger airports.

To chart a course of next steps, it is important to review existing programs that currently support retention and growth of air service at a competitive price.

8.3 Programs that Directly Support Air Service

The gains achieved in air service have come after several years of effort by the airports and by the state.

8.3.1 Air Service Initiatives Prior to 2004

Prior to 2004, Aeronautics participated in a number of air service initiatives. These included the following:

- Conduct of meetings about air service in all ten communities where there is a Commercial Service Airport.
- Assistance to five Wyoming communities with preparation of applications to participate in the US DOT Small Community Air Service Development Pilot Program.
- Funding and conduct of a travel agency incentive program in 2002 called "Book for Bucks" to aid communities in promoting awareness of air service to their communities.
- A full air service statewide study including a leakage study.
- Assistance to EAS communities by helping to select service providers best suited to serve each community.
- Initiation of the Laramie First Flight program designed to increase the number of enplanements out of a community to reach the minimum 10,000 enplanement threshold to be eligible for annual federal entitlement funding of $1 million.
- Participation by Aeronautics and the Wyoming Business Council in visits to airlines in advance of implementation of the Air Service Enhancement Program.

In addition, Aeronautics developed a grant program to support airport marketing and promotions at both Commercial Service Airports as well as other classifications of airports. The program has been in place for over ten years. State grants under this program require communities to contribute a 50% share of the total grant.

The Wyoming Aeronautics Commission also sponsored an Air Show and Fly-in Program. This is a separate and newer grant program designed to raise awareness about Wyoming's airports and educate the public. Aeronautics has the authority to grant $5,000 to airports for air shows and fly-ins with no local match required. While this program is typically directed at business and general aviation activity, it does increase community awareness of airport facilities and available services.

8.3.2 Current Air Service Programs

The most recent Wyoming initiatives are best grouped under two programs: one is the Air Service Enhancement Program enabled by state legislation in 2003; the other initiative is the Fly Wyoming campaign funded by a 2005 grant from the Small Community Air Service Development Pilot Program. These two programs have together raised airport awareness in Wyoming and materially improved air service. Each are briefly summarized in the following sections.

8.3.2.1 Air Service Enhancement Program

In 2003, the Wyoming Legislature passed the Air Service Enhancement Act (SF 120) which created a grant program that allows the state to participate with communities in air service improvements. The legislation provides financial incentives to support Commercial Service Airports in their efforts to retain and develop air service and authorizes Aeronautics to fund a variety of activities including:

- Air carrier marketing in the communities;
- Revenue guarantees to achieve service to a second hub, additional frequencies, or larger equipment;
- Air service development and marketing studies;
- Equipment purchases including acquisition of equipment to enhance passenger security;[1] and,
- Assistance to achieve threshold enplanement levels to qualify as a primary airport and receive FAA entitlement funds.[2]

The Wyoming Aeronautics Commission approves each grant that is applied for under this program. Since enactment of the legislation, six of the ten Commercial Service Airports in Wyoming have participated in the Air Service Enhancement Program. As of July 2008, state and local communities have allocated a total of $8 million and $2.7 million respectively to the program. However, because most of the programs were revenue guarantees and the revenue targets were met or exceeded on certain routes, much less was actually paid out of the program.

The Air Service Enhancement Program also has an administrative component to manage the program. The Legislature funded a new position in the Aeronautics Division for an Aviation Business and Marketing Manager who is dedicated full time to Wyoming air service, airline negotiations and fare monitoring. In addition, the Aeronautics Division subscribes to two databases that provide MIDT[3] data, origin and destination data as well as airline performance, segment-level traffic (T100)[4], capacity and advanced booking information. This data is available to all Wyoming airports to assist with monitoring local markets, fares and analyzing air service potential. **Appendix B** provides an example of statewide reports currently generated by Aeronautics for airports using this data. Individual airport reports are also produced.

[1] The Air Service Enhancement program purchased portable oxygen systems that could be used by passengers boarding smaller aircraft at Casper. Legislation enacted in 2007 permitted use of Air Service Enhancement funds for purchase of security equipment.
[2] The primary airport threshold is currently set by the FAA at 10,000 enplanements.
[3] Management Information Data Transfer (MIDT) is a database produced from computer reservation system bookings. The data includes information on the location of the passenger, origin airport, and trip destination.
[4] The T-100 databases include traffic data (passenger and cargo), capacity data and other operational data for U.S. air carriers and foreign air carriers operating to and from the United States. The T-100 data files are not based on sampled data or data surveys, but represent a 100 percent census of the data.

8.3.2.2 Fly Wyoming Program

The second important component to Wyoming's air service initiatives is the Fly Wyoming Program. In 2005, Aeronautics in consortium with the state's ten Commercial Service Airports successfully applied for a Small Community Air Service Development Program grant. The grant award consisted of an $800,000 Federal grant with a local match of $100,000 from the State of Wyoming and $10,000 from each of the ten airports for a total budget of $1 million. The intent of the grant was to provide marketing support for air service enhancements through a statewide Fly Wyoming Program. The program had several components summarized below:

- **Statewide Print Advertising** – The state purchased the inside cover of the Wyoming 2006 Official Summer Travel Guide which is distributed to approximately 400,000 businesses and residences. Also purchased were advertisements published in the Frontier Airlines and United Airline in-flight magazines and a full page advertisement for Great Lakes Airlines' first in-flight magazine, "Peaks and Plains".
- **Wireless Internet** – Part of the grant was spent to purchase wireless internet equipment and install a wireless network in each of the ten Commercial Service Airports. The grant also covered the first year of wireless service provided that individual airports agreed to continue the service for a second and third year. The airports had to design a log-in page that advertised their airport. They were also encouraged to provide a passenger survey on the log-in page.
- **Branding and Advertising** – The state hired an advertising firm to develop a statewide publicity campaign to promote use of Wyoming airports. The consultant traveled the state and conducted focus groups to determine the perceived air service issues and to test brand identity options for the advertising campaign. Following this effort, the consultants designed a logo and tagline, prepared two television ads and three radio ads, and developed, together with Aeronautics, the Fly Wyoming Website (www.flywyoming.org).
- **Coordination** – The Fly Wyoming campaign was designed and built in coordination with Aeronautics, the Wyoming Travel and Tourism department and the individual Commercial Service Airports.

8.4 Structure of Wyoming Air Service

8.4.1 Summary of Influencing Factors

To fully appreciate the advances in air service and opportunities in Wyoming it is important to consider how the airports function together within the state, in the region and in the national system of air transportation. The following factors together shape the structure of service:

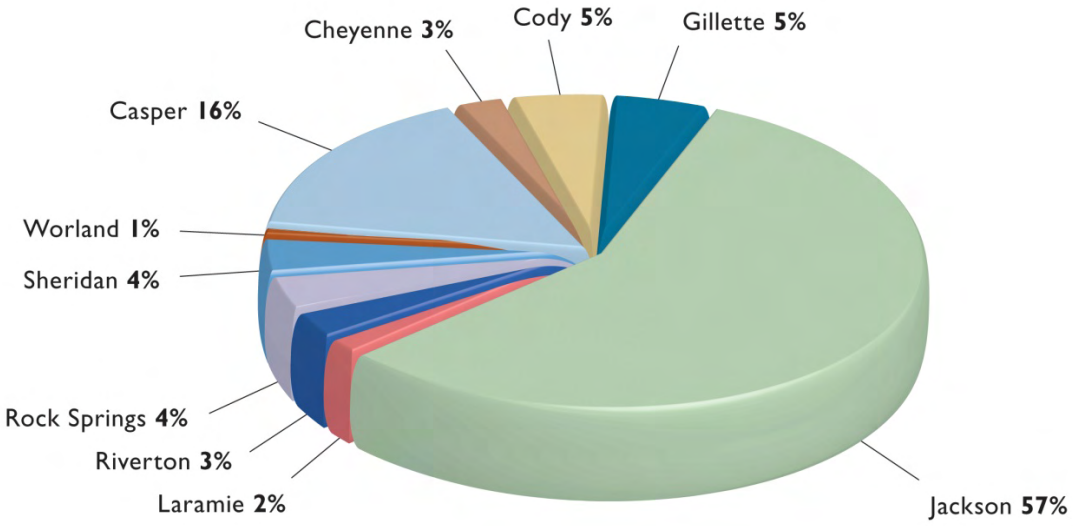
- Wyoming Commercial Service Airports are small relative to other airports in the U.S. and serve large geographic areas.
- The state is surrounded by larger airports: two connecting hubs - Denver and Salt Lake City and three other commercial airports that draw Wyoming passengers - Billings, Boise, and Rapid City.
- Wyoming is a tourist destination for both winter and summer recreation.

- Wyoming is rich in energy resources both non-renewable (coal and gas) and renewable energy (wind and solar).
- Essential Air Service has contributed significantly to retention of air service at the smallest airports.
- Recent mergers and acquisitions will impact service including the Northwest-Delta merger and the acquisition of Frontier Airlines.
- Southwest Airlines expansion at Denver has resulted in increased diversion of Wyoming passengers to Denver.
- Aging turboprops and small regional jets that serve Wyoming have limited options for replacement of similar sized aircraft.
- The Air Service Enhancement Program and the energy resource boom from 2005 through the middle of 2008 combined to effectively support new air service initiatives in Wyoming.

8.4.2 Size of Wyoming Airports

Wyoming has ten Commercial Service Airports of different sizes. Jackson is the largest airport and handles approximately 57% of the state's enplanements. Casper follows second with 16% of enplanements. The other airports cluster as follows: Cody and Gillette, 5%; Rock Springs and Sheridan, 4%; Cheyenne and Riverton, 3%; Laramie, 2%; and, Worland, 1%. **Chart 8-1** and **Table 8-5** show the distribution.

Chart 8-1
Distribution of 2007 Wyoming Enplanements



Source: WYDOT Aeronautics

Table 8-5
Wyoming Enplanements by Airport, 2007

Associated City	2007	Percent Share
Jackson	277,361	57%
Casper	76,908	16%
Cody	26,799	5%
Gillette	25,647	5%
Rock Springs	21,791	4%
Sheridan	20,978	4%
Cheyenne	16,766	3%
Riverton	15,831	3%
Laramie	9,939	2%
Worland	3,719	1%
Total Enplanements	**495,739**	**100%**

Source: WYDOT Aeronautics

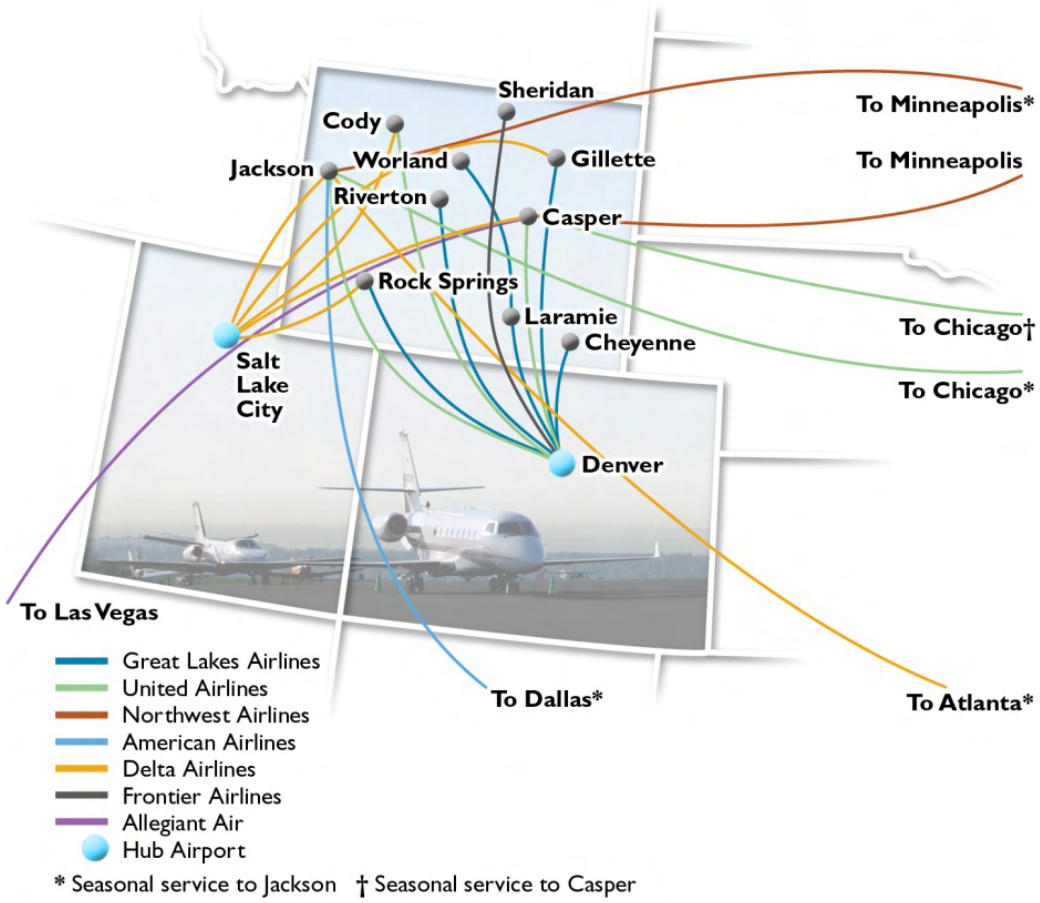
Despite differences among the ten airports, by national measures all of Wyoming's Commercial Service Airports are relatively small. Nine of Wyoming's Commercial Service Airports are considered primary, non-hub airports (including Jackson) in the FAA classification system of airports. Worland is the only Wyoming airport classified as a non-primary, non-hub airport.

8.4.3 Wyoming's Hub and Spoke Systems

In the United States, airlines offer air service primarily in two ways: (1) point to point service or (2) hub and spoke service. Many low cost carriers select the largest markets and offer point to point service between cities such as New York and Los Angeles. The hub and spoke model enables a carrier to serve different size communities and consolidate traffic at one or more large hub airports. The hub and spoke model was embraced by the airlines in the 1980's as a means to provide a more comprehensive level of service to cities of all sizes. Wyoming's CS Airports each function as spoke cities in hub networks. Denver is a connecting hub airport for United Airlines and Frontier Airlines; Salt Lake City is one of Delta's hubs. Jackson and Casper, Wyoming's largest airports in terms of passengers also have had limited service to more distant hubs.

Figure 8-1 graphically shows the service available to Wyoming passengers in September 2008.

Figure 8-1 – Wyoming Air Service Routes



Source: Official Airline Guide, September 2008

8.4.3.2 Importance of Denver and Salt Lake City Service

In many respects, the options for Wyoming air service coincide with developments at the Denver and Salt Lake City hub airports. Denver is a United Airlines and Frontier Airlines hub. Great Lakes Airlines has a code sharing agreement with both carriers so that any Wyoming passenger flying Great Lakes Airlines to Denver can check baggage to their final destination and connect at Denver on either carrier. Great Lakes Airlines also operates independently for service within its own system. **Table 8-6** provides a summary of daily departures and non-stop markets served from Denver and Salt Lake. In 2007, Denver offered 783 daily departures. United Airlines flew 429 of these flights for a market share of 55%. By April, 2009, United Airlines' market share has dropped from 55% to approximately 48% of non-stop departures. Loss of United Airlines' market share at Denver occurred as United Airlines reduced capacity and Frontier Airlines and Southwest expanded service.

Table 8-6
Summary of Denver and Salt Lake City Hub Operations, 2007

Hub Airport	Carrier Serving Wyoming	Average Daily Departures	% of Total Daily Departures	Non-Stop Markets	% Share of Non-Stop Markets
Denver	United Airlines	429	55%	116	71%
	Frontier Airlines	166	21%	67	41%
	Great Lakes Airlines	67	9%	26	16%
	Subtotal	662	85%		
Total Denver		**783**	**100%**	**163**	**100%**
Salt Lake City	Delta Air Lines	327	80%	118	97%
Total Salt Lake City		**411**	**100%**	**122**	**100%**

Source: Official Airline Guide via Seabury APG

Delta's hub at Salt Lake City is a regional carrier hub, with SkyWest Airlines, a Delta Connection carrier offering the largest number of daily departures. Frontier Airlines and Southwest offer large jet service at Salt Lake. So while Delta dominates with 80 percent of operations, it carried only 39% of passengers in 2008. Frontier Airlines carried 30% of passengers and Southwest, 14%. Carrier market shares at Salt Lake have remained stable however operations and traffic for all carriers declined in 2008 and 2009.

8.4.3.3 Critical Role of Regional Carriers

Most network carriers[1] that employ a hub and spoke model rely on regional carriers and smaller aircraft to serve spoke cities. In fact, in Wyoming spoke service is almost exclusively handled by regional carriers that are either wholly owned subsidiaries or operate under contract with network carriers. In 2008, the following regional carriers provided service in Wyoming:

- Great Lakes Airlines – United Airlines and Frontier Airlines to Denver.
- Lynx Aviation – Frontier Airlines to Denver.
- Mesa Airlines – United Airlines to Denver.
- SkyWest – Delta Air Lines to Salt Lake City and United Airlines to Denver.
- Pinnacle Airlines – Delta Air Lines to Minneapolis/St. Paul.

With the exception of Lynx Aviation which is a wholly owned subsidiary of Frontier Airlines, all of the other regional carriers serving Wyoming are independent airlines that have operating contracts with the network carriers. This code-sharing arrangement allows a passenger to purchase a single ticket under the network carrier brand and check baggage from the originating airport to the final destination.

[1] Network carriers include: United Airlines, American Airlines, Delta Air Lines (now merged with Northwest Airlines), Continental Airlines, and US Airways. These carriers are also often referred to as mainline or legacy carriers.

The use of independent regional carriers contributes to higher fares in Wyoming because two separate companies are seeking compensation for services. When a single company is providing both segments of the connecting service, there is more flexibility to respond competitively to specific market situations. Connecting service is inherently more expensive to provide and makes it difficult to achieve fare parity with nonstop service out of Denver or Salt Lake City, particularly air service provided by low cost carriers.

8.4.4 Current Levels of Service

Table 8-7 summarizes average daily departures from each Wyoming Commercial Service Airport.[1] Since there is a significant tourism component to Wyoming air service, average daily departures are shown for February as representative of winter schedules and August which is representative of summer schedules. Several developments in 2007 and 2008 are noteworthy:

- Casper daily departures have remained relatively stable. However, high frequency service to Salt Lake City has been reduced by two frequencies. Denver frequencies dropped by one, but additional service to Chicago, Minneapolis/St. Paul and Las Vegas (in September, 2008) were added.
- Great Lakes Airlines, based in Cheyenne, has provided relatively consistent levels of service at Cheyenne, Laramie, Gillette, Riverton, Rock Springs, Sheridan and Worland. However, there have been some seasonal adjustments.
- In the summer of 2008, Delta/SkyWest added service from Salt Lake City to Gillette and Rock Springs.
- Jackson's schedule reflects a hybrid of spoke service to major hub airports with limited weekly service to major metropolitan areas.

[1] In Table 8-7, average daily departures for Feb. 07, Aug. 07, and Feb. 08 are actual departures that the carriers reported to the US DOT T100 database. Aug. 08 data represents scheduled average daily departures as published in the Official Airline Guide, Aug 08.

Table 8-7
Average Daily Departures, February and August, 2007 and 2008

Origin	Destination	Airline	Average Daily Departures			
			Feb-07	Aug-07	Feb-08	Aug-08
Casper (CPR)	Denver, CO	United Airlines	5	5	5	4
	Chicago, IL	United Airlines	-	-	-	1
	Minneapolis/St. Paul, MN	Northwest Airlines	1	2	1	1
	Salt Lake City, UT	Delta Air Lines	4	5	4	3
CPR Total			**10**	**12**	**10**	**9**
Cheyenne (CYS)	Denver, CO	Great Lakes Airlines	6	7	6	7
CYS Total			**6**	**7**	**6**	**7**
Cody (COD)	Denver, CO	United Airlines	1	2	1	2
	Salt Lake City, UT	Delta Air Lines	2	3	2	2
COD Total			**3**	**5**	**3**	**4**
Gillette (GCC)	Denver, CO	Great Lakes Airlines	4	5	5	3
	Denver, CO	United Airlines	-	-	-	3
	Salt Lake City, UT	Delta Air Lines				2
GCC Total			**4**	**5**	**5**	**8**
Jackson (JAC)	Atlanta, GA	Delta Air Lines	0.3	0.5	0.4	0.8
	Boise, ID	Big Sky Airlines	1	-	-	-
	Chicago-O'Hare, IL	American Airlines	1	0.2	1	0.3
	Chicago-O'Hare, IL	United Airlines	-	1	1	1
	Dallas/Fort Worth, TX	American Airlines	1	1	1	1
	Denver, CO	Frontier Airlines	-	0.1	-	3
	Denver, CO	United Airlines	3	6	2	6
	Los Angeles, CA	United Airlines	-	-	0.1	-
	Minneapolis/St. Paul, MN	Northwest Airlines	-	1	-	1
	Salt Lake City, UT	Delta Air Lines	4	4	4	5
	Washington, DC	United Airlines	-	-	-	1
JAC Total			**10**	**13**	**9**	**19**
Laramie (LAR)	Denver, CO	Great Lakes Airlines	3	3	3	3
LAR Total			**3**	**3**	**3**	**3**
Riverton (RIW)	Denver, CO	Great Lakes Airlines	3	3	4	4
RIW Total			**3**	**3**	**4**	**4**
Rock Springs (RKS)	Denver, CO	Great Lakes Airlines	4	5	4	3
	Denver, CO	United Airlines	-	-	-	2
	Salt Lake City, UT	Delta Air Lines				2
RKS Total			**4**	**5**	**4**	**7**
Sheridan (SHR)	Billings, MT	Big Sky Airlines	1	1	-	-
	Denver, CO	Big Sky Airlines	3	3	-	-
	Denver, CO	Great Lakes Airlines	-	3	3	4
SHR Total			**4**	**7**	**3**	**4**
Worland (WOR)	Denver, CO	Great Lakes Airlines	1	2	2	2
WOR Total			**1**	**2**	**2**	**2**
Grand Total			**48**	**62**	**49**	**67**

Source: US DOT T100 and Official Airline Guide, August 2008

8.4.5 Other Factors Impacting the Structure of Service

Wyoming Commercial Service Airports function within the mountain state region and the national transportation system. Southwest's expansion at Denver, reliance on subsidies from the EAS Program and on-going turmoil within the domestic airline industry all contribute in important ways to the character of Wyoming air service and retention of passengers at local airports. These factors are described briefly in the following sections.

8.4.5.1 Southwest Expansion at Denver

Southwest Airlines has been steadily expanding its service at Denver. In January, 2006, Southwest began service at Denver with four daily nonstop flights to Chicago Midway, four to Phoenix and five to Las Vegas. In March of the same year, Southwest added four flights to Salt Lake City, one to Baltimore, an additional flight to Phoenix and one to Las Vegas for a total of 20 daily nonstop flights. By April of the following year, Southwest added nonstop service to Nashville, Houston, Kansas City and Orlando for a total of 34 daily departures. In 2008, nonstop markets served went from 9 to 17. By April, 2009, Southwest almost doubled the number of nonstop cities it served out of Denver to 32 with 111 daily departures. By even Southwest standards, its expansion at Denver is moving quickly.

In the markets it serves, Southwest has begun to set price. Unfortunately for Wyoming passengers, Southwest does not have domestic code-sharing partners. This places Wyoming connecting passengers at a price disadvantage and increases the challenge for airports to retain passengers at local airports.

8.4.5.2 Essential Air Service

All of Wyoming's airports with the exception of Gillette are designated as EAS communities. The EAS program was originally part of the Airline Deregulation Act of 1978. It was designed to assist small and medium-sized communities that have struggled to obtain and retain commercial air service. The U.S. Department of Transportation (DOT) determines a minimum level of service for each EAS eligible community that must be provided to a hub airport, typically two daily roundtrips, six days per week. Airlines bid for EAS contracts and the DOT will pay a subsidy to the carrier to ensure that the minimum level of service is provided. The EAS program has become more restrictive with respect to the eligibility of communities and the amount of subsidy available. Nationally, 405 communities were subsidized in 1980; in 2007, 145 communities were subsidized. Within the recent past, a number of Wyoming communities including Rock Springs and Riverton participated in the EAS program. Today Worland and Laramie are the two remaining airports in the state currently receiving subsidized EAS service.

8.4.5.3 Aircraft Fleet

Jackson and Casper offer a combination of jet, regional jet and turboprop service. Some regional jet service is offered at Cody. Turboprop service remains the mainstay of air service to Wyoming's smaller airports. Beechcraft 1900D, Embraer Brasilia or Dash 8 aircraft are the most frequent aircraft flown. This equipment has a few limitations. First, preference for jet aircraft results in some passengers driving to alternate airports. Second, passengers with large luggage items may not have the option of using local service as the aircraft can be weight and

space restricted. Third and most important, small aircraft have higher costs per available seat and typically fewer discounted fares are allocated to these flights.

The turboprop aircraft in Wyoming service are also aging. In other states, airlines are beginning to replace Dash 8 aircraft, Beech 1900's and Brasilia's. The Canadair Regional Jet CRJ100 and CRJ200 (50 passenger aircraft) are also moving out of the U.S. fleet mix in favor of larger regional jets that are more fuel and cost efficient to operate. Many small Wyoming air service markets are 'right-sized' for the older and smaller aircraft. It is not known how long these aging aircraft will continue to serve the state and what aircraft will replace them.

One newer aircraft is serving Jackson. Lynx Aviation is operating the Bombardier Q400 aircraft between Denver and Jackson. The Q400 is the most technologically advanced turboprop aircraft currently operating in the United States. It seats 68 to 78 passengers, climbs quickly and thus is suitable for shorter runways or high altitude environments.

8.4.5.4 Conditions in the Airline Industry

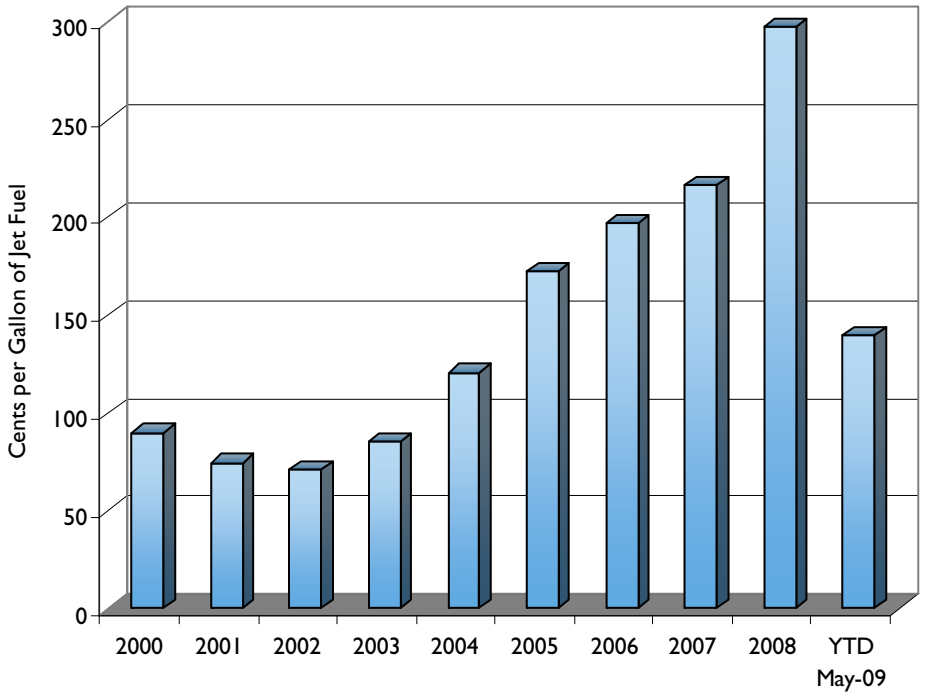
Wyoming air service is also inextricably entwined with changes within the U.S. domestic aviation industry. This section provides a snapshot of recent changes in the industry that influence air service in Wyoming.

8.4.5.4.1 Fuel Cost and Passenger Yields

In the thirty years since airline deregulation there has hardly been a period of relative calm and prosperity with the aviation industry. Today is no exception. The two largest operating costs for an airline are fuel and labor. According to the Air Transport Association, in the first quarter of 2008 fuel cost represented 29.4% of total operational costs; labor, 21.4%. The airlines have gone to great lengths to control labor costs with mixed results. Fuel has proven to be a wildcard as it is an outside cost that the airlines cannot control. **Chart 8-2** shows how the price of jet fuel accelerated from 2003 until 2008. In the first five months of 2009, jet fuel prices dropped by more than 50%.

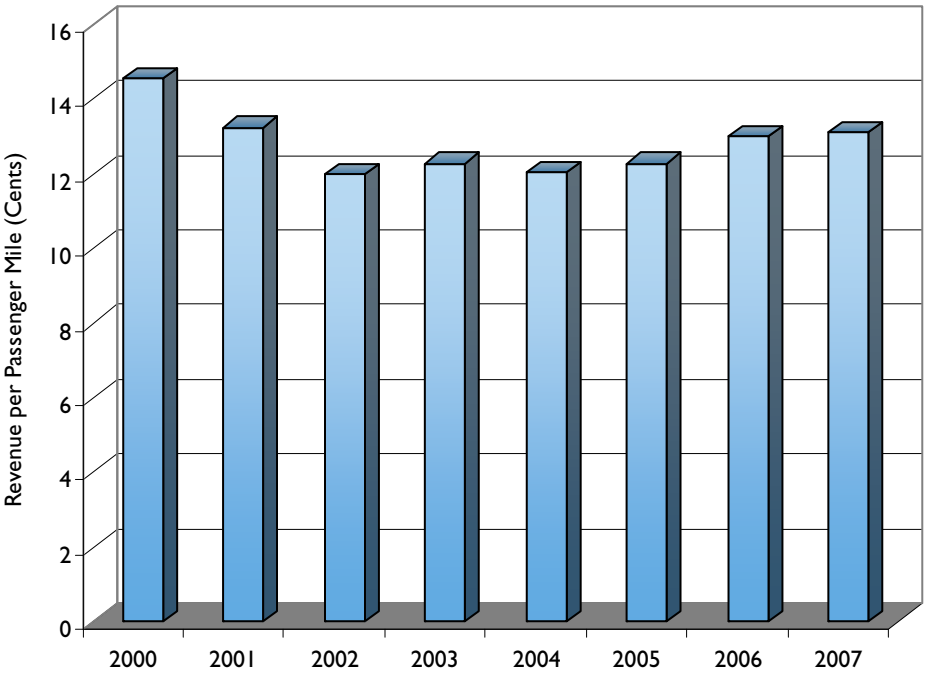
Given competition and excess capacity, the airlines, have become more agile in adjusting capacity to demand. However the large presence of low cost carriers has made adjustments in air fares much more difficult. As **Chart 8-3** shows, from 2000 through 2008 revenues per passenger mile (i.e. passenger yields) increased only slightly. When in 2008, the cost of jet fuel spiked by 50%, the domestic airline industry instead responded with more bankruptcies, new proposed mergers and reductions in capacity. Carriers also began to levy a variety of fees for checked baggage, food, and seats with extra legroom.

Chart 8-2
Cost of Jet Fuel, 2000-2009



Source: Air Transport Association

Chart 8-3
Passenger Yields, 2000-2008



Source: US DOT via Air Transport Association

Volatility in fuel prices and the deepest recession in post-war history have translated into dramatic changes within the airline industry:

- In the first six months of 2008, ten airlines ceased operation.
- In April 2008, Frontier Airlines declared bankruptcy and was acquired by Republic Airways Holdings Inc.
- The price of a barrel of oil went from $68 to more than $140 in July 2008 and 12 months later, the price had fallen to the low $60's per barrel.
- Airlines have implemented new fees for services and baggage that are not subject to federal ticket excise taxes.
- Domestic carriers grounded as many as 500 aircraft and by the end of the summer 2008 and cut upwards of 3,000 daily departures.
- Northwest and Delta Air Lines merged. Continental broke from the Sky Team airline alliance (Delta) and joined the Star Alliance (United Airlines et al.)
- American Airlines downsized and announced a cut of nearly 7,000 jobs by the end of 2008, retirement of MD 80 and Embraer 135 aircraft, and elimination of many flights.
- Regional carriers stepped up use of multi-stop itineraries to serve small cities such as those in Wyoming.

It is widely expected that the future will result in more consolidation of capacity either through mergers or downsizing of capacity and higher air fares. Since Wyoming is an integral part of the U.S. domestic system of air service, the state will be impacted by what is going on elsewhere in the country and particularly, the network carriers that operate within the state and at Denver and Salt Lake City.

8.4.5.4.2 Airline Mergers and Acquisitions

The merger between Delta and Northwest will result in consolidation of hubs, routes and service. Delta operates a large regional hub at Salt Lake City. However, the proposed merger will leave the combined airline with hubs for Delta at Atlanta, New York-JFK, Salt Lake and Cincinnati and for Northwest at Minneapolis-St. Paul, Detroit and Memphis. Conventional wisdom suggests that dominance at a hub provides an airline with the best profit margins. Northwest Airlines has a 67% share of passengers at MSP, an approximate 60% share in Detroit and 49% in Memphis. Delta has a 93% market share at Cincinnati. A merged Northwest and Delta may result in consolidation of international gateways and the closing or further downsizing of smaller hubs that overlap, possibly Memphis and Cincinnati. For Wyoming, it is likely that both Salt Lake City and Minneapolis-St. Paul will remain in the merged carrier's hub system. That said, as part of the consolidation process, Delta will scrutinize all of its routes including Wyoming's service to Salt Lake, Minneapolis-St. Paul, and Atlanta.

Another change in ownership will also impact Wyoming. In June, 2009 Republic Airways announced its plan to acquire Frontier Airlines (and Midwest Airlines). Few changes are immediately anticipated, however, Republic is based in Indianapolis and it is not known how Frontier Airlines' hub in Denver and service at Salt Lake City will evolve under the potential acquisition.

8.5 Factors that Influence Demand for Air Service

Most small airports located within a two hour drive to a larger airport experience some loss of passengers to the larger airport. This is typically referred to as passenger leakage or passenger diversion. The percentage of passengers that use the local airport is referred to as the local passenger retention rate. The variables that influence the retention rate include:

- quality and convenience of the local air service,
- cost of this service, and the
- drive time to a larger airport with more air service options and lower fares.

Opportunities for air service improvements can arise with improving retention rates.

8.5.1 Air Service Development Cycle

It is important to think about service development as incremental. Increasing retention rates helps to build traffic, which in turn makes the market more attractive and leads to new service. The cycle shown in **Figure 8-2** describes how the process works.

Figure 8-2 – Air Service Development Cycle

Source: Oliver Wyman and KRAMER aerotek, inc, March 2009

By using the air service at the local airport, residents are helping to build better air service in the future. By not using the local air service, they are doing just the opposite – contributing to a decline in air service as fewer passengers mean that the airlines provide fewer flights, which in turn makes the local airport even less attractive to local travelers.

One of the obstacles faced by Wyoming airports is the problem of higher airfares and fare restrictions. Smaller aircraft are more expensive to operate per passenger mile. For these reasons, there is a higher cost of providing service to smaller airports, which is often reflected in higher airfares versus nearby larger airports.

Wyoming airports also experience fare restrictions not always present at larger airports such as excessively high one way fares or requirements for Saturday night layovers to obtain a discounted fare. These fare policies can discourage even business travelers from using the local Wyoming airport. Unfortunately, fares must be continuously monitored as a single airline can make in excess of one million fare changes per day.

8.5.2 Wyoming Passenger Retention Rates

For most airports, a consistent time series for retention rates is difficult to obtain. Previously, many airports and state governments sponsored travel agent ticket surveys to obtain information about the airport preferences of local passengers. However, with the advent of on-line booking, travel agent ticket surveys have become less reliable as a broad spectrum indicator. To address this issue more comprehensively, Aeronautics has acquired and is processing monthly airline booking data for passengers whose address falls within zip codes of defined service areas for the Wyoming Commercial Service Airports. This is a large and statistically significant sample of local passengers.

The time series tracks a number of factors including origin airport, number of tickets sold and fares. With this data, it is possible to calculate retention rates for eight of Wyoming's Commercial Service Airports. Data for Laramie and Rock Springs are not currently available. The series is available starting in 2006 and three full years of data are now available and illuminate which airports local passengers use as well as the number of tickets sold, revenue and average fares by origin airport. This information is extremely valuable as it reveals airport preferences and average fare differentials.

Table 8-8 identifies Wyoming cities with Commercial Service Airports, the nearest larger airport and drive times to these alternate airports. A quick scan of the table shows that alternate airports are a minimum of 100 miles away and for most cities much farther. With the exception of Cheyenne, where the travel time to Denver is just over 90 minutes, travel time to all other alternate airports is well in excess of 90 minutes. Alternate airports are also located in other states.

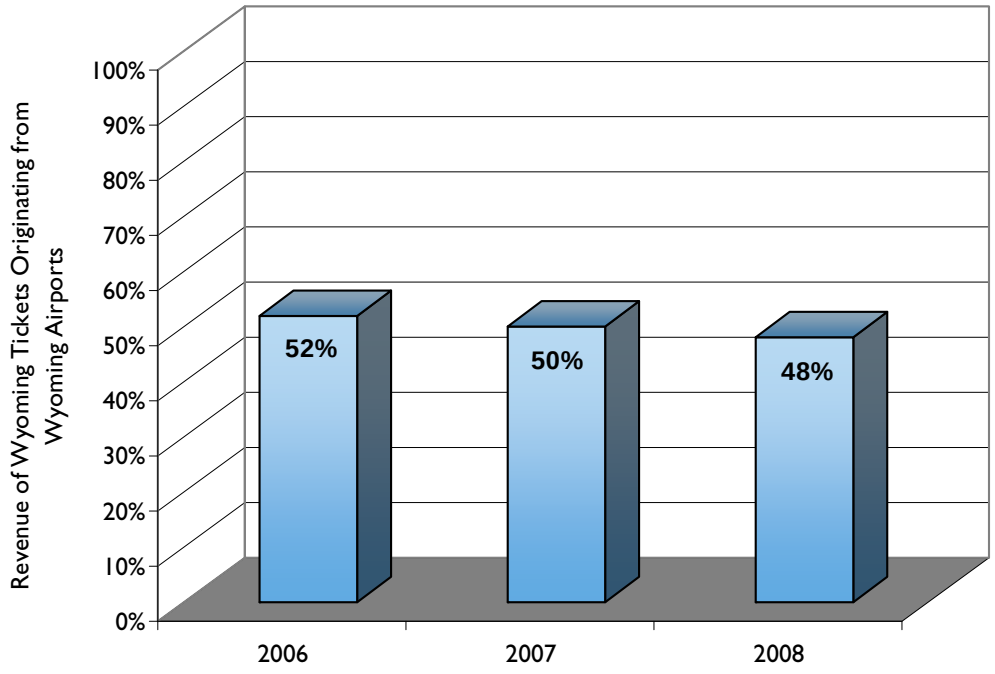
Table 8-8
Drive Times to Larger Airports

Associated City	Nearest Larger Airport	Driving Distance (miles)	Travel Time	Closest Larger Wyoming Airport
Jackson	Salt Lake City	315	5 hrs. 17 min.	NA
Casper	Rapid City	267	4 hrs. 40 min.	NA
Riverton	Billings	255	4 hrs. 49 min.	Casper - 118 miles
Sheridan	Billings	135	2 hrs. 3 min.	Gillette - 105 miles
Gillette	Rapid City	157	2 hrs. 24 min.	Casper - 190 miles
Worland	Billings	166	3 hrs. 12 min	Riverton - 93 miles or Casper-156 miles
Cody	Billings	120	2 hrs. 19 min.	NA
Laramie	Denver	156	2 hrs. 16 min	Cheyenne - 56 miles
Rock Springs	Salt Lake City	198	2 hrs. 55 min.	NA
Cheyenne	Denver	108	1 hr. 38 min.	NA

Source: Report to Wyoming Business Council, Enhancing Airline Service in the State of Wyoming, 2003

Chart 8-4 and Table 8-9 show the percent of Wyoming tickets that indicate passengers are originating trips at the airport nearest their home or another Wyoming airport. In 2008 statewide retention rates were approximately 48%. This is a decline from 52% in 2006 and 50% in 2007. After Wyoming airports, Denver, Billings and Salt Lake City capture the next highest percentage of Wyoming passengers.

Chart 8-4
Wyoming Passenger Retention, 2006-2008 Percent of Wyoming Tickets Originating from Wyoming Airports



Source: WYDOT Aeronautics, Sabre MIDT data

Table 8-9
Statewide Retention and Diversion Rates, 2006-2008

	2006	2007	2008
Statewide Capture Rates			
Nearest Wyoming Airport	46%	44%	43%
Other Wyoming Airports	6%	6%	5%
Total Wyoming Capture Rates	52%	50%	48%
Out of State Capture Rates			
Denver	28%	29%	30%
Billings	5%	5%	5%
Salt Lake City	2%	3%	2%
Other Out of State Airports	13%	13%	15%
Total All Airports	100%	100%	100%

Source: WYDOT Aeronautics, Sabre MIDT data and Diio (APGdat)

Table 8-10 tracks individual airport retention rates for the three years 2006-2008 and identifies the alternate airports that have captured the largest percent of diverted passengers. Closer inspection of the time series at individual airports indicates that Denver is attracting an increasingly larger percentage of Wyoming passengers. In 2006, Southwest Airlines began service at Denver. Some increased diversion to Denver has undoubtedly occurred because of the added Southwest service and because the additional competition at Denver has lowered fares at the airport.

Table 8-10
Retention Rates, 2006-2008

Associated City	Local Capture			Largest Alternate Airports			Name
	2006	2007	2008	2006	2007	2008	
Casper	51%	45%	40%	23%	23%	26%	Denver
Cheyenne	14%	14%	13%	72%	72%	73%	Denver
Cody	54%	48%	38%	28%	29%	33%	Billings
Gillette	41%	47%	49%	22%	22%	19%	Denver
				16%	13%	14%	Rapid City
Jackson	86%	78%	81%	6%	11%	6%	Salt Lake City
				4%	8%	10%	Denver
Riverton	42%	40%	47%	18%	18%	12%	Casper
				17%	17%	17%	Denver
Sheridan	30%	42%	35%	35%	26%	28%	Billings
				17%	14%	19%	Denver
Worland	22%	27%	24%	26%	25%	24%	Billings
				12%	10%	12%	Cody
				11%	11%	16%	Denver
Statewide	46%	44%	43%	28%	29%	30%	Denver
				6%	6%	5%	Other WY Airports
				5%	5%	5%	Billings
				2%	3%	2%	Salt Lake City

Source: WYDOT Aeronautics, Sabre MIDT data and Diio (APGdat)

Table 8-11 focuses in more detail on 2008 local passenger retention (and diversion) rates. The data suggests the following observation about retention rates and diversion to other airports:

- The closest larger airport is not always the next airport of choice. For Casper, Rapid City is slightly closer than Denver, yet diversion to Denver is the largest block of alternate airport tickets sold. The same is true for Gillette which is much closer to Rapid City and yet Denver attracts a higher number of passengers.
- For Worland which has limited one-stop service through Laramie, there is a high rate of passenger diversion, but that diversion is spread across six different airports.
- Jackson has excellent retention rates, however the base of local originations are relatively small compared with the number of passengers originating elsewhere and visiting Jackson. As a destination market, Jackson has excellent nonstop service, especially for a community its size.

Table 8-11
Detail of Retention Rates, 2008

Associated City	2008 Ticket Sample Size	Local Retention	Competing Alternate Airports						Total
Casper	9,258	40% Casper	26% Denver	5% Riverton	3% Gillette	1% Billings	0% Cheyenne	25% Other	100%
Cheyenne	6,492	13% Cheyenne	73% Denver	1% Laramie	2% Casper	11% Other			100%
Cody	1,517	38% Cody	33% Billings	13% Denver	6% Salt Lake City	10% Other			100%
Gillette	2,670	49% Gillette	19% Denver	14% Rapid City	4% Billings	3% Casper	1% Sheridan	10% Other	100%
Jackson	2,709	81% Jackson	10% Denver	6% Salt Lake City	1% Idaho Falls	1% Bozeman	1% Other		100%
Riverton	2,322	47% Riverton	12% Casper	17% Denver	9% Salt Lake City	4% Jackson	3% Billings	9% Other	100%
Sheridan	2,448	35% Sheridan	28% Billings	19% Denver	4% Casper	1% Gillette	13% Other		100%
Worland	1,361	24% Worland	24% Billings	16% Denver	12% Cody	6% Riverton	4% Casper	14% Other	100%
Statewide	28,678	43% WY Airports	5% Other WY Airport	30% Denver	2% Salt Lake City	5% Billings	2% Rapid City	13% Other	100%

Source: WYDOT Aeronautics from Sabre MIDT data and Diio (APGdat)

8.5.3 Estimate of Market Potential

With estimates of airport retention rates, **Table 8-12** shows estimates of potential enplanement levels if 100% retention could be achieved.[1] While 100% retention is unlikely, existing and potential enplanements bracket the possibilities for passenger retention. **Table 8-11** estimates that Wyoming generates in excess of one million enplaned passengers each year; however, Commercial Service Airports in Wyoming currently serve approximately half of these enplaned passengers.

Table 8-12
Enplanement Market Potential, 2008

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	49%	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**
Note: *Sabre's MIDT database is not reporting Laramie and Rock Springs tickets sold by zip code			

Source: WYDOT Aeronautics

To determine a reasonable expectation for enplanements at Wyoming airports going forward, it is important to look at several key trends that may affect the demand for air service and its use. The next several sections include discussion of:

- Enplanement trends.
- Socio-economic trends (population, income, employment).
- The importance of economic activity such as seasonal service to Wyoming destinations and growth in renewable and non-renewable energy industries.
- Travel patterns to major destinations.
- Changes in levels of service.
- Average fares.

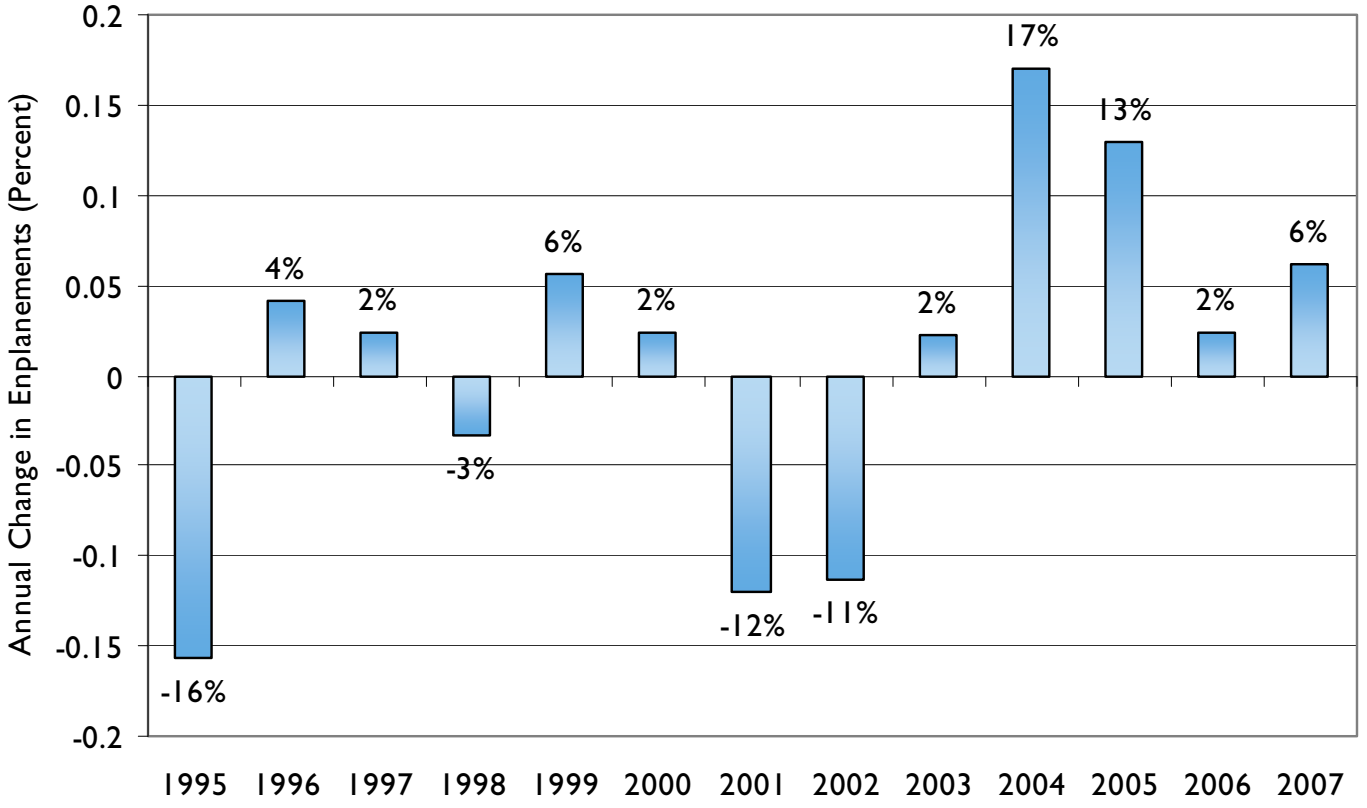
[1] Actual 2008 enplanements were divided by capture rates to estimate the total potential number of enplanements.

8.5.4 Enplanement Trends

Prior to enactment and implementation of the Air Service Enhancement Program, Wyoming air service had fluctuated up and down with an overall decline. Following the tragic events of September 11, 2001, air passenger activity declined in Wyoming in 2001 and 2002 by 14 and 8 percent respectively and began a slight recovery in 2003. The Air Service Enhancement Program instituted its first revenue guarantees in 2004 at Cody, Casper, and Jackson. Improved service and higher retention rates resulted in an increase in enplanements of 6% at Wyoming airports and 17% if Jackson is excluded. **Chart 8-5** shows the annual change in enplanements for all airports excluding Jackson. **Chart 8-6** combines enplanement growth at Jackson with enplanement growth at the other Wyoming airports. **Table C-1** in **Appendix C** details how enplanements have changed at individual airports. Several points are noteworthy including:

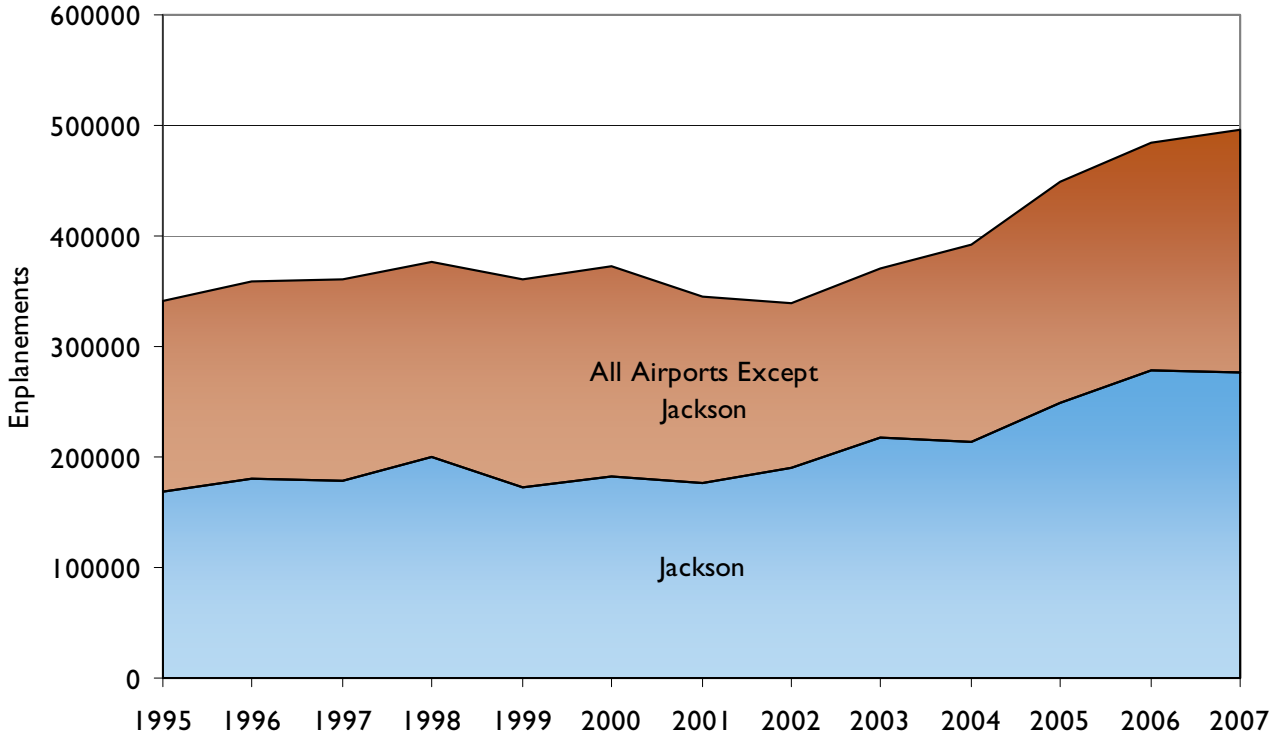
- Wyoming passenger activity is not only determined by demand for air service but also by the amount and type of air service offered at hub airports. When Continental discontinued its hub and spoke operations out of Denver, Wyoming service was also cut and consequently, enplanements dropped by 24% in 1994 and 1995.
- Aviation activity is also influenced by national events as airports experienced the negative impacts of the tragic events of September 11, 2001.
- Passenger enplanements increased following the introduction of additional service in 2004 with the first revenue guarantees jointly funded by the communities and the Air Service Enhancement Program.
- Increases in passenger activity at Gillette, Rock Springs, and Sheridan in 2006 and 2007 have contributed extensively to the overall increase in Wyoming passengers. These increases are largely because of the energy boom in the state, beginning in 2006. Gillette, Rock Springs and Sheridan each support extensive mining activity.

Chart 8-5
Percent Annual Change in Enplanements (Excluding Jackson), 1995-2007



Source: WYDOT Aeronautics

Chart 8-6
Passenger Enplanement Trends, 1995-2007



Source: WYDOT Aeronautics

8.5.5 Socio-Economic Trends

Retention of local passengers is determined by the quality and price of local air service and alternate options for air service at competing airports. However, the underlying demand for air service is directly related to the population base, local economic activity, and personal income in the region. This section examines statewide socio-economic trends. **Appendix D** provides population, employment and personal income data for each county where the Commercial Service Airports are located.

8.5.5.1 Overview

Increases in passenger enplanements have coincided with strong growth in employment within the state. From 2005-2007, Wyoming experienced one of the highest rates of job growth in the country. A high point was marked in 2006 with job growth decelerating somewhat in 2007 and at a faster rate in 2008. Even with a lower growth rate, average non-farm wage and salary jobs grew by $10,800 in 2007 and there are indications that the direct impacts of mining production resulted in additional job formation in other sectors of the economy. Unemployment during 2007 was the lowest since 1979 and averaged 3%. Most of the new jobs were in mining and construction. However, the expansion crossed over to other sectors of the economy (with the exception of the manufacturing and information sectors).

With the employment boom, Wyoming experienced significant and positive economic impacts in the state. This activity insulated Wyoming somewhat from the economic contraction that began in October 2008 in the rest of the nation. Prior to this contraction:

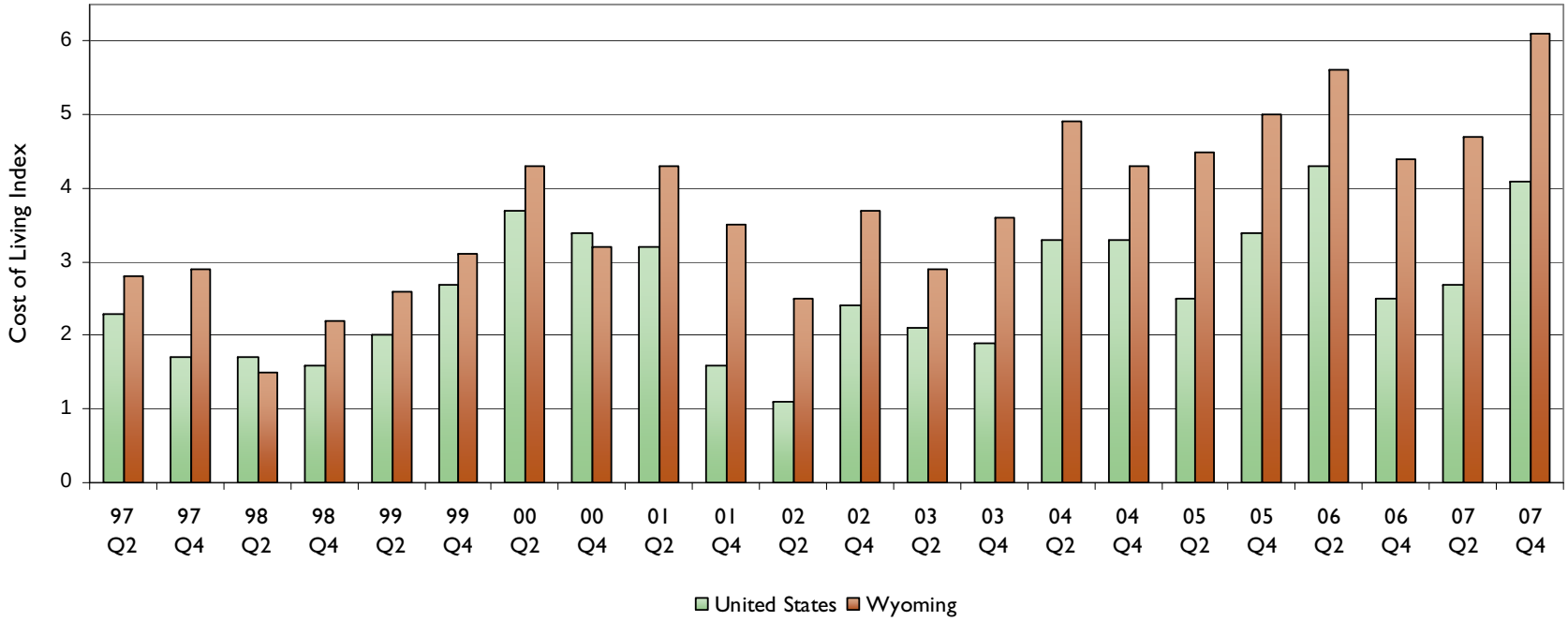
- Jobs in Wyoming were growing faster than the population.
- Personal income grew rapidly first because of the mining activity and then declined because increased grain prices raised production expenses for livestock growers.
- High demand for housing resulted in an 11.2% increase in the average home price.
- Food, real estate and transportation were the largest contributors to an inflation rate in Wyoming that in 2008 exceeded the average inflation rate in the U.S.

Chart 8-7 compares the inflation rates of the U.S. and Wyoming for the last ten years. In most years, the inflation rate in Wyoming has been higher; however, both the rate of inflation and the differences between the U.S. and Wyoming have been accelerating since 2003.

According to the Wyoming Economic Analysis Division, Wyoming's economy is highly concentrated. Mineral income makes up two-thirds of the state's total revenue. Wyoming has the third largest natural gas reserves, representing 10% of the total U.S. reserves. Wyoming is first in coal production, representing 38% of the U.S. total and seventh in oil production, contributing 3% of the U.S. total. High dependence on mineral production for employment, income and state revenues makes Wyoming vulnerable to a downturn in the energy sector; [1] however, in this economic recession, Wyoming maintained jobs better than many other states.

[1] Wyoming Economic Analysis Division, Wyoming Economic Insight and Outlook, April, 2008.

Chart 8-7
Biannual Inflation Rates, Wyoming and U.S., 1997-2007



Source: Wyoming Department of Administration and Information, Economic Analysis Division

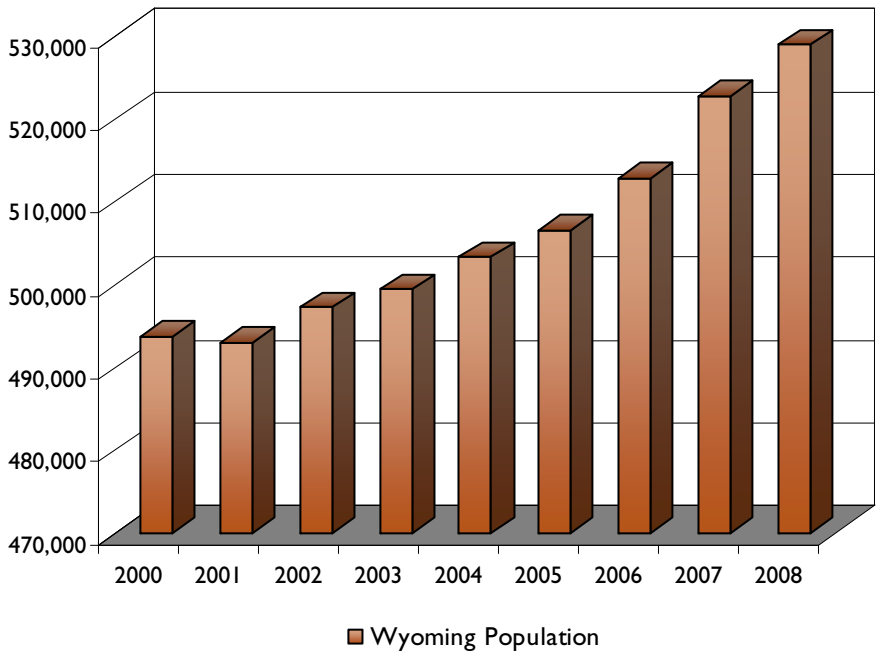
Initiation of the Air Service Enhancement Program coincided with the energy boom in Wyoming. Wyoming's Commercial Service Airports benefited from higher demand for air service, especially in the parts of the state where mineral production is concentrated. The application of revenue guarantees to attract new air service was the inducement for a much improved set of fundamentals for stronger air service.

While Wyoming has one of the lowest density populations in the U.S., its strong participation in the national energy economy necessitates close scrutiny of energy and financial trends in the U.S. and how these impact economic activity and demand for air service within the state. The Wyoming Economic Analysis Division watches the state's economy carefully. In the next several sections, basic trends in population, employment and personal income are highlighted.

8.5.5.2 Population

Population growth in the state is one indicator of demographic and economic change. In Wyoming, population grew by 1.1% in the period 2000 to 2003. However, since 2003, Wyoming's population has grown by 29.532 people or by 5.9%. In 2008, the state population was estimated at 528,900. The largest concentrations of growth have occurred around Gillette, Casper and Cheyenne. Some of this population growth is directly related to increases in oil and gas activity in the state. **Chart 8-8** shows the annual estimated change in population since the 2000 Census.

Chart 8-8
Estimated Wyoming Population, 2000-2008

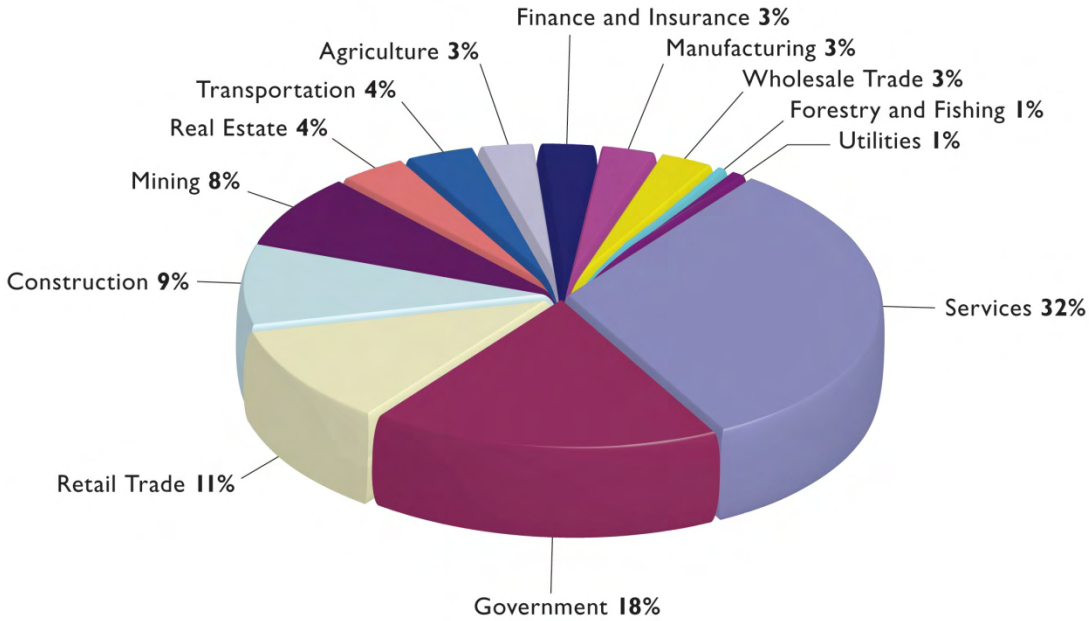


Source: Population Division, U.S. Census Bureau via Wyoming Department of Administration and Information, Division of Economic Analysis

8.5.5.3 Employment

Chart 8-9 shows the relative distribution of employment in the State of Wyoming. Services and government are the largest sectors of employment. When compared with the rest of the United States, Wyoming has more jobs in mining, construction, and government and relatively fewer jobs in manufacturing, retail and wholesale trade.

Chart 8-9
Wyoming Employment by Industry, 2006



Source: U.S. Bureau of Economic Analysis

In the last several years, Wyoming has experienced the largest absolute increases in employment in mining, construction and real estate. **Table 8-13** shows the changes in employment by industry. On a percentage increase basis, transportation, wholesale trade, education, professional/technical and management employment has grown in excess of 17% in the last three years. The total workforce of full-time and part-time jobs has increased by 37,065 or 11%. This is almost twice the rate of employment growth in the U.S. over the same period (6%).

Table 8-13
Full-Time and Part-Time Employment by Industry, 2003-2006

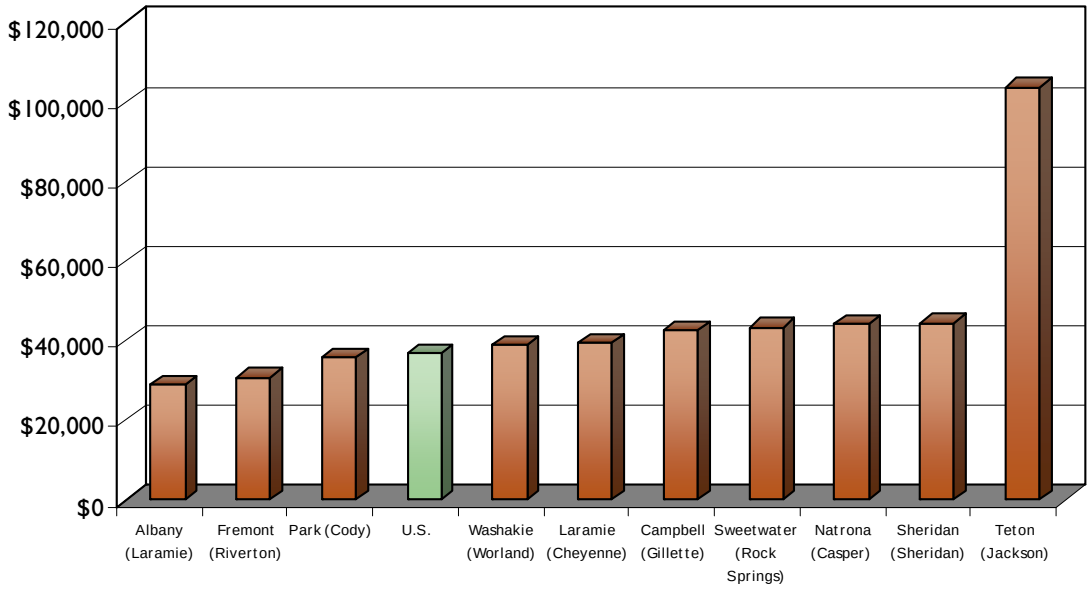
Industry	2003	2006	2003-2006 Growth	
			Number	Percent
Mining	21,390	29,359	7,969	37%
Construction	27,250	33,986	6,736	25%
Real Estate	11,329	15,219	3,890	34%
Other Services	17,767	20,363	2,596	15%
Professional and Technical	14,261	16,757	2,496	18%
Transportation and Warehousing	11,609	13,925	2,316	20%
Accommodation And Food	30,665	32,540	1,875	6%
Health Care and Social Assistance	25,120	26,714	1,594	6%
Retail Trade	39,517	41,074	1,557	4%
Wholesale Trade	7,827	9,338	1,511	19%
Government	67,154	68,521	1,367	2%
Manufacturing	10,742	11,791	1,049	10%
Finance and Insurance	11,098	11,858	760	7%
Education	2,639	3,117	478	18%
Arts, Entertainment, and Recreation	6,212	6,602	390	6%
Management	794	1,045	251	32%
Information and Communications	4,807	5,037	230	5%
Utilities	2,194	2,390	196	9%
Administrative and Waste Services	11,818	11,948	130	1%
Forestry and Fishing	2,820	2,695	-125	-4%
Agriculture	12,171	11,970	-201	-2%
Total Employment	**339,184**	**376,249**	**37,065**	**11%**

Source: U.S. Bureau of Economic Analysis

8.5.5.4 Per Capita Personal Income

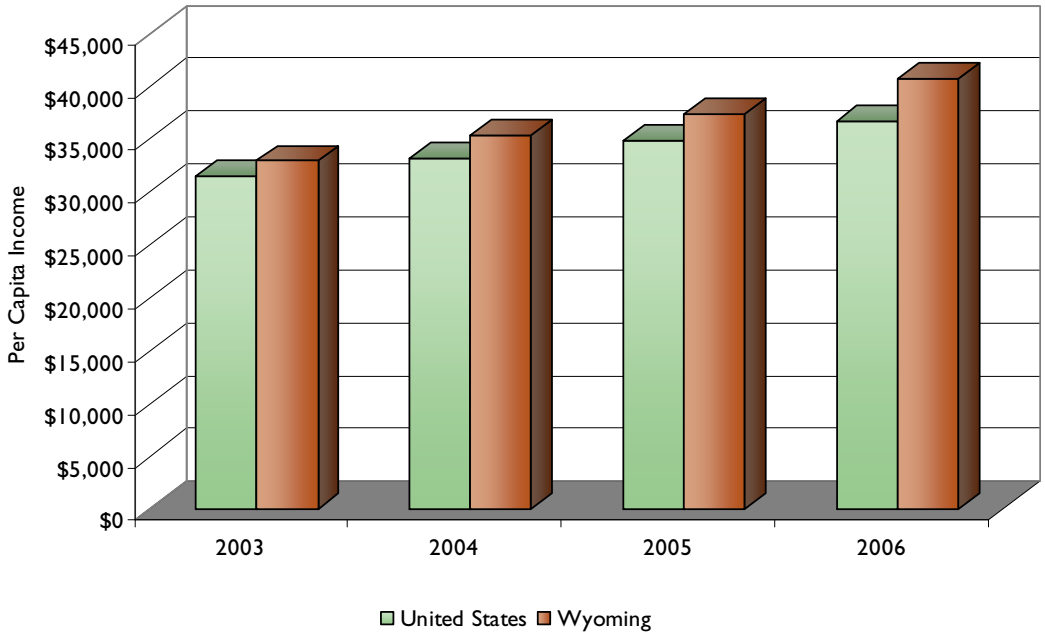
In the three years 2003-2006, Wyoming experienced a remarkable increase in per capita personal income. Nationally, per capita income grew 17% over the period while in Wyoming, it grew by 24%. With the exception of Albany County (Laramie), per capita income growth exceeded U.S. averages and was especially strong in Teton (Jackson), Campbell (Gillette), Sheridan and Sweetwater (Rock Springs) counties. **Chart 8-10** compares 2006 per capita personal income in each county that has a Commercial Service Airport. **Chart 8-11** compares Wyoming per capita personal growth with the national averages over the years 2003-2006.

Chart 8-10
Per Capita Personal Income in U.S. and Wyoming Counties



Source: U.S. Bureau of Economic Analysis

Chart 8-11
Per Capita Personal Income in U.S. and Wyoming, 2003-2006
(Current Dollars)



Source: U.S. Bureau of Economic Analysis

8.5.5.5 Implications of High Employment Growth

Table 8-14 compares the growth of population to the growth of employment. Population data for 2006 was used to make a comparison with employment data which at the time of this report was available up through 2006.

Table 8-14
Comparison of Wyoming Population and Employment Growth, 2003-2006

County	Associated City	2006 Benchmark		2003-2006 Growth	
		Population	Employment	Population	Employment
Albany	Laramie	32,497	20,894	28	448
Campbell	Gillette	38,480	30,362	2,400	5,265
Fremont	Riverton	36,829	23,304	1,019	1,768
Laramie	Cheyenne	85,783	60,584	1,445	4,301
Natrona	Casper	70,252	52,464	2,275	6,114
Park	Cody	26,723	19,940	759	1,241
Sheridan	Sheridan	27,482	19,688	501	2,086
Sweetwater	Rock Springs	38,017	29,811	1,431	4,962
Teton	Jackson	19,657	25,795	765	2,483
Washakie	Worland	7,687	5,614	-144	261
Wyoming Total		**512,757**	**376,249**	**13,389**	**37,065**

Source: U.S. Bureau of Economic Analysis and U.S. Census Bureau, Population Division

With energy exploration, production and transport activity intensifying in 2006, Wyoming has experienced a very high rate of job formation. In every county with a Commercial Service Airport, employment increased much faster than population. Since employment is a good indicator of economic activity, new jobs are also a likely contributor to the increased demand for air service experienced within the state during the same period. Wyoming at the time had a housing shortage which led to a large number of employees commuting to their jobs either by car or by air. The growth of jobs coupled with a significant increase in per capita income was contributing to higher passenger activity at certain Wyoming airports.

8.6 Market Characteristics and Fares

8.6.1 Load Factors

Higher than average demand for air transportation translated into more seats, larger aircraft and higher load factors. **Table 8-15** summarizes the statewide changes from 2003-2007. **Appendix E** shows the individual airport detail by year for each metric with the exception of enplanements (the enplanements metric is detailed in **Appendix C**). With the exceptions of Riverton and Worland, every other Wyoming Commercial Service Airport has experienced a substantial increase in capacity as measured by seats. In absolute numbers, Jackson, Sheridan and Casper have had the largest increases. Jackson is responsible for most of the changes in average aircraft size (seats/departure). Most of the other changes in aircraft types are attributable to a transition from exclusive Beechcraft 1900 service (19 seats) to a mix of Beechcraft 1900 and Brasilia (30 seats) service. This would be primarily fleet deployment changes by Great Lakes Airlines. Slightly increasing load factors are also a contributing factor.

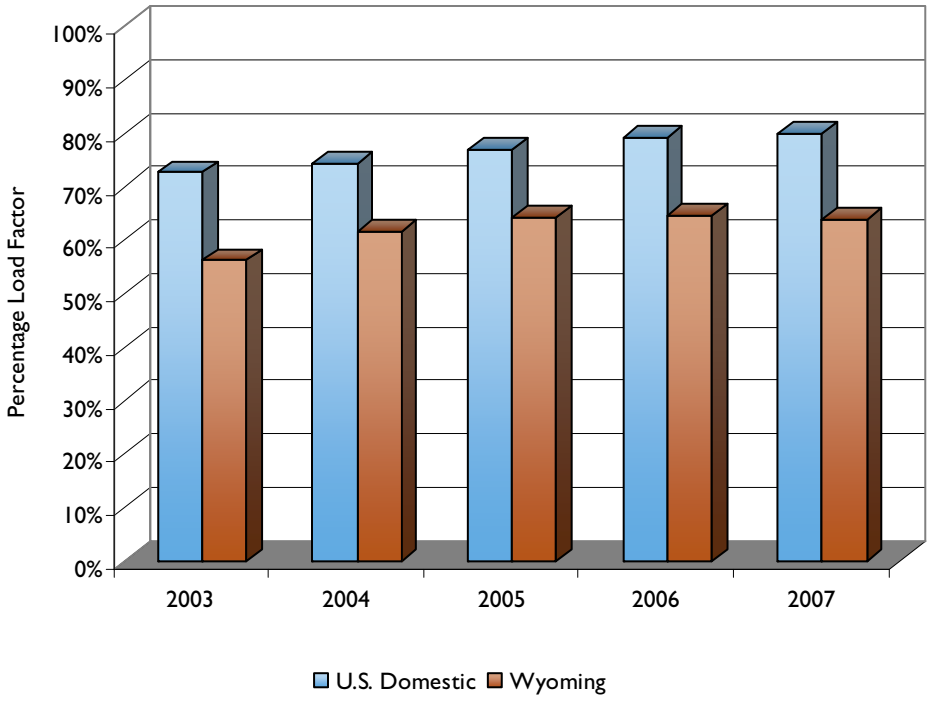
Table 8-15
Comparison of Wyoming Outbound Activity Metrics, 2003-2007

	2003	2004	2005	2006	2007	2003-2007 Change	
						Number	Percent
Seats	662,274	626,423	692,059	737,678	783,435	121,161	18%
Departures	19,071	18,431	18,520	17,786	19,596	525	3%
Seats/Departure	35	34	37	41	40	5	15%
Enplanements	369,758	392,207	449,470	483,497	495,739	125,981	34%
Load Factors	56%	62%	64 %	65%	64%	8%	14%

Source: US DOT (T100) Dynamic Table Report

Chart 8-12 compares Wyoming average load factors with U.S. average domestic load factors. Both Wyoming and U.S. domestic load factors are increasing. However the differences between Wyoming and U.S. load factors are large, between 13% and 16%. Carriers are focused on revenue rather than just load factors, so the differential here in Wyoming is explained by higher average fares, Essential Air Service subsidies, and revenue guarantees.

Chart 8-12
Comparison of Wyoming and U.S. Domestic Load Factors, 2003-2007



Source: US DOT (T100) Dynamic Table Report and Air Transport Association

8.6.2 Top Wyoming Destinations

In 2008, air passenger activity in Wyoming accounted for $215 million in ticket revenue. One third of this revenue was generated by travel to and from Jackson. **Tables 8-16** and **8-17** show Wyoming's top twenty markets with and without Jackson included. **Appendix F** shows top 25 Wyoming cities for each Commercial Service Airport in Wyoming and in addition Billings, Denver and Salt Lake City. Denver and Salt Lake City are among Wyoming's top markets, indicating that they are both important business centers for Wyoming. Also there may be a significant number of passengers flying to these hub airports and purchasing a separate ticket for destinations beyond Denver or Salt Lake City. It is noteworthy that when traffic to/from Jackson is excluded, New York, Chicago, and Atlanta drop down in the top 20 ranking.

Table 8-16
Top 20 Wyoming Markets - 2008 (Includes Jackson)

Rank	City	Passengers	Revenue	Average One-Way Fares
1	Denver	56,190	$10,715,912	$191
2	Salt Lake City	28,875	$4,772,796	$165
3	New York	22,898	$7,488,314	$327
4	Chicago	21,031	$5,013,128	$238
5	Dallas	18,696	$3,929,787	$210
6	Washington	17,489	$5,395,509	$309
7	Los Angeles	17,364	$4,515,410	$260
8	Atlanta	14,928	$4,048,801	$271
9	Houston	13,729	$4,126,848	$301
10	Minneapolis	12,184	$3,266,570	$268
11	San Francisco	11,718	$3,157,270	$269
12	Boston	9,463	$2,822,799	$298
13	Las Vegas	8,915	$1,931,297	$217
14	Phoenix	8,404	$1,918,896	$228
15	Philadelphia	7,867	$2,011,950	$256
16	Seattle	5,695	$1,461,224	$257
17	Detroit	5,467	$1,407,804	$258
18	Orlando	5,362	$1,397,739	$261
19	Portland	5,074	$1,396,910	$275
20	St Louis	5,011	$1,267,590	$253
	Top 20 Cities	296,360	$72,046,554	$243
	All Cities	793,769	$214,840,184	$271

Source: Sabre Airline Solutions, Airport Data Intelligence (ADI) via WYDOT Aeronautics

Table 8-17
Top 20 Wyoming Markets - 2008 (Excludes Jackson)

Rank	City	Total Passengers	Total Revenue	Average Fare
1	Denver	36,650	$7,063,384	$193
2	Salt Lake City	15,062	$3,020,057	$201
3	Houston	8,463	$2,757,428	$326
4	Los Angeles	8,237	$2,173,275	$264
5	Dallas	6,610	$1,871,961	$283
6	Las Vegas	6,528	$1,412,139	$216
7	Washington	5,970	$2,209,950	$370
8	Phoenix	5,675	$1,343,180	$237
9	Chicago	5,019	$1,412,379	$281
10	Minneapolis	4,784	$1,270,459	$266
11	San Francisco	4,309	$1,209,968	$281
12	New York	3,829	$1,409,329	$368
13	Portland	3,629	$1,055,440	$291
14	Seattle	3,366	$919,688	$273
15	Atlanta	3,084	$990,332	$321
16	Oklahoma City	2,808	$861,719	$307
17	Orlando	2,626	$770,376	$293
18	St Louis	2,601	$801,597	$308
19	London	2,485	$1,579,840	$636
20	Kansas City	2,466	$641,219	$260
	Top 20 Cities	134,201	$34,773,720	$259
	All Cities	534,197	$144,005,356	$270

Source: Sabre Airline Solutions, Airport Data Intelligence (ADI) via WYDOT Aeronautics

8.6.3 Competitiveness of Wyoming Fares

One component of the air service goal is air service at a competitive price. When an entire family travels, the difference in air fares between flying out of the local airport versus a more distant larger airport can be sizeable as the number of persons traveling increases. For example, a $100 differential in a roundtrip ticket per person translates into a $400 dollar premium for a family of four. Aeronautics has undertaken, as part of its Fly Wyoming Campaign, an initiative to educate the public on the true costs associated with driving to a larger airport such as Denver, Billings, Rapid City or Salt Lake City.

To examine trends in the cost of flying from Wyoming, average fares were analyzed extensively for each airport and for the top twenty Wyoming destinations. Individual average fare data is presented in **Appendix G**.

8.6.3.1 Average Fares at Wyoming Airports

Between 2003 and 2007, the average fare that a U.S. domestic passenger paid per mile increased from 13.2 cents to 14.5 cents or a 10.2% increase. Average fares at Wyoming Commercial Service Airports demonstrate no rational trend. Gillette changed little (3%), but continues to have one of the highest average fares in the state. Casper, Cody and Jackson average fares grew by 20%, 16%, and 12% respectively. Rock Springs and Riverton experienced virtually no change in average fares even though in 2003 service was EAS subsidized and in 2007, unsubsidized. For Laramie and Worland, who continue to receive EAS subsidy, average fares appear to have declined.[1] Average fares have also declined at Cheyenne and Sheridan. **Table 8-18** shows the changes.

Table 8-18
Wyoming Airport Average One-Way Fares* - 2003 and 2007

Associated City	Average One-Way Fare		2003-2007 Change	
	2003	2007	Fare Difference	Percent
Gillette	$291	$300	$9	3%
Rock Springs	$283	$289	$6	2%
Casper	$230	$276	$46	20%
Riverton	$271	$271	$0	0%
Cody	$218	$254	$36	16%
Cheyenne	$256	$240	-$16	-6%
Jackson	$203	$228	$25	12%
Laramie	$262	$223	-$39	-15%
Worland	$257	$215	-$42	-16%
Sheridan	$278	$193	-$85	-31%
Note: *Average one-way fares to final destinations				

Source: US DOT, O&D Database via Database Products/SH&E for 2003; Sabre Airline Solutions, Airport Data Intelligence (ADI) via WYDOT Aeronautics for 2007

To put Wyoming average fares in context, average one-way fares in 2007 for the larger airports just outside the state were: Denver - $197, Salt Lake City - $209 and, Billings - $220.

8.6.3.2 Average Fares at Competing Airports

Since Wyoming is retaining less than 50 percent of its originating passengers, it is important to examine in more detail, the air fare levels at competing airports. In addition to tracking retention rates, Aeronautics is also tracking monthly average fares paid by local passengers. **Table 8-19** presents the average one-way fares in 2008 paid by passengers originating at their local airport or beginning trips at alternate airports. Denver is clearly the lower fare provider in the region, although for northern Wyoming passengers, Billings is the preferred alternate airport.

[1] For Worland and Laramie it is most important to see how average fares in 2007 compare with other Wyoming cities because traffic is low at these airports and the probability of sampling errors is high and may distort year to year comparisons.

Table 8-19
Ticket Sample of One-Way Fares Paid by Local Wyoming Passengers

	2008 Tickets in Sample	Average Fare Paid All Tickets	Local Average Fare	Top Diversion Airport	Competing Airports				
Casper	9,258	$299	**$334** Casper	$225 Denver	$293 Riverton	$268 Gillette	$264 Billings	$272 Cheyenne	$324 Other
Cheyenne	6,492	$210	**$265** Cheyenne	$183 Denver	$263 Laramie	$307 Casper	$299 Others		
Cody	1,517	$299	**$311** Cody	$270 Billings	$315 Denver	$232 Salt Lake	$375 Other		
Gillette	2,670	$261	**$287** Gillette	$216 Denver	$234 Rapid City	$292 Casper	$217 Billings	$307 Sheridan	$264 Other
Jackson	2,709	$212	**$215** Jackson	$161 Denver	$215 Salt Lake City	$270 Idaho Falls	$268 Bozeman	$304 Other	
Riverton	2,322	$264	**$300** Riverton	$213 Denver	$292 Casper	$168 Salt Lake City	$222 Jackson	$255 Billings	$257 Other
Sheridan	2,448	$299	**$290** Sheridan	$326 Billings	$476 Casper	$214 Denver	$343 Gillette	$336 Other	
Worland	1,361	$282	**$238** Worland	$234 Billings	$260 Cody	$311 Casper	$257 Denver	$287 Riverton	$471 Others
Statewide	28,678	$255	**$271** Home Airport	$199 Denver	$291 Other WY Airports	$203 Salt Lake City	$280 Billings	$234 Rapid City	$318 Others

Source: WYDOT Aeronautics from Sabre MIDT data and Diio (APGdat)

Table 8-20 shows the average one-way fare differences between Wyoming airports and their top diversion airport. The average one-way fare difference appears to have no relationship to the driving miles between the two airports. Cheyenne is the closest to Denver and the average fare difference is $82. The difference for Gillette and Denver is $71 each way and the distance is 313 miles airport to airport. Given that there are actual miles flown by independent code-sharing airlines that serve Wyoming airports, an airfare of $70 to $85 each way does not seem unreasonable. **Table 8-20** suggests that Casper and Riverton average fares are on the high side.

Table 8-20
Average One-Way Fare Differences - Local vs. Top Diversion Airport

Airport	Local Average Fare	Top Diversion Airport	Average Fare Difference	Driving Miles Between Airports
Casper	$334 Casper	$225 Denver	**$109**	231
Cheyenne	$265 Cheyenne	$183 Denver	**$82**	90
Cody	$311 Cody	$270 Billings	**$41**	119
Gillette	$287 Gillette	$216 Denver	**$71**	313
Jackson	$215 Jackson	$161 Denver	**$54**	405
Riverton	$300 Riverton	$213 Denver	**$87**	295
Sheridan	$290 Sheridan	$326 Billings	**-$36**	135
Worland	$238 Worland	$234 Billings	**$4**	166
All WY Airports	$271 WY Airport	$199 Denver	**$72**	NA

Source: WYDOT Aeronautics from Sabre MIDT data and Diio (APGdat)

8.6.3.3 Average Fares at Peer Airports

To further investigate whether Wyoming air fares are reasonable and competitive, each Wyoming airport was compared with other similar airports on the basis of four variables:

1. Population
2. Distance to a major hub airport
3. Level of service as measured by weekly seats
4. Median income

In each category there were several candidate peer airports. Preference was given to airports located within the mountain state region. For Laramie and Worland, other EAS cities were selected for each variable. Lastly, weekly seats were also controlled for similar sized aircraft at peer airports.

The results of the comparison are shown in **Table 8-21.** The average one-way fares in this table are taken from the 10% sample of tickets processed in the U.S. DOT Origin and Destination Survey. This is a larger sample of tickets drawn from both local and arriving passengers, so average fares are different than reported in the previous two tables where only local passengers from specific zip codes were sampled.

On the basis of all four variables, Casper, Riverton, and Gillette experienced higher average fares in 2008 than all of their peers. Cody, Rock Springs, and Sheridan were higher than three of their peer airports. Cheyenne and Jackson fares were in the middle of their peers. Laramie and Worland had the lowest average fares of their peers.

A peer review is but one view of air fares as no two airports are exactly comparable. That said, the fact that six of Wyoming's Commercial Service Airports had higher fares than most of their peers suggests that air fares in these communities should be monitored frequently at least in the top individual markets.

Table 8-21
Comparison of Wyoming Average One-Way Fares to Peer Airports

Associated City	2008 Avg. Fare	Population Based Comparison	% Variance	Distance Based Comparison	% Variance	Weekly Seats Based Comparison	% Variance	Median Income Based Comparison	% Variance
Casper	$301	$290 Helena, MT	4%	$194 Grand Junction, CO	55%	$190 Yakima, WA	58%	$251 Great Falls, MT	20%
Cheyenne	$224	$275 Pocatello, ID	-18%	$162 Pueblo, CO	39%	$288 Butte, MT	-22%	$240 Idaho Falls, ID	-7%
Cody	$272	$292 Williston, ND	-7%	$210 Durango, CO	30%	$225 Twin Falls, ID	21%	$241 Hayden, CO	13%
Gillette	$333	$261 Montrose, CO	28%	$202 Rapid City, SD	65%	$192 Dubuque, IA	73%	$290 Helena, MT	15%
Jackson	$245	$305 Aspen, CO	-19%	$250 Bozeman, MT	-2%	$251 Winnipeg, Canada	-2%	$241 Hayden, CO	2%
Laramie	$176	$153 Dodge City, KS	15%	$211 Alamosa, CO	-17%	$199 Liberal, KS	-12%	$191 Cedar City, UT	-8%
Riverton	$244	$189 Garden City, KS	29%	$221 Kearney, NE	11%	$198 Crescent City, CA	23%	$210 Durango, CO	16%
Rock Springs	$304	$337 Aberdeen, SD	-10%	$194 Grand Junction, CO	57%	$225 Santa Maria, CA	35%	$179 Lewiston, ID	70%
Sheridan	$229	$198 Crescent City, CA	16%	$172 Grand Island, NE	33%	$182 Pierre, SD	26%	$261 Montrose, CO	-12%
Worland	$143	$126 McCook, NE	13%	$261 Vernal, UT	-45%	$199 Hays, KS	-28%	$161 Sidney, MT	-11%

Source: US DOT Origin and Destination Survey and the University of Wyoming

8.6.3.4 Available Data to Evaluate Fares

The air service goal of providing air access to the national transportation system at a competitive price will require on-going vigilance. Aeronautics is tracking weekly published air fares through the Airline Tariff Publishing Company (ATPCO) and from fare samples collected by QL2. These data reports can identify anomalies in pricing. **Table 8-22** shows a sample of published round-trip 'walk-up' fares available with no advance purchase required**.** These fares are typically the highest fares offered by the airlines. What is surprising about these fares is the variability. Cody, Casper and Jackson have much higher walk-up fares than other Wyoming airports. In the 7, 14 and 21 day advance purchase categories, the differences among Wyoming airports are much smaller.

Table 8-22
Round-trip Walk-up Sample Airfares

Market	Atlanta	Denver	Dallas	Los Angeles	Orlando
Cody	$1,244	$948	$950	$901	$1,211
Casper	$1,469	$1,088	$1,346	$1,192	$1,614
Cheyenne	$778	$432	$593	$603	$870
Gillette	$770	$662	$696	$683	$975
Jackson	$1,333	$1,329	$1,204	$1,325	$1,227
Laramie	$782	$428	$604	$626	$928
Riverton	$828	$612	$651	$671	$989
Rock Springs	$833	$624	$700	$697	$980
Sheridan	$841	$592	$675	$712	$956
Worland	$678	$588	$761	$671	$973
Average	**$956**	**$730**	**$818**	**$808**	**$1,072**

Source: ATPCO, February 2009

Airlines, through their yield management systems are constantly adjusting the quantity of tickets available for sale at a certain price. Consequently, published fares are not necessarily the price a passenger sees or pays when purchasing a ticket. Use of four data sources will provide the best comprehensive view to stay on top of fares:

1. Published tariffs through ATPCO are an excellent source to identify current anomalies in pricing.
2. Weekly fare samples provided by QL2 that identify fares walkup fares and 7, 14, 21 and 35 day advance purchase fares offered from each of Wyoming's ten commercial service airports to their respective top 20 destinations.
3. The ticket sample data presented for Wyoming passengers with zip codes within the service areas of local commercial airports will inform an airport about its current retention rate and average fares paid at the home airport and at other airports used by local passengers. It is possible with the Sabre Solutions MIDT data set to also track average fares paid at the individual market level.

4. The US DOT Origin and Destination (O&D) 10 percent sample is a broader spectrum sample of passengers that provides information about top travel destinations and average fares paid on individual routes. However, this data is available six to nine months after actual travel occurs. This sample is most useful to discern travel patterns, but it is published too late to influence airline fare policies.

8.7 Next Steps

8.7.1 Importance of Recent Air Service Gains

Wyoming was fortunate that the convergence of a substantial energy boom (increased prosperity and demand for air service) and an active Air Service Enhancement Program (revenue incentives and marketing) took Wyoming air service to new levels. **Table 8-23** recaps some of the following gains experienced since 2003.

- Wyoming enplanements grew by almost 126,000.
- Casper attracted Allegiant Air service to Las Vegas and for a short time, service to Chicago and Minneapolis-St. Paul.
- Gillette attracted service to a second hub (Salt Lake City) and increased service to Denver.
- Jackson increased capacity as the average size of aircraft grew from 71 seats in 2003 to 106 seats in 2007.
- Riverton added a frequency to Denver and discontinued its EAS subsidy.
- Rock Springs increased service to Denver, also discontinued its EAS subsidy, and added Salt Lake City service.
- Sheridan also added a frequency to Denver and discontinued its EAS subsidy.

Given a national trend toward reduction of air service at non-hub airports, these gains are remarkable. The challenge ahead is to maintain current levels of service during a weak economy.

Table 8-23
Comparisons of Change at Wyoming Airports, 2003-2007

Associated City	Enplanements		Growth 2003-2007		Number of Non-stop Destinations			2007 Average Load Factor
	2003	2007	Number	Percent	Aug. 2003	Aug. 2007	Aug. 2008	
Casper[1]	61,893	76,908	15,015	24%	2	3	5	58%
Cheyenne	13,825	16,766	2,941	21%	1	1	1	38%
Cody	20,325	26,799	6,474	32%	1	2	2	61%
Gillette	13,589	25,647	12,058	89%	1	1	2	59%
Jackson	217,530	277,361	59,831	28%	6	6	7	74 %
Laramie[2]	8,828	9,939	1,111	13%	1	1	1	50 %
Riverton	10,832	15,831	4,999	46%	1	1	1	64%
Rock Springs	8,583	21,791	13,208	154%	1	1	2	63%
Sheridan	11,450	20,978	9,528	83%	1	2	1	52%
Worland[2]	2,903	3,719	816	28%	1	1	1	33%

Notes:
[1] Startup service by Allegiant Air from Casper to Las Vegas began in September 2008. For purposes of comparison, this service was counted in the number of Aug 2008 non-stop destinations.
[2] Subsidized service under the Essential Air Service Program

Source: US DOT (T100) Dynamic Table Report, WYDOT Aeronautics, Official Airline Guide

The last column of **Table 8-24** shows average monthly load factors in 2007 for each airport and for each route offered from the airports. **Table E-5** in **Appendix E** details month to month load factors.

Table 8-24
Average Outbound Load Factors by Route, 2007

Airline	Origin	Destination	Average Monthly Load Factor
Delta Air Lines	Cody	Salt Lake City, UT	56%
United Airlines	Cody	Denver, CO	66%
Delta Air Lines	Casper	Salt Lake City, UT	50%
Northwest Airlines	Casper	Minneapolis/St. Paul, MN	56%
United Airlines	Casper	Denver, CO	64%
Great Lakes	Cheyenne	Denver, CO	37%
Great Lakes	Gillette	Denver, CO	58%
American Airlines	Jackson	Denver, CO	91%
American Airlines	Jackson	Dallas/Fort Worth, TX	75%
American Airlines	Jackson	Chicago-O'Hare, IL	70%
Delta Air Lines	Jackson	Atlanta, GA	78%
Delta Air Lines	Jackson	Salt Lake City, UT	70%
Big Sky Airlines	Jackson	Boise, ID	57%
Northwest Airlines	Jackson	Minneapolis/St. Paul, MN	88%
United Airlines	Jackson	Denver, CO	75%
United Airlines	Jackson	Los Angeles, CA	45%
United Airlines	Jackson	Chicago-O'Hare, IL	70%
Great Lakes	Laramie	Cheyenne, WY	39%
Great Lakes	Laramie	Denver, CO	62%
Great Lakes	Laramie	Worland, WY	33%
Great Lakes	Riverton	Denver, CO	65%
Great Lakes	Rock Springs	Denver, CO	63%
Big Sky Airlines	Sheridan	Billings, MT	16%
Big Sky Airlines	Sheridan	Denver, CO	69%
Great Lakes	Sheridan	Denver, CO	44%
Great Lakes	Sheridan	Gillette, WY	44%
Great Lakes	Worland	Denver, CO	28%
Great Lakes	Worland	Laramie, WY	33%

Source: US DOT (T100) Dynamic Table Report

The airline industry today "begins and ends with the revenue line."[1] Scanning average load factors for each airport and each market indicates that the number of on-board Wyoming passengers is, in almost every instance, lower than national averages where load factors in the high 70 to 80 percentile are common and expected. Lower than average load factors are not the whole story but indicate that the airlines are not as worried about number of passengers

[1] MIT, Global Airline Industry Program, Airline Data Project

because revenue on the routes is sufficient (either because of higher air fares or revenue guarantees). Since it is a reasonable assumption that air fares will rise and that demand for air service in Wyoming is price sensitive, the near-term strategy is to consolidate recent gains, build traffic and monitor performance.

8.7.2 Air Service Objectives for Individual Airports

Aeronautics has put in place programs to sustain and provide convenient and reliable air access at a competitive price. Work can and must continue. The air service programs are directed toward the following priorities and objectives:

- A minimum of three frequencies per day to a single hub airport is desirable for all Commercial Service Airports.[1]
- Service to two hubs is better than service to one hub. (i.e. competition and directional convenience are more important than frequency to a single hub airport).
- Competitive fares and rules for travel that retain passengers at Wyoming airports.
- Favorable schedules (including late night arrivals and early morning departures) and adequate frequencies that strengthen the reliability of the system.

Given that load factors are below national averages on most Wyoming routes, it is incumbent upon airports to focus on increasing passengers on local flights.

Objectives vary by airport and are summarized below.

- **Casper**
  - Monitor and increase passengers on all routes.
  - Examine the revenue and passenger experience in the Chicago and Minneapolis-St. Paul markets to determine how best to reinstitute these services.
- **Cheyenne**
  - Investigate second hub options to Salt Lake City to accommodate westbound passengers that might otherwise drive to Denver.
  - Examine extent of passengers using Allegiant Air service at Ft. Collins-Loveland to determine feasibility of limited frequency service to Las Vegas or other destination markets.
- **Cody**
  - Build Denver service. Strive to add a second winter flight.
  - Build Salt Lake City service.
- **Gillette**
  - Evaluate results of Salt Lake City service to determine what traffic and revenue levels are needed to restore a full complement of non-stop service.
  - Evaluate the market for air service to improve understanding of travel characteristics and special demands to better serve the energy sector.
  - Increase use of Gillette through on-going marketing in the community.

[1] This threshold has already been achieved at all Commercial Service Airports except Worland.

- **Laramie**
  - Strive to maintain enplaned passengers above the 10,000 level through the Fly Local program, advertising, and charters.
- **Jackson**
  - Work with the resorts and airlines to analyze travel patterns, review effectiveness of previous advertising campaigns and prioritize next year's target markets. Develop a market strategy and contingency plans for different economic conditions (i.e. continued recession, fast, medium, or slow recovery).
- **Rock Springs**
  - Evaluate results of Salt Lake City service to determine what traffic and revenue levels are needed to restore a full complement of non-stop service.
  - Evaluate the market to improve understanding of travel characteristics and special demands to better serve the energy sector.
  - Increase use of Rock Springs through on-going marketing in the community.
- **Riverton**
  - Market local air service, maintain four frequencies and build traffic to justify the use of 30 seat aircraft on all flights.
- **Sheridan**
  - Market local air service, monitor load factors and fares, and strive for four frequencies in both winter and summer seasons.
- **Worland**
  - Continue to develop support for and use of EAS.
  - Work with the carrier to achieve the best possible schedules.

8.7.3 Priorities for the Aeronautics Division

To emphasize again, the near-term strategy for Wyoming air service is to consolidate recent gains, build traffic and monitor performance. The action items for Aeronautics to address this strategy are discussed in the following sections.

8.7.3.1 Monitor the Industry for Wyoming Impacts

The merger of Delta and Northwest will result in consolidations of service within their combined network. The acquisition of Frontier Airlines and United Airlines' reduction of capacity will also cause careful scrutiny of connecting routes at Denver. The airlines will continue to seek ways to control and reduce costs. This will put additional pressure on code sharing partners, particularly the independent regional carriers flying at risk including SkyWest Airlines, Mesa Airlines, Pinnacle Airlines, and Great Lakes Airlines.

Today, as much as ever, it is important to solidify traffic on routes, especially routes that were supported by revenue guarantees or routes where a carrier serves multiple cities.

8.7.3.2 Market to Retain and Build Traffic

In today's environment, without revenue guarantees, new air service must typically show profits within three months. The Air Service Enhancement Program has used revenue guarantees to assist with extending that period six months to more than a year. Revenue guarantees will continue to serve as an effective incentive for the introduction of new routes or added frequencies to existing routes. A number of on-going marketing activities will also assist.

The Fly Wyoming campaign produced a redesigned brand, an excellent website and marketing materials in 2007. The campaign also contributed to the development of local airport websites. The Fly Wyoming campaign should be considered a multi-year endeavor. The following is a list of recommended actions to continue to raise airport awareness and mobilize community use of local air service.

8.7.3.2.1 Update/Maintain Websites

The Internet can be the single most effective and least expensive method of communication. Many airports in the U.S. direct all advertising back to their website. This is the place where passengers, tenants, business prospects, and the press can find out about the airport and services available. Today, users are sophisticated and have low tolerance for outdated web information. Generally, if a user finds out of date information on a web site, they won't return to use the site again.

All but one of Wyoming's airports has a dedicated airport website, but only half of the websites offer current flight schedules. This recommendation is for the Air Service Enhancement Program to fund (1) flight tracking and flight schedule capability on airport websites that don't currently have this capability; (2) consider grants and/or technical assistance for redesign and maintenance of websites and local marketing campaigns that direct target audiences back to an airport's website; and, (3) facilitate information sharing amongst the airports so that air service news, information and ideas can be exchanged and discussed.

8.7.3.2.2 Community Air Service Meetings

Five years ago, Aeronautics conducted a series of meetings in each of the communities that had commercial air service. Since building traffic is a significant priority, a second round of meetings will provide a venue to (1) mobilize support; (2) discuss the successes of the Air Service Enhancement Program; and, (3) identify upcoming challenges and solutions to maintain and grow air service.

8.7.3.2.3 Support Marketing to Attract Visitors

According to the Wyoming Travel and Tourism, FY09-FY10 Strategic Plan, Wyoming Travel and Tourism is charged with "bringing non-resident visitors to Wyoming by promoting the state as a vacation destination to both domestic and international audiences." Many of this agency's strategic goals coincide to a large extent with similar activities initiated by Aeronautics through its Fly Wyoming campaign. The Travel and Tourism FY09-FY10 Strategic Plan calls for the agency to:

- Expand research requirements to measure brand awareness and message penetration in the travel marketplace, gain additional knowledge about travel consumers, and understand more clearly the travel patterns and preferences of current and potential visitors to Wyoming.
- Enhance the consistency and distribution of advertising messages.
- Expand and enhance online advertising efforts.
- Improve the agency's website.
- Strengthen Wyoming's competitive position in the international marketplace.
- Maximize gains from participation in travel trade shows and direct marketing programs.

It makes sense to explore additional joint campaigns with Wyoming Travel and Tourism.

8.7.3.3 Review Effectiveness of Air Service Enhancement Grants

Aeronautics has funded several local marketing efforts. It would be useful to know which marketing techniques have worked best. Aeronautics is exploring ways to facilitate communication about marketing and air service development techniques through its web platform. In addition, it is possible to develop objectives that can measure if marketing activities are reaching intended audiences. For example, Aeronautics could set programmatic objectives to: fund or provide technical assistance for website improvements at four airports over the next fiscal year or to monitor the number of visits or bookings on airport websites. Another measurable objective is to track the number of people who sign up for an airport or tourism newsletter. Enplanement and deplanement data are the ultimate measure of whether marketing or revenue guarantees are working.

Performance benchmarks are an undeveloped area of marketing management. Funding a small effort to improve marketing benchmarks would be very useful for the Air Service Enhancement Program and would make a national contribution to improved management and content of air service marketing programs.

8.7.3.4 Develop, Explain, and Distribute Market Data to the Airports

As part of the Air Service Enhancement Program, the Aeronautics Division purchases access to the Sabre Airport Data Intelligence and the Seabury APG data systems. These sources of aviation data are rich with information about travel demand as well as airline operating and revenue statistics. Aeronautics is now reporting on this data monthly and providing individual airport and statewide detail. The objective here is to increase use and understanding of this data and to track performance on individual routes and the Wyoming system as a whole.

Just as the Division of Economic Analysis publishes a quarterly report on economic trends in the state, utilization of this data could be used to publish a quarterly report or special report on aviation trends. Suggested topics include:

- Traffic trends and load factors at the airport and route level.
- Passenger retention rates.
- Air fare trends at each airport in top markets with special reports on peer airport comparisons.
- RASM (Revenue per Available Seat Mile) analysis and cost analysis on selected routes. Industry averages for similar routes.
- Analysis of revenue guarantee results to inform future negotiations.
- Employment, personal income and energy sector trends affecting air demand.

8.7.3.5 Monitor Operating Conditions for Great Lakes Airlines

Great Lakes Airlines, based in Cheyenne, serves 50 cities in the U.S. and is the largest EAS carrier in the country serving 42 EAS communities. In Wyoming Great Lakes provides service to seven airports as either an EAS carrier, flying under its own brand or as an "at risk" code sharing partner for Frontier Airlines and United Airlines. In the U.S., Great Lakes Airlines holds a unique position as a specialist in service to small communities.

As noted previously in the discussion of national trends, the special role of Great Lakes Airlines will continue to be challenged as their fleet ages and network carriers move to consolidate operations and cut costs. The central role of Great Lakes in air service at Gillette, Laramie, Cheyenne, Riverton, Rock Springs, Sheridan, and Worland suggests that air service enhancements are inextricably woven together with this airline and may warrant further discussions about the most effective ways to ensure and improve the carrier's capacity to serve Wyoming airports, modernize its fleet and reservation system, and provide continued, excellent access to the national transportation system.