

Chapter One ***Inventory***



Colorado City Municipal Airport ***Airport Master Plan***

Chapter One Inventory



INTRODUCTION AND AIRPORT HISTORY

The Colorado City Municipal Airport (AZC) is a general aviation airport located in northwestern Arizona, approximately three miles southwest of Colorado City, Arizona. The airport is 29 nautical miles east-southeast of St. George, Utah.

The airport was initially constructed in the 1960's and originally consisted of compacted dirt runways. The original runways were abandoned in 1991 when the existing paved runways were developed. The land was originally leased from the Bureau of Land Management (BLM) by Benjamin G. Bistline. In 1978 the lease held by Benjamin G. Bistline was transferred to Mohave County. In 1988 the lease held by Mohave County was transferred to Colorado City. In 1991 Colorado City obtained the ownership of the airport fee simple from the BLM.

Colorado City is located in an area known as the Arizona Strip. The Arizona Strip includes more than five million acres of land and is referred to as the gateway to the North Rim of the Grand Canyon. Colorado City was founded in 1908 and incorporated in 1985. Colorado City is also located immediately south of Hildale, Utah and the two communities share many services.

AIRPORT GRANT HISTORY

The original Airport Master Plan was completed in 1982 and this Airport Master Plan replaces the 1999 Airport Master Plan Update and subsequent revisions. A federal and state grant history for the capital improvements at the Colorado City Municipal Airport is provided in Table 1-1. In Arizona, under the most recent FAA Airport Improvement Program legislation (Vision 100), capital improvement projects are typically funded at 95 percent Federal Aviation Administration (FAA), 2.5 percent State of Arizona and 2.5 percent by the sponsor.

SERVICE LEVEL

The airport service level reflects the type of public use the airport provides to the community. The service level also reflects the funding categories established by Congress to assist in airport development. The following list identifies the different types of airport service levels:

- **Commercial service** airports are public airports that enplane 2,500 or more passengers annually and receive aircraft offering scheduled passenger service. Commercial service airports are either:

Primary- an airport that enplanes more than 10,000 passengers annually; or

Nonprimary- an airport that enplanes between 2,500 and 10,000 passengers annually.

- **General Aviation Airports** while not specifically defined are considered to be airports not classified as commercial service. General aviation airports include:

Reliever- an airport designated by the FAA as having the function of relieving congestion at a commercial service airport and providing more general aviation access to the overall community. Privately owned airports may be identified as reliever airports.

Privately owned public-use- airports that enplane 2,500 or more passengers annually and receive scheduled passenger service are also classified as general aviation because they do not meet the criteria for commercial service.

Other General Aviation- are airports that are largely intended to serve the needs of general aviation users (users who conduct non-military operations not involving the carriage of passengers or cargo for hire or compensation.)

Colorado City Municipal Airport is listed in the NPIAS as a general aviation airport. The airport meets all of the NPIAS criteria for a general aviation airport.

AIRPORT ROLE

The Colorado City Municipal Airport provides access to the Colorado City and Arizona Strip area for a variety of users. The geographic location of the Colorado City Municipal Airport near the communities of Colorado City and Hildale allows easy access to users throughout the entire area.

The Colorado City Municipal Airport is currently an Airport Reference Code (ARC) B-II airport serving predominately single engine piston, multi-engine piston and turbo prop aircraft, with some use by light turbojet aircraft. Users include:

Air Medivac Services: Air medivac provides essential emergency medical transport in life threatening situations and patient transfers from clinics to higher level care facilities throughout the Colorado City/Hildale area. These users utilize a variety of multi-engine turboprop and turbojet aircraft.

Business/Recreational Transportation: These users desire the utility and flexibility offered by general aviation aircraft. The types of aircraft utilized for personal and business transportation varies with individual preference and resources and generally include a mix of single-engine, multi-engine and turbojet aircraft.

Flight Training: Flight schools from other airports in the state and surrounding region have students perform cross-country flights to Colorado City Municipal Airport. Flight training includes instructional flying to obtain a pilot's license or proficiency checks including biennial flight reviews. The majority of aircraft used for flight instruction include single and multi engine piston.

TABLE 1-1 GRANT HISTORY		
FAA Grant No. & Year	Description of Work	Federal Amount
001-1989	Conduct Airport Master Plan Study	\$36,424
002-1990	Construct Runway	\$500,000
	Construct Apron	\$12,064
	Construct Apron	\$36,536
	Acquire Security Equipment	\$94,500
	Construct Runway	\$137,310
	Acquire Land for Development	\$79,200
	Improve Access Road	\$45,000
	Grant Total	
003-1991	Construct Apron	\$130,257
	Install Runway Lighting	\$84,677
	Install Apron Lighting	\$24,147
	Grant Total	\$239,081
004-1991	Install Runway Vertical/Visual Guidance System	\$15,000
	Install Weather Reporting Equipment	\$80,000
	Install Runway Vertical/Visual Guidance System	\$30,000
	Grant Total	\$200,000
005-1993	Extend Runway	\$305,903
	Expand Apron	\$207,000
	Grant Total	\$512,903
006-2001	Rehabilitate Runway	\$35,694
	Construct Taxiway	\$120,200
	Acquire Land for Development	\$9,106
	Grant Total	\$165,000
007-2002	Construct Taxiway	\$539,508
008-2003	Improve Utilities	\$147,216
010-2005	Conduct Environmental Study	\$57,000
011-2007	Install Apron Lighting	\$50,000
	Install Perimeter Fencing	\$261,386
	Grant Total	\$311,386
012-2007	Update Airport Master Plan Study	\$100,000
TOTAL FAA AMOUNTS		\$2,958,258
State Grant No. & Year		State Amount
N729-1997	Security Lighting, NAVAIDs, Master Plan Update	\$180,000
9004-1998	Surface Runway, Taxiway, Apron, Access Road	\$218,250
2F35-2001	Rehab RW 11/29, acquire 160 acres, Construct TW A and B phase I, Improve RW 11/29 RSA	\$8,100
3F51-2003	Construct TW Phase II	\$36,600
4F18-2003	Rehabilitate airport electrical service entrance and misc. electrical improvements	\$7,363
6F63-2007	Conduct Environmental Assessment for land acquisition of 134 acres	\$1,500
8F52-2007	Install perimeter fencing 2,000 linear feet, apron lighting, rotating beacon and tower (Phase II)	\$8,195
8F94-2008	Update Airport Master Plan	\$2,632
TOTAL STATE AMOUNTS		\$462,640

SOURCE: FAA AND ARIZONA DEPARTMENT OF TRANSPORTATION (ADOT)

AIRPORT LOCATION

The Colorado City Municipal Airport is located in the northwestern portion of Arizona adjacent to the Utah State border in northern Mohave County. The airport is situated in portions of Sections 11, 12, 13 and 14 Township 41 North, Range 7 West of the Gila and Salt River Meridian. Figure 1-1 provides a graphic depiction of the location of Colorado City. The airport is designated by the FAA as Site Number 00660.7A and is a public airport. The airport location is Latitude 36° 57' 36.4" North and Longitude 113° 00' 49.6" West according to FAA Form 5010-1, Airport Master Record. The airport elevation is 4,871 feet and the airport currently has a B-II Airport Reference Code.



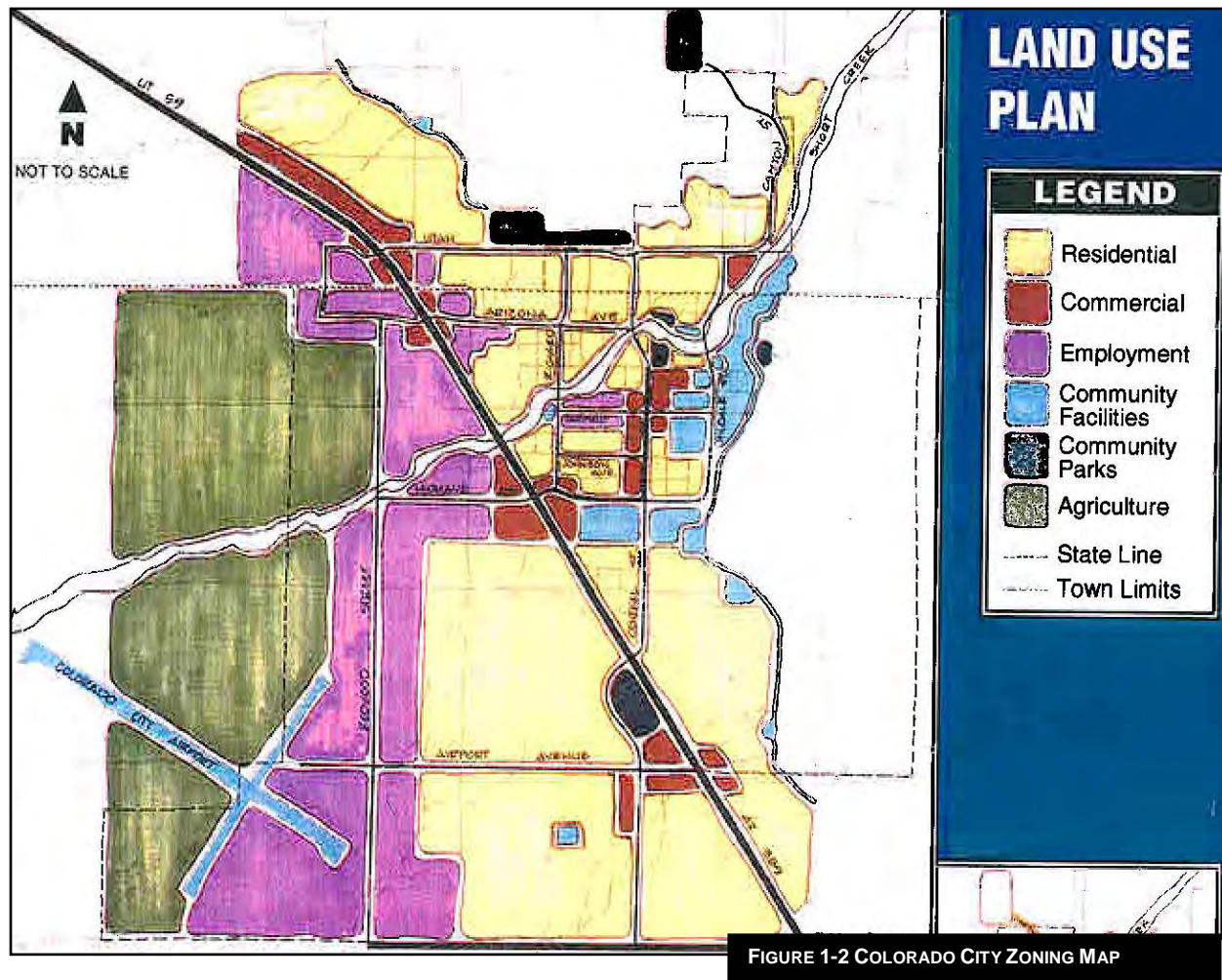
Source: Map Quest, 2007

AIRPORT PROPERTY

The existing airport property line encompasses approximately 204 acres according to the airport deeds. Colorado City is in the process of an environmental assessment to obtain additional land for approach protection. The additional land would be acquired from the BLM and private land owners.

LAND USE PLANNING

The existing land use zoning for Colorado City is shown in Figure 1-2. The airport is located adjacent to rangeland/agricultural to the north, west and south. The east side of the airport consists of some residential and commercial land uses. The airport is surrounded by land uses that are considered compatible with the airport. The FAA recommends that airport sponsors protect the areas surrounding an airport from incompatible development. Incompatible development includes those land uses which would be sensitive to aircraft noise or over flight, such as residences, schools, churches and hospitals and those uses which could attract wildlife and cause a hazard to aircraft operations such as landfills, ponds and wastewater treatment facilities. A recommended Compatible Land Use and Height Restriction Plan is included as part of this Master Plan.



REGIONAL SETTING

Colorado City is located in the Arizona Strip at an elevation of approximately 4,870 feet. Colorado City is combined with a mild climate and proximity to a wealth of outdoor recreation year round. Areas of interest include House Rock Valley, Cane Beds, Pipe Springs Navajo Trail, Zion National Park and the Kaibab/Paiute Indian Reservation. The North Rim of the Grand Canyon is located about 100 miles south and the Kaibab Nation Forest with picnicking,

rock hunting, camping and hunting is less than 40 miles southeast of Colorado City. Colorado City is located 354 highway miles northwest of Phoenix.



SOCIOECONOMIC CHARACTERISTICS

Examining the specific socioeconomic characteristics of Colorado City and Mohave County will help determine the factors influencing aviation activity in the area and the extent to which aviation facility developments are needed in Colorado City. Characteristics, such as employment, demographic patterns and income, will help in establishing the potential growth rate of aviation within the city and the county. In other words, by analyzing the information in this Chapter, forecasts of aviation activity can be developed. Those forecasts are provided in Chapter 2.

LOCAL PROFILE

For many years, ranching and agriculture were the primary economic focus. Ranching and agriculture have slowly changed with growth throughout the community. The largest single employer is the school district however regional construction and manufacturing plants provide most of the jobs in the community. Hildale, Utah which neighbors Colorado City, Arizona has an active industrial park and service industries; these are an important part of the Colorado City economy. Most of the industrial activity takes place in Hildale and most commercial and retail is located in Colorado City.

POPULATION

As of the 2000 US Census, there were 3,334 people residing in Colorado City, 1,895 residing in Hildale and 155,032 residing in Mohave County. According to population estimates from the Arizona Department of Economic Security and the U.S. Census Bureau, these populations increased moderately from 2000 to 2006. Colorado City's population increased to 4,607,

Hildale’s population increased to 1,950 and the population of the County increased to 193,035 residents in 2006. Table 1-2 shows this increasing population trend.

	1990	2000	2006
Colorado City	2,426	3,334	4,607
Hildale	1,325	1,895	1,905
Mohave County	93,497	155,032	193,035
Arizona	3,665,228	5,130,632	6,166,318

Sources: US Census Bureau (August 2007)

The Arizona Department of Economic Security, Research Administration, Population Statistics Unit developed population projections for all Arizona communities, counties and the state in 2006. Population projections as shown in Table 1-3, indicate a 58 percent population increase for the State of Arizona from 2004 to 2025. The population of Colorado City is projected to increase to 6,894 by 2026 or a 50 percent increase from the current population.

	2011	2016	2021	2026
Colorado City	4,980	5,677	6,320	6,894
Hildale	3,882	3,902	4,765	5,677
Mohave County	227,858	258,708	287,128	312,544
Arizona	7,186,070	8,093,110	8,945,447	9,744,463
Colorado City/Hildale	8,862	9,579	11,085	12,571

Source: Arizona Department of Economic Security, Research Administration Population Statistics Unit (2006) and the Utah Five County Association of Governments (2005)

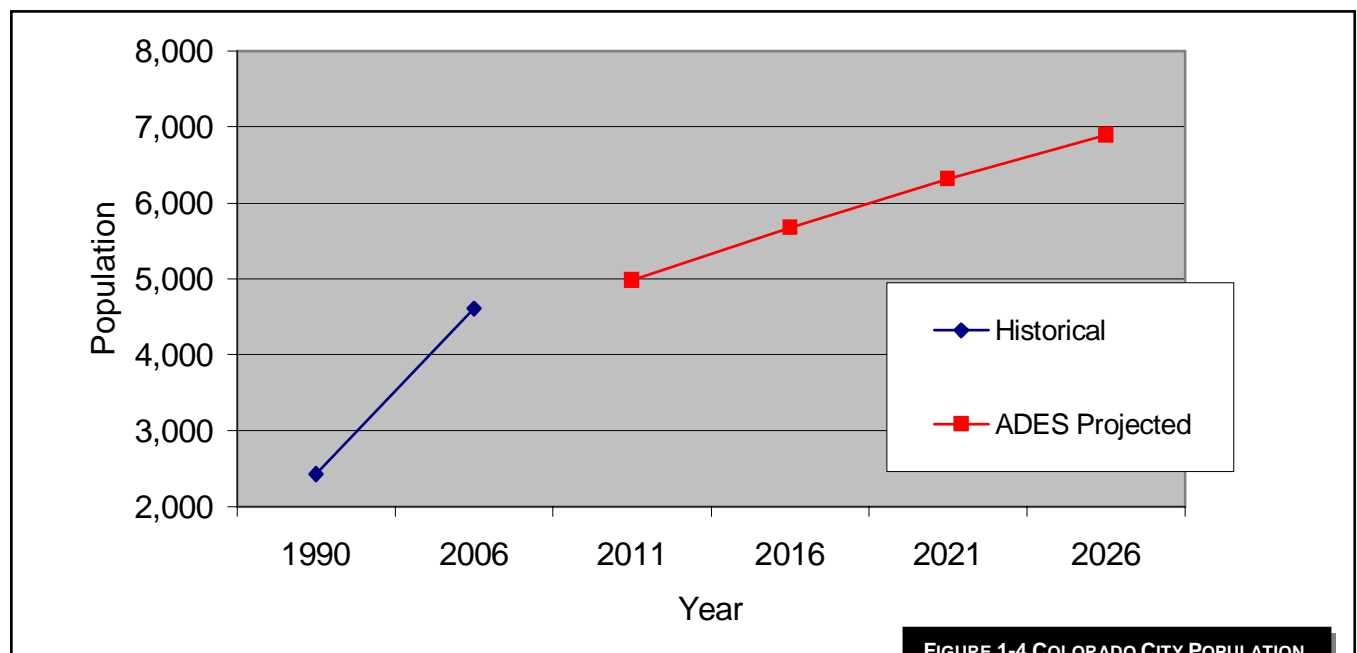


FIGURE 1-4 COLORADO CITY POPULATION

EMPLOYMENT

As stated previously, the largest employer in Colorado City is the school district according to the Arizona Department of Economic Security. The second largest employment sector in the

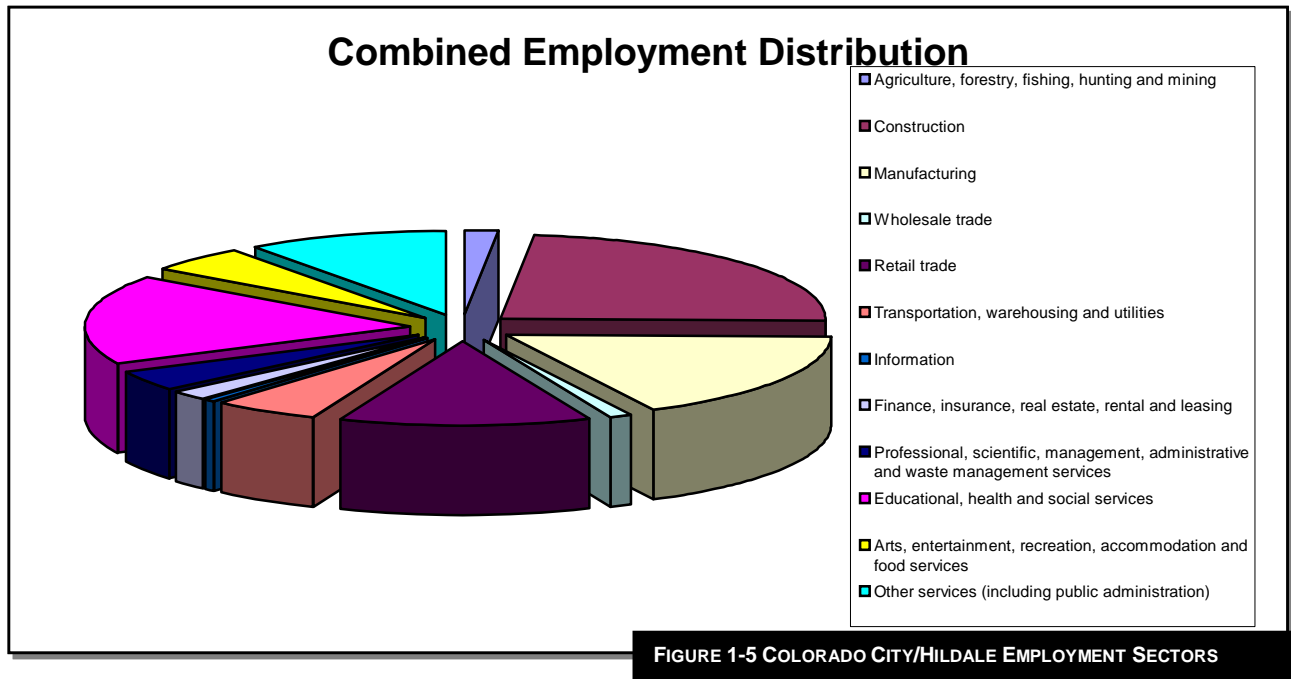
County is trade, transportation and utilities. Government is the third largest employment sector in the County followed by mining and construction.

According to the Arizona Department of Economic Security, the unemployment rate in Colorado City was 0.0 percent in 2000 and 2.6 percent in 2006. While the unemployment rate has increased for the community, the civilian labor force has also increased approximately 31 percent from 2000 to 2006. Employment distribution by industry for Colorado City and Hildale is shown in Table 1-4 and Figure 1-5.

TABLE 1-4 COLORADO CITY AND HILDALE EMPLOYMENT DISTRIBUTION

	Colorado City	% of Total	Hildale	% of Total
Agriculture, forestry, fishing, hunting and mining	13	1.5	9	2.0%
Construction	230	26.3	85	18.7%
Manufacturing	142	16.2	85	18.7%
Wholesale trade	13	1.5	4	0.9%
Retail trade	115	13.1	52	11.4%
Transportation, warehousing and utilities	48	5.5	19	4.2%
Information	6	0.7	2	0.4%
Finance, insurance, real estate, rental and leasing	13	1.5	14	3.1%
Professional, scientific, management, administrative and waste management services	33	3.8	17	3.7%
Educational, health and social services	141	16.1	88	19.3%
Arts, entertainment, recreation, accommodation and food services	48	5.5	21	4.6%
Other services (including public administration)	73	8.3	59	13%
Total	875	100%	455	100%

Source: U.S. Bureau of the Census, Census 2000



INCOME

According to the 2004 US Census, the median income for a household in Mohave County was \$34,126. The median household income for Colorado City was \$32,826 and the median income for Hildale was \$32,679. The per capita income in 1999 was \$16,788 for the county, \$5,293 for Colorado City and \$4,782 for Hildale. The percentage of families living below the poverty line was 15.4 percent for the county, 29 percent for Colorado City and 37 percent for Hildale.

GROWTH INDICATORS

Additional growth indicators include building permits, taxable sales and net assessed valuation. Building permit data was not reported by Colorado City in 2006. According to the Arizona Tax Research Foundation, taxable sales have increased 62 percent in Colorado City from \$8.6 Million in 2000 to \$14 Million in 2006. Net assessed valuation of real property in Colorado City has increased from \$4.5 million in 2000 to \$9 million in 2006.

As shown in previous paragraphs, the socioeconomic condition of Colorado City and Hildale are strong and growing steadily. Healthy socioeconomic growth in the area will enhance the Colorado City Municipal Airport's ability to attract future aviation activity.

CERTIFICATED PILOTS AND REGISTERED AIRCRAFT

The FAA databases of certificated airmen and registered aircraft were reviewed to determine the current distribution of pilots and registered aircraft in the Colorado City/Hildale area.

TABLE 1-5 CERTIFICATED PILOTS AND REGISTERED AIRCRAFT NEAR COLORADO CITY

	Aircraft Registered	Certificated Pilots
Colorado City	3	6
Hildale	0	0

SOURCE: FAA, 2007

This data indicates that there are six certificated pilots and three aircraft registered in Colorado City, Arizona. Aircraft are not always based where they are registered, which explains why there are seven based aircraft at the Colorado City Municipal Airport.

BASED AIRCRAFT AND OPERATIONS

According to the 1999 Airport Master Plan, in 1997 there were ten based aircraft at the Colorado City Municipal Airport with an annual operations estimate of 3,000. That master plan forecasted based aircraft and operations to increase annually from these baseline numbers. However, the airport manager has been recording based aircraft and operations and reports current based aircraft and operations at approximately seven and 4,500, the based aircraft and tail numbers are listed in Appendix B. After reviewing the GCR data showing the number of instrument flight plans filed into and out of Colorado City indicated 112 operations in 2006. However this only indicates operations that were filed under instrument flight plans.

INVENTORY OF EXISTING AIRPORT FACILITIES

AREA AIRPORT/SERVICE AREA

An airport service area is defined by the communities and surrounding areas served by the airport facility. For example, factors such as the airport's surrounding topographical features (mountains, rivers, etc.), proximity to its users, quality of ground access, required driving time to the airport and the proximity of the facility to other airports that offer the same or similar services can all affect the size of a particular airport's service area. To define the service area for the

Colorado City Municipal Airport, the airports in the area and their specific services and facilities were reviewed.

The nearest public airport with a paved surface is located approximately 17 nautical miles northwest in Hurricane, Utah. Runway 18/36 at Hurricane is 3,410 feet long and 40 feet wide. Kanab Municipal Airport is located approximately 23 nautical miles east of Colorado City. St. George Municipal Airport in St. George, Utah is located approximately 29 nautical miles west of Colorado City. The primary service area includes the area within (20 miles-30 minute drive) of the Colorado City Municipal Airport.

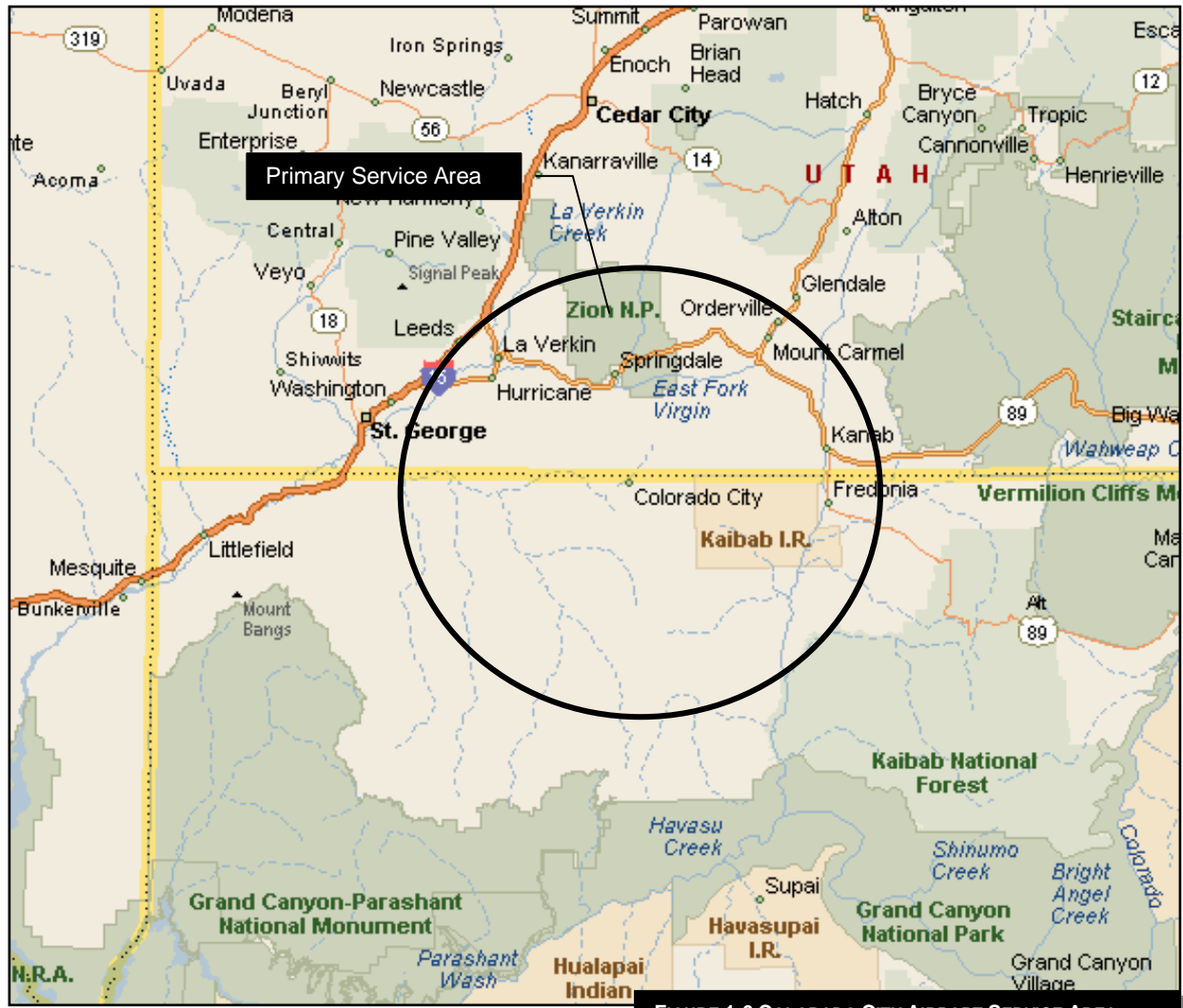


FIGURE 1-6 COLORADO CITY AIRPORT SERVICE AREA

SOURCE: MAP QUEST, 2006

TABLE 1-6 AIRPORTS SURROUNDING COLORADO CITY

Identifier	Distance (Nautical Miles)	Distance (Highway Miles)	NPIAS Status	Runway Length(s) Width(s)	Pavement Type	Instrument Approaches	Fuel	
General Dick Stout Field Airport, Hurricane, UT	1L8	17 NW	24	PVT	3,410'x40'	asphalt	None	Yes
Kanab Municipal Airport, Kanab, UT	KNB	23 E	39	GA	6,193'x75'	asphalt	GPS	Yes
St. George Municipal Airport, St. George, UT	SGU	29 W	43	OCS	6,606' x 100'	asphalt	GPS/VOR	Yes
Cedar City Regional Airport, Cedar City, UT	CDC	45 N	65	OCS	8,653'x150' 4,822'x60'	asphalt	GPS/VOR	Yes
Mesquite Airport, Mesquite, NV	67L	51 W	81	GA	5,100'x75'	asphalt	No	Yes

OCS: Other Commercial Service
 GA: General Aviation
 PVT: Private, not included in NPIAS
 SOURCE: AIRNAV, 2007

TOPOGRAPHY AND TERRAIN

Colorado City Municipal Airport is at an elevation of 4,871 feet Mean Sea Level (MSL). Surrounding land features include the Vermilion and Shinorump Cliffs and the North Rim of the Grand Canyon. Additional land features include Zion and Bryce National Parks, Cedar Breaks National Monument, Coral Pink Sand Dunes, Utah State Park, Lake Powell, Glen Canyon and Lake Mead Recreation Areas and Historic Pipe Springs National Monument.

AIRSIDE FACILITIES

The airside facilities of an airport are described as the runway configuration, the associated taxiway system, the ramp and aircraft parking area and any visual or electronic approach navigational aids. Figure 1-7 depicts the existing airside facilities at the Colorado City Municipal Airport while Figure 1-8 shows the existing landside facilities at the airport. An overview of the Colorado City Municipal Airport facilities is provided in Table 1-8. The ADOT Aeronautics Division, in association with Applied Pavement Technology, Inc. conducted a 2006 Airport Pavement Management System Update of all airport pavements in the state of Arizona. According to the inspector comments, Runway 11/29 is in fair condition with significant quantities of longitudinal and transverse cracking identified throughout the pavement area with a PCI of 62. Runway 2/20 is in good condition with substantial amounts of longitudinal and transverse cracking observed, with a PCI of 80. Depression and patching were also recorded in an isolated area near the intersection of Runway 11/29. Taxiway B was recently constructed and is in excellent condition with a PCI of 100. The apron area is in relatively good condition with moderate amounts of longitudinal and transverse cracking along with isolated areas of depression recorded throughout the pavement area with a PCI of 81. The T-Hangar area is in relatively good condition with significant quantities of longitudinal and transverse cracking identified. Additionally, smaller amounts of alligator cracking and raveling and weathering were observed with a PCI of 76.

Pavement	PCI	Rating
Runway 11/29	62	Fair
Runway 2/20	80	Good
Taxiway B	100	Excellent
Apron	81	Good
T-Hangar Area	76	Good

SOURCE: ADOT AERONAUTICS DIVISION, 2006

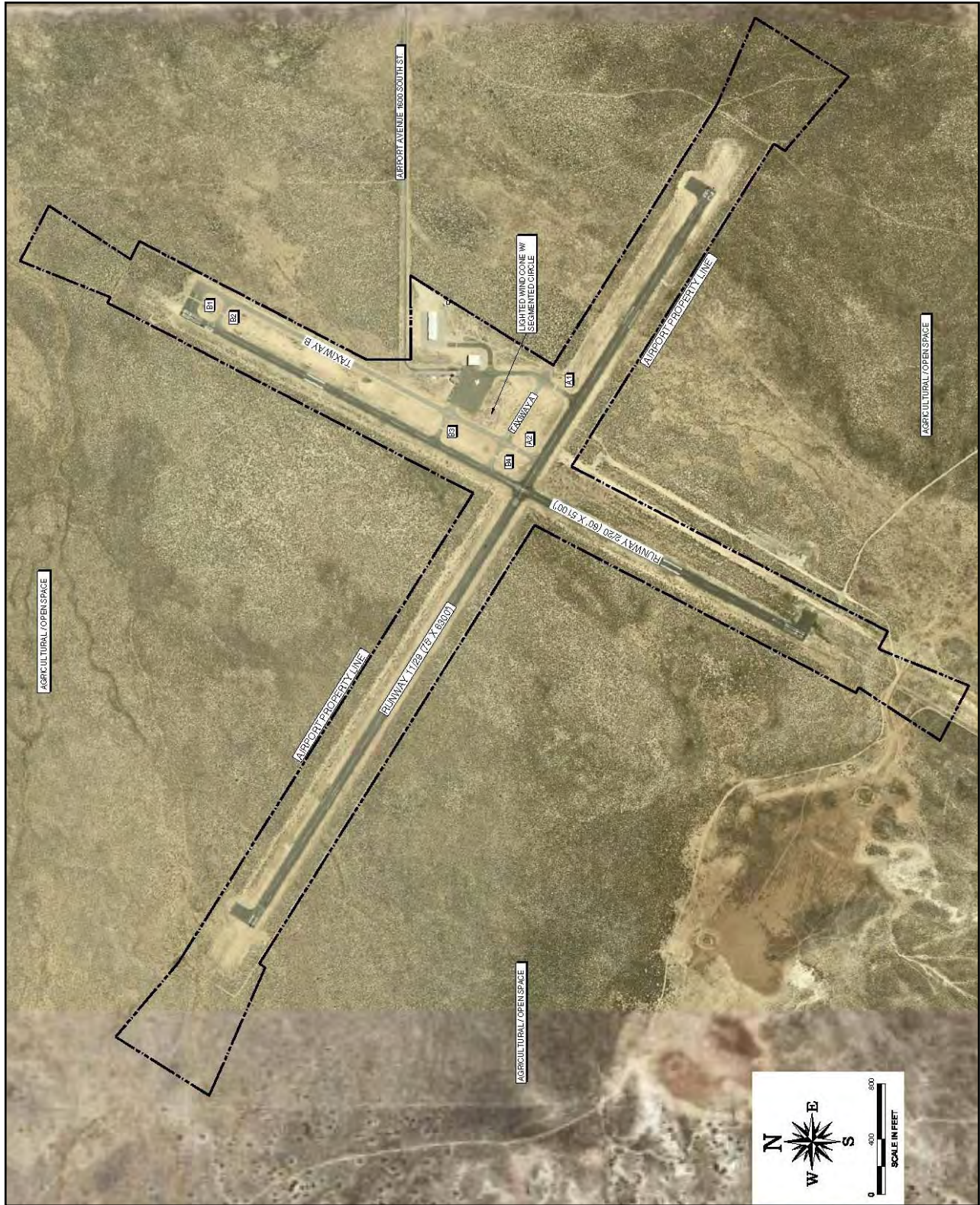


FIGURE 1-7 EXISTING AIRSIDE FACILITIES



FIGURE 1-8 EXISTING LANDSIDE FACILITIES

TABLE 1-8 COLORADO CITY MUNICIPAL AIRPORT INVENTORY

Airport Data		
Identifier	AZC	
FAA Site Number	00660.7A	
NPIAS Number	04-0076	
Airport Reference Code	B-II	
Owner/Sponsor	Colorado City	
Airport Elevation	4,871'	
Facilities		
Runway 11/29	Length: 6,300' Width: 75' Surface: Asphalt Marking: Basic visual	Pavement: Fair with longitudinal and transverse cracking Marking: Poor/Faded Right-hand Traffic: RW 11
Runway 2/20	Length: 5,100' Width: 60' Surface: Asphalt Marking: Basic visual	Pavement: Good Markings: Poor/Faded
Runway Lighting	Pilot Controlled MIRL	Direct burial
Navigational Aids	NDB/GPS Circling approach	
Approach Minimums	Visibility varies by aircraft, A=1 mile, B=1 ¼ miles C= 2 miles and D=2 ¾ miles, 829' ceiling height (lowest published – not for navigation)	
Visual Aids Runway 11/29	PAPI-2 both ends, REILs both ends, Beacon, Lighted wind cone segmented circle and traffic pattern indicators	
Visual Aids Runway 2/20	Beacon, Lighted wind cone and segmented circle	
Taxiway A	Partial Parallel to Runway 11/29	
Taxiway B	Partial Parallel to Runway 20	
Taxiway Lighting	Reflectors on Taxiway A and Taxiway B	
Aircraft Apron	8,040 SY	
Tie Downs	14	
Pavement Strength	12,500 lbs on Runway 11/29 12,500 lbs on Runway 2/20	
Landside Facilities	1 80' x 70' Maintenance Hangar 1 T-Hangar Terminal Building	Good Good Good
Automobile Parking	6,000 SY (Gravel)	Fair
Perimeter Fencing	5-Strand barbed wire	Poor
Fuel	100 LL AvGas tank and truck and Jet A Truck	AvGas Tank = 10,000 Gal. Jet A Truck = 2,500 Gal. 100 LL Truck= 1,000Gal.
Weather Equipment	AWOS III	
FBO	Westwing Aviation	
Utilities	Power, Water, Propane, Phone, Septic Tank	

RUNWAY

Colorado City Municipal Airport currently has two runways available to aviation users. Runway 11/29 is constructed of asphalt and is 6,300 feet long and 75 feet wide with a 2006 PCI Index of 62 and a published runway strength of 12,500 pounds. The pavement is experiencing moderate

transverse cracking. Runway 11/29 has basic visual markings that are in poor condition. Runway 2/20 is also constructed of asphalt and is 5,100 feet long and 60 feet wide with a 2006 PCI Index of 80 and published runway strength of 12,500 pounds SWG. Runway 2/20 has nonprecision markings that are in poor condition.

TAXIWAYS

Taxiways provide a surface for aircraft access from the parking apron to and from the runways. They expedite aircraft departures from the runway and increase operational safety and efficiency. The Colorado City Municipal Airport has a partial parallel taxiway (Taxiway B) to Runway 20 located 225 feet from the runway centerline and is constructed to the same pavement strength as Runway 2/20. Runway 11/29 has a partial parallel taxiway (Taxiway A) located mid field adjacent to the apron area 300 feet from runway centerline and is constructed to 12,500 pounds. Taxiway A is 35 feet wide and Taxiway B is 25 feet wide.

AIRCRAFT APRON

The aircraft apron provides an area for aircraft to park. The apron is typically connected to the runway via taxiways or taxilanes. The aircraft-parking apron at Colorado City Municipal Airport has approximately 8,040 square yards (SY) of area and contains approximately 14 aircraft tiedowns with Group II taxilanes. The 2006 apron PCI Index was rated at 81. The existing apron area is located within the Runway Visibility Zone (RVZ) of the two intersecting runways and therefore is considered to be a nonstandard condition.



FIGURE 1-9 AIRCRAFT APRON

AIRFIELD LIGHTING AND SIGNAGE

Guidance on airport lighting standards is provided in FAA Advisory Circular (AC) 150/5340-30C, Design and Installation Details for Airport Visual Aids. Airport lighting enhances safety during periods of inclement weather and nighttime operations by providing visual guidance to pilots in the air and on the ground.

Several common airfield lighting and visual aid features of general aviation airports include a rotating beacon (activated by photoelectric cell for dusk to dawn operations), pilot-controlled Medium Intensity Runway Lights (MIRLs) (activated by aircraft radio signal), threshold lights, Runway End Identifier Lights (REILs) which mark the runway threshold with flashing strobe lights and Precision Approach Path Indicators (PAPIs) to provide descent guidance information during an approach to the runway. Airfield lighting at Colorado City Municipal Airport consists of Medium Intensity Runway Lights (MIRL's) on Runways 11/29 and 2/20 which can be controlled by the clicks of the pilot's microphone while the radio is set on frequency 122.7 (three clicks for low intensity, five clicks for medium intensity and seven clicks for high intensity). The runway lights have white colored lenses. The airport also has a segmented circle and lighted wind cone. Taxiways A and B are marked with reflectors. The airport also has lighted runway signs showing runway and taxiway locations.

NAVIGATIONAL AIDS AND APPROACH PROCEDURES

The current approach procedures at the Colorado City Municipal Airport include a circle to land non-precision NDB/GPS instrument approach. Services include Los Angeles Air Route Traffic Control Center (ARTCC) and Prescott Flight Service Station (FSS). Enroute and radar

coverage for the Colorado City area is provided by the Los Angeles ARTCC. The altitude of radar coverage may vary as a result of the FAA navigational/radar facilities in operation, weather conditions and terrain which surround Colorado City. The Prescott FSS provides additional weather data and other pertinent weather information to pilots on the ground and enroute. There is no air traffic control tower (ATCT) at the airport.

A Navigational Aid (NAVAID) is any ground based visual or electronic device used to provide course or altitude information to pilots. NAVAIDS include Very High Omnidirectional Range (VORs), Very High Frequency Omnidirectional Range with Tactical Information (VOR-TACs), Nondirectional Beacons (NDBs) and Tactical Air Navigational Aids (TACANs), as examples. There is currently an NDB at the Colorado City Municipal Airport. The NDB or GPS approach to the Colorado City Municipal Airport is illustrated in Figure 1-10. (Note: This is for information purposes only and should not be used for navigation).

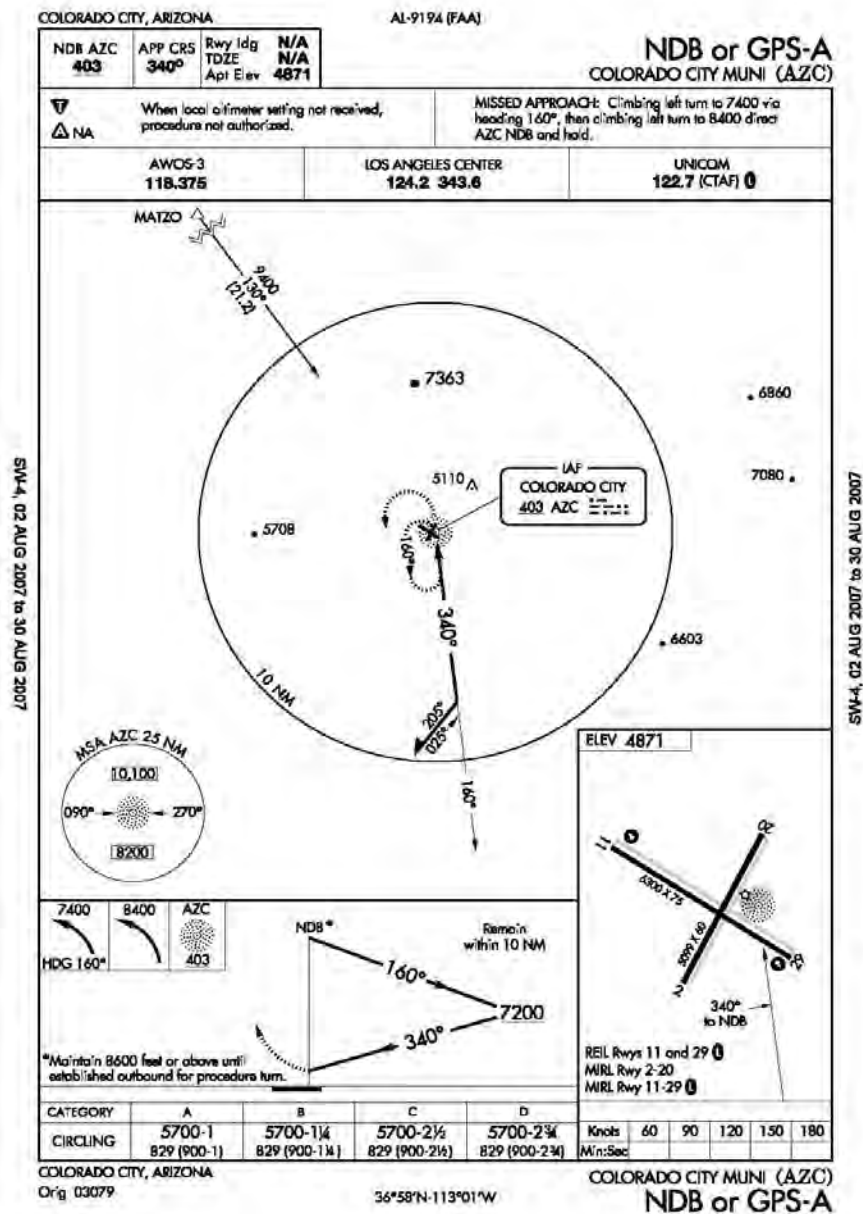


FIGURE 1-10 COLORADO CITY NDB/GPS APPROACH PROCEDURE (NOT FOR NAVIGATION)

AIRPORT SERVICES/FIXED BASE OPERATIONS

A Fixed Base Operator (FBO) is usually a private enterprise that leases land from the airport sponsor on which to provide services to based and transient aircraft. The extent of the services provided varies from airport to airport; however, these services frequently include aircraft fueling, minor maintenance and repair, aircraft rental and/or charter services, flight instruction, pilot lounge and flight planning facilities and aircraft tiedown and/or hangar storage. FBO services at the Colorado City Municipal Airport are provided by Westwing Aviation. Westwing Aviation owns and operates the fuel trucks at the airport for dispensing fuel.



FIGURE 1-11 WESTWING AVIATION FBO BUILDING

LANDSIDE FACILITIES

BUILDING AREA

The building area of a typical general aviation airport usually consists of FBO offices and/or hangars, a pilot lounge, terminal building, eating facility, additional aircraft hangars, a maintenance building and other related structures. Existing buildings at the Colorado Municipal Airport include one large conventional hangar (80 feet by 70 feet), a terminal building and one T-Hangar unit located near the apron area. The terminal building is located within the RVZ and is considered to be a nonstandard condition.

UTILITIES

Available utilities at the Colorado City Municipal Airport include power, non-potable water, propane, phone and septic tanks. Electricity is provided by Twin City Power, the airport also

has a back up generator for power supply in the event of a power disruption, telephone services are provided by South Central Utah Telephone and the water is provided by a well and pumped into a 60,000 gallon storage tank which provides non potable water for fire suppression and other uses at the airport. The tank is located adjacent to the T-hangar unit, the airport also has three separate septic tanks located on the field to dispose of waste water one for the terminal building, one for the T-Hangars and one for the FBO building.

GROUND ACCESS AND SIGNAGE

The Colorado City Municipal Airport can be reached by following State Highway 389 south from Colorado City and west on 1600 South Street (also known as Airport Avenue). Colorado City is located 354 miles northwest of Phoenix, Arizona and 43 miles east of St. George, Utah. The signage to the airport currently consists of two airport signs one for traffic traveling south on State Highway 389 and one for traffic traveling north on State Highway 389, the existing signs are considered adequate. Access to the Colorado City Municipal Airport is provided via Airport Avenue, a paved two lane road which enters from the east side of the airport.

INTERMODAL TRANSPORTATION

The ground transportation network in the vicinity of the Colorado City Municipal Airport consists of private automobile transportation only. There is no bus or rail service to Colorado City. The nearest bus and rail service is located 43 miles west in St. George, Utah.

AIRCRAFT FUEL FACILITIES

A Fixed Base Operator (FBO) or the airport sponsor often provides aircraft fuel services. Combinations of 100LL and 80 Octane Aviation Gas and/or Jet-A fuel are usually provided depending on the aircraft traffic mix. These fuels may be stored in underground storage tanks, above ground storage tanks, fuel trucks or a combination of the three.

The Colorado City Municipal Airport has one 10,000 gallon above ground fuel tank which contains 100 low lead, a 1,000 gallon 100 low lead fuel truck and 2,500 gallon jet A fuel truck. The fuel tank is owned by Colorado City and fuel is dispensed by Westwing Aviation. Only trained personnel are authorized to fuel aircraft. Emergency services are available nearby and provided by Colorado City. The fuel tank is single walled and is surrounded by a concrete secondary containment area. Colorado City has and maintains a Spill Prevention, Control and Countermeasure (SPCC) plan along with a Stormwater Management Pollution Prevention Plan (SWPPP).



FIGURE 1-12 COLORADO CITY FUEL TANK

AIRPORT FENCING AND SECURITY

The primary purpose of airport fencing is to prevent unwanted intrusions by persons or animals on to airport property. Airport fencing provides increased safety and security for the airport. It is normally installed along the perimeter of the airport property and outside any of the safety areas

defined by the Federal Aviation Administration (FAA) in Advisory Circular (AC) 150/5300-13, Airport Design and Federal Aviation Regulation (FAR) Part 77, Objects Affecting Navigable Airspace. The airport is currently fenced with 5-strand barbed wire fence along the perimeter. The terminal area is fenced with six foot chain link fencing and has an electric vehicle access gate. The existing perimeter fence is considered inadequate, as the airport manager indicated that there have been animals and unauthorized people on the runway recently.

EMERGENCY SERVICES

Emergency fire, rescue and medical services are available from the Colorado City Fire District. The closest hospital is the Kane County Hospital located in Kanab, Utah. The hospital is a 38-bed facility with 2 physicians on staff. The Colorado City Fire District provides ambulance service to the area.

TABLE 1-9 COLORADO CITY EMERGENCY SERVICES

DISTANCE FROM AIRPORT: 3 MILES	RESPONSE TIME: 8 MINUTES
PERSONNEL	
VOLUNTEERS: 54	36 - EMTs 18 - PARAMEDICS
EQUIPMENT	
4 ENGINES ALL CLASS A PUMPERS	FOAM (AFFF) ON BOARD
2 LADDER TRUCKS WITH 100' AERIALS	
1 HEAVY RESCUE TRUCK	
1 WATER TENDER	5,000 GALLONS OF WATER
COMMAND VEHICLES	
5 AMBULANCE VEHICLES	

SOURCE: COLORADO CITY FIRE DISTRICT, 2007

ADDITIONAL FACILITIES

There is not currently any Airport Rescue and Fire Fighting (ARFF) equipment or personnel based at the Colorado City Municipal Airport. There are also no designated security personnel at the airport.

FAA SAFETY AND DESIGN STANDARDS

FAA AC 150/5300-13, Airport Design, establishes design standards for airports based on the Airport Reference Code (ARC) of the airport. When design standard deficiencies exist, the FAA recommends correction of such deficiencies as soon as practicable. Design standards are based on the Airport Reference Code (ARC) and approach visibility minimums of the airport. The ARC is a combination of the tail height, wingspan and approach speed of the critical aircraft operating at the airport. The current ARC for the Colorado City Municipal Airport is B-II. A more detailed discussion of ARCs is included in Chapter 3.

SAFETY AREAS

Runway and Taxiway Safety Areas (RSAs and TSAs) are defined surfaces surrounding the runway or taxiway prepared specifically to reduce the risk of damage to aircraft in the event of an undershoot, overshoot or excursion from the runway or taxiway. The Safety Areas must be:

- Cleared and graded and have no potentially hazardous surface variations;
- Drained so as to prevent water accumulation;
- Capable, under dry conditions, of supporting snow removal equipment, ARFF equipment and the occasional passage of aircraft without causing structural damage to the aircraft; and

-
- Free of objects, except for objects that need to be located in the runway or taxiway safety area because of their function.

The runway safety areas off the ends of all the runways at Colorado City are overgrown with brush and ruts, these conditions could affect ARFF response and could result in damage to aircraft.

OBSTACLE FREE ZONE (OFZ) AND OBJECT FREE AREA (OFA)

The Obstacle Free Zone (OFZ) is a three dimensional volume of airspace which supports the transition of ground to airborne aircraft operations. The clearing standard precludes taxiing and parked airplanes and object penetrations, except for frangible visual Navigational Aids (NAVAIDs) that need to be located in the OFZ because of their function. The OFZ is similar to the FAR Part 77 Primary Surface insofar that it represents the volume of space longitudinally centered on the runway. It extends 200 feet beyond the end of each runway. The Runway Object Free Area (ROFA) is a two-dimensional ground area surrounding the runway. The ROFA standard precludes parked airplanes, agricultural operations and objects, except for objects that need to be located in the ROFA for air navigation or aircraft ground maneuvering purposes.

THRESHOLD SITING SURFACE

According to FAA AC 150/5300-13, the runway threshold should be located at the beginning of the full-strength runway pavement or runway surface. However, displacement of the threshold may be required when an object obstructs the airspace required for landing airplanes and is beyond the airport owner's power to remove, relocate or lower. Thresholds may also be displaced for environmental considerations such as noise abatement or to provide the standard RSA and ROFA lengths.

Based on the non-precision NDB/GPS instrument approach and size of aircraft using the Colorado City Municipal Airport, in order to meet FAA design standards, no object should penetrate a surface that starts 200 feet from the threshold of Runway 11/29 at the elevation of the runway centerline at the threshold and slopes upward from the threshold at a slope of 20 feet (horizontal) to 1 foot (vertical). In the plan view, the centerline of this surface extends 10,000 feet along the extended runway centerline. This surface extends laterally 200 feet on each side of the centerline at the threshold and increases in width to 1,700 feet at a point 10,000 feet from the threshold. No object should penetrate a surface that starts at the threshold of Runway 2/20 at the elevation of the runway centerline at the threshold and slopes upward from the threshold at a slope of 20 feet (horizontal) to 1 foot (vertical). In the plan view, the centerline of this surface extends 2,250 feet along the extended runway centerline. This surface extends laterally 125 feet on each side of the centerline at the threshold and increases in width to 350 feet at a point 2,250 feet from the threshold.

RUNWAY PROTECTION ZONE (RPZ)

According to FAA AC 150/5300-13, the RPZ is trapezoidal in shape and centered about the extended runway centerline. The RPZ dimension for a particular runway end is a function of the type of aircraft and approach visibility minimum associated with that runway end. At both ends of Runways 11/29 and 2/20 the RPZ begins 200 feet from the runway threshold and extends for 1,000 feet. The RPZ is 500 feet wide at the inner end and 700 feet wide at the outer end. The land uses not recommended within the RPZ are residences and places of public assembly (churches, schools, hospitals, office buildings, shopping centers and other uses with similar concentrations of persons typify places of public assembly).

TABLE 1-10 DESIGN STANDARDS

	RW 11/29	RW 2/20
Description	B-II	B-I
RW Centerline to parallel TW centerline	240'	225'
RW Centerline to aircraft parking apron	250'	200'
RW Width	75'	60'
RW Safety Area width	150'	120'
RW Safety Area length beyond Rwy end	300'	240'
RW Object Free Area width	500'	400'
RW Object Free Area beyond Rwy end	300'	240'
RW Obstacle Free Zone width	400'	400'
RW Obstacle Free Zone length beyond Rwy end	200'	200'
RW Protection Zone	1,000' x 500' x 700'	1,000' x 500' x 700'
TW Width	35'	25'
TW Safety Area width	79'	49'
TW Object Free Area width	131'	89'
RW Centerline to aircraft hold lines	200'	200'

FAA ADVISORY CIRCULAR 150/5300-13 CHANGE 12

AIRSPACE CHARACTERISTICS

The National Airspace System consists of various classifications of airspace that are regulated by the FAA. Airspace is either controlled or uncontrolled. Pilots flying in controlled airspace are subject to Air Traffic Control (ATC) and must follow either Visual Flight Rule (VFR) or Instrument Flight Rule (IFR) requirements. These requirements include combinations of operating rules, aircraft equipment and pilot certification and vary depending on the Class of airspace and are described in Federal Aviation Regulations (FAR) Part 71, Designation of Class A, Class B, Class C, Class D and Class E Airspace Areas; Airways; Routes; and Reporting Points and FAR Part 91, General Operating and Flight Rules. Figure 1-13 below shows the different airspace classes and gives a graphical representation of them.

General definitions of the Classes of airspace are provided below:

- **Class A Airspace:** Airspace from 18,000 feet Mean Sea Level (MSL) up to and including Flight Level (FL) 600.
- **Class B Airspace:** Airspace from the surface to 10,000 feet MSL surrounding the nation's busiest airports in terms of IFR operations or passenger enplanements.
- **Class C Airspace:** Generally, airspace from the surface to 4,000 feet above the airport elevation (charted in MSL) surrounding those airports that have an operational control tower, are serviced by radar approach control and that have a certain number of IFR operations or passenger enplanements. The airspace usually consists of a 5 nautical mile (nm) radius core surface area that extends from the surface up to 1,200 feet above the airport elevation and a 10 nm radius shelf area that extends from 1,200 feet up to 4,000 feet above the airport elevation.
- **Class D Airspace:** Airspace from the surface up to 2,500 feet above the airport elevation (charted in MSL) surrounding those airports with an operational control tower.
- **Class E Airspace:** Generally, controlled airspace that is not Class A, Class B, Class C or Class D.
- **Class G Airspace:** Generally, uncontrolled airspace that is not designated Class A, Class B, Class C, Class D or Class E.
- **Victor Airways:** These airways are low altitude flight paths between ground based VHF Omnidirectional Receivers (VORs).

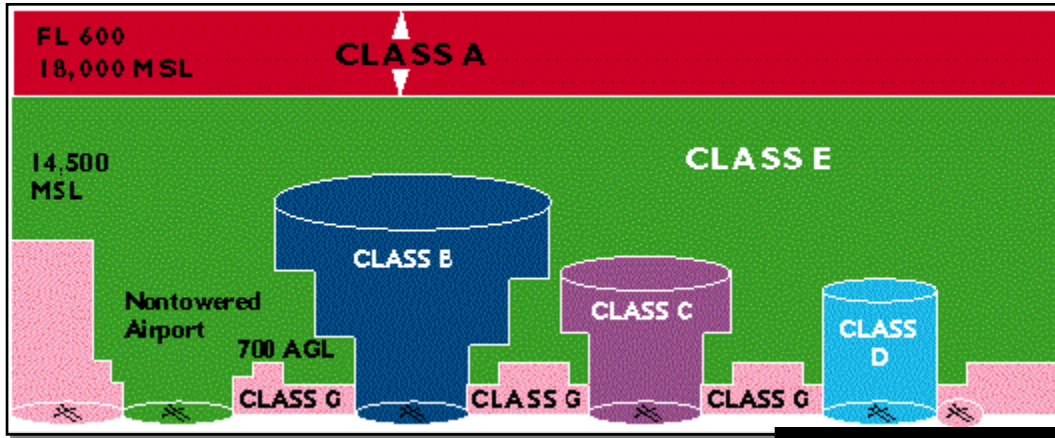
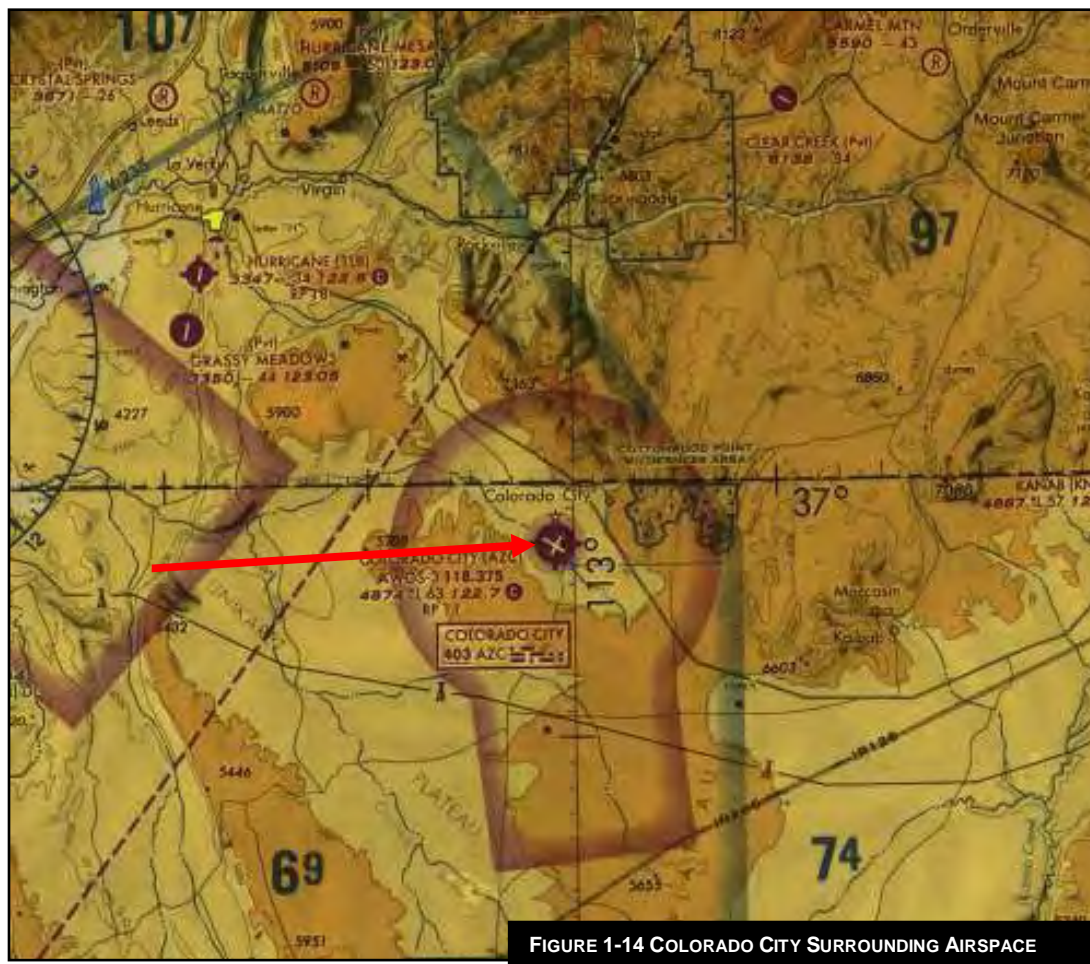


FIGURE 1-13 AIRSPACE

Figure 1-14 provides a graphical depiction of the airspace surrounding the Colorado City Municipal Airport. The airport is situated under Class E airspace starting at 700 feet above the surface. Between the surface and 700 feet, the airspace is considered Class G.

The traffic patterns to the Colorado City Municipal Airport are standard left hand traffic to all runways except Runway 11. Pilots must make right hand turns when approaching to land on Runway 11. There are no noise abatement procedures currently in place at the airport. The Colorado City Municipal Airport is also located in the vicinity of some noise sensitive national parks and wilderness areas. The Cottonwood Point Wilderness area is located approximately 3 nautical miles northeast, the Zion National Park is approximately 11 nautical miles north and the Kanab Creek Wilderness Area is approximately 30 nautical miles southeast. Airspace and land use planning are further discussed in Chapter 3.



SOURCE: 2007 LAS VEGAS SECTIONAL

AIRSPACE JURISDICTION

Colorado City is located within the jurisdiction of the Los Angeles Air Route Control Center (ARTCC) and the Prescott Flight Service Station (FSS). The altitude of radar coverage by the Los Angeles ARTCC may vary as a result of the FAA navigational/radar facilities in operation, weather conditions and surrounding terrain. The Prescott FSS provides additional weather data and other pertinent information to pilots on the ground and enroute.

AIRSPACE RESTRICTIONS

The Colorado City Municipal Airport is located north of a low-level military training route (MTRs) (see Figure 1-14). There are no Military Operation Areas (MOAs) located in the vicinity of the Colorado City Municipal Airport. MOAs and MTRs are established for the purpose of separating certain military training activities, which routinely necessitate acrobatic or abrupt flight maneuvers, from Instrument Flight Rules (IFR) traffic. IFR traffic can be cleared through an active MOA if IFR separation can be provided by Air Traffic Control (ATC), otherwise ATC will reroute or restrict the IFR traffic.

The Colorado City Municipal Airport is located approximately 56 nautical miles southeast of the Desert Military Operations Area (MOA) which is in use sunrise to sunset Monday through Saturday. The controlling agency is Los Angeles Center. The altitude of use of the Desert MOA is 100 feet AGL up to but not including flight level 180 (18,000) feet Mean Sea Level (MSL).

In addition to the MOAs, a Military Training Route (MTR) exists in the vicinity of Colorado City. The MTR program is a joint venture by the FAA and the Department of Defense (DOD). MTRs are mutually developed for use by the military to conduct low-altitude, high-speed training. Military Training Route IR-266 is located approximately 13 nautical miles southeast of Colorado City Municipal Airport. Increased vigilance is recommended for pilots operating in the vicinity of these training routes.

METEOROLOGICAL CONDITIONS

Meteorological conditions have a direct impact on the operational characteristics of an airport. These conditions determine the regulations under which operations may be conducted, the frequency of use for each operational configuration and the instrumentation required to assist aircraft in landing and departing.

LOCAL CLIMATOLOGICAL DATA

Colorado City is located in northern Mohave County in an area that receives approximately 8 to 12 inches of precipitation annually. Average annual snowfall for the Colorado City Area is 17.2 inches. The average maximum temperature of the hottest month, July, is 92.8 degrees Fahrenheit, while the average minimum temperature of the coldest month, January, is 23.6 degrees Fahrenheit. The annual average maximum temperature is 69.5 degrees Fahrenheit and the annual average minimum temperature is 41.1 degrees Fahrenheit.

CEILING AND VISIBILITY CONDITIONS

Ceiling and visibility conditions are important considerations since the occurrence of low ceiling and/or poor visibility conditions limit the use of the airport to instrument approach and departure operations until conditions change. Under poor visibility conditions or Instrument Meteorological Conditions (IMC), the pilot must operate under Instrument Flight Rules (IFR), rather than Visual Flight Rules (VFR). Under IFR, the pilot maneuvers the aircraft through sole reference to instruments in the aircraft and navigational aids on the ground. The airport must be closed for use when conditions are worse than the published IFR minimums for that airport. When flight conditions are visual or Visual Meteorological Conditions (VMC), the pilot can maneuver the aircraft by reference to the horizon and objects on the ground.

The Colorado City Municipal Airport currently has a circle to land non-precision NDB/GPS instrument approach. The minimums for the circling approach are 829 foot ceilings and 1-mile visibility.

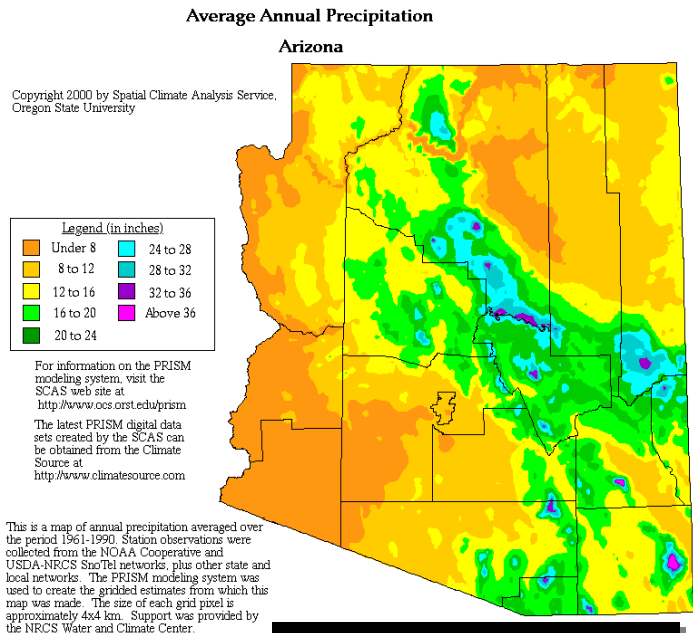


FIGURE 1-15 ARIZONA PRECIPITATION

Source: *Spatial Climate Analysis Service, Oregon State University*

RUNWAY WIND COVERAGE

Wind direction and speed determine the desired alignment and configuration of the runway system. Aircraft land and takeoff into the wind and therefore can tolerate only limited crosswind components (the percentage of wind perpendicular to the runway centerline). The ability to land and takeoff in crosswind conditions varies according to pilot proficiency and aircraft type.

Allowable Crosswind in Knots	Airport Reference Code
10.5 knots	A-I & B-I
13 knots	A-II & B-II
16 knots	A-III, B-III, & C-I through D-III
20 knots	A-IV through D-VI

FAA Advisory Circular 150/5300-13, Airport Design, recommends that a runway should yield 95 percent wind coverage under stipulated crosswind components. If one runway does not meet this 95 percent coverage, then construction of an additional runway may be advisable. The crosswind component of wind direction and velocity is the resultant vector, which acts at a right angle to the runway. It is equal to the wind velocity multiplied by the trigonometric sine of the angle between the wind direction and the runway direction. The allowable crosswind component for each Airport Reference Code is shown in Table 1-11.

A wind rose was developed for the Colorado City Municipal Airport using hourly observations from the Colorado City wind monitoring station at the Colorado City sewage lagoon from February 1981 to December 1981. This wind rose is shown in Figure 1-16 and indicates combined 10.5-knot crosswind coverage of 97.7 percent and combined 13-knot crosswind coverage of 99.19 percent. Table 1-12 shows the crosswind coverage for each runway at 10.5 and 13 knots. The AWOS is currently not connected to the National Airspace Data Interchange Network (NADIN). Information from the AWOS is only available through the phone and radio.

	10.5 knots	13.0 knots
Runway 2/20	81.3%	86.9%
Runway 11/29	86.3%	89.4%
Combined	95.9%	98.3%

SOURCE: COLORADO CITY SEWAGE LAGOONS
FEBRUARY 1981-DECEMBER 1981

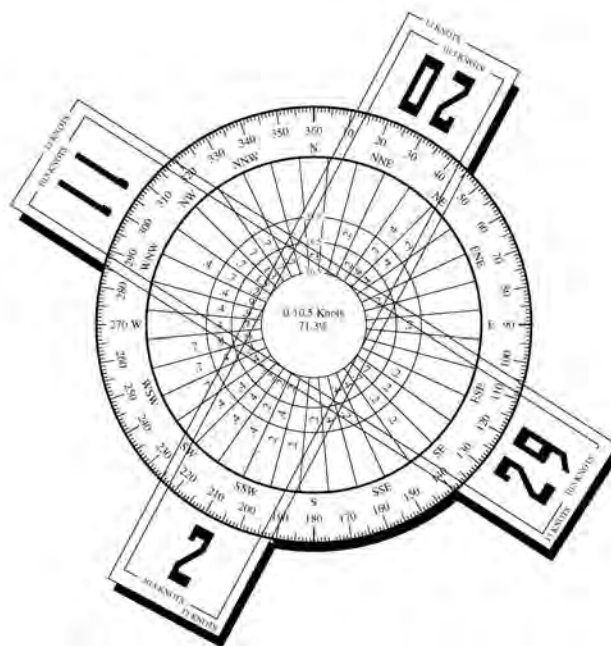


FIGURE 1-16 COLORADO CITY WIND ROSE

ENVIRONMENTAL INVENTORY

INTRODUCTION

The purpose of the environmental inventory is to identify key environmental resources that maybe affected by potential airport development. The data compiled in this section will be used later in this study in evaluating potential airport development alternatives and to identify environmental related permits that may be required for recommended development projects.

AIR QUALITY

Air quality attainment maps were obtained from the August 2007 EPA map of nonattainment areas. The project is located within an attainment area (See Figure 1-17). An attainment area is a zone within which the level of a pollutant is considered to meet National Ambient Air Quality Standards.

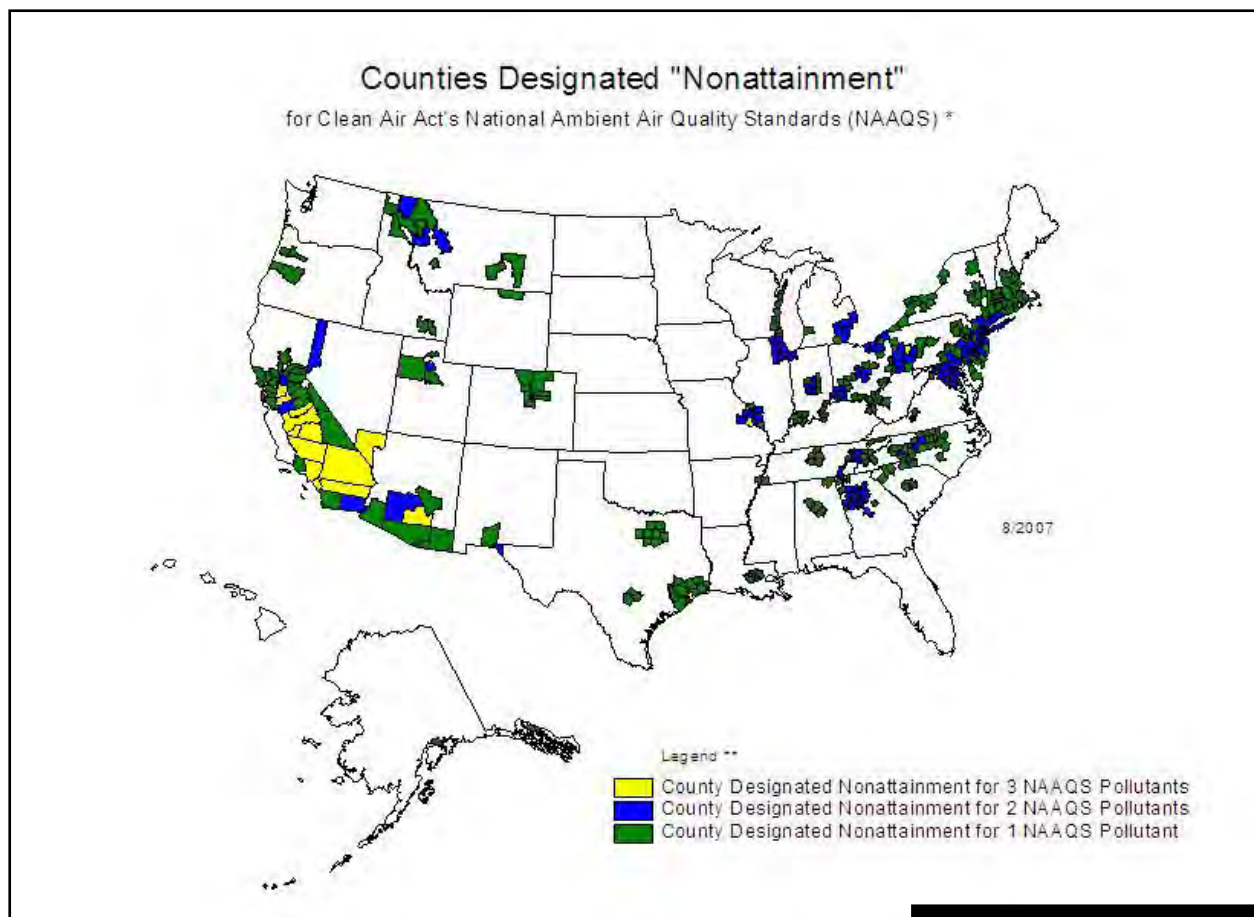


FIGURE 1-17 AIR QUALITY MAP

LAND USE COMPATIBILITY

The existing airport is located on approximately 204 acres of land. There are currently no significant environmental impacts at the airport. The surrounding land uses are considered compatible with the airport.

DEPARTMENT OF TRANSPORTATION ACT

There are currently no public parks, recreation areas or wildlife and waterfowl refuge of National, State or Local significance surrounding the airport. The nearest wilderness area is the

Cottonwood Point Wilderness Area located approximately three nautical miles northeast of the airport.

FLOODPLAINS

The area has not been mapped by FEMA however the City has indicated that the airport is not within any designated floodplain and is considered to be a non risk area.

FISH, WILDLIFE AND PLANTS

A qualified biologist performed an extensive biological assessment in March of 2006. The biological assessment revealed no evidence of threatened or endangered species or critical habitat within the area surrounding the airport.

HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL AND CULTURAL RESOURCES

A Cultural Resource Survey of the area was accomplished by Aztlan Archaeology, Inc. in May and September 2001. The Cultural Resource Survey lists five newly identified archaeological sites, four previously recorded archaeological sites and 28 isolated occurrences within the surveyed area. Two of the sites are on privately owned land and seven of the sites are on BLM land. The sites are not impacted by existing airport operations.

WETLANDS

The U.S. Army Corps of Engineers completed a jurisdictional delineation for the area dated May 31, 2001. No wetlands were identified within the area. The area known as the Dry Lakes of Short Creek were identified as Jurisdictional Waters of the United States, these waters cover only the far edge of the Runway Protection Zone and are not currently impacted by the existing airport operations.