Chapter One

Inventory

The initial step in the preparation of the master plan for Apple Valley Airport (APV or airport) is the collection of information pertaining directly to or influencing the airport and the area it serves. The information summarized in this chapter will be used in subsequent analyses within this study and includes:

- Background information related to the Victor Valley region and the Town of Apple Valley specifically, including descriptions of the local geography, regional climate, and surface transportation systems.

- Physical inventories and descriptions of current facilities and services offered at the Airport. The analysis will include airfield and landside infrastructure and services, as well as local and regional airspace, competing airport facilities, air traffic control, and aircraft operating procedures.

- Apple Valley Airport's role in regional, state, and national aviation systems. Development at the Airport since the completion of the previous master plan will also be discussed.

- Socioeconomic data, including population, employment, and housing, will be analyzed. These sectors typically offer an indication of future trends that could influence activity at the Airport.

- A review of existing local and regional plans and studies which will be utilized later in the process to determine their potential influence on the development and implementation of the airport master plan.

- Review of existing environmental conditions and sensitivities, on or near the Airport, so as to be factored into the recommended development plan.

The information outlined in this chapter provides a foundation for all subsequent chapters. Much of the information was obtained through on-site inspections of the Airport and personal interviews with Airport staff and tenants. Information was also obtained from outside resources, including documents prepared by the Federal Aviation Administration (FAA), California State Department of Transportation – Aviation Division (Caltrans), San Bernardino County, Southern California Association of Governments (SCAG) and other pertinent regional planning and economic development agencies.

REGIONAL SETTING

Exhibit 1A shows the regional setting for Apple Valley Airport. The Airport is located approximately three miles north of the central business district of the Town of Apple Valley, within the Town limits, and within San Bernardino County. The regional area is Southern California's Victor Valley, which is an area northeast of the San Gabriel Mountains in the Mojave Desert. Victorville, Hesperia, and Apple Valley are the largest incorporated municipalities in the Victor Valley. The Airport is approximately 40 miles northeast of the City of San Bernardino, 90 miles northeast of Los Angeles, and 190 miles southwest of Las Vegas.

The Mojave Desert is an arid region in southern California that serves as a transition between the Sonoran Desert to the south and the higher Great Basin to the north. Typical topography of the Mojave Desert includes mountains and valleys with sparce vegetation.

COMMUNITY PROFILE

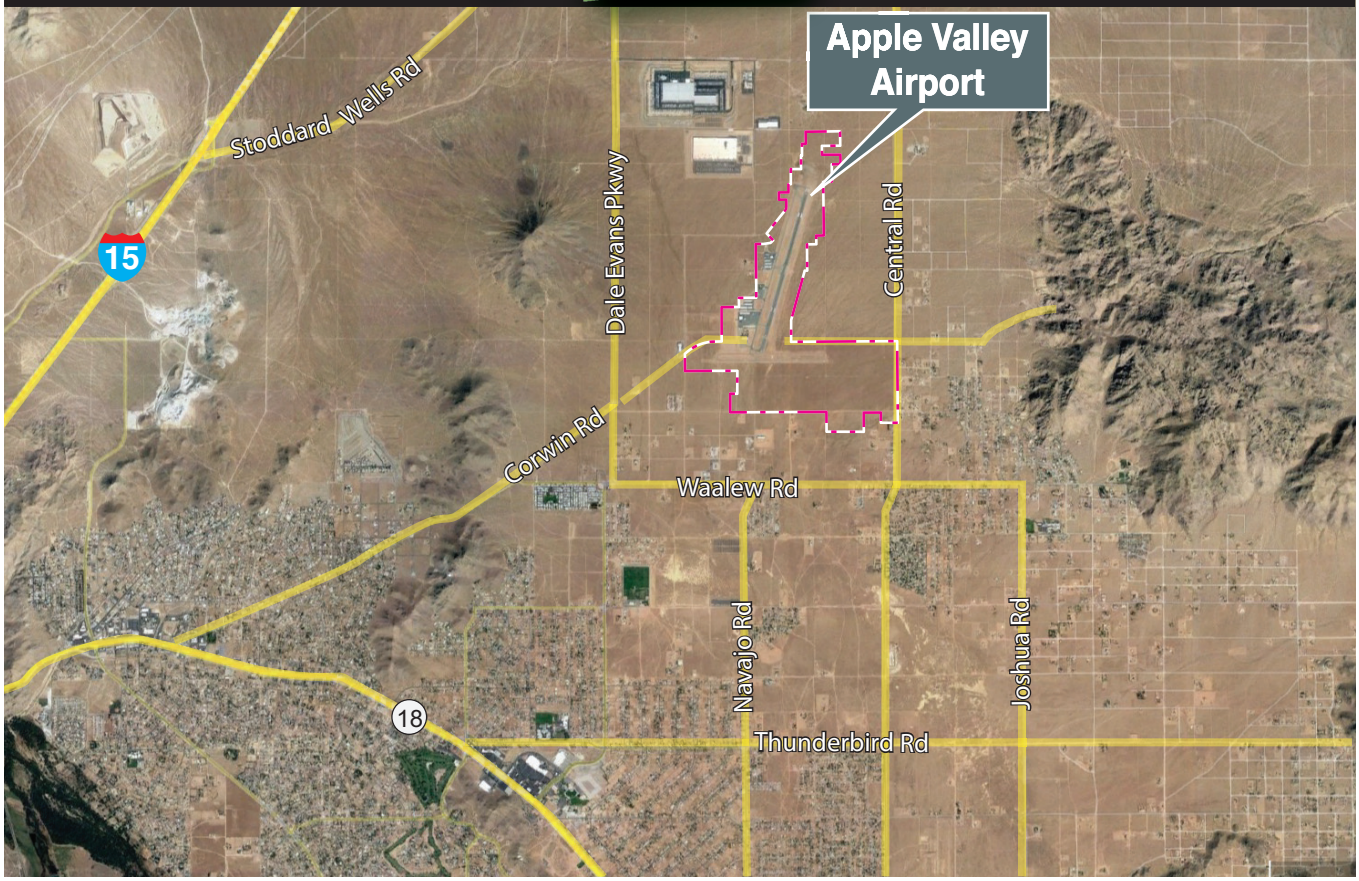
The Town of Apple Valley is in the heart of the Victor Valley in the County of San Bernardino. Known as the "High Desert", Apple Valley is strategically located 35 minutes north of the Inland Empire, along Interstate 15. The Town has 78 square miles in its incorporated boundaries and a sphere of influence encompassing 200 square miles.

Apple Valley experiences an average of 350 days of sunshine a year, and the combination of weather and geography unveils the hidden treasures of the High Desert's dramatic landscapes and exquisite sunsets.

The local economy is driven by 4.2 million square feet of retail and office space, 2.6 million square feet of industrial inventory, relatively low vacancy rates, and available large-acre sites. The 6,600-acre North Apple Valley Industrial Specific Plan (NAVISP) area includes a certified program Environmental Impact Report (EIR) and a California and McCallum Sweeney certified site held by Watson Land Company. The Apple Valley Airport is located within the NAVISP.

Apple Valley is home to a nationally recognized laboratory school that gives students a hands-on science and math education – the Lewis Center for Academic Excellence. They were recently listed in the top three percent of schools nation-wide by the U.S. News and World Report. Apple Valley also has three private schools that offer distinguished award-winning education.


Warren
Mojave
Kramer Junction
Lenwood
Barstow
Kern
Los Angeles
San Bernardino
Lancaster
Apple Valley Airport
Victorville
Apple Valley
Sacramento
San Francisco
San Jose
Hesperia
Redlands
Yucca Valley
Fontana
San Bernardino
Riverside
Desert Hot Springs
Moreno Valley
Los Angeles
Apple Valley Airport
Hemet
Cathedral City
Orange
Lake Elsinore
San Diego


Apple Valley Airport
Stoddard Wells Rd
Dale Evans Pkwy
Central Rd
Corwin Rd
Waalew Rd
Navajo Rd
Joshua Rd
Thunderbird Rd

Apple Valley has emerged as a leader in advanced health care systems, spanning the gamut from pediatric services to radiology, with St. Mary Medical Center as the hub of state-of-the-art medical services.

Clean air, low crime rates, and open spaces permit Apple Valley to be the land of opportunity for those who are seeking a better place to live, work, and play.

AIRPORT HISTORY

The first Apple Valley Airport was located at a site immediately north of State Route 18 between Rancherias Road and Apple Valley Inn Road. Bonanza Airlines operated at the airport from 1957 until 1966. Citing the poor condition of the runway, Bonanza Airlines ceased operation to Apple Valley Airport in 1966, which prompted County leaders to consider development of a replacement airport. By 1969, the County had acquired 410 acres of land, and on January 1, 1970, the new Apple Valley Airport at the current site was opened. In 1970, Hughes Airwest began passenger service to the new Airport using the Fairchild F27 turboprop aircraft with seating capacity between 44 and 52 people. This service was available until 1973. In the late 1970's into the early 1980's, Inland Empire Airlines provided commuter passenger service to Los Angeles, Bullhead City, and Las Vegas. APV has not had scheduled passenger service since this time.

In 1999, the County constructed a crosswind runway. Today, the Apple Valley Airport provides general aviation services and serves as an economic and transportation hub to the community as well as the Victor Valley region. The airport is home to approximately 117 based aircraft, a fixed base operator, and the California Highway Patrol (CHP) – Inland Division Air Operations.

Over the years, the Airport has periodically sought and accepted FAA development grants. The most recent grant accepted was for approximately $269,000 for rehabilitation of Runway 18-36 in 2014. **Table 1A** summarizes grants the airport has received since 2002.

TABLE 1A | Federal Development Grants Since 2002

Fiscal Year	FAA Grant Number	Project	AIP Grant Total	Caltrans Matching Funds
2002	2	South Ramp & Taxiway Reconstruction	$150,000	$0
2003	3	South Ramp & Taxiway Reconstruction	$90,000	$0
2004	4	ALP Update	$60,000	$0
2005	5	Fire Access Road/Fence/Run-Up Areas	$350,000	$37,032
2006	6	Taxiway A Reconstruction & Widening	$544,578	$25,417
2007	7	Construct & Expand Apron	$439,285	$10,992
2008	8	Electrical & Signage Improvements	$463,733	$11,593
2014	9	Runway 18-36 Rehabilitation	$269,415	Unknown
TOTAL			**$2,367,011**	**$85,034**

Source: https://www.faa.gov/airports/aip/2018_aip_grants/ (FAA Grant Histories)

AIRPORT ADMINISTRATION

Apple Valley Airport is a public use facility owned by San Bernardino County Services Area 60 and operated by the Department of Airports. The department has a professional airport management staff that operates six airports (Apple Valley, Baker, Barstow-Daggett, Chino, Needles, and Twenty-nine Palms). There is a dedicated airport manager for the Apple Valley Airport.

The Director of Airports reports to the San Bernardino County Board of Supervisors. The Board consists of five elected members who oversee all County operations, including the airports. There is a seven-member Airport Commission, appointed by the Board of Supervisors to four-year terms. The Airport Commission is tasked with the following:

1. Make such recommendations and observations concerning County airports and aviation-related issues to the Board of Supervisors.
2. Review proposals for airport leases as required or when otherwise deemed appropriate by the Director or the Commission, and make recommendations regarding approval by the Director or the Board.
3. Promote airports and aviation in general in San Bernardino County.
4. Review and participate in County airport special events and recommend appropriate Board action.
5. Review and make recommendations for initial preparation of the annual airports budget and the five-year and ten-year capital improvement budgets, and review and make recommendations for the initial preparation of the year-end budget.
6. Review and make recommendations for appropriate action on rental delinquencies or lease defaults requiring possible legal action and/or termination by the Board.

It is the responsibility of the Director of Airports to:

1. Attend meetings of the Commission and serve as the Secretary of the Commission, without vote.
2. Advise and inform the Airports Commission regarding airport and aviation related issues, growth and development that may affect the County and/or operations of the County airports.
3. Forward the advice and recommendations of the Commission to the Board of Supervisors, and keep the Commission advised of the Board's actions and requests.

REGIONAL CLIMATE

Weather conditions are important to the planning and development of an airport. Temperature is an important factor in determining runway length requirements, while wind direction and speed are used to determine optimum runway orientation. The need for navigational aids and lighting is determined by the percentage of time that visibility is impaired due to cloud coverage or other conditions.

The airport's location within the Mojave Desert region, leads to an average high temperature in July of 97.5 degrees. The lowest average monthly low temperature is 32.5 degrees which occurs in December. Being a desert climate, precipitation is infrequent, and over the course of a year, rainfall averages 5.6 inches. The Town of Apple Valley experiences sunshine 350 days per year. **Table 1B** summarizes climate data for the region.

TABLE 1B | Historic Climate Data - Victorville, CA			
Period	**Average Precipitation (in.)**	**Mean Min Temp (°F)**	**Mean Max Temp (°F)**
January	0.97	33.2	58.4
February	1.27	35.9	61.0
March	0.78	40.1	66.8
April	0.33	44.2	73.1
May	0.09	50.9	81.4
June	0.04	28.0	91.4
July	0.22	64.2	***97.5***
August	0.11	63.3	97.0
September	0.16	57.6	91.2
October	0.31	47.3	79.3
November	0.35	37.6	66.9
December	0.94	32.5	56.9
Total	***5.6***		

Source: National Oceanic and Atmospheric Administration (NOAA) - Climate Normals of the United States (30-years of data from 1991-2020) as sourced from meteorological station ID: Victorville USC00049325.

AIRPORT SYSTEM PLANNING ROLE

Airport planning exists on many levels: national, state, and local. Each level has a different emphasis and purpose. On the national level, Apple Valley Airport is included in the *National Plan of Integrated Airport Systems* (NPIAS). On the regional and state levels, the airport is included in the *California Aviation System Plan* (CASP). The local airport planning document is the Airport Master Plan or an Airport Layout Plan Update.

FEDERAL AIRPORT PLANNING

The role of the federal government in the development of airports cannot be overstated. Many of the nation's existing airports were either initially constructed by the federal government, or their development and maintenance was partially funded through various federal grant-in-aid programs to local communities. The system of airports existing today is due, in large part, to the existence of federal policy that promotes the development of civil aviation. As part of a continuing effort to develop a national airport system to meet the needs of civil aviation and promote air commerce, the United States (U.S.) Congress has continually maintained a national plan for the development and maintenance of airports.

There are 19,853 public and private aviation facilities in the U.S. The NPIAS identifies 3,287 existing public use airports which are considered significant to the national air transportation system. As such, these airports are eligible for federal FAA grant funds for capital improvements. This total includes 383 primary commercial service airports and 2,904 non-primary general aviation airports. The NPIAS is published and used by the FAA in administering the Airport Improvement Program (AIP), which is the source of federal funds for airport improvement projects across the country. The AIP program is funded exclusively by user fees and user taxes, such as those on fuel and airline tickets. The 2023-2027 NPIAS estimates that $62.4 billion worth of needed airport improvements are eligible for AIP funding across the country over the next five years. An airport must be included in the NPIAS to be eligible for federal funding assistance through the AIP.

The NPIAS supports the FAA's strategic goals for safety, system efficiency, and environmental compatibility by identifying specific airport improvements. The current issue of the NPIAS identifies approximately $6.0 million in development needs at Apple Valley Airport for the five-year planning horizon. This figure is not a guarantee of federal funding; instead, this figure represents development needs as presented to the FAA by the airport administration in the annual airport capital improvement program. **Table 1C** shows the classification of the NPIAS airports.

TABLE 1C I NPIAS Airport Distribution

Number of Airports	Airport Category	Percent of All GA Aircraft	Percent of Total Operations	Percent of NPIAS Cost
30	Large Hub	1.0	10.0	32.0
35	Medium Hub	2.0	5.0	14.9
80	Small Hub	5.0	7.0	9.7
238	Nonhub	10.0	10.0	12.2
383	***Primary Subtotal***	***18.0***	***32.0***	***68.8***
107	National - GA	12.0	11.0	5.3
501	Regional - GA	22.0	25.0	9.0
1,179	Local - GA	20.0	23.0	10.3
904	Basic - GA	3.0	7.0	6.0
213	Unclassified	1.0	2.0	0.0
2,904	***Nonprimary Subtotal***	***58.0***	***68.0***	***30.6***
3,287	**Total NPIAS Airports**	**76.0**	**100.0**	**100.0**

Note: Apple Valley Airport is a Local - GA airport.

Source: National Plan of Integrated Airport Systems (2021-2025)

Apple Valley Airport is included in the NPIAS as one of 1,179 nonprimary Local General Aviation airports. Local general aviation airports are described as airports that support local communities by providing access to local and regional markets. They are generally located near larger population centers but not necessarily in metropolitan areas. Local airports typically offer flight training and emergency services, as well as moderate levels of general aviation activity. Local airports average about 32 based piston aircraft.

Exhibit 1B presents a summary of the national aviation system and the development needs of those airports.

STATE AIRPORT PLANNING

Apple Valley Airport is included in the California Airport System Plan (CASP) which was updated in 2020. The CASP includes 241 public use airports, 190 of which are included in the federal NPIAS (including Apple Valley Airport). The CASP classifies general aviation airports according to their roles in the state air transportation system in the following manner:

- **Limited Use:** These airports provide limited access, are usually located in non-urban areas, and may be used for a single purpose, such as firefighting. Limited use airports have few or no based aircraft and provide no services.

- **Community:** These airports provide access to other regions or states and are located near small communities or in remote locations. Community airports typically support recreational flying, flight training, and local emergencies. Most activity is by small single engine piston aircraft, and some basic services, such as fuel, are available.
- **Regional:** Regional general aviation airports typically provide access to other regions and states and may also have international access. They are typically located in areas with a larger population than community airports, and often serve multiple cities or counties. These airports are capable of accommodating business aviation, turboprops, and business jets. Often these airports have published instrument approach procedures and a fixed-base operator. **Apple Valley Airport is classified as a Regional Airport with a Business/Corporate emphasis in the CASP**.
- **Metropolitan:** Metropolitan airports are typically located in urban areas and may be designated reliever airports. Typically, these airports have an aeronautical emphasis on business aviation and can accommodate the largest business jets in the national fleet. Often these airports have a significant level of business aeronautical activity including fixed-base-operators, aircraft maintenance, and other specialty aviation related businesses.

LOCAL AIRPORT PLANNING

An Airport Master Plan or an Airport Layout Plan with Narrative Report is the primary local airport planning document. The last Master Plan adopted for the Airport was completed in 1992. An ALP with Narrative Report was adopted in 2006. A Master Plan was undertaken in 2012, however it was not formally adopted. This study is intended as a new Master Plan for the Airport.

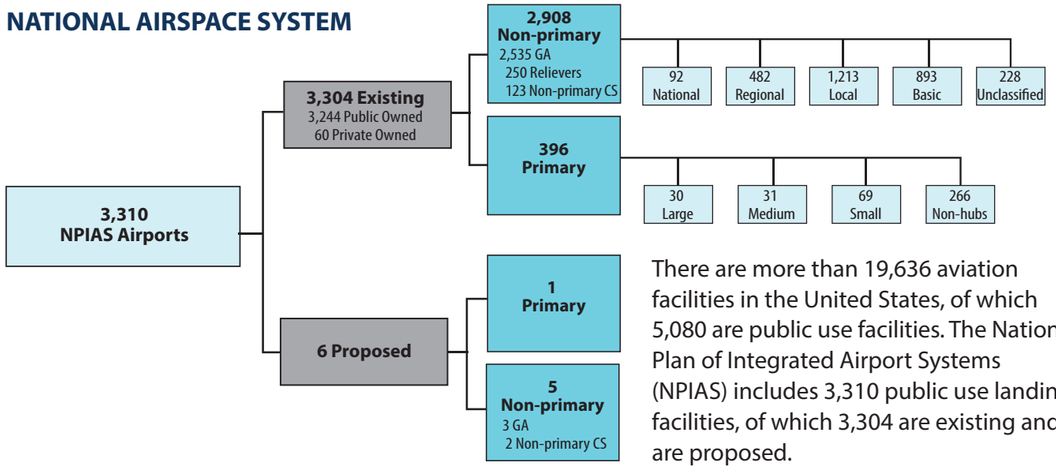
AIRFIELD FACILITIES

Airfield facilities are those which facilitate aircraft movements between the air and ground. Generally, these facilities include runways, taxiways, airport lighting and markings, and navigational aids. **Exhibit 1C** summarizes and depicts airfield facility information atop an aerial photograph for visual reference.

RUNWAYS

Apple Valley Airport is served by a two-runway system. Runway 18-36, oriented in a north to south manner, is the primary runway. It is 6,498 feet long and 150 feet wide and constructed of asphalt. FAA data indicates that the runway is in good condition. The runway has basic markings on the Runway 36 end, which includes the runway designation and centerline stripe. There is non-precision marking on the Runway 18 end which includes threshold bars, runway designation, centerline stripe, and aiming zone markings. The gradient of the runway is 1.47 percent with the Runway 18 end being at an elevation of 3,061.7 feet MSL and the Runway 36 end at an elevation of 2,966.1 feet MSL. Runway 18-36 is equipped with white medium intensity edge lighting (MIRL) to illuminate the runway edges at night. The last 2,000 feet of edge lights are amber caution zone lights to alert pilots of the approaching runway end.

NATIONAL AIRSPACE SYSTEM

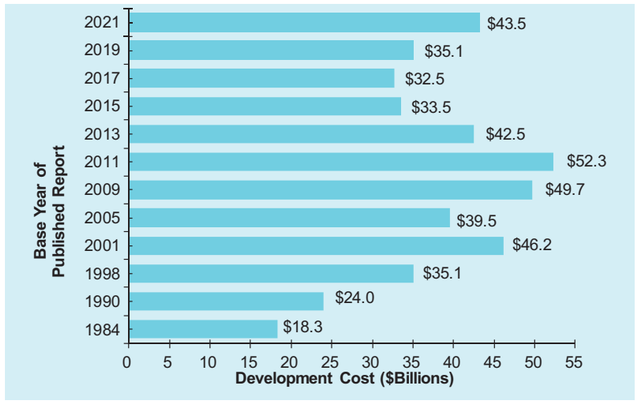


There are more than 19,636 aviation facilities in the United States, of which 5,080 are public use facilities. The National Plan of Integrated Airport Systems (NPIAS) includes 3,310 public use landing facilities, of which 3,304 are existing and 6 are proposed.

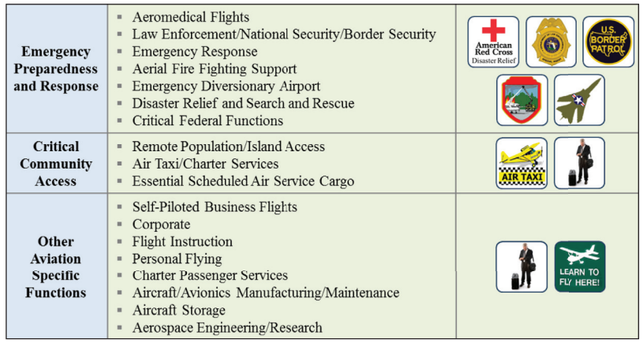
GENERAL AVIATION AIRPORTS

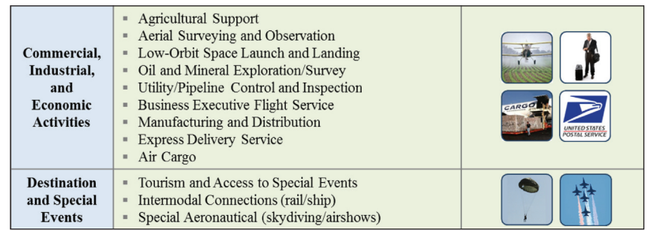
GROUP (number of airports)	DESCRIPTION	FUNCTIONS (varies among individual airports)
National (92)	**Serves national - global markets** Very high levels of activity with many jets and multi-engine propeller aircraft Averaging about 200 total based aircraft, including 30 jets	Emergency Preparedness and Response Critical Community Access Other Aviation Specific Functions Commercial, Industrial, and Economic Activities Destination and Special Functions
Regional (482)	**Serves regional - national markets** High levels of activity with some jets and multi-engine propeller aircraft Averaging about 90 total based aircraft, including 3 jets	
Local (1,213)	**Serves local - regional markets** Moderate levels of activity with some multi-engine propeller aircraft Averaging about 33 based propeller-driven aircraft and no jets	
Basic (893)	**Often serving critical aeronautical functions within local and regional markets** Moderate - low levels of activity Averaging about 10 propeller-driven aircraft, and no jets	

The FAA has further categorized non-primary airports to help guide policy makers when making decisions regarding airport development. An additional 266 airports are currently unclassified.



The FAA estimates that over the next five years, (2021-2025), there will be $43.6 billion of airport infrastructure projects eligible for Airport Improvement Program (AIP) funding.





General aviation airports provide important services for both local communities and the national aviation system.

The 396 primary airports account for 12.0% of the airports and 66% of the total development costs. The 2,908 non-primary airports account for 88% of the airports and 34% of total development costs.

Development Category	Large	Medium	Small	Nonhub
Safety	$195	$79	$175	$317
Security	$34	$13	$21	$45
Reconstruction	$3,826	$2,108	$2,001	$2,434
Standards	$1,732	$1,129	$1,015	$2,139
Environmental	$691	$61	$15	$58
Noise	$446	$33	$68	$25
Capacity	$2,732	$292	$200	$166
Terminal	$3,174	$870	$1,542	$834
Access	$4	$81	$42	$131
New Airport	$0	$0	$0	$0
Other/Special	$0	$0	$1/$13	$19/$9
Total	$12,835	$4,667	$5,092	$6,117
Percentage	29.4%	10.7%	11.7%	14.2%

Note: Dollars in millions (2019)

Source: National Plan of Integrated Airport Systems 2021-2025

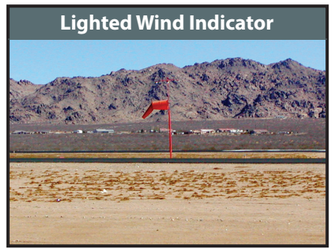
Airports in the non-primary categories account for $14.6 billion of the $43.6 billion in identified development need over the next five years.

Development Category	National	Regional	Local	Basic	Unclassified	New Airports	Total	% of Costs
Safety	$220	$176	$246	$279	$0	$0	$1,487	3.4%
Security	$3	$11	$6	$3	$0	$0	$136	0.3%
Reconstruction	$900	$2,092	$2,256	$1,256	$0	$0	$16,873	38.7%
Standards	$721	$1,365	$2,528	$1,200	$0	$0	$11,829	27.1%
Environmental	$6	$15	$15	$5	$0	$0	$867	2.0%
Noise	$34	$7	$1	$0	$0	$0	$614	1.4%
Capacity	$66	$311	$234	$128	$0	$0	$4,129	9.5%
Terminal	$12	$77	$83	$42	$0	$0	$6,634	15.2%
Access	$22	$60	$63	$54	$0	$0	$457	1.0%
New Airport	$4	$0	$0	$29	$0	$269	$302	0.7%
Other/Special	$2/$1	$44/$14	$123/$0	$65/$0	$0/$0	$0/$0	$254/$36	0.6%
Total	$1,988	$4,172	$5,556	$2,862	$0	$269	$43,617	100%
Percentage	4.6%	9.6%	12.7%	6.6%	0.0%	0.6%	100%	

Note: Dollars in millions (2019)


Runway 18


PAPI-2

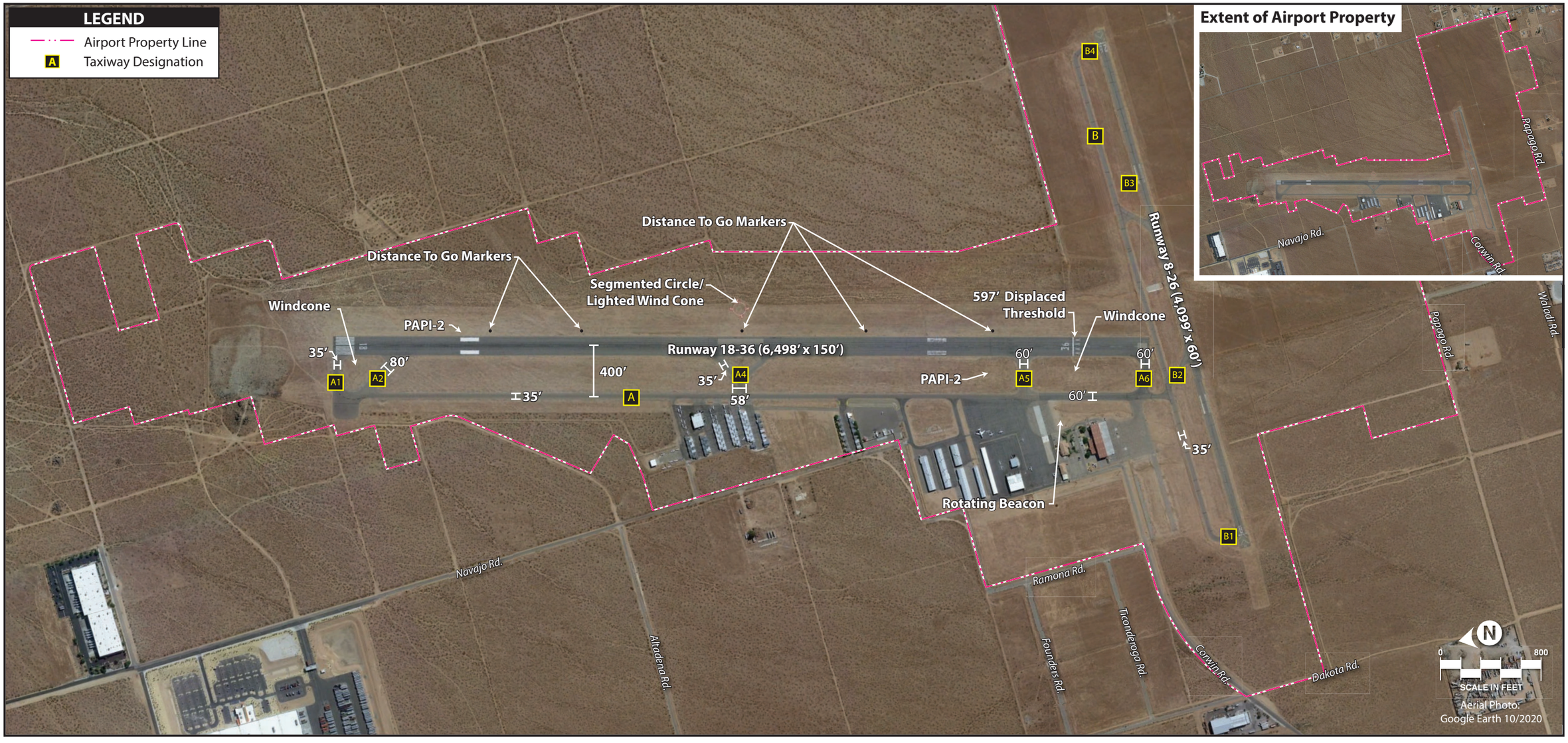

Lighted Wind Indicator


Runway 36


Runway 26


Rotating Beacon


Runway 8



Runway 18 has a standard left hand traffic pattern, while Runway 36 has a right-hand traffic pattern as shown on **Exhibit 1D**. The landing threshold to Runway 36 is displaced by 597 feet. Runway 18-36 has a pavement strength of 70,000 pounds for aircraft with single wheel landing gear (S), 90,000 pounds for dual wheel (D) landing gears, and 150,000 pounds for landing gears with dual tandem (DT) land gears.

Runway 8-26 is the crosswind runway oriented in a west to east manner. It is 4,099 feet long and 60 feet wide and constructed of asphalt. The runway has basic markings, which include the runway designation, centerline stripe, and aiming zone markings. The gradient of the runway is 0.44 percent with the Runway 8 end being at an elevation of 2,957.7 feet MSL and the Runway 26 end at an elevation of 2,975.6 feet MSL. Runway 8 does not have runway edge lights and is closed at night due to rapidly rising terrain to the east and west. Runway 8 employs a right-hand traffic pattern, and Runway 26 has a standard left-hand air traffic pattern. Runway 8-26 has a pavement strength of 40,000 pounds for aircraft with single wheel landing gear (S), 60,000 pounds for dual wheel (D) landing gears, and 100,000 pounds for landing gears with dual tandem (DT) land gears. **Table 1D** summarizes the runway data for Apple Valley Airport.

TABLE 1D | Runway Data

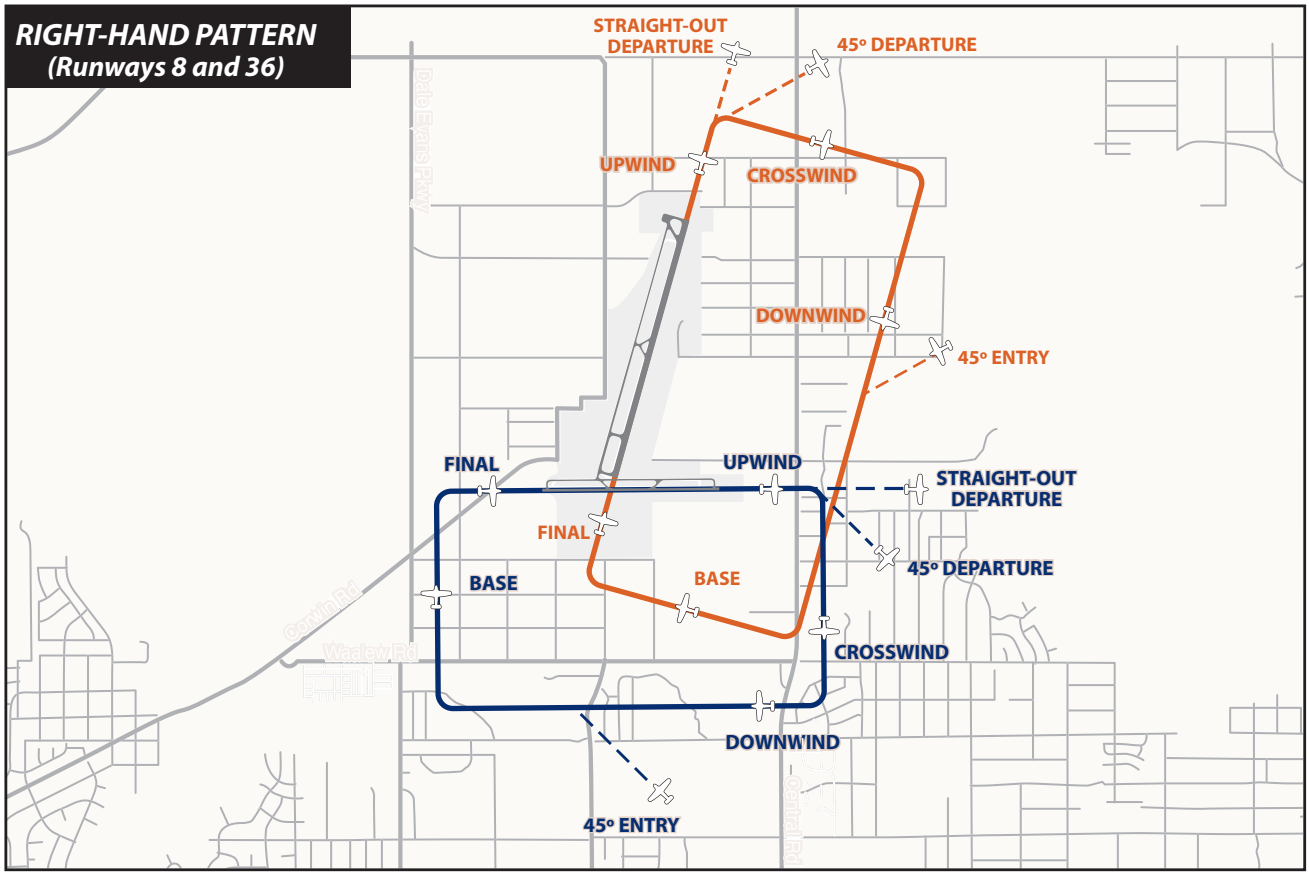
Field Elevation: 3,061.7'	Runway 18	Runway 36	Runway 8	Runway 26
Runway Length (feet)	6,498'		4,099'	
Runway Width (feet)	150'		60'	
Pavement Type	Asphalt		Asphalt	
Pavement Condition (FAA Reported)	Good		Good	
Gradient	1.47%		0.44%	
Runway Load Bearing Strength (lbs.)				
Single Wheel (S)	70,000 lbs.		40,000 lbs.	
Dual Wheel (D)	90,000 lbs.		60,000 lbs.	
Double Tandem (DT)	150,000 lbs.		100,000 lbs.	
Runway Pavement Markings	Basic		Basic	
Runway Edge Lighting	Medium Intensity (MIRL)		NA	
Visual Slope Aids	PAPI-2L (3.5°)	PAPI-2L (3.0°)	NA	
Traffic Pattern	Left	Right	Right	Left
Approach Procedure/Visibility Minimum	Yes/⅞-mile	NA	NA	NA
Weather and Navigational Aids	Automated UNICOM; Segmented Circle, Windcones (3), Rotating Beacon			

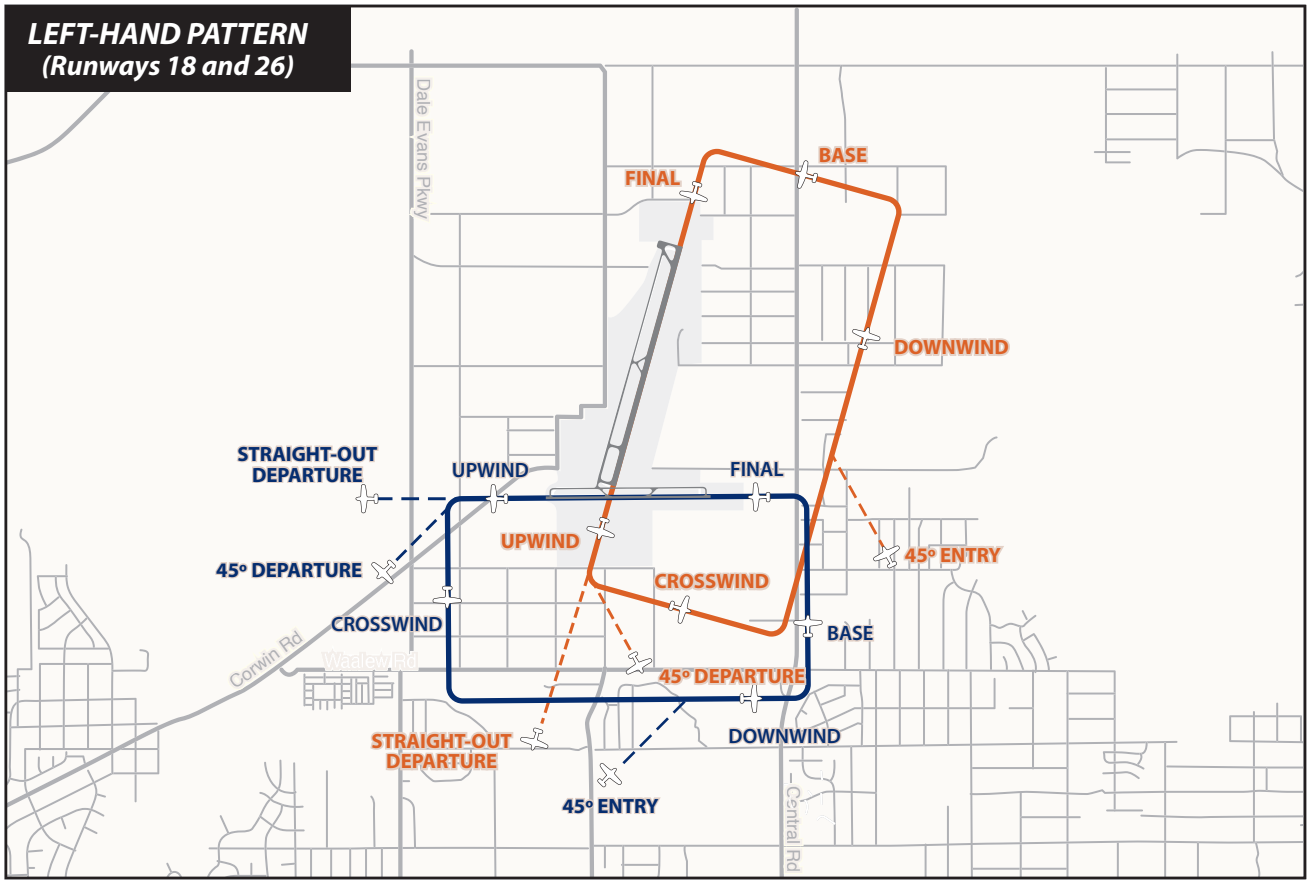
Source: FAA Airport Facility Directory (effective Dec. 2, 2021)

TAXIWAYS/TAXILANES

Taxiways are generally those providing direct access to the runway. This includes parallel taxiways and connecting taxiways. Taxilanes are those providing access to hangar or aircraft tie-down areas. Aircraft movement on taxiways tends to be at higher speeds than on taxilanes.

Taxiway A is a full-length parallel taxiway serving Runway 18-36. It is 35 feet wide and separated from the runway by 400 feet, centerline to centerline. There are five connecting taxiways designated A1, A2, A4, A5, and A6. Taxiway A1 is the threshold taxiway to the Runway 18 end, and it is 60 feet wide. Taxiway A2 is an angled taxiway near the Runway 18 threshold that is 80 feet wide. Taxiways A1 and A2 formerly served as an aircraft turn around prior to the construction of parallel Taxiway A. Taxiway A4 is a


RIGHT-HAND PATTERN
(Runways 8 and 36)
STRAIGHT-OUT DEPARTURE
45° DEPARTURE
UPWIND
CROSSWIND
DOWNWIND
45° ENTRY
FINAL
UPWIND
STRAIGHT-OUT DEPARTURE
FINAL
45° DEPARTURE
BASE
BASE
CROSSWIND
DOWNWIND
45° ENTRY
Dale Evans Pkwy
Corwin Rd
Wadelow Rd
Central Rd


LEFT-HAND PATTERN
(Runways 18 and 26)
BASE
FINAL
DOWNWIND
STRAIGHT-OUT DEPARTURE
UPWIND
FINAL
UPWIND
45° ENTRY
45° DEPARTURE
CROSSWIND
CROSSWIND
BASE
Corwin Rd
Wadelow Rd
45° DEPARTURE
STRAIGHT-OUT DEPARTURE
DOWNWIND
45° ENTRY
Dale Evans Pkwy
Central Rd

mid-field connecting taxiway that splits to provide an angled taxiway exit. The two legs of this taxiway are 35 feet wide, and the throat is 50 feet wide. Taxiway A5 is a connecting taxiway extending from the runway to the terminal apron, and it is 60 feet wide. Taxiway A6 is the threshold taxiway to Runway 36, and it is 60 feet wide. Taxiway A and the connecting taxiways are equipped with medium intensity taxiway edge lighting (MITL).

Taxiway B is a full-length taxiway serving Runway 8-26, and it is 35 feet wide. Taxiway B is separated from the runway by 240 feet. Taxiways B1, B2, B3, and B4 are the connecting taxiways, all of which are 35 feet wide. Taxiway B1 is the threshold taxiway serving Runway 8, and Taxiway B4 is the threshold taxiway serving Runway 26. Taxiways B2 and B3 are connecting taxiways that are angled to the runway. There is not taxiway edge lighting or reflective cans serving Taxiway B or the connectors. **Table 1E** summarizes the taxiway detail.

TABLE 1E | Taxiway Detail

Designation	Width
Taxiway A (Parallel)	35'
Taxiway A1 (Rwy 18 Threshold)	60'
Taxiway A2 (Connector)	80'
Taxiway A4 (Connector)	35'/50'
Taxiway A5 (Connector)	60'
Taxiway A6 (Rwy 36 Threshold)	60'
Taxiway B (Parallel)	35'
Taxiway B1 (Rwy 8 Threshold)	35'
Taxiway B2 (Connector)	35'
Taxiway B3 (Connector)	35'
Taxiway B4 (Rwy 26 Threshold)	35'

AIRCRAFT APRON CHARACTERISTICS

Aircraft aprons are wide expanses of paved surfaces necessary for parking local and transient aircraft. Aprons typically have direct access via taxilanes to the airfield system and are often equipped with aircraft tie-down markings and chains or ropes, which are used to secure the aircraft to prevent unintended movement (e.g., from high winds). Apple Valley Airport has five separate asphalt apron areas as detailed in **Table 1F**.

TABLE 1F | Aircraft Apron Detail

Apron ID	Size (s.y.)[1]	Parking Positions
CHP Apron	8,100	None Designated
Terminal	24,000	50 Designated
Fuel Apron	6,400	None Designated
Mid Field	2,000	24 Designated
North Hangar	1,600	10 Designated
Total	**42,100**	**84 Designated**

[1]Includes access taxilanes

At the southwest end of the airport is the CHP apron and hangar. This apron is approximately 8,100 square yards in size. It does not have any fixed wing tie-down markings. It does have one circular marking for helicopter parking.

The apron immediately north of the terminal building encompasses approximately 24,000 square yards. There are several taxilanes providing access to the 50 designated tie down parking positions. Transient parking is available on this apron closest to the terminal building, but these positions are not specifically marked on the pavement.

North of the terminal apron is the fueling apron. The apron encompasses approximately 6,400 square yards, and there are no designated spaces on this apron.

Midfield Aviation provides 24 designated tie-down positions which are situated on the pavement at the ends of the Port-a-Port hangars. Combined, this tie-down provides approximately 2,000 square yards of pavement.

The conventional hangar north of Midfield Aviation has a wide taxilane to the sides of which approximately 10 aircraft parking spaces are available. There are no tie-down ropes or chains, and the parked aircraft are positioned on the unpaved areas next to the taxilane.

In total, there are approximately 42,100 square yards of aircraft apron pavement and 84 designated aircraft tie-down positions. While not specifically marked, the transient apron can provide parking for an additional 10 aircraft.

RUN-UP APRONS

Run-up aprons are specific locations on the airfield where pilots can pull their aircraft off a taxiway to perform final pre-flight checks and engine run-ups. These are typically located in proximity to the runway thresholds. There is a run-up apron at the north end of Taxiway A.

PAVEMENT CONDITION

Airport sponsors are required to maintain the pavement surfaces in suitable condition as outlined in Federal Grant Assurance No. 11. To this end, the airport sponsor must implement an effective airport pavement maintenance/management program. Essentially, airport sponsors must continually assess the condition of the pavements and provide preventative maintenance to preserve the useful life of the pavements.

In 2023, the San Bernardino County Department of Airports engaged the services of a pavement specialist to study the pavement condition at APV. The study serves as a tool to identify pavement needs, shape programming decisions for federal and state grant aid, provide information for legislative decision-making, and assist the airport sponsor in making informed planning decisions. The study also developed accurate pavement inventories and identified necessary maintenance, repair, rehabilitation, and reconstruction projects.

The surveys were conducted using the pavement condition index (PCI) procedure documented in the following publications:

1. The Federal Aviation Administration's (FAA's) Advisory Circular 150/5380-6B, *Guidelines and Procedures for Maintenance of Airport Pavements*.
2. The American Society for Testing and Material's (ASTM's) D-5340, *Standard Test Method for Airport Pavement Condition Index Surveys*.

The PCI procedure is the standard used by the aviation industry to visually assess pavement condition. It was developed to provide engineers with a consistent, objective, and repeatable tool to represent the overall pavement condition. During a PCI survey, visible signs of deterioration within a selected sample area are identified, recorded, and analyzed.

The results of a PCI evaluation provide an indication of the structural integrity and functional capabilities of the pavement. However, it should be recognized that during a PCI inspection only the top layer of the pavement is examined and that no direct measure is made of the structural capacity of the pavement below. Nevertheless, the PCI does provide an objective basis for determining maintenance and repair needs, as well as for establishing rehabilitation priorities in the face of constrained resources. Furthermore, the results of repeated PCI monitoring over time can be used to determine the rate of deterioration and to estimate the time at which certain rehabilitation measures can be implemented.

Exhibit 1E presents the findings of the 2023 pavement inspections. Runway 18-36 has an average PCI of 58, which is well below where a primary runway should be. The airport is planning a significant rehabilitation project which will restore the runway to very good condition. Areas in red are nearly failed pavement which should be a high priority for rehabilitation. Runway 8-26 is in good condition currently.

AIRFIELD LIGHTING SYSTEMS

Airfield lighting systems extend an airport's usefulness into periods of darkness and/or poor visibility. A variety of lighting systems are installed at the airport for this purpose. All airfield lighting is traditional incandescent bulbs. The lighting systems, categorized by function, are summarized as follows.

Identification Lighting: The location of the airport at night is universally identified by a rotating beacon. The rotating beacon projects two beams of light, one white and one green, 180 degrees apart. The rotating beacon is located atop a tilt-capable pole structure located immediately east of the terminal building. The beacon operates from sunset to sunrise.

Runway and Taxiway Lighting: Runway and taxiway edge lighting utilize light fixtures placed near the edge of the pavement to define the lateral limits of the pavement. This lighting is essential for safe operations during night and/or times of low visibility to maintain safe and efficient access to and from the runways and aircraft parking areas.

Runway 18-36 is equipped with medium intensity runway lights (MIRL). Taxiway A and the associated connectors have medium intensity taxiway edge lighting (MITL). Runway 8-26 is not equipped with edge lights nor are Taxiway B and the connectors. This runway is closed to nighttime operations.

Airfield Signage: The airport also has a runway/taxiway signage system. The presence of runway/taxiway signage is an essential component of a surface movement guidance control system necessary for the safe and efficient operation of the airport. The signage system installed at the airport includes runway and taxiway designations, holding positions, routing/directional, runway end and exits, and runway distance remaining (Runway 18-36).

Visual Glide Slope Approach Aids: Both ends of Runway 18-36 are equipped with precision approach path indicator (PAPI) systems. The PAPI system consists of light boxes that shine either a red or white light that the pilot interprets to determine if they are on the correct glide path to the runway. The PAPI-2L serving Runway 18 is located on the left side of the runway approximately 1,050 feet from the runway threshold. It is set to a glide path of 3.50 degrees. The PAPI-2L serving approaches to Runway 36 is on the left side of the runway, approximately 660 feet from the Runway 36 landing threshold. The glide path to this PAPI is set at the standard 3.00 degrees.

There are no visual glide slope approach aids serving Runway 8-26 because this runway is closed at nighttime.

After-Hours Lighting: At night, all airfield lights are turned off except for the PAPIs serving Runway 18-36, which operate continuously. Pilots can activate the Runway 18-36 MITL and Taxiway A MITL utilizing the pilot-controlled lighting (PCL) system. The PCL will activate the various elements on the airfield via a series of clicks with their microphone transponder on the common traffic advisory channel (CTAF) frequency 122.8 MHz.

The airport owns and maintains all lighting systems and navigational aids.

WEATHER AND COMMUNICATION AIDS

Wind Indicators: Apple Valley Airport is equipped with three windsocks. The windsocks provide information to pilots regarding wind conditions, such as direction and intensity. The primary windsock is lighted and located on the east side of Runway 18-36, near the mid-point of the runway. This windsock is situated within a segmented circle, which provides traffic pattern information to pilots. Supplemental windsocks are located near the Runway 18-36 thresholds between the runway and parallel Taxiway A.

Weather Reporting Systems: Apple Valley Airport does not have the traditional dedicated automated weather observation system (AWOS) or automated surface observation system (ASOS). Instead, APV has an automated UNICOM system commonly known as Super AWOS. Automated UNICOMs are computerized command response systems which combine traffic advisories with enhanced ATIS. Automated UNICOMs provide weather information that includes altimeter setting, wind speed and direction, temperature, dew point, density altitude, and visibility. The Automated UNICOM is also capable of recommending a preferred runway, conducting radio checks, and greeting inbound VFR pilots. Apple Valley Airport is equipped with an on-site Automated UNICOM. Pilots operating at Apple Valley are encouraged to get current weather information from the Automated UNICOM prior to entering Apple Valley airspace and prior to departure from the Airport.

Runway 18-36 (6,498' x 150')
Runway 8-26 (4,099' x 60')
Navajo Rd.
Alta dena Rd.
Ramona Rd.

LEGEND

- Airport Property Line
- A Taxiway Designation
- 86-100 PCI (Good)
- 85-71 PCI (Satisfactory)
- 70-56 PCI (Fair)
- 55-41 PCI (Poor)
- 40-26 PCI (Very Poor)
- 25-11 PCI (Serious)
- PCI: Pavement Condition Index

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Aerial Photo:
Google Earth 10/2020

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Common Traffic Advisory Frequency (CTAF): Apple Valley Airport CTAF radio frequency is 122.8 MHz. CTAF is used by pilots near the airport to communicate with each other about approaches to or departures from the airport, as well as for PCL.

LANDSIDE FACILITIES

Landside facilities support the aircraft and pilot/passenger transition between air and ground. Typical landside facilities include the passenger terminal complex, on-airport buildings and hangars, general aviation facilities, and support facilities (i.e., fuel storage, vehicle parking, roadway access, and aircraft rescue and firefighting). An overview of the landside facilities and building inventory are depicted on **Exhibit 1F**.

AIRCRAFT HANGARS

It is important to identify those hangars that may be used for storage/parking of active aircraft. By having a reasonable estimate of the baseline hangar capacity, a determination of future hangar needs can be made based upon forecast hangar demand. It is estimated that there is 198,100 square feet of hangar space, providing approximately 145 aircraft parking spaces at the Airport. There is an additional 28,400 square feet of space in hangars that is dedicated to aircraft maintenance, office space functions, airport maintenance, or storage. The terminal building encompasses approximately 5,300 square feet of space.

The airport has available a variety of aircraft storage options. T-hangars and Port-a-Ports are T-shaped structures designed to house a single aircraft. T-hangars are often “nested” with other units to form a single structure with multiple units. Box hangars are somewhat larger hangars, typically between 2,000 and 6,000 square feet in size. Conventional hangars are clear-span hangars that are typically larger than 6,000 square feet. Conventional hangars are often utilized for aviation businesses.

At Apple Valley Airport, it is estimated that the T-hangars and Port-a-Port hangars encompass approximately 159,000 square feet of hangar space providing 126 aircraft parking positions. There is approximately 12,600 square feet of box hangar space which includes one structure with multiple box hangar units. It is estimated that the box hangar space provides parking for up to eight aircraft. Conventional hangars provide approximately 26,500 square feet of space and 11 aircraft parking spaces. **Table 1G** summarized existing aircraft hangar space at APV.

TABLE 1G | Building and Hangar Inventory					
Building ID	Building Type	Total Square Footage	Square Footage for Aircraft	Maintenance/ Office	Aircraft Parking Spaces
1	Conv.-CHP Hangar	18,600	18,600	0	6
1A	CHIPS Office	5,900	-	5,900	-
2	Terminal	5,300	-	5,300	-
3	Airport Maintenance	5,800	-	5,800	-
4	Conventional/ Maintenance Hangar	14,100	1,400	12,700	1
5	Box	3,000	2,500	500	2
6	T-Hangar	14,600	14,600	0	12
7	Box	8,500	7,800	700	4
8	T-Hangar	15,600	15,600	0	12
9	T-Hangar	9,800	9,800	0	6
10	T-Hangar	17,100	17,100	0	14
11	T-Hangar	15,400	15,400	0	12
12	T-Hangar	8,800	8,800	0	7
13	T-Hangar	7,900	7,900	0	7
14	T-Hangar	8,100	8,100	0	6
15	T-Hangar	16,500	16,500	0	13
16	T-Hangar	14,500	14,500	0	12
17	T-Hangar	12,200	12,200	0	10
18	T-Hangar	8,500	8,500	0	7
19	T-Hangar	10,000	10,000	0	8
20	Conventional	7,100	6,500	600	4
20A	Office	2,200	-	2,200	-
21	Box	2,300	2,300	0	2
TOTALS		**231,800**	**198,100**	**33,700**	**145**

AIRPORT TERMINAL BUILDING

The 5,262 square foot airport terminal building provides space for airport tenants and airport administration personnel. **Exhibit 1G** depicts the layout of the terminal building. The Aviator Café leases space in the terminal to operate their businesses, while the County of San Bernardino – Department of Airports staff have administrative office space in the northeast corner of the building. A 565 square foot conference room is located adjacent to the administration offices. Other facilities located in the terminal building include a lobby, pilot briefing area, and restrooms.

AIRPORT BUSINESSES

There are several aviation businesses based at the airport.

- **California Highway Patrol (CHP) – Inland Division Air Operations**: Located in an office and aircraft storage hangar facility immediately south of the airport terminal building, has 16 uniformed employees and two non-uniformed employees on the airport. The CHP currently leases four bays of the hangar facility totaling approximately 12,000 square feet. The CHP's office area totals approximately 3,250 square feet. The CHP conducts aerial law enforcement and emergency service operations over a 44,000 square mile area utilizing two Cessna 206 multi-engine aircraft and two Eurocopter AS350 B3 rotorcraft based at Apple Valley Airport.

Building ID	Building Type	Total Square Footage	Square Footage for Aircraft	Maintenance/ Office	Aircraft Parking Spaces
1	Conv.-CHP Hangar	18,600	18,600	0	6
1A	CHP Office	5,900	-	5,900	-
2	Terminal	5,300	-	5,300	-
3	Airport Maintenance	5,800	-	5,800	-
4	Conventional/ Maint Hangar	14,100	1,400	12,700	1
5	Box	3,000	2,500	500	2
6	T-Hangar	14,600	14,600	0	12
7	Box	8,500	7,800	700	4
8	T-Hangar	15,600	15,600	0	12
9	T-Hangar	9,800	9,800	0	6
10	T-Hangar	17,100	17,100	0	14
11	T-Hangar	15,400	15,400	0	12
12	T-Hangar	8,800	8,800	0	7
13	T-Hangar	7,900	7,900	0	7
14	T-Hangar	8,100	8,100	0	6
15	T-Hangar	16,500	16,500	0	13
16	T-Hangar	14,500	14,500	0	12
17	T-Hangar	12,200	12,200	0	10
18	T-Hangar	8,500	8,500	0	7
19	T-Hangar	10,000	10,000	0	8
20	Conventional	7,100	6,500	600	4
20A	Office	2,200	-	2,200	-
21	Box	2,300	2,300	0	2
	TOTALS	**231,800**	**198,100**	**33,700**	**145**

1 Cal. Highway Patrol / San Bernardino County Sheriff's Hangar

2 Terminal

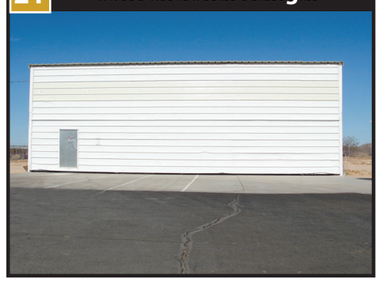
3 Airport Maintenance

4 5 Conventional Hangars

8 9 10 11 T-Hangars

20 20A Midfield Aviation

21 Conventional Hangar



LEGEND

- Airport Property Line
- A — Taxiway Designation
- 1 — Building Identification

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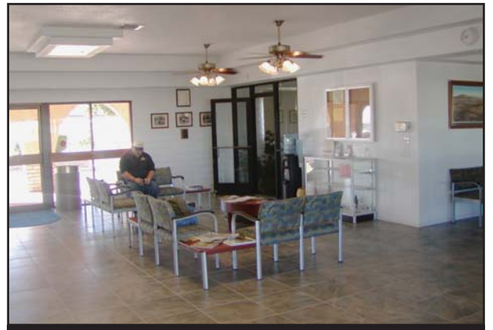
Aerial Photo: Google Earth 10/2020

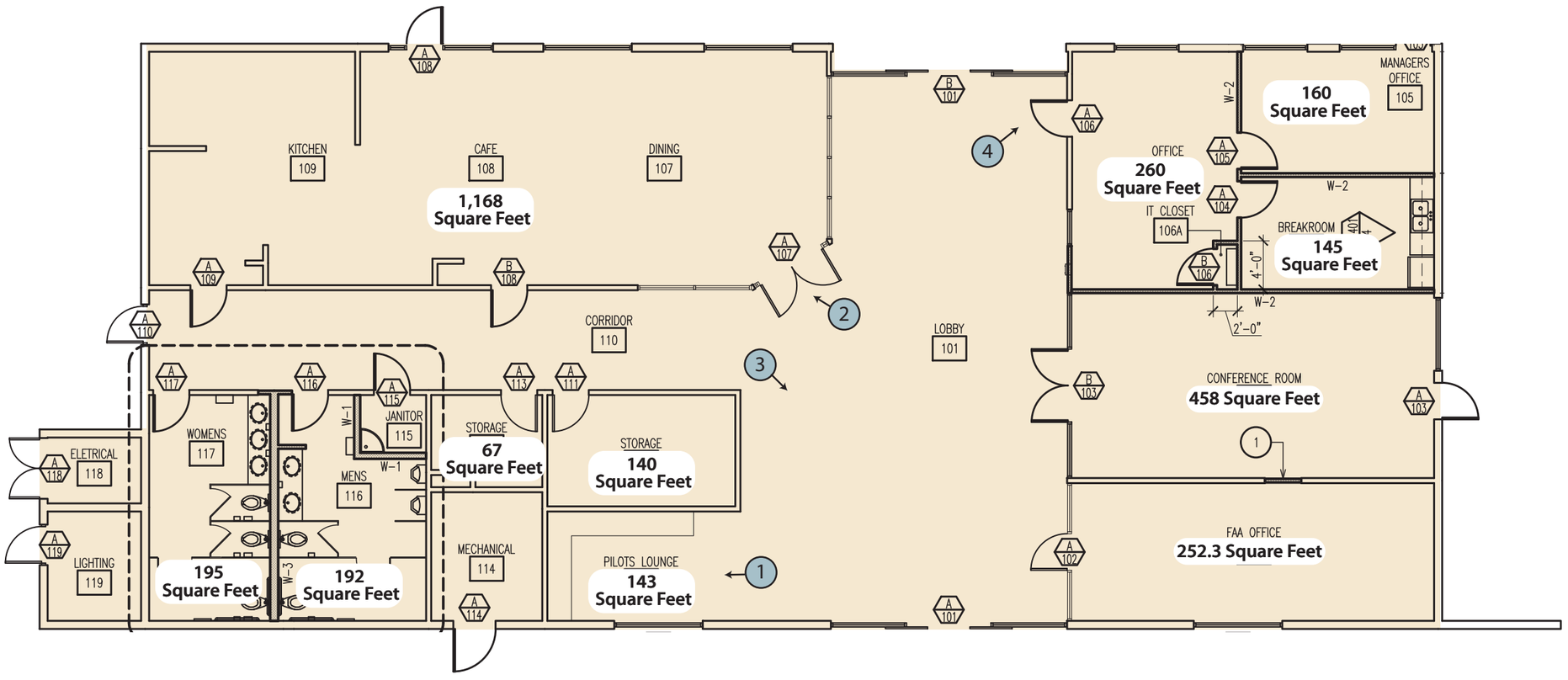
1 PILOT BRIEFING AREA

2 THE CAFÉ



3 LOBBY

4 AIRPORT ADMINISTRATIVE OFFICES



- **The County of San Bernardino Sheriff's Department – Aviation Unit**: Located in the same facility as the CHP immediately south of the airport terminal building. The County of San Bernardino Sheriff's Department occupies two aircraft storage hangar bays, totaling approximately 6,600 square feet, where it houses its aircraft used to conduct aerial law enforcement operations.
- **Midfield Aviation**: Offers flight training, aircraft rental, aircraft storage hangar space, and aircraft maintenance services. Midfield Aviation leases land from the County of San Bernardino for its 2,000 square foot office building, 6,400 square feet of conventional hangar space used for aircraft maintenance, and its 54 Port-a-Port individual aircraft storage units. Midfield Aviation has 12 aircraft based at Apple Valley Airport, which are available for rental.
- **MAG Aviation Fuel**: The entity that manages the fuel apron and fuel deliveries to aircraft.
- **The Café**: A restaurant located in the terminal building. It is open from 7:00 a.m. to 2:00 p.m. daily.

SUPPORT FACILITIES

The previous sections addressed airside and landside facilities. This section discusses other related facilities that support airport operations.

Airport Maintenance Facility

Apple Valley Airport has a dedicated 5,800 square foot maintenance facility located immediately west of the terminal building. This maintenance facility is used for the storage of equipment such as tractors, dump trucks, and water trucks which are used for various purposes on the Airport. Due to the rarity of snowfall, the Airport is not equipped with snow removal equipment.

Airport Rescue and Firefighting (ARFF)

Airports that have regularly scheduled commercial service utilizing aircraft with ten or more passenger seats are required to have available aircraft rescue and firefighting (ARFF) services. These airports must follow regulations outlined in 14 CFR Part 139, which includes the ability of ARFF responders to reach the center of the runway within three minutes of an emergency.

Since APV is not a Part 139 airport and does not have scheduled commercial activity, they are not required to have on-airport ARFF capability. The Airport has a first response truck equipped with fire extinguishers on the Airport. The Apple Valley Protection District responds to any airport emergencies and is capable of being on-site in approximately ten minutes.

Fuel Storage

The airport has a dedicated fuel apron located at the midfield of the airport. There are two static fuel storage tanks, one for Avgas and one for Jet A, both of which have self-serve capability. There are two fuel delivery trucks, one each for Avgas and Jet A. The fuel farm and delivery trucks are owned and operated by MAG Aviation who pay a fuel flowage fee to the Airport. **Table 1H** summarizes the fuel storage capacity at the Airport.

TABLE 1H | Fuel Storage Capacity

Storage Type	Capacity (gal.)	Fuel Type
Static Above Ground Tank	12,000	Avgas
Static Above Ground Tank	15,000	Jet A
Mobile Truck	2,000	Jet A
Mobile Truck	750	Avgas
Total Capacity	**29,750 gallons**	
Total Avgas	*12,750 gallons*	
Total Jet A	*17,000 gallons*	

Source: Airport records

Security Fencing

Security fencing at airport facilities provides a physical barrier and a psychological deterrent, which can prevent unauthorized individuals from accessing sensitive areas and facilities. Fencing can also mitigate wildlife from traversing onto active runways and taxiways. The perimeter of Apple Valley Airport is equipped primarily with six-foot chain link fencing without barbed wire. Several automated access gates are located along the fence line providing access to the airfield. The locations of the automated access gates are identified on Exhibit 1F.

Utilities

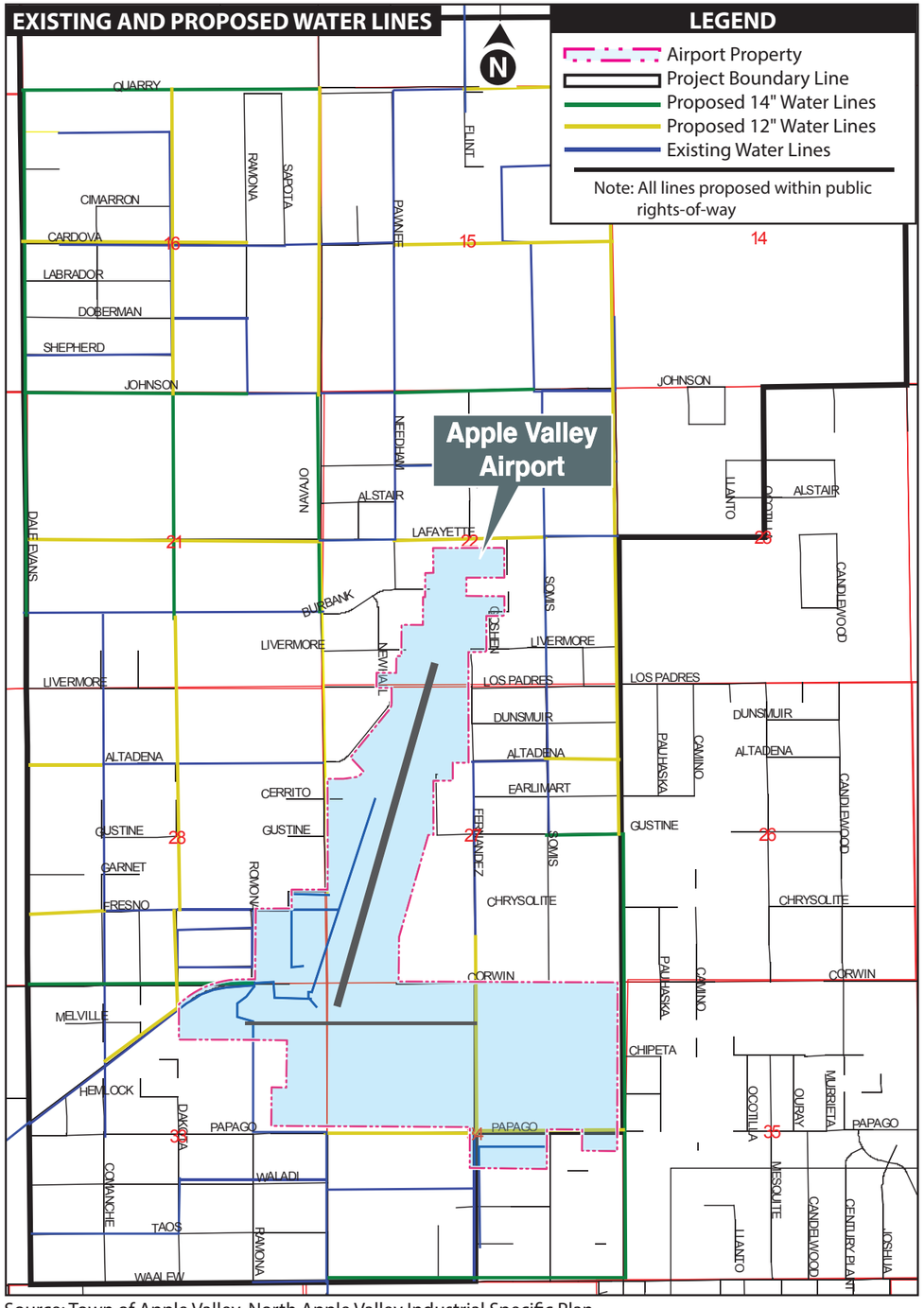
The availability of utilities at Apple Valley Airport is an important factor in determining the development potential of the airport property. Of primary concern in the inventory investigation is the availability of water, sanitary sewer, electricity, and natural gas. Some, if not all, of these utilities will be necessary for future development considerations.

Water is provided by Liberty Utilities. **Exhibit 1H** depicts the existing and proposed water lines in the vicinity of Apple Valley Airport. The water lines that supply the airport originate from west and south of the airport. There is a 14-inch water line that enters the Airport from the west along Fresno Road. A 12-inch water line is currently located along Corwin Road, which extends along the airport's western boundary.

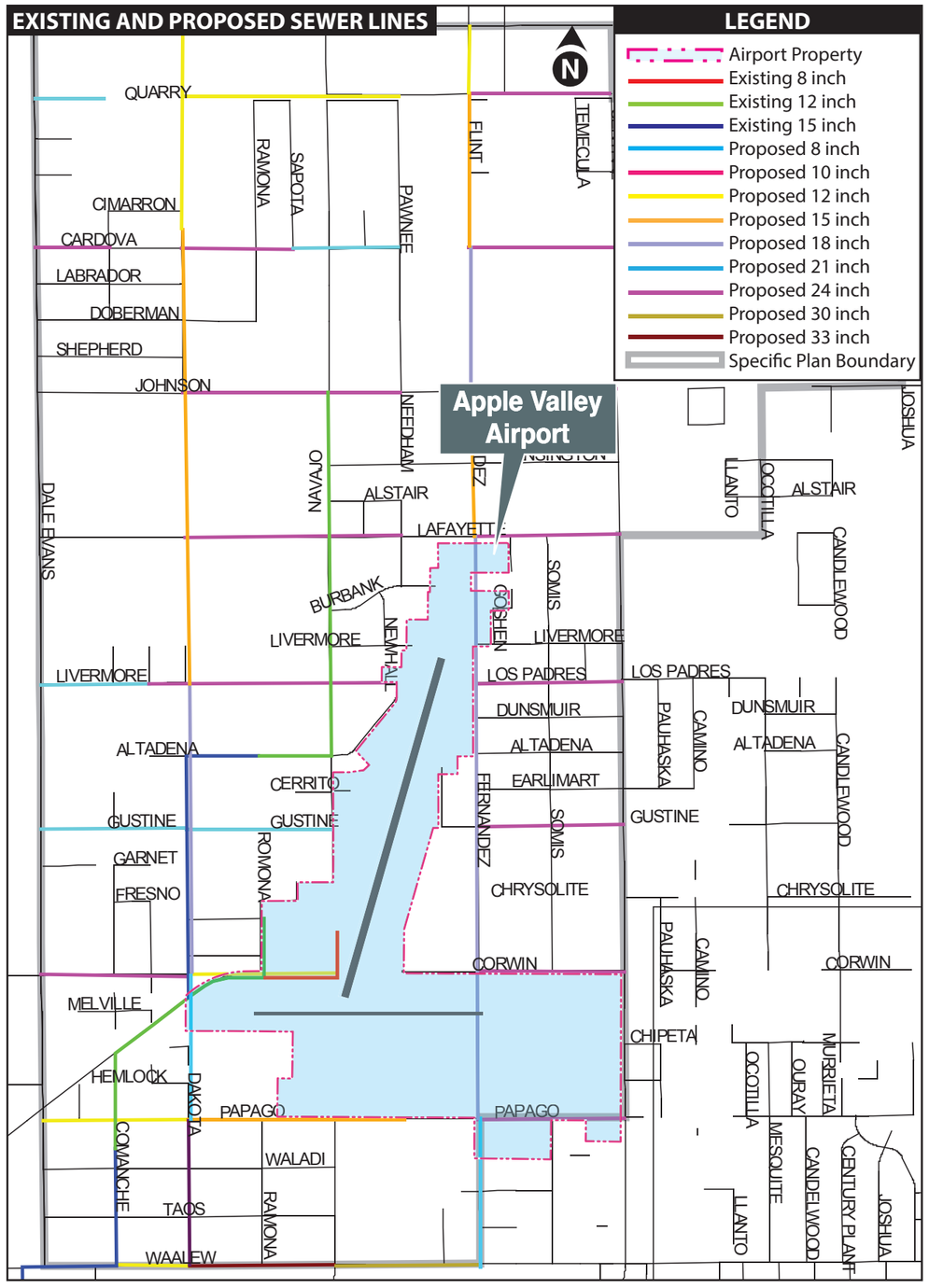
Sanitary sewer is provided by the Town of Apple Valley. Midfield Aviation's facilities are not connected to the Town's sewer system but have their own septic system. **Exhibit 1H** also depicts the existing and proposed sewer lines in the vicinity of Apple Valley Airport. The existing eight-inch sewer line enters the airport from the west near the terminal building and extends for a short distance to the north. The North Apple Valley Industrial Specific Plan proposes increasing the airport's sewer line capacity with the addition of eight-inch and 10-inch sewer lines.

Electricity is provided by Southern California Edison. Four major electric transmission corridors, each with 115 kV lines, cross through the Town and provide power to the area including Apple Valley Airport.

EXISTING AND PROPOSED WATER LINES



EXISTING AND PROPOSED SEWER LINES



Source: Town of Apple Valley. North Apple Valley Industrial Specific Plan

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Natural gas is provided by Southwest Gas. A polyvinylchloride (PVC) gas distribution line, which extends along the portions of Corwin Road that are west of the airport, supplies several of the airport facilities with natural gas. This PVC line is four inches in diameter and carries a maximum pressure of 40 psi. Electric and telephone lines are co-located in the same trench.

Southwest Gas plans to upgrade all of its distribution lines to polyethanol (PE) pipe, which carry a pressure of 60 psi in the lines serving the airport.

Solid waste and recycling services in the Town of Apple Valley are contracted by the Town through Burrtec Waste Industries of Fontana, California. Solid waste from the airport is hauled to the Victorville landfill, which is part of the County of San Bernardino landfill system. The closing date for the Victorville landfill is estimated to be 2055.

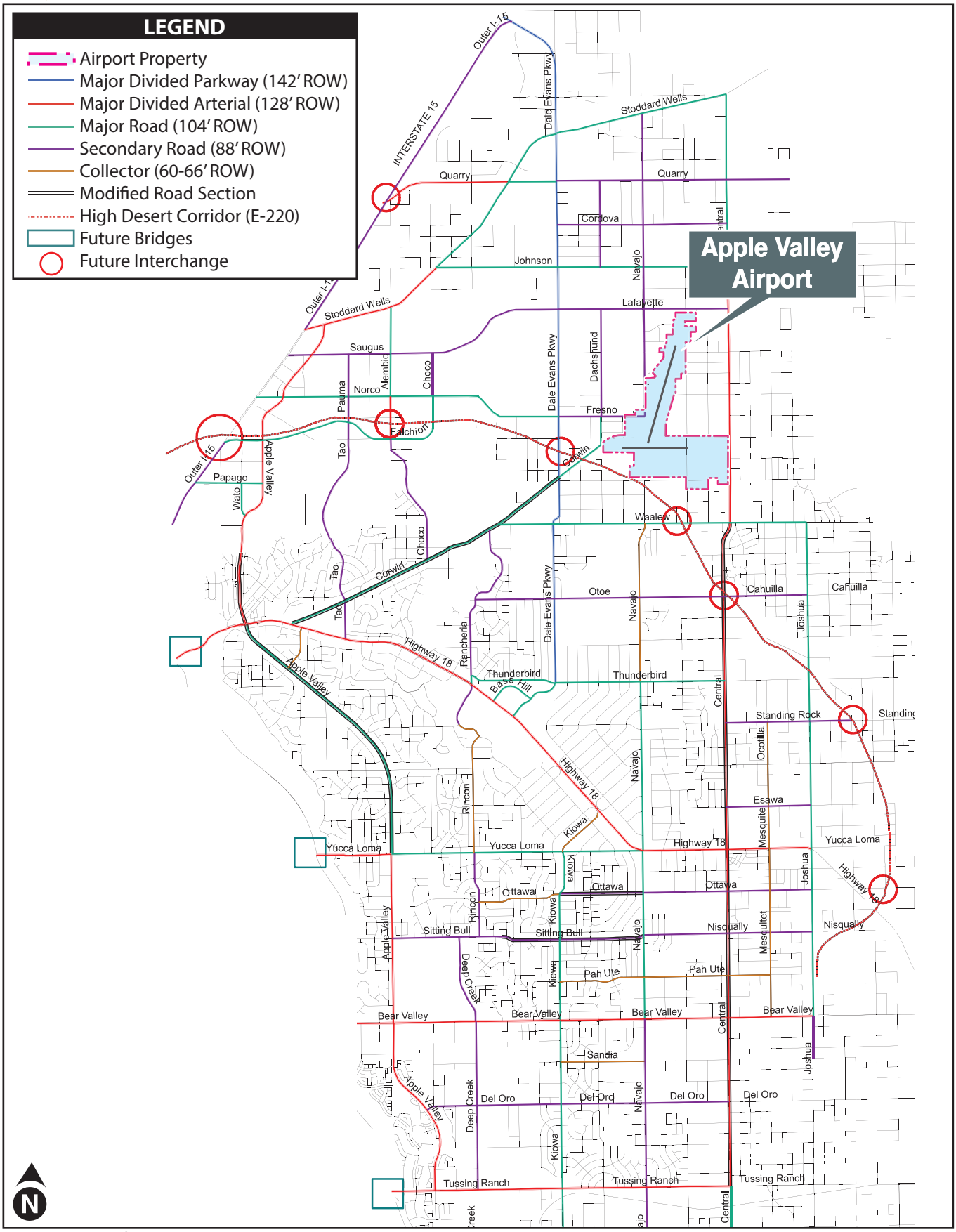
ACCESS AND CIRCULATION

Apple Valley is located along Interstate Highway 15, approximately 40 miles northeast of San Bernardino, 90 miles northeast of Los Angeles, and 190 miles south of Las Vegas, Nevada. The east-west State Route 18 bisects Apple Valley connecting it with Big Bear City to the east and Palmdale to the west. Apple Valley Airport is located approximately three miles north of downtown Apple Valley. Corwin Road is the airport's primary access road, which enters airport property from the west. Interstate Highway 15, which extends northeast-southwest on the west side of the Airport, has several exits to the Town of Apple Valley. Drive-time from each of these exits to the Airport is approximately 15 minutes. Major roadways around the Airport's perimeter include Dale Evans Parkway along the west side, Central Road to the east, Quarry Road to the north, and Waalew Road to the south. According to the Town's General Plan, which was adopted in August 2009, each of these roadways is currently within an acceptable threshold level for daily capacity.

The proposed Town of Apple Valley street system plan from the Apple Valley General Plan is presented on **Exhibit 1J**. According to this system, the High Desert Corridor is proposed along the southwest boundary of the Airport, which will ultimately provide access between Victor Valley and Antelope Valley to the west. An interchange is planned at the High Desert Corridor and Dale Evans Parkway which would provide excellent access to the Airport. Ultimately, Frisco Road could replace Corwin Road as the main entrance to the Airport.

AUTOMOBILE PARKING

The Airport has a public automobile parking lot adjacent to the terminal building. This lot has a total of 86 parking spaces including four handicapped spots. The California Highway Patrol and the County of San Bernardino Aviation Unit facilities located south of the terminal have a total of 25 parking spaces including six handicapped spaces. Other airport tenants have automobile parking adjacent to their facilities.



Source: Town of Apple Valley General Plan.

HISTORICAL AERONAUTICAL ACTIVITY

A key aspect of the master planning process is the documentation of activity levels for various aviation demand indicators. For Apple Valley Airport, these include based aircraft and operations (takeoffs and landings). In the chapter to follow, forecasts of each of the aviation demand indicators will be developed, submitted to the FAA for review and approval, and will serve as one of many inputs for determination of future facility needs.

BASED AIRCRAFT

Identifying the current number of based aircraft is important to master plan analysis, yet it can be challenging because of the transient nature of aircraft storage. It is only in recent years that the FAA has required airports to keep a count of based aircraft. Airports are now asked to inventory their based aircraft and upload that data to a national database (www.basedaircraft.com). Only active aircraft (those that fly at least one hour per year) and those based at an airport for at least six months of the year are counted as based. As part of this Master Plan study, the airport staff conducted a comprehensive count of the based aircraft and uploaded the information to the based aircraft database. As shown in **Table 1J**, currently (August 2023) there are 117 aircraft based at the Airport, which are comprised of 111 single engine piston planes, four multi-engine piston aircraft, and two helicopters.

TABLE 1J | 2022 Based Aircraft Mix

Aircraft Type	Based[1]
Single Engine Piston	111
Multi-Engine Piston	4
Turboprop	0
Jets	0
Helicopters	2
TOTAL	**117**

[1]www.basedaircraft.com accessed on 8.23.23

AIRCRAFT OPERATIONS

Aircraft operations, being a takeoff or landing, are classified as either local or itinerant. Local operations consist mostly of aircraft training operations conducted within the airport traffic pattern and are primarily characterized by touch-and-go and stop-and-go operations. Itinerant operations are arriving or departing aircraft which have an origin or destination away from an airport.

Aircraft operations are further sub-classified into four general categories: air carrier, air taxi, general aviation, and military. Air carrier operations are defined as those conducted commercially by aircraft having a seating capacity of 60 or more and/or a maximum payload capacity of 18,000 pounds. There are no air carrier operations at the Airport. Air taxi operations can include small commercial service aircraft operations, air cargo, air ambulance, as well as general aviation aircraft used for the “on-demand” commercial transport of persons and property in accordance with 14 Code of Federal Regulations (CFR) Part 135 and Subchapter K of 14 CFR Part 91. There are air taxi operations at the airport which primarily consist of charter and fractional ownership aircraft. All air taxi operations are itinerant in nature.

General aviation operations comprise the largest portion of activity at the Airport. These are characterized by recreational and business aviation. The vast majority of general aviation activity is by piston engine aircraft. These operators perform both local and itinerant operations.

Military pilots can and do utilize general aviation airports, however, it does not appear they operate at APV in significant numbers. The FAA's Terminal Area Forecast (TAF) indicates there are no military operations at APV.

There is not an airport traffic control tower (ATCT) at the airport; therefore, there is not a precise count of aircraft operations. The FAA TAF (published February 2023) estimates that there were approximately 37,500 annual operations in 2022.

AREA AIRSPACE

The *Federal Aviation Administration Act of 1958* established the FAA as the responsible agency for the control and use of navigable airspace within the United States. The FAA has established the National Airspace System (NAS) to protect persons and property on the ground and to establish a safe and efficient airspace environment for civil, commercial, and military aviation. The NAS covers the common network of U.S. airspace, including air navigation facilities; airports and landing areas; aeronautical charts; associated rules, regulations, and procedures; technical information; and personnel and material. The system also includes components shared jointly with the military.

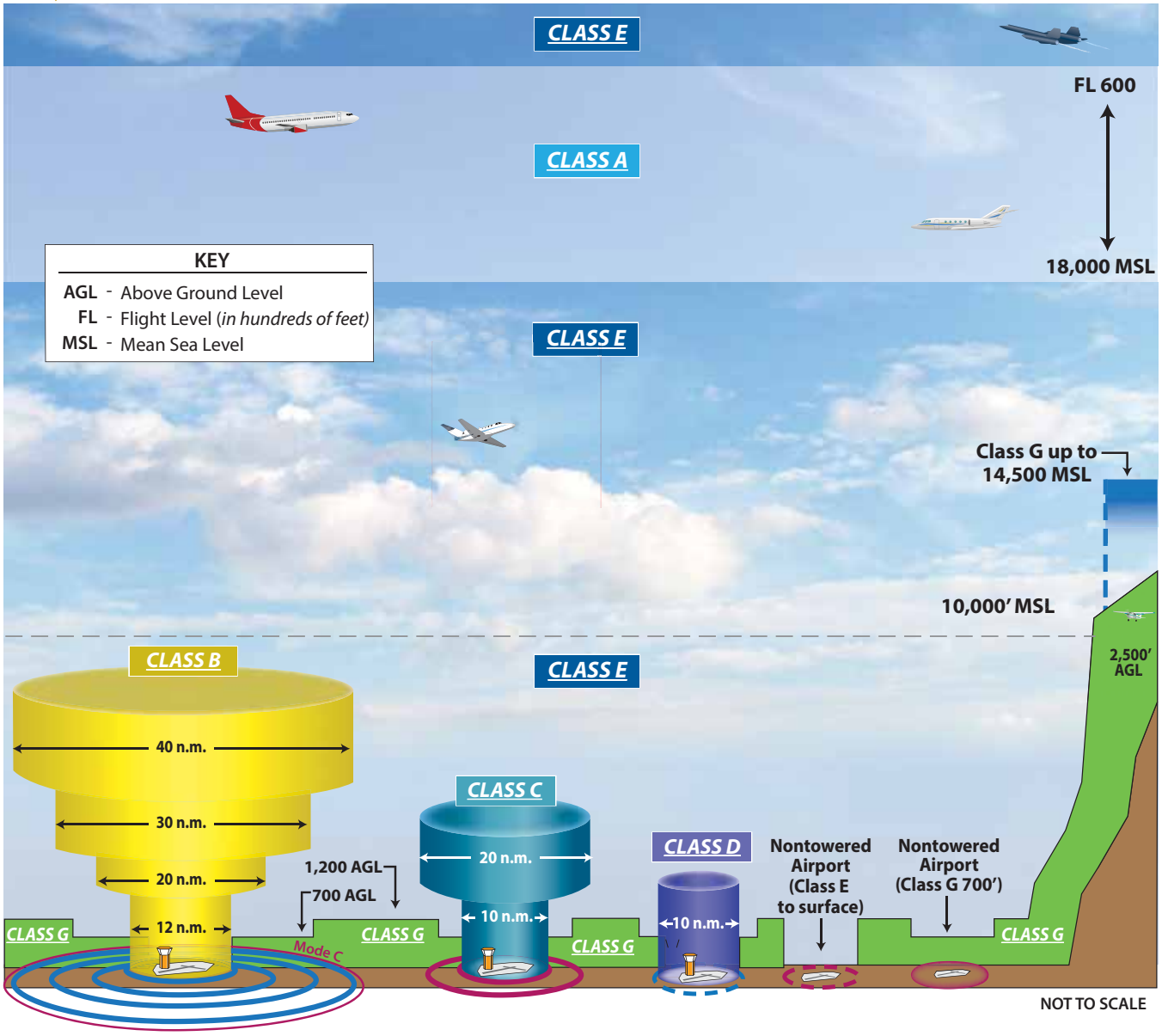
AIRSPACE STRUCTURE

Airspace within the United States is broadly classified as either "controlled" or "uncontrolled." The difference between controlled and uncontrolled airspace relates primarily to requirements for pilot qualifications, ground-to-air communications, navigation and air traffic services, and weather conditions. Six classes of airspace have been designated in the United States, as shown on **Exhibit 1K**. Airspace designated as Class A, B, C, D, or E is considered controlled airspace. Aircraft operating within controlled airspace are subject to varying requirements for positive air traffic control. Class G airspace is uncontrolled airspace.

Class A Airspace: Class A airspace includes all airspace from 18,000 feet mean sea level (MSL) to flight level (FL) 600 (60,000 feet MSL). This airspace is designated in FAR Part 71.193 for positive control of aircraft. The Positive Control Area (PCA) allows flights governed only under IFR operations. The aircraft must have special radio and navigation equipment, and the pilot must obtain clearance from an ATC facility to enter Class A airspace. In addition, the pilot must possess an instrument rating.

Class B Airspace: Class B airspace has been designated around some of the country's busiest commercial service airports, such as the Los Angeles International Airport (LAX). Class B airspace is designed to regulate the flow of uncontrolled traffic above, around, and below the arrival and departure airspace required for high-performance, passenger-carrying aircraft at busy commercial service airports. This airspace is the most restrictive controlled airspace encountered by pilots operating under VFR.

To fly within Class B airspace, an aircraft must be equipped with special radio and navigation equipment and must obtain clearance from air traffic control. Moreover, a pilot must have at least a private pilot's



DEFINITION OF AIRSPACE CLASSIFICATIONS

CLASS A Think A - Altitude. Airspace above 18,000 feet MSL up to and including FL 600. Instrument Flight Rule (IFR) flights only, ADS-B 1090 ES transponder required, ATC clearance required.

CLASS B Think B - Busy. Multi-layered airspace from the surface up to 10,000 feet MSL surrounding the nation's busiest airports. ADS-B 1090 ES transponder required, ATC clearance required.

CLASS C Think C - Mode C. Mode C transponder required. ATC communication required. Generally airspace from the surface to 4,000 feet AGL surrounding towered airports with service by radar approach control.

CLASS D Think D - Dialogue. Pilot must establish dialogue with tower. Generally airspace from the surface to minimum 2,500 feet AGL surrounding towered airports.

CLASS E Think E - Everywhere. Controlled airspace that is not designated as any other Class of airspace.

CLASS G Think G - Ground. Uncontrolled airspace. From surface to a 1,200 AGL (in mountainous areas 2,500 AGL) Exceptions: near airports it lowers to 700' AGL; some airports have Class E to the surface. Visual Flight Rules (VFR) minimums apply.

Source: www.faa.gov/regulations_policies/handbooks_manuals/aviation/phak/media/15_phak_ch15.pdf

certificate or be a student pilot who has met the requirements of F.A.R. Part 61.95, which requires special ground and flight training for Class B airspace. Helicopters do not need special navigation equipment or a transponder if they operate at or below 1,000 feet and have made prior arrangements in the form of a Letter of Agreement with the FAA controlling agency. Aircraft are also required to have and utilize a Mode C transponder within a 30-nautical-mile (NM) range of the center of Class B airspace. A Mode C transponder allows the ATCT to track the altitude of the aircraft.

Class C Airspace: The FAA has established Class C airspace at 120 airports around the country as a means of regulating air traffic in these areas. Class C airspace is designed to regulate the flow of uncontrolled traffic above, around, and below the arrival and departure airspace required for high-performance, passenger-carrying aircraft at some commercial service airports. To fly inside Class C airspace, the aircraft must have a two-way radio, an encoding transponder, and have established communication with the ATC. Aircraft may fly below the floor of the Class C airspace, or above the Class C airspace ceiling without establishing communication with ATC. The closest Class C airspace surrounds Ontario International Airport (ONT).

Class D Airspace: Class D airspace is controlled airspace surrounding airports with an ATCT. Often, but not always, the ATCT at these airports is not open 24 hours a day. Southern California Logistics Airport (VCV) is the closest Class D airspace, approximately six miles to the north. The Class D airspace typically constitutes a cylinder with a designated horizontal radius from the airport, extending from the surface up to a designated vertical limit, above the airport elevation. If an airport has an instrument approach or departure, the Class D airspace sometimes extends along the approach or departure path. During periods when the airport's ATCT is closed, Class D airspace typically reverts to Class E airspace.

Class E Airspace: Class E airspace consists of controlled airspace designed to contain IFR operations near an airport and while aircraft are transitioning between the airport and enroute environments. Unless otherwise specified, Class E airspace terminates at the base of the overlying airspace. Only aircraft operating under IFR are required to be in contact with air traffic control when operating in Class E airspace. While aircraft conducting visual flights in Class E airspace are not required to be in radio communications with air traffic control facilities, visual flight can only be conducted if minimum visibility and cloud ceilings exist. Apple Valley Airport falls within Class E airspace.

The Class E airspace surrounding Appley Valley Airport is described in FAA Order JO 7400.11E, *Airspace Designations and Reporting Points*, as: that airspace extending upward from 700 feet above the surface within an 8-mile radius of APV and within 1.8 miles to each side of the 16° bearing from APV, extending from the 8-mile radium to 12.5 miles north of the Airport, excluding that portion within VCV Class E airspace.

Class G Airspace: Airspace not designated as Class A, B, C, D, or E is considered uncontrolled, or Class G, airspace. Air traffic control does not have the authority or responsibility to exercise control over air traffic within this airspace. Class G airspace lies between the surface and the overlaying Class E airspace which begins 700 feet above ground level.

SPECIAL USE AIRSPACE

Special use airspace is defined as airspace where activities must be confined because of their nature or where limitations are imposed on aircraft not taking part in those activities. The designation of special use airspace identifies for other users the areas where military activity occurs, provides for segregation of that activity from other fliers, and allows charting to keep airspace users informed.

There is special use airspace north of APV primarily because of the proximate location of Edwards Air Force Base. The following discusses special use airspace that may impact pilots operating around APV.

Military Operating Areas (MOAs): This special use airspace is established outside positive control areas to separate/segregate certain nonhazardous military activities from IFR traffic and to identify for VFR traffic where these activities are conducted. MOAs are established to contain certain military activities, such as air combat maneuvers, air intercepts, acrobatics, etc. The Buckhorn MOA is approximately 20 miles to the northwest of APV. The Barstow MOA is approximately 30 miles to the north/northeast of APV.

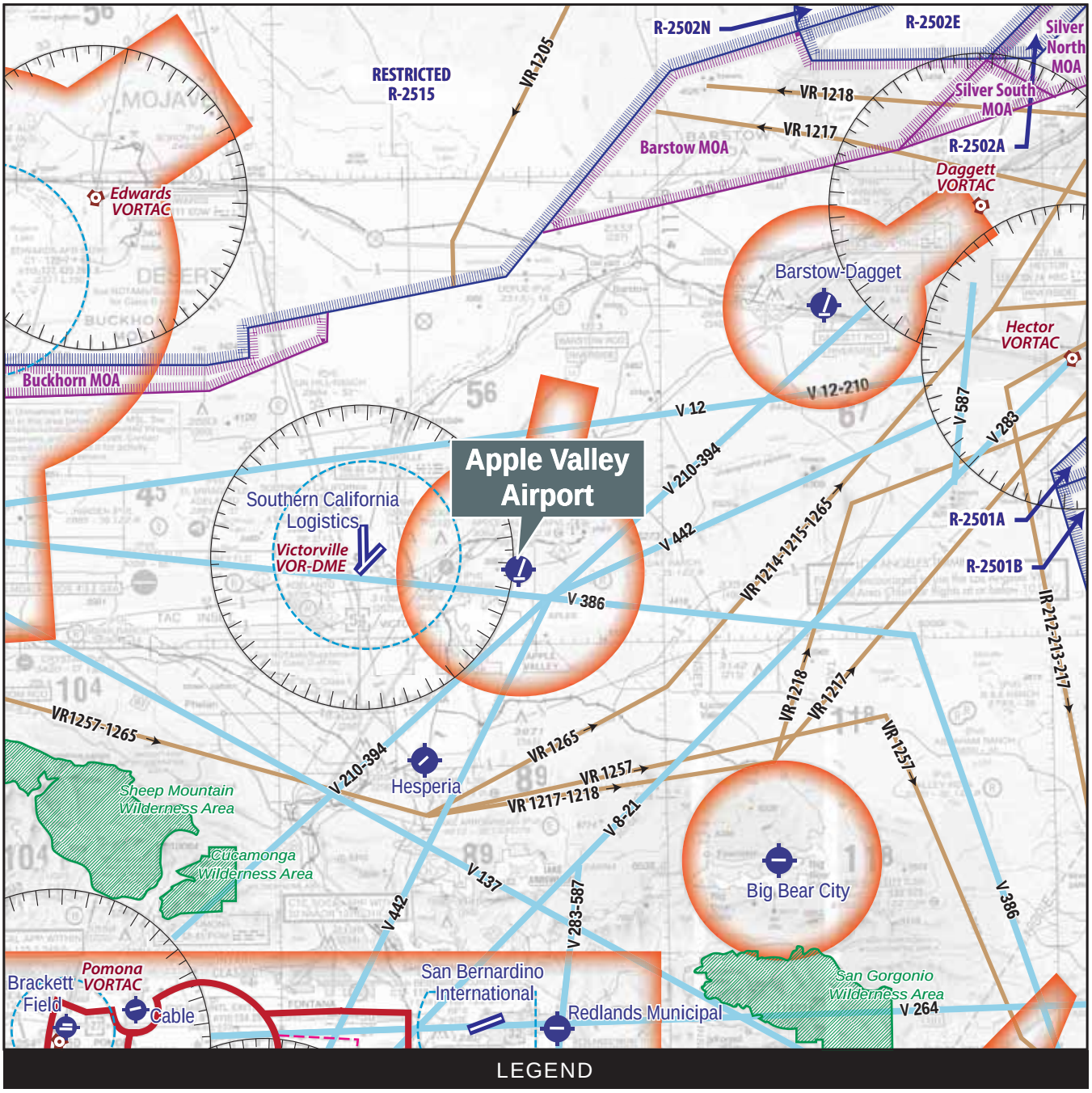
Military Training Routes: Military training routes (MTRs) are designated airspace that has been generally established for use by high performance military aircraft to train below 10,000 feet AGL and in excess of 250 knots. There are VR (visual) and IR (instrument) designated MTRs. MTRs with no segment above 1,500 feet AGL will be designated with the VR or IR, followed by a four-digit number (e.g., VR1257). MTRs with one or more segments above 1,500 feet AGL are identified by the route designation followed by a three-digit number (e.g., VR540). The arrows on the route show the direction of travel. MTR VR1265 is to the south and east of APV. There are several other MTRs in proximity to APV.

Victor Airways: For aircraft arriving or departing the area using very high frequency omni-directional range (VOR) facilities, a system of Federal Airways, referred to as Victor Airways, has been established. Victor Airways are corridors of airspace eight miles wide that extend upward from 1,200 feet AGL to 18,000 feet MSL and extend between VOR navigational facilities. There are several Victor Airways in proximity to APV, including V210-394, V442, and V386, all of which converge approximately one mile to the southeast of APV.

Restricted Airspace: No person may operate an aircraft within a restricted area between the designated altitudes and during the time of designation without advanced permission of the using and controlling agency. The closest restricted airspace is R-2515 which surrounds Edwards Air Force Base and extends to the northeast. R-2515 encompasses 1,812 square miles. Civil users may use this restricted airspace if granted permission from the controlling agency, 412th Test Wing. When R-2515 is not scheduled for Department of Defense use, it is released to the FAA for joint-use.

Alert Areas: Alert Areas are areas that may contain a high volume of pilot training or an unusual type of aerial activity, typically associated with military training. There is no alert airspace in proximity to APV.

Exhibit 1L shows the airspace structure and the vicinity airspace (aeronautical sectional chart) surrounding Apple Valley Airport.



- Airport with hard-surfaced runways 1,500' to 8,069' in length
- Airports with hard-surfaced runways greater than 8,069'or some multiple runways less than 8,069'
- VORTAC
- Compass Rose
- Class C Airspace
- Class D Airspace
- Class E Airspace
- Class E Airspace with floor 700 ft. above surface
- Prohibited, Restricted, and Warning Area
- Victor Airways
- Wilderness Areas
- Millitary Training Routes
- Alert Area and Millitary Operations Area

Source: Los Angeles Sectional Chart, US Department of Commerce, National Oceanic and Atmospheric Administration.January 22, 2022

AREA NAVIGATIONAL AIDS

Navigational aids are electronic devices that transmit radio frequencies, which pilots of properly equipped aircraft can translate into point-to-point guidance and position information. The types of electronic navigational aids available for aircraft flying to or from APV include the very high frequency omni-directional range (VOR) facility and the global positioning system (GPS).

A VOR, in general, provides azimuth readings to pilots of properly equipped aircraft, transmitting a radio signal at every degree to provide 360 individual navigational courses. Frequently, distance measuring equipment (DME) is combined with a VOR facility (VOR-DME) to provide distance as well as direction information to the pilot. Military tactical air navigation aids (TACANs) and civil VORs are commonly combined to form a VORTAC. The VORTAC provides distance and direction information to both civil and military pilots. While there is not a VOR type facility on the airport, there are several in the region that pilots may use to navigate to the area then fly under visual conditions to the airport. The Victorville VOR-DME is located approximately six miles to the west at the Southern California Logistics Airport (VCV).

GPS is an additional navigational aid for pilots. GPS was initially developed by the United States Department of Defense for military navigation around the world. GPS differs from a VOR in that a pilot is not required to navigate using a specific facility. GPS uses satellites placed in orbit around the earth to transmit electronic radio signals, which pilots of properly equipped aircraft use to determine altitude, speed, and other navigational information. With GPS, pilots can directly navigate to any airport in the country and are not required to navigate to a specific ground-based navigation facility.

INSTRUMENT APPROACH PROCEDURES

Instrument approach procedures are a series of predetermined maneuvers established by the FAA, using electronic navigational aids that assist pilots in locating and landing at an airport, especially during instrument flight conditions. There is currently one published instrument approach procedure (with three components) for Apple Valley Airport. Instrument approach procedures are either precision in nature or non-precision. Precision instrument approaches provide both horizontal course guidance and vertical guidance. Non-precision instrument approaches provide only course guidance to the pilot; however, the relatively new GPS localizer performance with vertical guidance (LPV) approaches are currently categorized by the FAA as a non-precision approach, even though they provide both horizontal and vertical guidance.

The capability of an instrument approach procedure is defined by the visibility and cloud ceiling minimums associated with the approach. Visibility minimums define the horizontal distance the pilot must be able to see to complete the approach. Cloud ceilings define the lowest level a cloud layer (defined in feet above the ground) can be situated for the pilot to complete the approach. If the observed visibility or cloud ceilings are below the minimums prescribed for the approach, the pilot cannot complete the instrument approach. **Table 1K** summarizes the FAA approved and published instrument approach procedure available for landing at Apple Valley Airport.

TABLE 1K | Instrument Approach Procedures				
	WEATHER MINIMUMS BY AIRCRAFT TYPE			
	Category A	Category B	Category C	Category D
RNAV (GPS) Runway 18				
LPV DA	318'/⅞-mile			
LNAV MDA	538'/1-mile		538'/1½-mile	
Circling	1158'/1¼-mile	1378'/1½-mile	1678'/3-mile	

Aircraft categories are based on the approach speed of aircraft, which is determined as 1.3 times the stall speed in landing configuration as follows:

Category A:	0-90 knots (e.g., Cessna 172)
Category B:	91-120 knots (e.g., Beechcraft KingAir)
Category C:	121-140 knots (e.g., Canadair Challenger, Boeing 737)
Category D:	141-166 knots (e.g., Gulfstream IV, Boeing MD-88)
Category E:	Greater than 166 knots (e.g., certain large military or cargo aircraft)

Abbreviations:
GPS - Global Positioning System
LPV - A technical variant of GPS (Localizer Performance with Vertical Guidance)
LNAV/RNAV/VNAV - A technical variant of GPS (Lateral, Area, Vertical Navigation)
DA - Decision Altitude (Used for non-precision approaches)
MDA - Minimum Decision Altitude
Note: (xxx'/ x-mile) = Cloud ceiling height/Visibility minimum

Source: U.S. Terminal Procedures (Effective Dec. 5, 2021)

Instrument approaches based on the global positioning system (GPS) have become very common across the country. GPS is inexpensive, as it does not require an investment in ground-based systems by the airport or FAA. Runway 18 has a GPS/LPV instrument approach with visibility minimums as low as ⅞-mile, which is the lowest visibility minimum for the airport. The current instrument approach plate is shown on **Exhibit 1M**.

LOCAL CONDITIONS AND PROCEDURES

Various pilot information services identify potential obstructions near the airport of which pilots should be aware. These include:

- There is a 10-foot hill, 500 feet from Runway 18, 125 feet to the right of centerline. Pilots should employ a 30:1 climb ratio to clear the hill safely.
- Runway 8-26 is closed to nighttime operations due to rapidly rising terrain east and west of the runway. West to 3,890 feet within 1.5 nm and east to 3,910 feet within 1.7 nm.
- There is a 40-foot-tall powerline, 1,540 feet from Runway 8, 212 feet to the left of centerline. Pilots should employ a 34:1 climb ratio to clear the powerline safely.
- Runway 8-26 is closed to aircraft over 12,500 pounds without prior permission of the airport manager.
- Aerobatic training occurs frequently to the northeast of the airport.

APPLE VALLEY, CALIFORNIA | AL-5822 (FAA) | 20366

RNAV (GPS) RWY 18
APPLE VALLEY (APV)

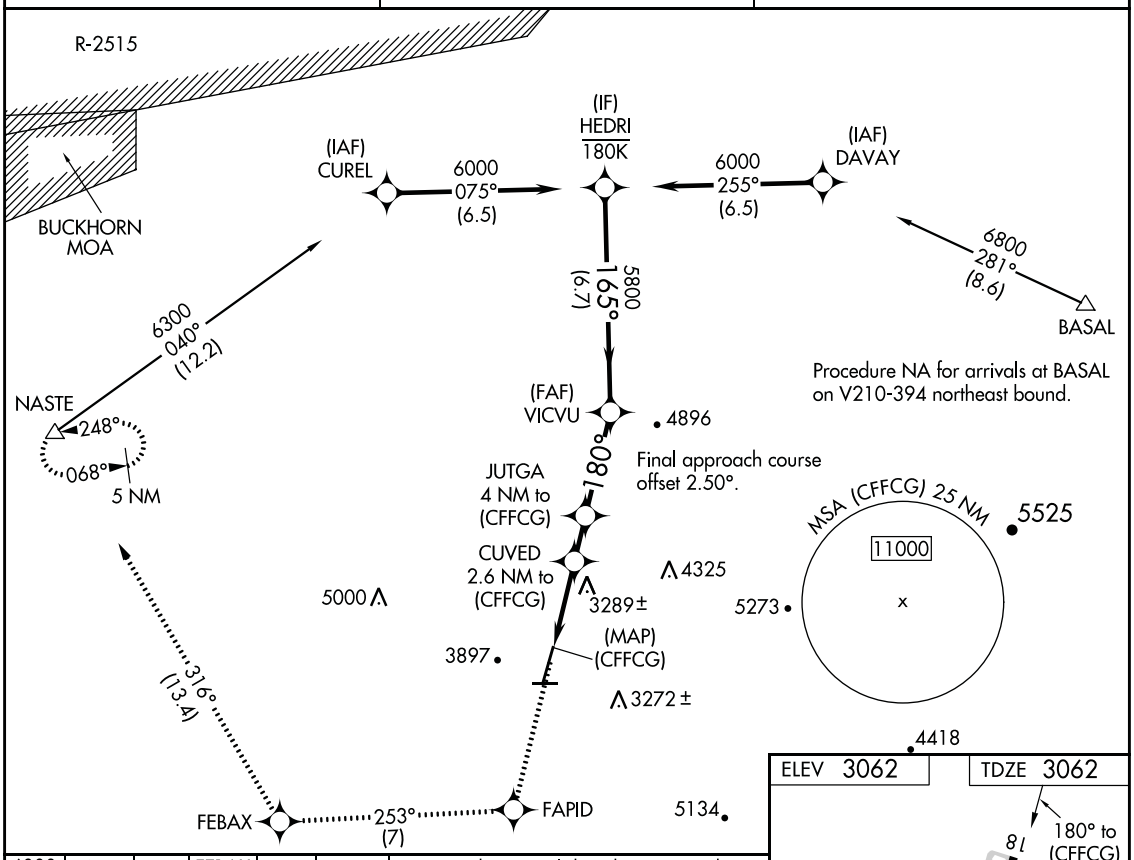
WAAS	APP CRS	Rwy Idg	6498
CH 63102	180°	TDZE	3062
W18A		Apt Elev	3062

RNP APCH.

T A NA Circling NA to Rwys 8 and 26. Circling to Rwy 36 NA at night. Rwy 18 helicopter visibility reduction below ¾ SM NA. Use Victorville altimeter setting; if not received, procedure NA.

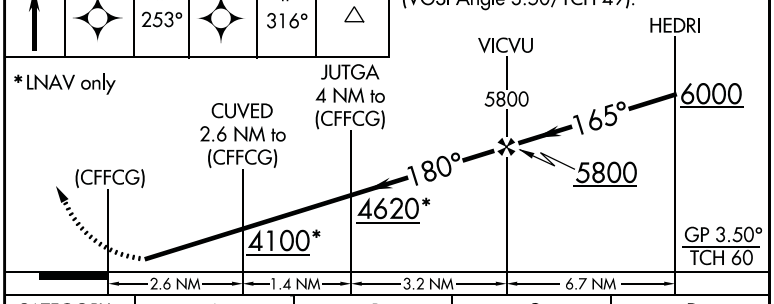
MISSED APPROACH: Climb to 6000 direct FAPID and track 253° to FEBAX and track 316° to NASTE and hold.

VCV AWOS-3	JOSHUA APP CON	AUNICOM
135.475	124.55 363.0	122.8 (CTAF) L

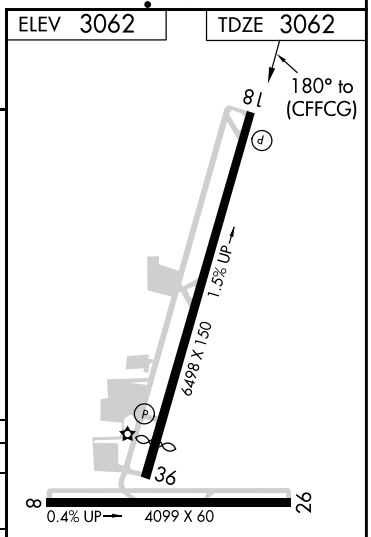


6000	FAPID	tr 253°	FEBAX	tr 316°	NASTE

VGSI and RNAV glidepath not coincident (VGSI Angle 3.50/TCH 49).



CATEGORY	A	B	C	D
LPV DA	3380-⅞ 318 (400-⅞)			
LNAV MDA	3600-1 538 (600-1)		3600-1½ 538 (600-1½)	
C CIRCLING	4220-1¼ 1158 (1200-1¼)	4440-1½ 1378 (1400-1½)	4740-3 1678 (1700-3)	



MIRL Rwy 18-36 L

APPLE VALLEY, CALIFORNIA
Amdt 1 05DEC19

34°35'N-117°11'W

APPLE VALLEY (APV)
RNAV (GPS) RWY 18

SW-3, 30 DEC 2021 to 27 JAN 2022

SW-3, 30 DEC 2021 to 27 JAN 2022

REGIONAL AIRPORTS/AIRPORT SERVICE AREA

The service area for an airport is a generalized geographical area from which the airport can expect most of their based users and most of their business. In airport master planning, the defined service area is typically an existing political boundary, such as a county or metropolitan statistical area, which allows other variables, such as population, to be used for forecasting future demand. The service area for an airport may be limited by its proximity to other airports providing a similar level of service. **Table 1L** presents summary information for public use airports within 25 miles of the airport.

TABLE 1L | Regional Airports Within 25 Miles

Nautical Miles/ Direction from APV[1]	FAA Service Level[2]	State Service Level[3]	Based Aircraft[1]	Annual Operations[1]	Longest Runway (ft.)[1]	Lowest Visibility Minimum[1]
Apple Valley Airport (APV)						
-	**GA-Local**	**Regional**	**117**	**37,500**	**6,498'**	**⅞-mile**
So. Cal. Logistics (VCV)						
9.8 W	GA(R)-Regional	Regional	65	16,800	15,050'	¾-mile
Hesperia (L26)						
13.5 SSW	NA	Community	33	6,000	3,910'	NA
Big Bear City Airport (L25)						
24.8 SE	GA-Local	Community	91	30,000	5,850'	1¼-Mile

GA: General Aviation R: Reliever

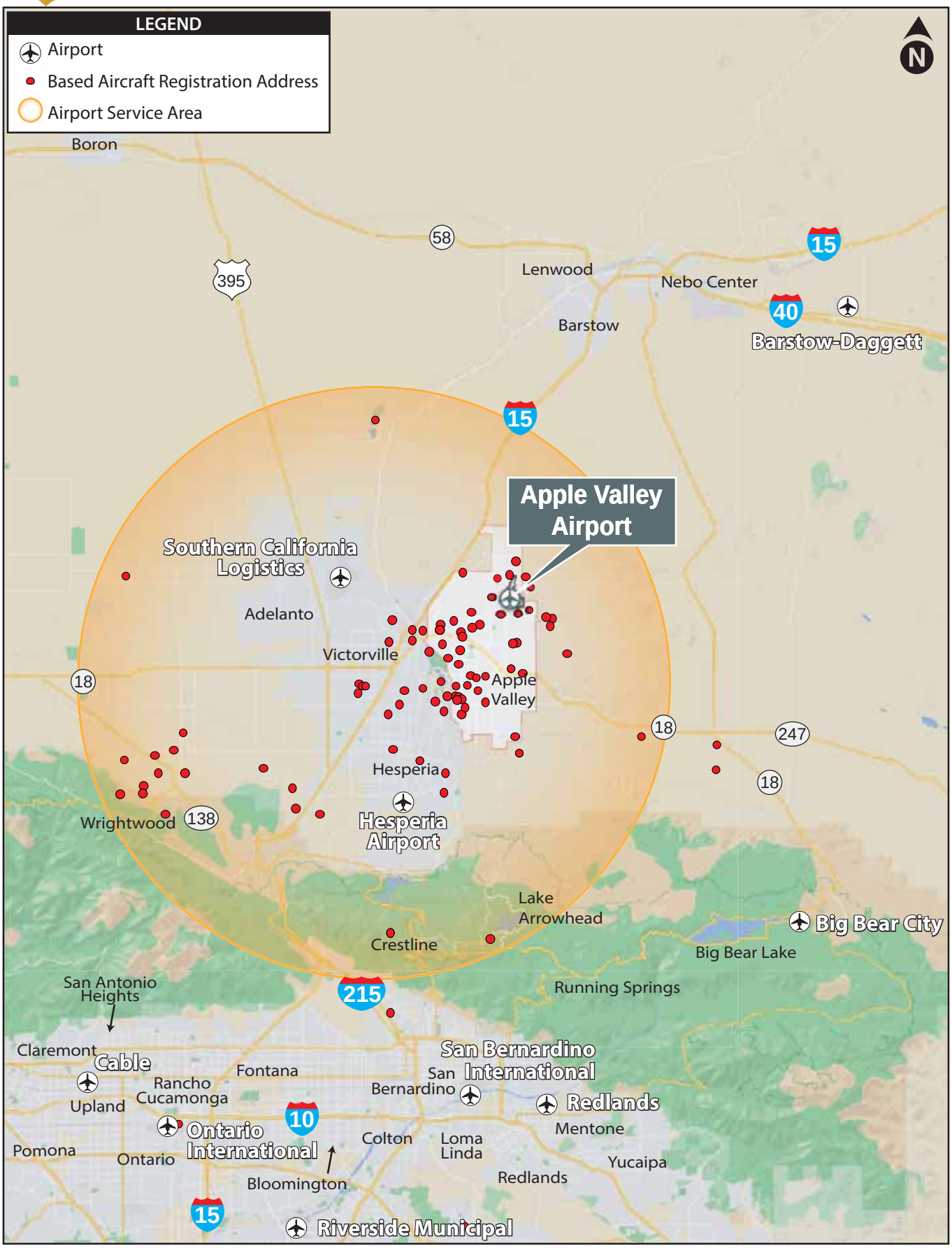
Source: [1]*www.airnav.com;* [2]*NPIAS;* [3]California Aviation System Plan (CASP)

Southern California Logistics Airport is 9.8 nm to the west of APV. This airport has two long runways, 65 based aircraft, most of which are business jets, a control tower, and an ILS instrument approach with visibility minimums of ½-mile. Hesperia Airport is located 13.5 nm to the south-southeast. This airport has a 3,910-foot-long runway and approximately 33 based aircraft, all of which are small piston aircraft. Big Bear City Airport is approximately 25 miles to the southeast. The longest runway is 5,850 feet, and there are approximately 91 based aircraft. These airports will limit the service area for Apple Valley.

It is unlikely that the whole of San Bernardino County could be considered the service area for Apple Valley Airport. For this Master Plan, a service area that is more narrowly centered around the airport is considered as shown on **Exhibit 1N**. The service area includes the Town of Apple Valley, Hesperia, Victorville, and Adelanto.

SOCIOECONOMIC CHARACTERISTICS

For an airport planning study, socioeconomic characteristics are collected and examined to derive an understanding of the dynamics of growth within the study area. Socioeconomic information related to the approximate airport service area is an important consideration in the master planning process. The primary service area for Apple Valley Airport is the southwest corner of San Bernardino County which includes the Town of Apple Valley and the Cities of Victorville, Hesperia, and Adelanto. Other nearby counties and communities may influence aviation demand at the airport but serve as a secondary service area.


LEGEND
Airport
Based Aircraft Registration Address
Airport Service Area
N
Boron
58
395
Lenwood
Nebo Center
15
40
Barstow
Barstow-Daggett
15
Apple Valley Airport
Southern California Logistics
Adelanto
Victorville
Apple Valley
18
18
247
18
Hesperia
Hesperia Airport
Wrightwood
138
Lake Arrowhead
Big Bear City
Big Bear Lake
Crestline
San Antonio Heights
215
Running Springs
Claremont
Cable
Upland
Rancho Cucamonga
Fontana
San Bernardino International
San Bernardino
Redlands
Mentone
Yucaipa
Ontario International
Ontario
Pomona
10
Colton
Loma Linda
Bloomington
Redlands
15
Riverside Municipal

The historic trend in socioeconomic elements, such as population, employment, and households, provides insight into the long-term socioeconomic condition of the region. This information is essential in determining aviation service level requirements, as well as forecasting aviation demand elements for airports. Aviation forecasts are typically related to the population base, economic strength of the region, and the ability of the region to sustain a strong economic base over an extended period of time.

Historical and forecast socioeconomic data was obtained from *Connect SoCal – Regional Transportation Plan 2016-2040*. This regional transportation plan is produced by the Southern California Association of Governments (SCAG), which serves as the Metropolitan Planning Organization for the region. That data is presented in **Table 1M**.

TABLE 1M | Area Socioeconomic Statistics

	SERVICE AREA[3]			SAN BERNARDINO COUNTY		
Year	Population	Employment	Households	Population	Employment	Households
2012[1]	312,000	64,000	91,100	2,068,000	659,500	615,300
2020[1]	332,800	82,100	104,700	2,197,000	789,500	687,100
2022[2]	346,767	85,591	108,627	2,251,130	814,559	703,983
2027[2]	384,305	94,983	119,101	2,392,360	880,741	748,027
2032[2]	425,905	105,405	130,585	2,542,451	952,300	794,827
2035[1]	453,000	112,200	138,000	2,637,000	998,000	824,300
2040[1]	484,200	116,400	147,400	2,731,000	1,028,100	854,500
2042[2]	504,522	121,350	152,929	2,798,286	1,060,732	875,496
CAGR 2022-2042	1.89%	1.76%	1.72%	1.09%	1.33%	1.10%

[1]Southern California Association of Governments, Connect SoCal - Regional Transportation Plan 2016-2040
[2]Interpolated/Extrapolated
[3]Includes Town of Apple Valley, City of Victorville, City of Hesperia, and City of Adelanto
CAGR: Compound Annual Growth Rate (2022-2042)

The Apple Valley area is rapidly growing and is forecast to continue to grow at a rate that out paces the whole of San Bernardino County. The four incorporated municipalities of Apple Valley, Victorville, Hesperia, and Adelanto are projected to grow from approximately 347,000 people in 2022 to 505,000 people in 2042, an annual growth rate of 1.89 percent. Employment and households are projected to grow annually at 1.76 percent and 1.72 percent respectively.

AREA LAND USE

Land uses in the vicinity of the Airport can have an impact on Airport operations and growth potential. The following section identifies baseline land uses around the Apple Valley Airport. By understanding the land use issues surrounding the Airport, more appropriate recommendations can be made for the future of the Airport.

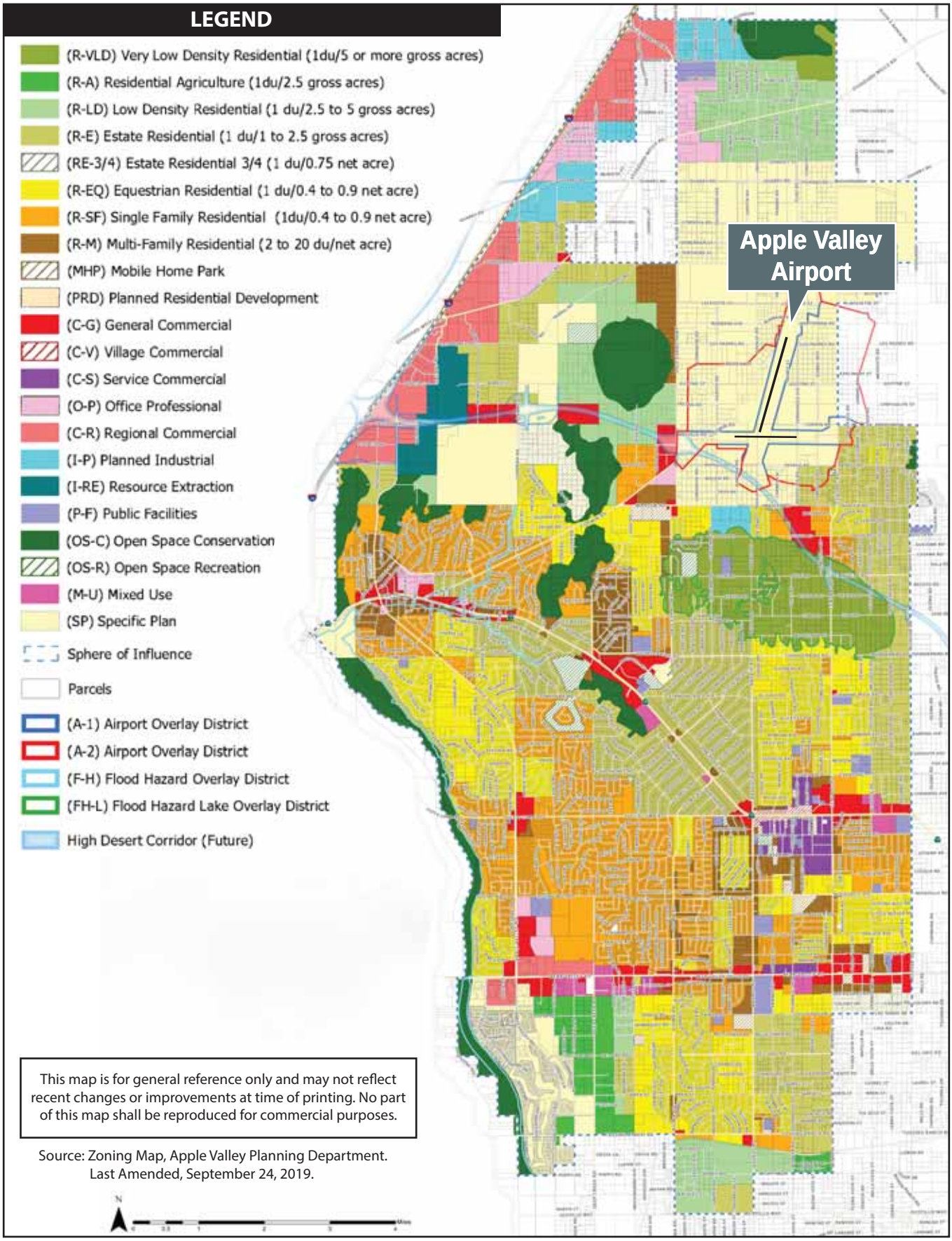
Exhibit 1P shows the current land use zoning for the Town of Apple Valley as sourced from the General Plan. The Apple Valley Airport is located within the North Apple Valley Industrial Specific Plan (NAVISP) area, the detail of which is shown on **Exhibit 1Q**. The whole of the area is zoned for commercial and industrial uses, including the Airport. The NAVISP includes approximately 5,100 acres of which the airport represents approximately 410 acres. Areas around the NAVISP are zoned as residential, open space, and commercial uses. The High Desert Corridor (future State Highway 220) is shown passing through the southern portion of the NAVISP, immediately south of the Airport property.

The Town of Apple Valley has adopted two airport overlay districts, which protect public health, safety, and welfare in the vicinity of Apple Valley Airport. These overlay districts minimize exposure to high noise levels and accident hazards generated by airport operations and encourage future development that is compatible with the continued operation of the Airport. These airport overlay districts are identified on **Exhibit 1R**. The following uses are listed in Chapter 9.65 of the Town of Apple Valley's Development Code as prohibited within the Airport Overlay Districts.

a. "Any use which would direct a steady light or flashing light of red, white, green, or amber colors associated with airport operations toward an aircraft engaged in an initial straight climb following takeoff toward an aircraft engaged in a straight final approach toward a landing at an airport, other than an FAA approved navigational signal light or visual approach slope indicator;
b. Any use which would cause sunlight to be reflected towards an aircraft engaged in an initial straight climb following takeoff or towards an aircraft engaged in a straight final approach towards a landing at an airport;
c. Any use which would generate smoke or water vapor, or which would attract large concentrations of birds, or which may otherwise affect safe air navigation within the area;
d. Any use which would generate electrical interference that may be detrimental to the operation of aircraft and/or aircraft instrumentation;
e. Any land use outside the Airport Master Plan Safety Area involving, as the primary activity, the manufacture, storage, or distribution of explosives or flammable or hazardous materials; and
f. Any outdoor, above-ground storage of flammable or hazardous materials."

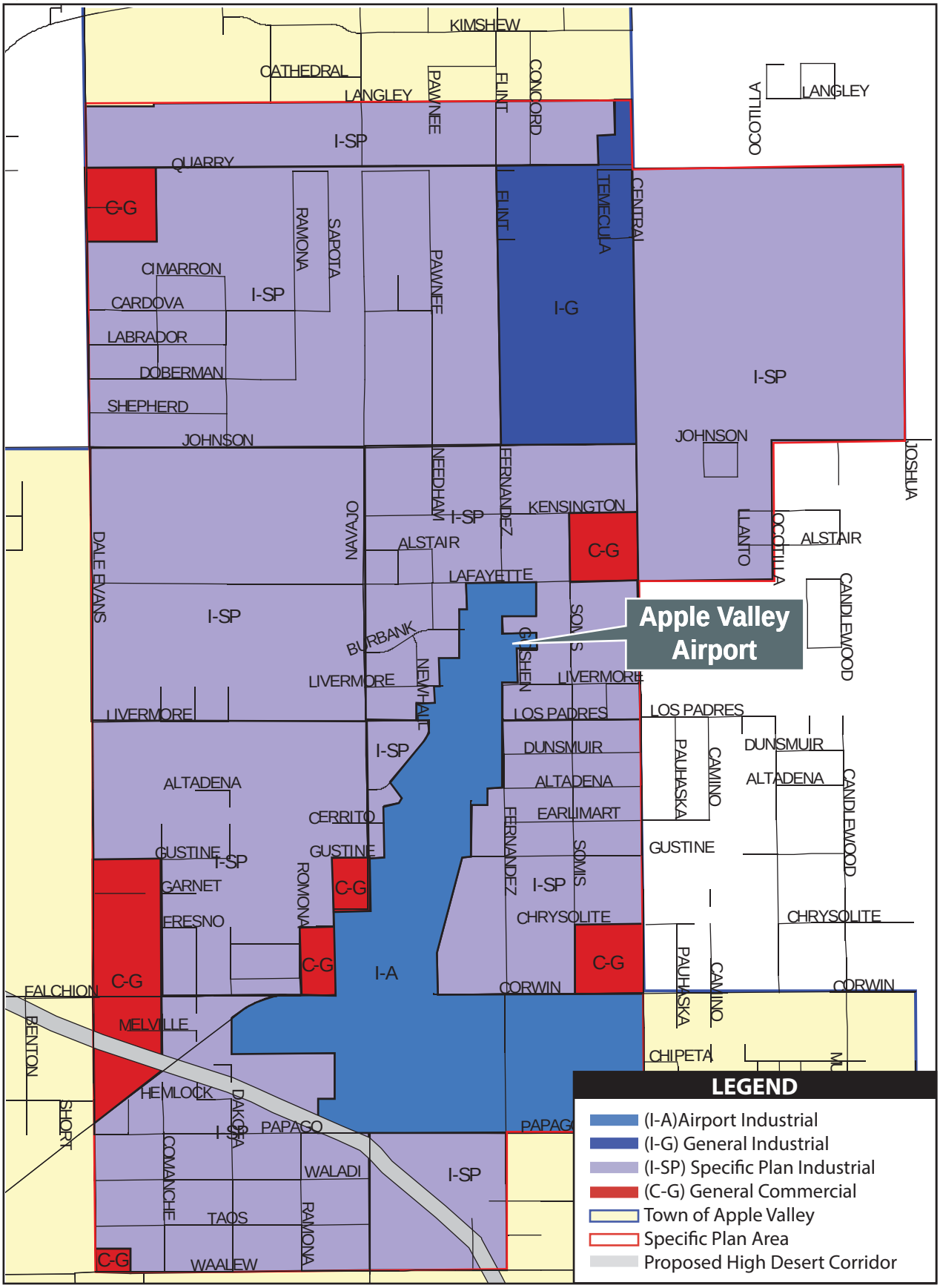
Airport Overlay District A-1 includes the outer safety zone with the runway approach surface which conforms to the previous Airport Master Plan flight paths that extend along the runway centerline from the ends of each runway. Structures and vegetation are permitted to reach heights of no greater than 35 feet in Airport Overlay District A-1.

Airport Overlay District A-2 is based upon the traffic pattern/overflight zone adopted in the previous Airport Master Plan. Structures and vegetation are permitted to reach heights of no greater than 50 feet in Airport Overlay District A-2.

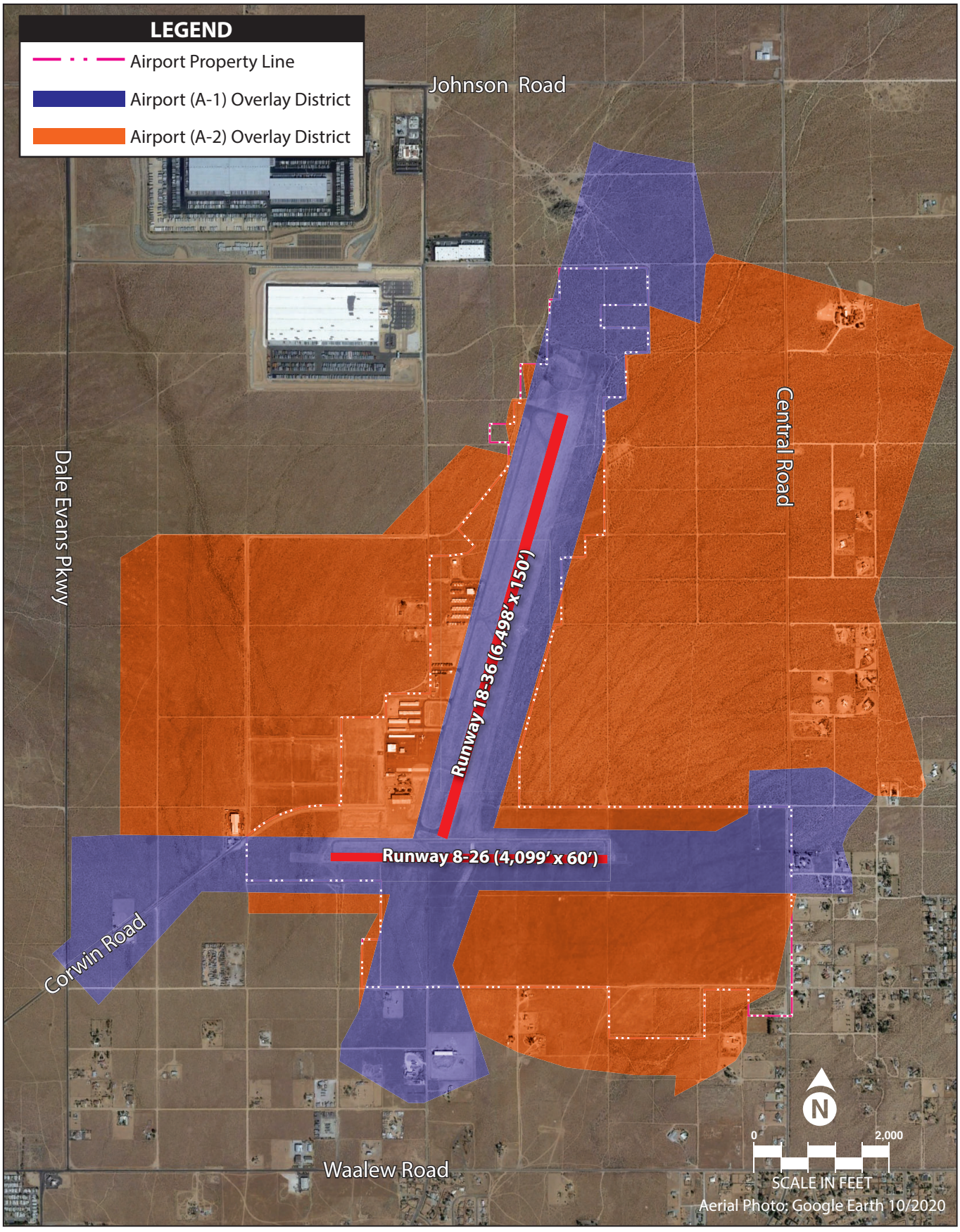


This map is for general reference only and may not reflect recent changes or improvements at time of printing. No part of this map shall be reproduced for commercial purposes.

Source: Zoning Map, Apple Valley Planning Department. Last Amended, September 24, 2019.



Source: North Appley Valley Industrial Specific Plan.



Source: Town of Apple Valley General Plan.

ENVIRONMENTAL INVENTORY

The purpose of the following environmental inventory is to identify potential environmental sensitivities that should be considered when planning future improvements at the airport. **Exhibit 1S** graphically summarizes potential environmental sensitivities in proximity to the airport. Research was performed for each of the 13 impact categories within FAA Order 1050.1G, *FAA National Environmental Policy Act Implementing Procedures* (§1.2(b)(1)). When considering the effects to the impact categories listed below, the FAA may examine the short-term and long-term effects, beneficial and adverse effects, effects on public health and safety, economic effects, and effects on the quality of life of American people.

i. Aviation Emissions and Air Quality
ii. Biological Resources (including fish, wildlife, and plants)
iii. Coastal Resources
iv. *Department of Transportation Act*, Section 303 (referred to as "Section 4(f)") and Land and Water Conservation Fund (referred to as "Section 6(f)")
v. Farmlands
vi. Hazardous Materials, Solid Waste, and Pollution Prevention
vii. Historical, Architectural, Archeological, and Cultural Resources
viii. Land Use
ix. Natural Resources and Energy Supply
x. Noise and Noise-Compatible Land Use
xi. Socioeconomic and Children's Health and Safety Risks
xii. Visual Effects (including light emissions)
xiii. Water Resources (including wetlands, floodplains, surface waters, groundwater, and wild and scenic rivers)

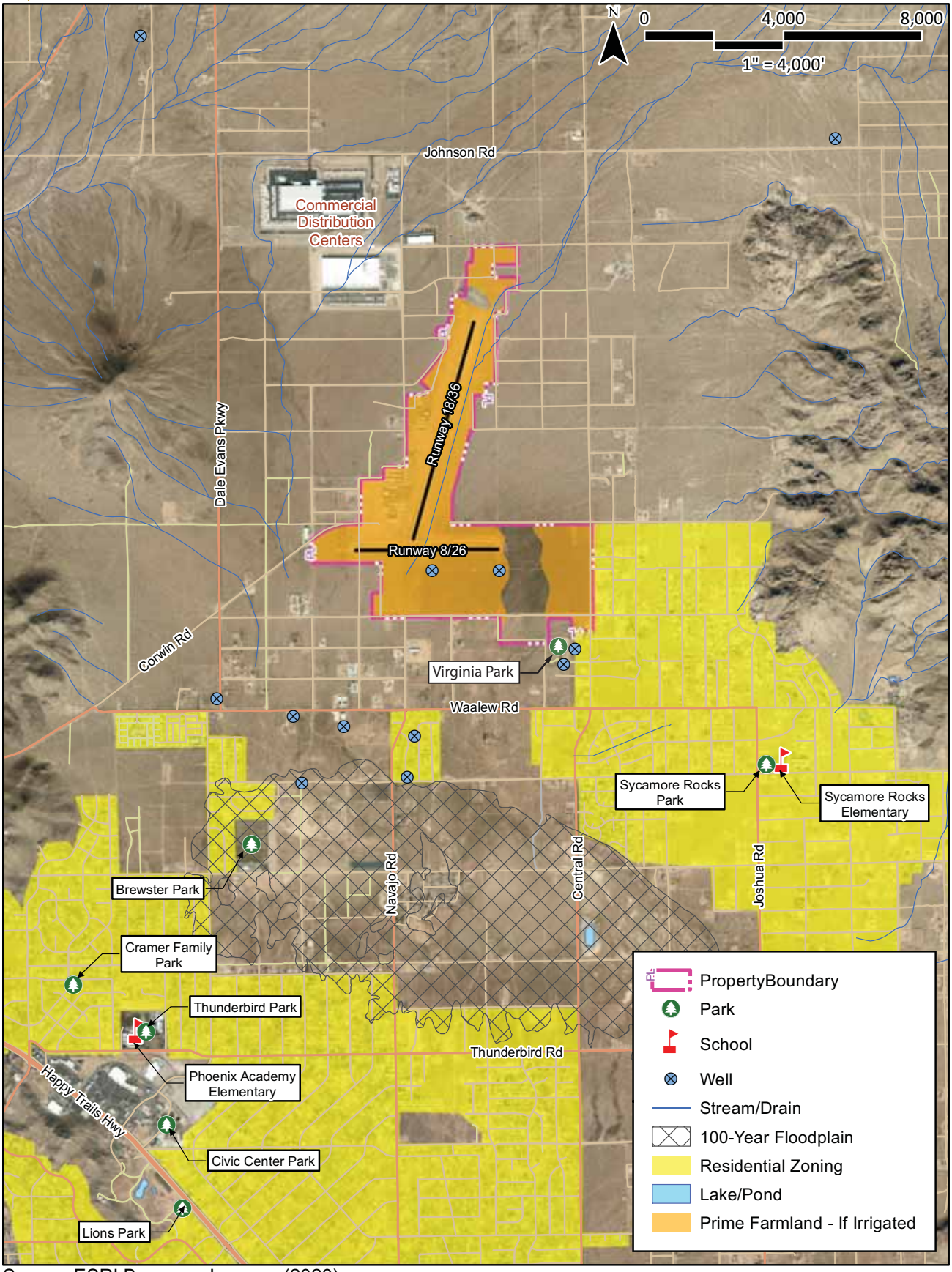
AVIATION EMISSIONS AND AIR QUALITY

The concentration of various pollutants in the atmosphere describes the local air quality. The significance of a pollutant's concentration is determined by comparing it to the state and federal air quality standards. In 1971, the U.S. Environmental Protection Agency (EPA) established standards that specify the maximum permissible short- and long-term concentrations of various air contaminants. The National Ambient Air Quality Standards (NAAQS) consist of primary and secondary standards for criteria pollutants: ozone (O_3), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead (Pb).

Based on federal air quality standards, a specific geographic area can be classified as either an "attainment," "maintenance," or "nonattainment" area for each pollutant. The threshold for nonattainment designation varies by pollutant.

The Airport is in San Bernardino County. The Los Angeles-San Bernardino Counties – West Mojave Desert area is in nonattainment for 8-Hour Ozone (Severe 15) and particulate matter (serious), as of November 30, 2025. The Los Angeles-San Bernardino Counties - West Mohave Desert area is in attainment for all other criteria pollutants.[1] This airshed is managed by the Mojave Desert Air Quality Management District.

[1] California Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants | Green Book | US EPA https://www3.epa.gov/airquality/greenbook/anayo_ca.html



Source: ESRI Basemap Imagery (2020), FEMA, USDA, USFWS, City of Apple Valley

BIOLOGICAL RESOURCES

Biotic resources include the various types of plants and animals that are present in an area. The term also applies to rivers, lakes, wetlands, forests, and other habitat types that support plants and animals.

The U.S. Fish and Wildlife Service (USFWS) is charged with overseeing the requirements contained within Section 7 of the *Endangered Species Act* (ESA). The ESA provides a framework to conserve and protect animal or plant species whose populations are threatened by human activities. The FAA and USFWS review projects to determine if a significant impact to protected species will result in the implementation of a proposed project. Significant impacts occur when a proposed action could jeopardize the continued existence of a protected species or would result in the destruction or adverse modification of federally designated critical habitat in the area. The USFWS's Information for Planning and Consultation (IPaC) provides a list of species protected under ESA within the vicinity of the Airport. This information is summarized in **Table 1N.**

Section 3 of the ESA is used to protect critical habitat areas. Designated critical habitat areas are geographically defined and have been determined to be essential to the recovery of a specific species. There is no federally designated critical habitat at the Airport.

A Habitat Assessment was performed at the airport in 2012. The findings of this investigation identified 26 plants and 27 wildlife special status species from federal, state, and local lists and databases to occur in the project vicinity. Four special status species (Joshua tree, desert tortoise, burrowing owl, and California horned lark) were found to be present on the project area, and seven (Mojave yucca, barrel cactus, honey mesquite, screw bean mesquite, Mojave monkeyflower, loggerhead shrike, and le Conte's thrasher) may occur on the project area. All remaining special status species were assessed as not likely to occur on the project area or absent from the project area.[2]

The potential for the Biological Study Area (BSA) to support birds protected under the federal Migratory Bird Treaty Act (MBTA) has also been evaluated. There are three potential avian concerns for areas at the airport: California thrasher (*Toxostoma redivivum*), Costa's hummingbird (*Calypte costae*), and the Lawrence's goldfinch (*Carduelis lawrencei*).

[2] Apple Valley Airport Master Plan Initial Study. October 2012.

TABLE 1N | Species Protected Under ESA Section 7			
Common Name (*Scientific Name*)	**Federal Status**	**Habitat and Range**	**Potential for Occurrence at Airport**
IPaC Resource List			
Desert tortoise *(Gopherus agassizii)*	Threatened	Desert tortoises live in the deserts of the southwestern United States and northwestern Mexico. They dig underground burrows and tunnels to avoid the heat.	Potential. Additional habitat surveys may be necessary to determine the presence of this species.
Monarch butterfly *(Danaus plexippus)*	Proposed Threatened	Monarchs feed exclusively on the leaves of milkweed, wildflowers in California, when they migrate for winter.	Potential. Individuals may occur seasonally as a potential migratory stopover. However, there are no milkweed species present for breeding in the project study area.
ESA: Endangered Species Act IPaC: U.S. fish and Wildlife - Information for Planning and Consultation			

Source: USFWS IPaC (IPaC: Home (fws.gov)

COASTAL RESOURCES

Federal activities involving or affecting coastal resources are governed by the *Coastal Barriers Resource Act*, the *Coastal Zone Management Act*, and Executive Order (E.O.) 13089, *Coral Reef Protection*.

The Airport is not located within a coastal zone. The closest National Marine Sanctuary is the Channel Islands National Marine Sanctuary, located 122 miles from the Airport.[3]

DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(f)

Section 4(f) of the *Department of Transportation Act,* which was recodified and renumbered as Section 303(c) of 49 United States Code, provides that the Secretary of Transportation will not approve any program or project that requires the use of any publicly or privately owned historic sites, public parks, recreation areas, or waterfowl and wildlife refuges of national, state, regional, or local importance unless there is no feasible and prudent alternative to the use of such land, and the project includes all possible planning to minimize harm resulting from the use.[4] **Table 1P** presents those potential section 4(f) resources in proximity to the Airport.

TABLE 1P | Dept. of Transportation Section 4(f) Resources Within the Vicinity of the Airport		
Potential Resource	**Distance from APV**	**Direction from APV**
Virginia Park	0.06 mile	Southeast
Brewster Park	1.6 mile	Southwest
Sycamore Rocks Park	2.3 miles	Southeast

Source: Google Earth Aerial Imagery (December 2021); Coffman Associates analysis

[3] Google Earth Aerial Imagery (2021)
[4] 49 U.S. Code § 303 - Policy on lands, wildlife and waterfowl refuges, and historic sites

There are no other Section 4(f) Resources within the vicinity of the Airport (i.e., wilderness and recreation areas, wildlife refuges or waterfowl habitats). Nearest wilderness and national recreation areas are listed below:

- Nearest Wilderness Area: Newberry Mountains Wilderness (23 miles from the airport)
- Nearest Recreation Area: Santa Monica Mountains National Recreation Area (72 miles from airport)

FARMLANDS

Under the *Farmland Protection Policy Act* (FPPA), federal agencies are directed to identify and consider the adverse effects of federal programs on the preservation of farmland, to consider appropriate alternative actions which could lessen adverse effects, and to assure that such federal programs are, to the extent practicable, compatible with state or local government programs and policies to protect farmland. The FPPA guidelines, developed by the U.S. Department of Agriculture (USDA), apply to farmland classified as prime or unique, or of state or local importance as determined by the appropriate government agency, with concurrence by the Secretary of Agriculture.

Information obtained from the USDA Natural Resources Conservation Service's (NRCS) Web Soil Survey (WSS) indicates that soils throughout the airport property are classified as "prime farmland if irrigated" or "Not prime farmland". **Table 1Q** breaks down the ratio of each soil type in the Airport area.

TABLE 1Q | Farmland Classification

Soil Type	Classification
Cajon loamy sand, loamy substratum, 0-2% slopes	Prime farmland if irrigated
Cajon-arizo complex, 2-15% slopes	Not prime farmland
Cajon-wasco, cool complex, 2-9% percent slopes	Not prime farmland
Helendale-bryman loamy sands, 2-5% slopes	Prime farmland if irrigated
Rock outcrop-lithic torriorthents complex, 15-50% slopes	Not prime farmland

Source: NRCS Web Soil Survey

The NRCS Web Soil Survey farmland classification shows Not prime farmland and Prime farmland if irrigated within the vicinity of the Airport. However, the California Statewide Important Farmland Map indicates grazing land classification.

HAZARDOUS MATERIALS, SOLID WASTE AND POLLUTION PREVENTION

Federal, state, and local laws regulate hazardous materials use, storage, transport, and disposal. These laws may extend to past and future landowners of properties containing these materials. In addition, disrupting sites containing hazardous materials or contaminants may cause significant impacts to soil, surface water, groundwater, air quality, and the organisms using these resources. According to the U.S. EPA's *NEPAssist*, there are no Superfund or brownfields sites within three miles of the airport.

NPDES permits outline the regulatory requirements of municipal storm water management programs and establish requirements to help protect the beneficial uses of the receiving waters. They require permittees to develop and implement Best Management Practices (BMPs) to control/reduce the discharge of pollutants to waters of the United States to the maximum extent practicable (MEP). The August 2005 Mojave River Watershed Stormwater Program was developed by the Town of Apple Valley, County of San Bernardino County, and the cities of Hesperia and Victorville to comply with the Phase II MS4 Permit. The Mojave River Watershed Water Quality Management Plan prescribes Best Management Practices (BMP) measures for pollutant generating activities and its source.[5]

Solid Waste and recycling services in the Town of Apple Valley are contracted by the Town through Burrtec Waste Industries of Fontana, California. Solid waste from Apple Valley is hauled to the Victorville landfill which is part of the San Bernardino County landfill system. The closing date for the Victorville landfill is estimated to be 2055. The County is currently moving towards the acquisition of additional acreage at the landfill to expand capacity.

The Victorville landfill accepts industrial waste if it is non-hazardous. Hazardous industrial waste is collected by private contractors and disposed of elsewhere by County-approved hazardous waste disposal firms. Production and disposal of hazardous waste may involve the San Bernardino County Fire Department. Collection of commercial and industrial hazardous waste is coordinated through the County Fire Department, and one of the more commonly used areas for such disposal has been Cattleman's Hill in Central California.[6]

HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

Determination of a project's environmental impact to historic and cultural resources is made under guidance in the *National Historic Preservation Act* (NHPA) *of 1966*, as amended, the *Archaeological and Historic Preservation Act* (AHPA) *of 1974*, the *Archaeological Resources Protection Act* (ARPA), and the *Native American Graves Protection and Repatriation Act* (NAGPRA) *of 1990*. In addition, the *Antiquities Act of 1906*, the *Historic Sites Act of 1935*, and the *American Indian Religious Freedom Act of 1978* also protect historical, architectural, archaeological, and cultural resources. Impacts may occur when a proposed project causes an adverse effect on a resource which has been identified (or is unearthed during construction) as having historical, architectural, archaeological, or cultural significance.

SWCA Environmental Consultants (SWCA) performed a cultural resources survey of areas situated near the western, northern, and southern airport boundaries (i.e., project area) in 2012 as part of the previous Master Plan and state environmental review, including coordination with Native American groups, a cultural resources records search, and an intensive pedestrian survey of the project area for cultural resources.

The San Bernardino Archaeological Information Center (SBAIC) completed the California Historical Resources Information System (CHRIS) records search on November 15, 2011, for the project area. The

[5] Mojave River Watershed Water Quality Management Plan Appendix-G-Water-Quality-Management-Plan-and-Percolation-Report.pdf (sbcounty.gov)
[6] North Apple Valley Industrial Specific Plan https://www.applevalley.org/home/showpublisheddocument/18587/636149111285930000

CHRIS records search identified eight prior cultural resource studies within 0.5 miles of the project area and two general overview studies. The two overview studies do not contain detailed information regarding the specific project area. Although the project area did not contain any previously recorded cultural resources, the CHRIS records search identified 11 such sites within 0.5 miles of the project area. One of these sites, a historic-era U-shaped rock feature, is located 16.4 feet outside of the project area. The four sites that had not been previously identified consist of historic-era domestic refuse. No prehistoric materials or built environment resources dating to the ethnographic or historic periods were encountered in the survey. SWCA recommended no additional cultural resources work for this project.[7]

All structures included on the airport property from the 1970s and prior must be further evaluated for historical importance.

LAND USE

Land use regulations near airports are achieved through local government codes, city policies, and plans that include airport districts and planning areas. Regulations are used to avoid land use compatibility conflict around airports.

The framework for the Land Use Element is established in Government Code Section 65300 et. seq., which requires that all municipalities adopt land use plans for residential, commercial, industrial, open space, and other land uses for all lands within their boundaries.

The land use types in Apple Valley are all related to a single, over-arching concept: that Apple Valley's quality of life is tied to its rural character, and that this character is to be preserved and protected for the long-term health of the community. In Apple Valley "rural" means space -- unscarred mountains and vistas of desert valleys, neighborhoods of large lots where keeping horses is allowed, an extensive multi-use trail system, and landscaping consistent with the desert environment. The land use designations established in this General Plan are provided below. The single-family land use designations are consistent with those defined in Measure N (see further discussion below).[8]

The Zoning Districts Map shows the airport is located within Specific Plan and is designated for Airport Industrial. This land use designation allows high quality, non-polluting industrial land uses, either as free-standing uses or as part of master planned industrial parks. Uses permitted include warehousing, light manufacturing, research and development, and administrative facilities. The minimum size for a Planned Industrial project site is 5 acres. The Specific Plan must conform to State law and include maps and text that establish the land use designations, standards and guidelines for development, infrastructure requirements, and phasing for the specific plan area. Surrounding parcels around the Airport have several zone classifications including low density residential, single-family, and estate residential.[9]

[7] Apple Valley Airport Master Plan Initial Study. October 2012.
[8] Town of Apple Valley General Plan 2009 Chapter II Community Development: AVGP Community Development Reso 2009-31, 2012-51, 2013-37 (applevalley.org)
[9] Town of apple Valley Zoning Map https://www.applevalley.org/home/showdocument?id=16113

NATURAL RESOURCES AND ENERGY SUPPLY

Natural resources and energy supply provide an evaluation of a project's consumption of natural resources. It is the policy of FAA Order 1053.1C, *Energy and Water Management Program for FAA Buildings and Facilities*, to encourage the development of facilities that exemplify the highest standards of design, including principles of sustainability.

Natural resources and energy supply are discussed earlier in this chapter under "Fuel Facilities and Equipment" and "Utilities."

NOISE AND NOISE-COMPATIBLE LAND USE

Federal land use compatibility guidelines are established under 14 Code of Federal Regulations (CFR) Part 150, *Airport Noise Compatibility Planning*. According to 14 CFR Part 150, residential land and schools are noise-sensitive land uses that are not considered compatible with a 65 decibel (dB) Day-Night Average Sound Level (Ldn or DNL).[10] Other noise-sensitive land uses (such as religious facilities, hospitals, or nursing homes), if located within a 65 dB DNL contour, are generally compatible when an interior noise level reduction of 25 dB is incorporated into the design and construction of the structure. Special consideration should also be given to noise-sensitive areas within Section 4(f) properties where the land use compatibility guidelines in 14 CFR Part 150 do not account for the value, significance, and enjoyment of the area in question.[11] The closest residential neighborhood is adjacent to the airport property boundary along Central Road. The only other noise sensitive land uses within three miles of APV are the Sycamore Rocks Elementary School which is 2.0 miles to the southeast and Phoenix Academy which is 2.6 miles southwest of the airport.

SOCIOECONOMICS AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

Socioeconomics

Socioeconomics is an umbrella term used to describe aspects of a project that are either social or economic in nature. A socioeconomic analysis evaluates how elements of the human environment such as population, employment, housing, and public services might be affected by the proposed action and alternative(s).

The Airport is surrounded primarily by open desert and scattered commercial or industrial land uses, which do not contribute substantial tax revenue or traffic near the airport.

[10] The DNL accounts for the increased sensitivity to noise at night (10:00 PM to 7:00 AM) and is the metric preferred by FAA, the U.S. EPA, and the U.S. Department of Housing and Urban Development as an appropriate measure of cumulative noise exposure. In California, however, these agencies accept the use of Community Noise Equivalent Level (CNEL), which, in addition to night-time sensitivities, also accounts for increased sensitivities during the evening hours (7:00 PM to 10:00 PM).

[11] 49 U.S. Code § 47141 – Compatible land use planning and projects by State and Local Governments

Children's Environmental Health and Safety

Federal agencies are directed, per E.O. 13045, Protection of Children from Environmental Health Risks and Safety Risks, to make it a high priority to identify and assess the environmental health and safety risks that may disproportionately impact children. Such risks include those that are attributable to products or substances that a child is likely to encounter or ingest (air, food, water – including drinking water) or to which they may be exposed.

VISUAL EFFECTS

Visual effects deal broadly with the extent to which a proposed action or alternative(s) would either (1) produce light emissions that create an annoyance or interfere with activities; or (2) contrast with, or detract from, the visual resources and/or the visual character of the existing environment. Each jurisdiction will typically address outdoor lighting, scenic vistas, and scenic corridors in zoning ordinances and their general plan.

Light Emissions: Light emission impacts typically relate to the extent to which any light or glare results from a source that could create an annoyance for people or would interfere with normal activities. Generally, local jurisdictions will include ordinances in the local code addressing outdoor illumination to reduce the impact of light on surrounding properties.

San Bernardino County adopted The Light Trespass Ordinance on December 7, 2021, to prevent light trespassing onto neighboring properties and for protection of dark night skies in the mountain and desert regions.[12]

Visual Resources and Visual Character: *Visual character* refers to the overall visual makeup of the existing environment where a proposed action or its alternative(s) would be located. For example, areas near densely populated areas generally have a visual character that could be defined as urban, whereas less developed areas could have a visual character defined by the surrounding landscape features, such as open grass fields, forests, mountains, deserts, etc.

Visual resources include buildings, sites, traditional cultural properties, and other natural or manmade landscape features that are visually important or have unique characteristics. Visual resources may include structures or objects that obscure or block other landscape features. In addition, visual resources can include the cohesive collection of various individual visual resources that can be viewed at once or in concert from the area surrounding the site of the proposed action or alternative(s).

The Airport lies on the outskirts of the urban area and is visible from State Route I-15. This highway is not a designated scenic highway within the state or the county.[13]

[12] San Bernardino County Light Trespass Ordinance: https://www.sbcounty.gov/uploads/LUS/Planning/LIGHT_TRESPASS_ORD_FINAL.pdf
[13] California State Scenic Highways: https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways

WATER RESOURCES

Wetlands: The U.S. Army Corps of Engineers regulates the discharge of dredged and/or fill material into waters of the United States, including adjacent wetlands, under Section 404 of the *Clean Water Act* (CWA). Wetlands are defined in E.O. 11990, *Protection of Wetlands*, as "those areas that are inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction." Wetlands can include swamps, marshes, bogs, sloughs, potholes, wet meadows, river overflows, mudflats, natural ponds, estuarine areas, tidal overflows, and shallow lakes and ponds with emergent vegetation. Wetlands exhibit three characteristics: the soil is inundated or saturated to the surface at some time during the growing season (hydrology), has a population of plants able to tolerate various degrees of flooding or frequent saturation (hydrophytes), and soils that are saturated enough to develop anaerobic (absent of air or oxygen) conditions during the growing season (hydric).

USFWS manages the National Wetlands Inventory on behalf of all federal agencies. The National Wetlands Inventory identifies surface waters and wetlands in the nation. The inventory indicates riverine wetlands surrounding the northeast and west boundaries of the airport. There are freshwater retention ponds present two miles southeast of the airport surrounded by residential parcels.[14]

Drainage from the airport is channelized running north to south to retention ponds off the Airport runway. The National Wetlands Inventory maps the inland surface waterways as Riverine. However, based on aerial and ground photography of the airport, including Google Earth mapping, the on-airport drainages do not appear to convey waters to waters of the U.S. (i.e., traditional navigable waters). The area generally drains southwest to the Mojave River which empties into Silverwood Lake. The NRCS Web Soil Survey indicated hydric soils present within the airport boundaries due to conditional flooding in the area.[15]

Floodplains: E.O. 11988, *Floodplain Management*, directs federal agencies to take action to reduce the risk of flood loss, minimize the impact of floods on human safety, health, and welfare, and restore and preserve the natural and beneficial values served by the floodplains. A review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel numbers 06071C5830H and 0671C5835H, effective August 2008 indicates that the airport is in Zone D, an Area of Undetermined Flood Hazard.[16]

Surface Waters: The Clean Water Act establishes water quality standards, controls discharges, develops waste treatment management plans and practices, prevents or minimizes the loss of wetlands, and regulates other issues concerning water quality. Water quality concerns related to airport development most often relate to the potential for surface runoff and soil erosion, as well as the storage and handling of fuel, petroleum products, solvents, etc. Additionally, Congress has mandated (under the CWA) the National Pollutant Discharge Elimination System (NPDES).

[14] National Wetlands Inventory Wetlands Mapper https://www.fws.gov/wetlands/Data/Mapper.html
[15] National Wetlands Inventory – Wetlands Mapper https://www.fws.gov/wetlands/Data/Mapper.html
[16] Federal Emergency Management Agency *Flood Map Service Center* https://msc.fema.gov/portal/home

The NPDES section administers the National Pollutant Discharge Elimination System (NPDES) program for the County of San Bernardino and the San Bernardino County Flood Control District. This stormwater management program is mandated by the Federal Clean Water Act, implemented by the State Water Resources Control Board, and has the goal of preventing pollutants from entering our lakes, streams, rivers, and oceans through stormwater runoff. The County, the Town of Apple Valley, and the cities of Victorville and Hesperia have been issued a MS4 Phase II Stormwater Permit by the State Water Resources Control Board, covering the urbanized portion of the Mojave River Watershed.[17]

Groundwater: Groundwater is subsurface water that occupies the space between sand, clay, and rock formations. The term aquifer is used to describe the geologic layers that store or transmit groundwater, such as wells, springs, and other water sources. Examples of direct impacts to groundwater could include withdrawal of groundwater for operational purposes or reduction of infiltration or recharge area due to new impervious surfaces.[18]

The EPA's Sole Source Aquifer (SSA) Program was established under Section 1424(e) of the Safe Drinking Water Act (SDWA.) Since 1977, it has been used by communities to help prevent contamination of groundwater from federally funded projects. It has increased public awareness of the vulnerability of groundwater resources. The SSA program is authorized by Section 1424(e) of the Safe Drinking Water Act of 1974 (Public Law 93-523, 42 U.S.C. 300 et. seq), which states:

"*If the Administrator determines, on his own initiative or upon petition, that an area has an aquifer which is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health, he shall publish notice of that determination in the Federal Register.*"[19]

According to the U.S. EPA Sole Source Aquifer for Drinking Water website, there are no sole source aquifers located within airport boundaries. The nearest sole source aquifer is 120 miles from the airport, Campo/Cottonwood Creek Aquifer. [20]

Wild and Scenic Rivers: The *National Wild and Scenic Rivers Act* was established to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of present and future generations.

The Nationwide River Inventory (NRI) is a list of over 3,400 rivers or river segments that appear to meet the minimum *Wild and Scenic Rivers Act* eligibility requirements based on their free-flowing status and resource values. The development of the NRI resulted from Section 5(d)(1) in the *Wild and Scenic Rivers Act*, directing Federal agencies to consider potential wild and scenic rivers in the comprehensive planning process.

[17] Department of Public Works NPDES/Stormwater NPDES (sbcounty.gov)
[18] United States Geological Survey - What is Groundwater? https://www.usgs.gov/faqs/what-groundwater
[19] Overview of the Drinking Water Sole Source Aquifer Program | US EPA https://www.epa.gov/dwssa/overview-drinking-water-sole-source-aquifer-program#Authority
[20] Interactive Map for Sole Source Aquifers Sole Source Aquifers (arcgis.com)

The closest designated wild and scenic river identified is the Fuller Mill Creek located 57 miles east of the Airport.[21] The nearest National River Inventory feature is named Deep Creek, located 15 miles away.

DOCUMENT SOURCES

A variety of sources were used during the inventory process. The following list reflects sources of this information. In addition, considerable information was provided directly to the consultant by Apple Valley Airport, and numerous official websites were consulted.

Airport/Facility Directory, U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office. Chart Supplement Southwest U.S. Effective January 27, 2022.

Los Angeles Sectional Chart, U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office. Effective January 27, 2022.
U.S. Terminal Procedures, U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office. Effective January 27, 2022.

National Plan of Integrated Airport Systems (NPIAS), U.S. Department of Transportation, Federal Aviation Administration, 2021-2025.

Apple Valley Airport Master Plan – Draft Final Report, 2012. Prepared by Coffman Associates.

Town of Apple Valley – Comprehensive Plan 2009, as amended.

ConnectSoCal (2020-2045 Regional Transportation Plan/Sustainable Communities Strategy). Prepared by the Southern California Association of Governments (SCAG).

Several internet websites were also used to collect information for the inventory chapter. These include the following:

Apple Valley Airport: https://cms.sbcounty.gov/airports/Airports/AppleValley.aspx

Southern California Association of Governments: https://scag.ca.gov/

Caltrans – Division of Aeronautics: https://dot.ca.gov/programs/aeronautics

FAA Historical Grants: *http://www.faa.gov/airports/aip/grant_histories/*

FAA Terminal Area Forecast (TAF): http://aspm.faa.gov/main/taf.asp

FAA Traffic Flow Management System Counts (TFMSC): https://aspm.faa.gov/tfms/sys/main.asp

[21] Nationwide Rivers Inventory – Rivers https://www.rivers.gov/california.php

FAA 5010 Data: http://www.airnav.com and http://www.gcr1.com/5010Web

U.S. Census Bureau: http://www.census.gov

U.S. Bureau of Labor Statistics: http://www.bls.gov

U.S. Fish and Wildlife Service Information, Planning, and Conservation System: http://ecos.fws.gov/ipac/

U.S. Fish and Wildlife Service National Wetlands Inventory: http://www.fws.gov/wetlands/Data/Mapper.html

U.S. Environmental Protection Agency, Currently Designated Nonattainment Areas for All Criteria Pollutants: https://www3.epa.gov/airquality/greenbook/anayo_wa.html

USGS National Map: http://nationalmap.gov/

FEMA Flood Map Service Center: https://msc.fema.gov/portal/search?AddressQuery=waco%20regional%20airport#searchresultsanchor

Natural Resources Conservation Service, Web Soil Survey: http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm