Chapter One

INVENTORY

The initial step in the preparation of the Master Plan for the Treasure Valley Executive Airport at Caldwell (EUL) 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 region, 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.

- Treasure Valley Executive 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 income activity sectors, will be presented. These sectors typically offer an indication of future trends that could influence commercial and general aviation activity at the Airport.

- A review of existing local and state 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 to be factored into the recommended development plan.

TREASURE VALLEY
EXECUTIVE AIRPORT
AT CALDWELL
Airport Master 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 interviews with Airport staff and tenants. Information was also obtained from outside resources, including documents prepared by the Federal Aviation Administration (FAA), Idaho Transportation Department – Division of Aeronautics (ITD), the City of Caldwell, Canyon County, and other pertinent regional planning and economic development agencies.

REGIONAL SETTING

The Airport is located in Canyon County in the southwest corner of Idaho, with Payette County to the north, Owyhee County to the south, Ada County to the east, and Malheur County to the west. The Sawtooth Mountain Range rises to the east while the Snake River borders to the west. The county is in an area known as the Treasure Valley that stretches from Vale, Oregon, to Boise, Idaho. The region includes the valley lands where multiple tributaries including the Boise River, drain into the Snake River. Treasure Valley is surrounded by the Owyhee, Weiser, and Boise mountains that rise to 9,000 feet above mean sea level (MSL) in some areas. The U.S. Census Bureau indicates the population of Canyon County was 189,366 in 2010, with a 2019 estimate of 224,780. The county seat is the City of Caldwell. **Exhibit 1A** shows the regionl setting for the Treasure Valley Executive Airport at Caldwell.

AIRPORT LOCATION

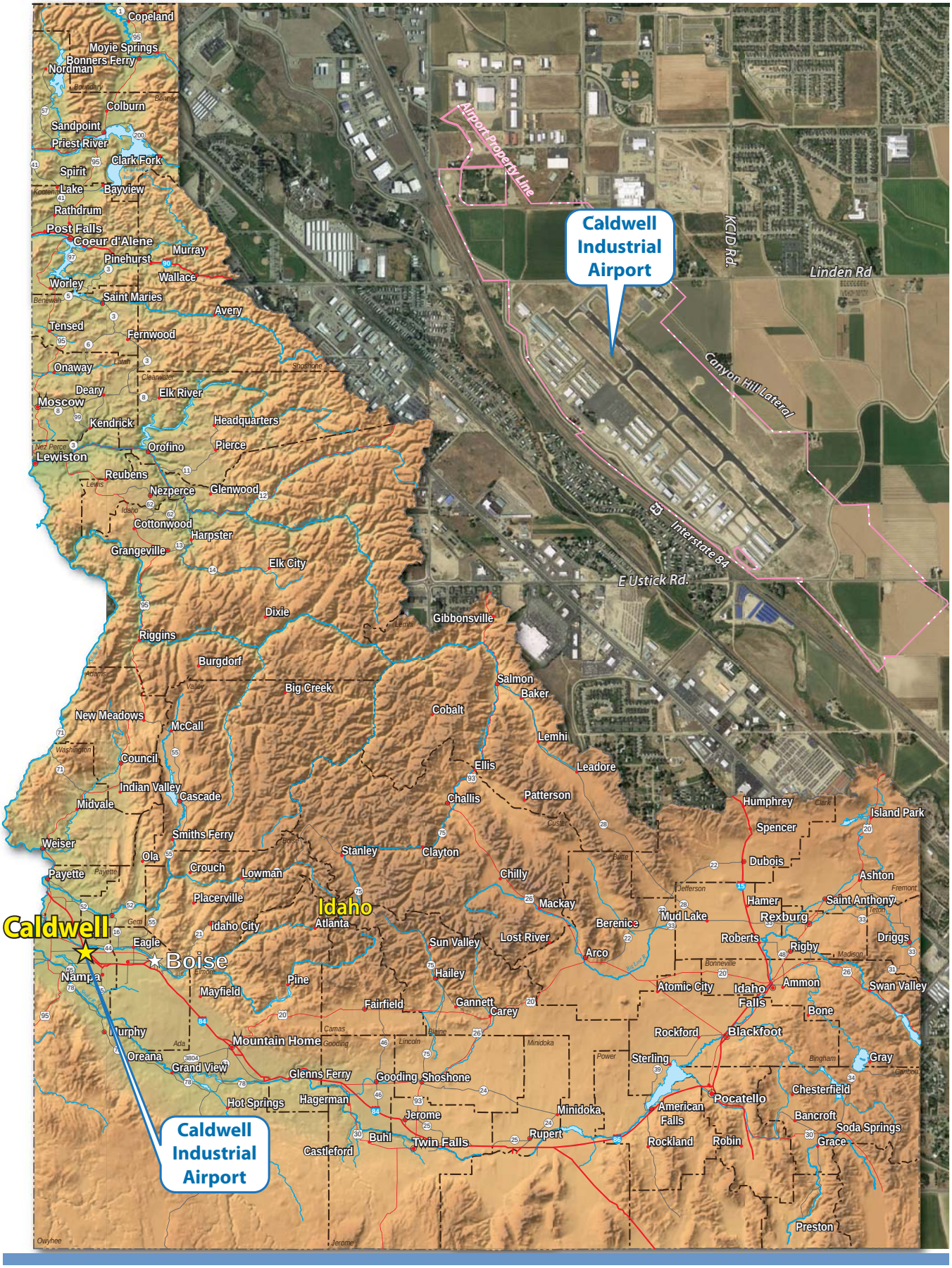
the Treasure Valley Executive Airport is in the City of Caldwell, Idaho. Caldwell is situated in the central area of Canyon County, north of Lake Lowell and approximately 28 miles west of Boise, Idaho. The city has an estimated population of 56,541. The elevation of the city is 2,375 feet MSL. The Airport is listed at an elevation of 2,432 feet above sea level.

AIRPORT HISTORY

In 1928, the City of Caldwell purchased 160 acres northwest of downtown Caldwell from Webber J. Apell, who ran a flight school on the property for eight years. In the 1930s, the city made improvements to the Airport including the construction of the first hangar in 1939. The runway was first paved in 1952. By the late 1960s, residential development began encroaching upon the Airport property causing the city to perform a feasibility study to relocate the airport. In 1971, 460 acres of land were purchased along Interstate 84 and construction began on the new Airport at its current site in 1975.

AIRPORT ADMINISTRATION

The Treasure Valley Executive Airport is a General Aviation (GA) airport owned by the City of Caldwell and managed by the Public Works Department. A city-employed airport manager handles the day-to-day operations of the Airport. Administrative and financial oversight is given by the Caldwell City Council with guidance from a seven-member Airport Commission.


Caldwell Industrial Airport
Airport Property Line
KCID Rd.
Linden Rd
Canyon Hill Lateral
Interstate 84
E Ustick Rd.
Caldwell
Boise
Idaho
Caldwell Industrial Airport
Copeland
Moyie Springs
Bonners Ferry
Nordman
Colburn
Sandpoint
Priest River
Clark Fork
Spirit
Lake
Bayview
Rathdrum
Post Falls
Coeur d'Alene
Murray
Pinehurst
Wallace
Worley
Saint Maries
Avery
Tensed
Fernwood
Onaway
Deary
Moscow
Elk River
Kendrick
Headquarters
Orofino
Pierce
Lewiston
Reubens
Nezperce
Glenwood
Cottonwood
Harpster
Grangeville
Elk City
Dixie
Gibbonsville
Riggins
Burgdorf
Big Creek
Salmon
Baker
Cobalt
New Meadows
McCall
Lemhi
Council
Ellis
Leadore
Indian Valley
Cascade
Challis
Patterson
Midvale
Humphrey
Island Park
Spencer
Smiths Ferry
Weiser
Ola
Stanley
Clayton
Dubois
Payette
Crouch
Lowman
Chilly
Ashton
Placerville
Mackay
Hamer
Saint Anthony
Mud Lake
Rexburg
Idaho City
Atlanta
Berenice
Roberts
Driggs
Eagle
Sun Valley
Lost River
Rigby
Arco
Nampa
Hailey
Pine
Mayfield
Atomic City
Idaho Falls
Ammon
Swan Valley
Fairfield
Gannett
Carey
Bone
Murphy
Mountain Home
Rockford
Blackfoot
Oreana
Grand View
Sterling
Gray
Glenns Ferry
Gooding
Shoshone
Chesterfield
Hot Springs
Hagerman
Pocatello
Jerome
Minidoka
American Falls
Bancroft
Soda Springs
Buhl
Twin Falls
Rupert
Rockland
Robin
Grace
Castleford
Preston

The Commission members are appointed by the mayor with the consent and approval from the Council. Commission members serve four-year terms. One of the seven members is a City Council member who serves a one-year term. The Commission meets once a month where a majority present represents a quorum. The Airport Commission serves in an advisory role, reviewing policy and providing recommendations to the City Council.

AIRPORT ACCESS

The Airport is accessed by Aviation Way that runs along the airport's southern perimeter. Ustick Road along the east side of the Airport and connects to Aviation Way. East Linden Street runs along the west side of the airport connecting with Aviation Way. Interstate-84 (I-84) passes on the south side of the Airport. The terminal building and transient aircraft apron on the north side of the runway are accessible via Linden Street.

While the runway is oriented in a northwest to southeast manner, for purposes of this document all directional references will be to north, east, south, and west. For example, the terminal building is on the north side of the Airport, Linden Street is to the west, Ustick Road is to the East and Aviation Way is to the south.

LOCAL ECONOMY

Canyon County, Idaho, employs approximately 95,000 people as of 2019. The largest industries in the county include health care and social assistance, retail, and manufacturing. In recent years, the economic base of Caldwell has experienced diversification. New retail and commercial growth have occurred along with a variety of non-agricultural and manufacturing uses.

Canyon County is Idaho's second most populous county with over 186,000 residents with a medium household income of $46,426. Many people are attracted to Canyon County because of the reasonable housing prices, rural lifestyle, and short commute to the city of Boise.

Agriculture makes up most of Canyon County's land. There are approximately 275,000 acres of farmland in the county. According to the 2017 Census of Agriculture by the U.S. Department of Agriculture, the 2,289 farms in Canyon County experienced a total net income of $78.1 million. This averages a net income of $34,000 per farm.

Economic Impact of the Airport

Periodically, ITD will develop an economic impact report regarding airports in the state. The most current economic analysis impact report is from 2020. The economic impact report estimates that EUL accounts for:

- 341 direct jobs,
- $14.1 million in earnings,
- $25.3 million in gross domestic product, and
- $56.1 million in economic output.

Airport Businesses

There are several aviation and non-aviation businesses based at the Airport. **Table 1A** lists the businesses located on airport property. Silverhawk Aviation Academy is a FAR Part 141 flight school and full-service FBO located on the Airport providing fixed-wing and helicopter flight training, self-serve aviation fuel, line services, pilot lounge facilities, aircraft maintenance, aircraft sales, and aircraft storage.

TABLE 1A | Airport Businesses
Treasure Valley Executive Airport

Airport Businesses	Primary Product/Service
Aero Builders	Aeronautical parts, Aviation Maintenance
Air-O-Drome Aviation Inc.	Flight Training, Aircraft Rental
Airport Café	Restaurant
Budell	Flight Training, Charter
Cascade Aircraft Management	GA maintenance, Aircraft Painting and Upholstery
Highland Appraisal	Appraisal, Hangar/Office Rental
Hinkle Aviation	Flight Training, Aircraft Rental
Midfield Aviation	Aircraft Fueling, Aircraft Maintenance, Aircraft Sales
Performance Air	Aircraft Maintenance
Silverhawk Aviation Academy	FBO - Fuel, Aircraft Storage, Flight Training
Sky Down	Sky Diving
Vintage Airframes	Aircraft Restoration

Source: Airport records.

AIRPORT PROPERTY

The Airport property encompasses 532 acres and is located approximately three miles to the southeast of the City of Caldwell central business district. The Airport property is owned by the City of Caldwell.

RECENT AIRPORT DEVELOPMENT

The FAA supports development and maintenance of the Airport primarily through the Airport Improvement Program (AIP). Since the last master plan grant (2009), the Airport has received approximately five million dollars in grants from the FAA. Through these grants, the Airport has resurfaced the runway, improved the taxiways, resurfaced aprons, and conducted a wildlife hazard assessment. **Table 1B** presents the federal grants received since the last master plan was completed in 2010. Runway rehabilitation phase II includes the resurfacing of Runway 12-30 which was completed in the fall of 2018.

TABLE 1B | Federal Grants Since Last Master Plan
Treasure Valley Executive Airport

Fiscal Year	FAA Grant Number	Project Description	Grant Total
2019	31	Update Airport Master Plan	$630,000
2018	30	Runway Rehabilitation Phase II	$1,748,006
2016	29	Runway Rehabilitation, Taxiway Rehabilitation	$165,753
2015	28	Taxiway Lighting Installation, Apron Rehabilitation, Runway Lights Rehabilitation	$1,312,200
2014	27	Taxiway Lighting Installation, Apron Rehabilitation, Runway Lights Rehabilitation	$126,333
2013	26 25	Wildlife Hazard Assessment Apron Rehabilitation, Runway Rehabilitation, Taxiway Rehabilitation	$52,289 $223,158
2012	24	Taxiway Construction, Apron Rehabilitation, Taxiway Rehabilitation	$272,618
2011	23	Taxiway Construction	$77,000
2010	22	Taxiway Construction	$560,521
		TOTAL	**$5,167,878**

Source: https://www.faa.gov/airports/aip/grant_histories/

REGIONAL CLIMATE

Weather conditions are a vital part to the planning and development of an airport. Temperature impacts the recommended length of runways, while wind direction and speed are used to determine the optimal orientation of runway. The percentage of time that visibility is impaired due to cloud coverage or other meteorological conditions influences the need for navigational aids and lighting requirements for airports.

Caldwell, Idaho, is within a transition area between steppe and desert, therefore the climate is semi-arid to arid. Summers are warm and dry, and winters are relatively mild. The area experiences distinct seasonal changes with average highs in the low 90s in the summer to average lows dipping below 32 degrees in the winter. The city averages approximately 12 inches of rainfall and 20 inches of snowfall annually. The mean maximum monthly temperature for the hottest month (July) is 91.2 degrees Fahrenheit. **Table 1C** lists the pertinent climate data for the area.

TABLE 1C | Historic Climate Data
Boise Air Terminal, ID

Period	Average Precipitation (in.)	Mean Max Temp (F)
January	1.2	37.8
February	1.0	44.7
March	1.4	54.6
April	1.2	62.3
May	1.4	71.6
June	0.7	81.3
July	0.3	91.2
August	0.2	89.7
September	0.6	78.8
October	0.8	64.8
November	1.4	48.2
December	1.6	37.5
Total	**11.7**	

Key: In - Inches; F - Fahrenheit

Source: Source: National Oceanic and Atmospheric Administration (NOAA) -Climatography of the United States No. 81 (30-years of data from 1981-2010) as sourced from meteorological station ID: Boise Air Terminal, ID USW00024131

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, the Treasure Valley Executive Airport is included in the *National Plan of Integrated Airport Systems* (NPIAS). On the state level, the Airport is included in the *Idaho State Aviation System Plan* (IASP) - 2010. The most recent local planning document is the Airport Master Plan, which was finalized in 2010 and has a base forecast year of 2008.

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 19,627 public and private aviation facilities in the U.S. The NPIAS identifies 3,321 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 380 primary commercial service airports and 2,941 non-primary general aviation (GA) 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 2019-2023 NPIAS estimates that $35.1 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 $4.66 million in development needs at EUL 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 1D** shows the classification and distribution of the NPIAS airports.

The Treasure Valley Executive Airport is included in the NPIAS as one of 492 regional general aviation airports. Regional airports serve regional and national markets. They typically have high levels of activity with some jet and multiengine propeller aircraft traffic. Regional airports are used heavily by general aviation aircraft and average 90 based aircraft.

TABLE 1D | NPIAS Airport Distribution

Number of Airports	Airport Category	Percent of all Based Aircraft	Percent of Total Operations	Percent of NPIAS Cost
30	Large Hub	0	13.1	23.5
31	Medium Hub	1.7	4.9	10.5
72	Small Hub	4.8	6.9	11.9
247	Nonhub	10.2	10.7	15.2
380	***Primary Subtotal***	**16.7**	**35.6**	**61.1**
88	National - GA	10.5	8.4	5.3
492	Regional - GA	22.3	24.5	12.1
1278	Local - GA	21.3	23.2	14.5
840	Basic - GA	3.4	5.9	6.2
243	Unclassified	1.1	2.3	0
941	***Nonprimary Subtotal***	**58.6**	**64.3**	**38.1**
3,321	**Total NPIAS Airports**	**75.3**	**100**	**99.2**

Note: EUL is a Regional GA airport.

Source: National Plan of Integrated Airport Systems (2019-2023)

The Treasure Valley Executive Airport is further categorized as a reliever airport. These GA airports are located in metropolitan areas and provide pilots with an alternative to using congested commercial service airports or provide general aviation access to the surrounding area. EUL is a reliever to Boise Air Terminal/Gowen Field.

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

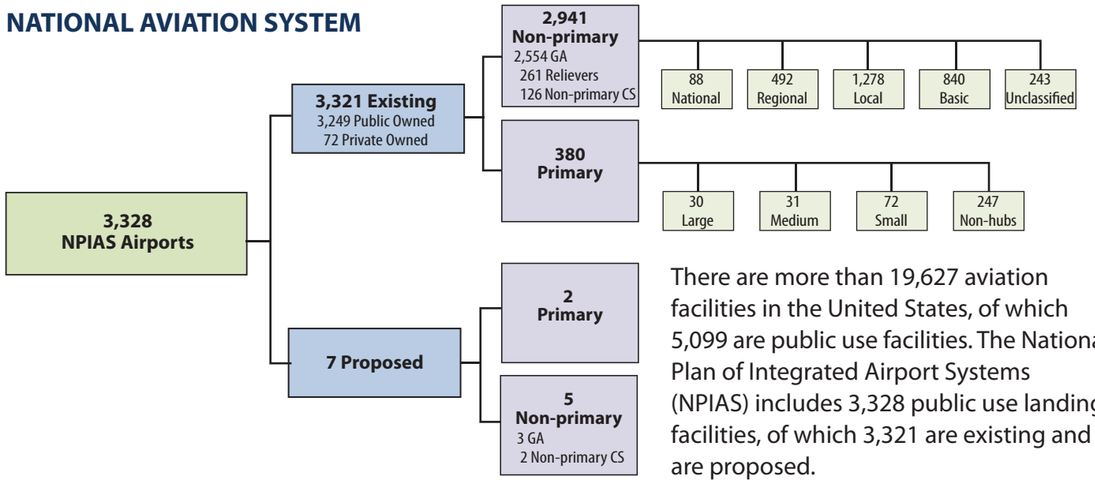
GENERAL AVIATION AIRPORTS

The FAA defines general aviation as the operation of civilian aircraft for purposes other than commercial passenger or freight transport, including personal, business, and instructional flying. General aviation airports are airports that are not classified as commercial service.

General aviation airports in the United States are diverse and their aeronautical functions have evolved over time. Many airports were opened as private landing strips or military airfields in the 1920s, 1930s, and 1940s. Some of these airports evolved into primary airports used today. These airports have evolved differently over the past century to meet the specific needs of the communities they serve and the national aviation system. The United States has the largest and most diverse system of general aviation airports in the world.

The rationale for continued Federal involvement in the system is that GA airports assist communities and their residents in meeting the needs that would otherwise be too costly or impossible to provide. The following are examples that illustrate the societal benefits of general aviation airports.

NATIONAL AVIATION SYSTEM

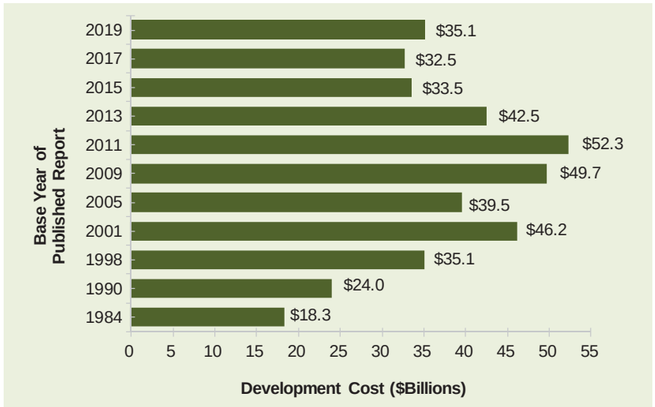


There are more than 19,627 aviation facilities in the United States, of which 5,099 are public use facilities. The National Plan of Integrated Airport Systems (NPIAS) includes 3,328 public use landing facilities, of which 3,321 are existing and 7 are proposed.

GENERAL AVIATION AIRPORTS

GROUP (number of airports)	DESCRIPTION	FUNCTIONS (varies among individual airports)
National (88)	**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 (492)	**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 (1,278)	**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 (840)	**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 243 airports are currently unclassified.



The FAA estimates that over the next five years, (2019-2023), there will be $35.1 billion of airport infrastructure projects eligible for Airport Improvement Program (AIP) funding.

Emergency Preparedness and Response	▪ Aeromedical Flights ▪ Law Enforcement/National Security/Border Security ▪ Emergency Response ▪ Aerial Fire Fighting Support ▪ Emergency Diversionary Airport ▪ Disaster Relief and Search and Rescue ▪ Critical Federal Functions	
Critical Community Access	▪ Remote Population/Island Access ▪ Air Taxi/Charter Services ▪ Essential Scheduled Air Service Cargo	
Other Aviation Specific Functions	▪ Self-Piloted Business Flights ▪ Corporate ▪ Flight Instruction ▪ Personal Flying ▪ Charter Passenger Services ▪ Aircraft/Avionics Manufacturing/Maintenance ▪ Aircraft Storage ▪ Aerospace Engineering/Research	
Commercial, Industrial, and Economic Activities	▪ Agricultural Support ▪ Aerial Surveying and Observation ▪ Low-Orbit Space Launch and Landing ▪ Oil and Mineral Exploration/Survey ▪ Utility/Pipeline Control and Inspection ▪ Business Executive Flight Service ▪ Manufacturing and Distribution ▪ Express Delivery Service ▪ Air Cargo	
Destination and Special Events	▪ Tourism and Access to Special Events ▪ Intermodal Connections (rail/ship) ▪ Special Aeronautical (skydiving/airshows)	

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

The 380 primary airports account for 11.6% of the airports and 61.1% of the total development costs. The 2,941 non-primary airports account for 88.4% of the airports and 38.9% of total development costs.

Development Category	Large	Medium	Small	Nonhub
Safety	$84	$63	$164	$326
Security	$0	$9	$9	$19
Reconstruction	$2,697	$1,771	$1,544	$1,848
Standards	$1,452	$785	$880	$2,038
Environmental	$215	$116	$141	$50
Noise	$381	$37	$67	$65
Capacity	$2,001	$98	$202	$172
Terminal	$1,427	$760	$1,076	$625
Access	$0	$37	$78	$146
New Airport	$0	$0	$0	$0
Other	$0	$0	$1	$43
Total	$8,257	$3,67 6	$4,162	$5,332
Percentage	23.5 5%	10. 48%	11.87 %	15.2 1%

Source: National Plan of Integrated Airport Systems 2019-2023

Airports in the non-primary categories account for $13.3 billion of the $35.1 billion in identified development need over the next five years.

Development Category	National	Regional	Local	Basic	Unclassified	Proposed Airport	Total	% of Costs
Safety	$91	$117	$72	$36	$0	$0	$953	2.72%
Security	$11	$5	$5	$2	$0	$0	$60	0.17%
Reconstruction	$765	$1,811	$1,914	$789	$7	$0	$13,146	37.5 0%
Standards	$825	$1,806	$2,633	$1,146	$0	$0	$11,565	32. 99%
Environmental	$4	$20	$9	$22	$0	$0	$577	1.65%
Noise	$33	$22	$0	$0	$0	$0	$605	1.73%
Capacity	$65	$269	$249	$93	$0	$0	$3,149	8. 98%
Terminal	$18	$71	$82	$40	$0	$0	$4,099	11.69%
Access	$30	$81	$62	$32	$0	$0	$466	1.33%
New Airport	$0	$0	$0	$0	$0	$282	$282	0.80%
Other	$2	$38	$45	$27	$0		$156	0.44%
Total	$1,844	$4,24 0	$5,071	$2,18 7	$7	$282	$35,0 58	100.0%
Percentage	5.26%	12.09%	14.46%	6.24%	0.02%	0.8%	100.0%	

Note: Dollars in millions (2017)

This page intentionally left blank

Aeromedical Flights: Many general aviation airports are used to transport patients in need of specialized medical care. It is faster, easier on the patient, and far less expensive to operate these services from a general aviation airport.

Law Enforcement/National Security: General aviation airports often serve as the base for local, state, or national programs to enforce laws. Many local police forces in large metropolitan areas (for example, the city of Los Angeles) choose to use a general aviation airport to base their helicopter fleets. It is usually less expensive for them to operate from a general aviation airport than from a primary airport where there is more commercial activity. General aviation airports are usually more accessible.

Emergency Diversions: An extensive system of airports provides pilots with immediate alternatives to their intended destination in the event of unexpected bad weather or a flight emergency. The system of general aviation airports is a safety net that reduces accidents by being extensive and available in the event of a mid-air emergency.

Disaster Relief: The extensive system of general aviation airports provides a staging area to support relief efforts wherever they are needed in the event of a disaster.

Tourism and Special Event Access: General aviation airports often enable access to areas otherwise inaccessible for recreation, including remote parks, mountainous areas, and islands. During special events general aviation airports are used by both charter carriers and private operators to supplement facilities and services at primary airports.

STATE AIRPORT PLANNING

The Treasure Valley Executive Airport is included in the Idaho Aviation System Plan (IASP). According to the FAA 5010 database, the current Idaho airport system consists of 75 airports. Airports that are included in the NPIAS are classified within the IASP with their NPIAS role. Non-NPIAS airports go through a process flow-chart to determine their IASP role. The IASP classifies airports in the following manner:

NPIAS Airport Categories

- **Primary:** These airports are commercial service with more than 10,000 annual enplanements (passenger boardings). Depending on the number of annual enplanements, they are further classified as large, medium, small, and non-hub. There are seven airports in the IASP that are classified as a primary airport.

- **National:** These airports are non-primary airports that typically service general aviation aircraft. National airports are located in metropolitan areas near major business centers and support flying throughout the country and the world. These airports provide pilots with attractive alternatives to the busy primary airports. National airports have very high levels of activity with many jets and multiengine propeller aircraft. There are no airports in the IASP that are classified as a national airport.

- **Regional:** These airports serve metropolitan areas with relatively large populations and support regional economies with interstate and some long-distance flying. Regional airports have high levels of activity, including some jets and multiengine propeller aircraft. There are currently three airports in the IASP classified as regional, including EUL.

- **Local**: These airports provide communities with access to local and regional markets. Local airports are situated near larger population centers but not necessarily in metropolitan areas. They can accommodate flight training and emergency services. There are 16 airports classified as local in the IASP.

- **Basic:** These airports fulfill the role of providing private general aviation flying, linking the community with the national airport system, and making other unique contributions. Basic airports have moderate levels of activity and typically serve rural areas. There are 10 airports classified as basic in the IASP.

- **Unclassified:** These airports have limited activity and can be privately or publicly owned. There is one airport that is unclassified in the IASP.

Non-NPIAS Airport Categories

- **Utility:** These airports serve moderate to significant roles in regional economies and accommodate a variety of aviation activities including business, recreational, and safety and security related flying. Utility airports experience moderate levels of activity, including few jet and multiengine aircraft. There are eight utility airports in the IASP.

- **General:** These airports serve a supplemental role in regional economies and primarily serve local communities. General airports accommodate smaller business, recreational, and personal flying. There are 23 general airports identified in the IASP.

- **Backcountry:** These airports experience no jet aircraft activity and little activity in general. Backcountry airports play a significant role in supporting mobility, access, and safety and security in rural areas. There are seven airports classified as backcountry in the IASP.

LOCAL AIRPORT PLANNING

An Airport Master Plan is the primary planning document of an airport's future needs. The Master Plan provides a 20-year look into the future of an airport's development based on aviation demand forecasts. The most recent update to the airport planning document is the 2010 Caldwell Industrial Airport Master Plan. The forecast element of an Airport Master Plan will become less dependable over time due to changes in aviation activity and/or the economy. As a result, the FAA recommends that airports update their master plans every seven to ten years, or as needed, to accommodate any significant changes.

AIRFIELD FACILITIES

Airfield facilities are those which enable aircraft movements between the air and ground such as runways, taxiways, airport lighting, airport markings, and navigational aids to aircraft. **Exhibit 1C** summarizes and depicts airfield facility information superimposed on an aerial photograph for visual reference.

RUNWAY

The Treasure Valley Executive Airport is served by one primary runway. Runway 12-30, oriented in a northwest/southeast manner, is 5,500 feet long and 100 feet wide and constructed of asphalt. The runway was rehabilitated in 2018 and is therefore in excellent condition. The runway has non-precision markings which include the runway designation, threshold bars, centerline stripe, edge striping, and aiming zone markings that are in excellent condition. Runway 30 has a right-hand traffic pattern and Runway 12 has a left-hand traffic pattern. The elevation at the Runway 12 threshold is 2,426 feet and at the Runway 30 threshold it is 2,431 feet.

Runway Markings

Various runway markings are used to provide information to pilots. Runways intended for use by only small aircraft have basic markings. Runways available for larger transport aircraft have more complex markings providing more information (i.e., non-precision). Runways that support instrument approach procedures with both horizontal and vertical guidance (precision approach or CAT-I approaches) have additional markings. Runway 12-30 has non-precision markings that include the threshold markings, runway designators, aiming point, and runway centerline.

Threshold Bar: The threshold bar is a 10-foot-wide white stripe at the end of each runway end that visually designates the runway landing threshold and the end of the runway. Threshold bars are typically associated with precision markings and/or a displaced landing threshold. EUL does not have threshold bars.

Threshold Markings: Runway threshold markings are a series of white stripes 150 feet long and six feet wide. These markings provide a visual grid that alerts pilots to the location of the landing threshold. The total number of threshold markings indicates to pilots the width of the runway. There are eight threshold stripes on each end of Runway 12-30, which is the standard for showing that the runway is 100 feet wide.

Runway Designators: The end of each runway at EUL is marked with a number which indicates the approximate magnetic azimuth of the direction of operation. Runway designators are white with a height of 60 feet.

Centerline and Edge Stripes: The runway centerline is a dashed white line positioned on the centerline of the runway. The runway edge stripes are solid white lines designating the edges of the runway.

Aiming Point Markings: Aiming point markings are used to provide an enhanced visual guidance to pilots when landing. At EUL, these markings consist of two white stripes 150 feet long, 20 feet wide, and spaced 48 feet apart. The aiming point markings are 1,020 feet from both runway end thresholds.

Runway Pavement Strength

The strength rating of runway pavement has traditionally been measured in terms of the number of wheels on each landing gear strut of an aircraft. Additional wheels on each landing gear provides greater dispersal of the aircraft weight, enabling the pavement to withstand heavier aircraft. The strength rating, expressed in pounds, indicates that the pavement can withstand repeated usage by aircraft within that weight limitation and the pavement will experience normal wear and tear. Repeated usage of the runway by aircraft that are heavier than the strength rating will exert greater wear and tear and will shorten the useful life of the pavement.

Aircraft with a single wheel on each landing gear strut are classified as single (S). Two wheels on each landing gear strut is classified as dual (D), and dual tandem wheel (DT) has four tires on the landing gear strut. Runway 12-30 has a pavement strength of 72,000 pounds S and 86,000 pounds D.

The FAA has recently moved to implementing the International Civil Aviation Organization (ICAO) pavement classification number (PCN) for identifying strength of airport pavements. The PCN is a five-part code described as follows:

1) *PCN Numerical Value:* Indicates the load-carrying capacity of the pavement expressed as a whole number. The value is calculated based on several engineering factors such as aircraft geometry and pavement usage.

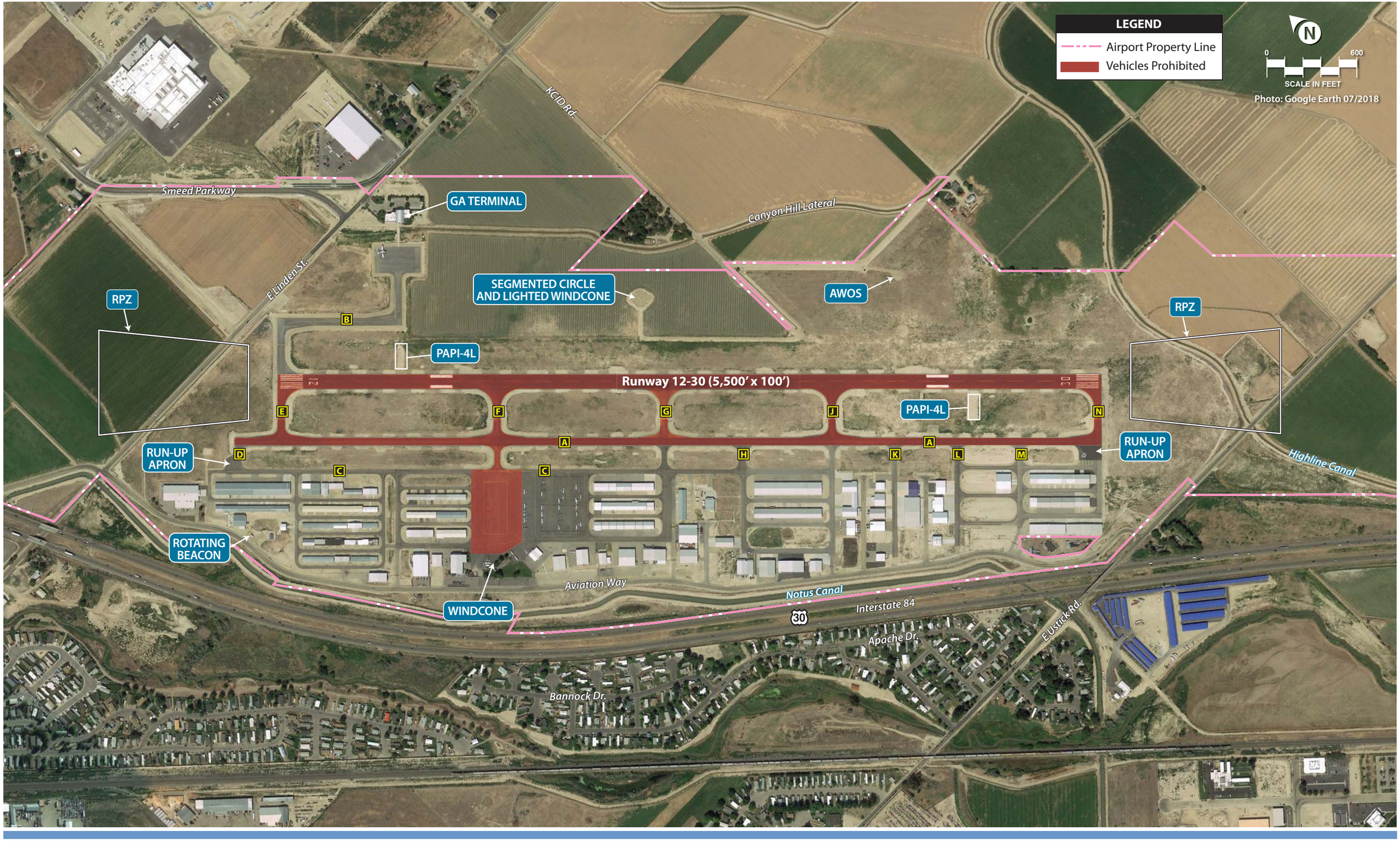
2) *Pavement Type:* Expressed as either R for rigid pavement (most typically concrete) or F for flexible pavement (most typically asphalt).

3) *Subgrade Strength:* Expressed as A (High), B (Medium), C (Low), or D (Ultra Low). A subgrade of A would be considered very strong, like concrete-stabilized clay, and a subgrade of D would be very weak, similar to un-compacted soil.

4) *Maximum Tire Pressure:* Expressed as W (Unlimited/No Pressure Limit), X (High/254 psi), Y (Medium/181 psi), or Z (Low/72 psi), this indicates the maximum tire pressure the pavement can support. Concrete surfaces are usually rated W.

5) *Process of Determination:* Expressed as either T (technical evaluation) or U (physical evaluation), this indicates the method of pavement testing.

The PCN for Runway 12-30 is expressed as 51/F/B/X/T. This means that the underlying pavement value has a load-carrying capacity of 51 (unitless), is flexible (asphalt), is medium subgrade strength, has high allowable tire pressure capability, and was calculated through a technical evaluation.


LEGEND
Airport Property Line
Vehicles Prohibited
N
0
600
SCALE IN FEET
Photo: Google Earth 07/2018
KCID Rd.
Smeed Parkway
GA TERMINAL
Canyon Hill Lateral
E Linden St.
SEGMENTED CIRCLE AND LIGHTED WINDCONE
AWOS
RPZ
RPZ
B
PAPI-4L
Runway 12-30 (5,500' x 100')
12
30
E
F
G
J
PAPI-4L
N
A
A
RUN-UP APRON
D
C
C
H
K
L
M
RUN-UP APRON
Highline Canal
ROTATING BEACON
WINDCONE
Aviation Way
Notus Canal
Interstate 84
30
Apache Dr.
E Ustick Rd.
Bannock Dr.

This page intentionally left blank

TAXIWAYS/TAXILANES

Taxiways are pavement surfaces which provide primary access to runways for taxiing aircraft. Taxilanes provide aircraft access to aircraft parking areas or hangars. Aircraft generally operate at lower speeds on taxilanes than on taxiways.

Taxiway A is a full-length parallel taxiway serving Runway 12-30. Taxiway A is 50 feet wide and separated from the runway centerline by 400 feet. There are five taxiway connectors leading directly to the runway from Taxiway A designated E, F, G, J, and N. These taxiways are 50 feet wide north of Taxiway A and 35 feet wide south of Taxiway A. Taxiway E is the threshold taxiway for Runway 12 and Taxiway N is the threshold taxiway for Runway 30. Taxilane C runs parallel to Taxiway A and is 30 feet wide. There are five connectors from Taxiway A to Taxilane C designated D, H, K, L, and M. These taxiway connectors are 35 feet wide except for Taxiway H which is 50 feet wide. Taxilane C provides access to the GA apron, the hangars, and all other airside facilities. Taxiway B connects to the threshold of Runway 12 and provides access to the terminal apron on the north side of the runway. Taxiway B is 50 feet wide.

Taxiway Markings

Taxiways have various markings to inform pilots of proper movement areas on taxiways and to alert them to what they are approaching.

Taxiway Centerline: These taxiway markings consist of a single continuous six-inch yellow line that visually shows pilots where aircraft should be positioned when taxiing. The taxiways and taxilanes have centerline markings at EUL.

Taxiway Edge: These markings are used to delineate the edge of the taxiway. They are used when the taxiway edge does not correspond with the edge of the pavement and where the full-strength pavement of the taxiway is not readily visible. There are no taxiway edge markings at EUL.

Hold Lines: These markings consist of four yellow lines, two solid and two dashed, spaced six or twelve inches apart, and extending across the width of the taxiway or runway. The solid lines are always on the side where the aircraft must hold. There are hold lines on all taxiways leading to Runway 12-30.

Movement/Non-Movement Area Markings: These markings designate tower-controlled movement areas with a single solid yellow line and a dashed yellow line. There are no movement area markings at EUL; however, the Airport has instituted a local movement area designation for the main apron area, the runway, and Taxiway A, which is intended to limit vehicular traffic.

Surface Painted Location Signs: On taxiways leading directly to runways prior to the hold lines, location signs may be painted to alert pilots that they are about to encounter is the runway. These surface signs have a bright red background with prominent white numbers with the runway designation. EUL does not have this type of surface painted signs.

PAVEMENT CONDITION

The Network Pavement Management System (NPMS) is a system used by ITD to monitor the pavement conditions of airports in Idaho. The system includes data on inventory, current pavement conditions, predicted pavement conditions, recommended global maintenance treatments, and recommended major rehabilitation. Public law 103-305 mandates that any airport that requests federal AIP funding for pavement construction or restoration have a pavement maintenance management system.

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

1. The Federal Aviation Administration's (FAA's) Advisory Circular 150/5380-6C, *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*.

Pavement Condition Index (PCI) values are given by a visual assessment of pavement while following the current FAA Advisory Circular (AC) 150/5380-6C. The values range from 0 (failed) to 100 (good). ITD assesses airport pavements on a rotating three-year cycle.

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.

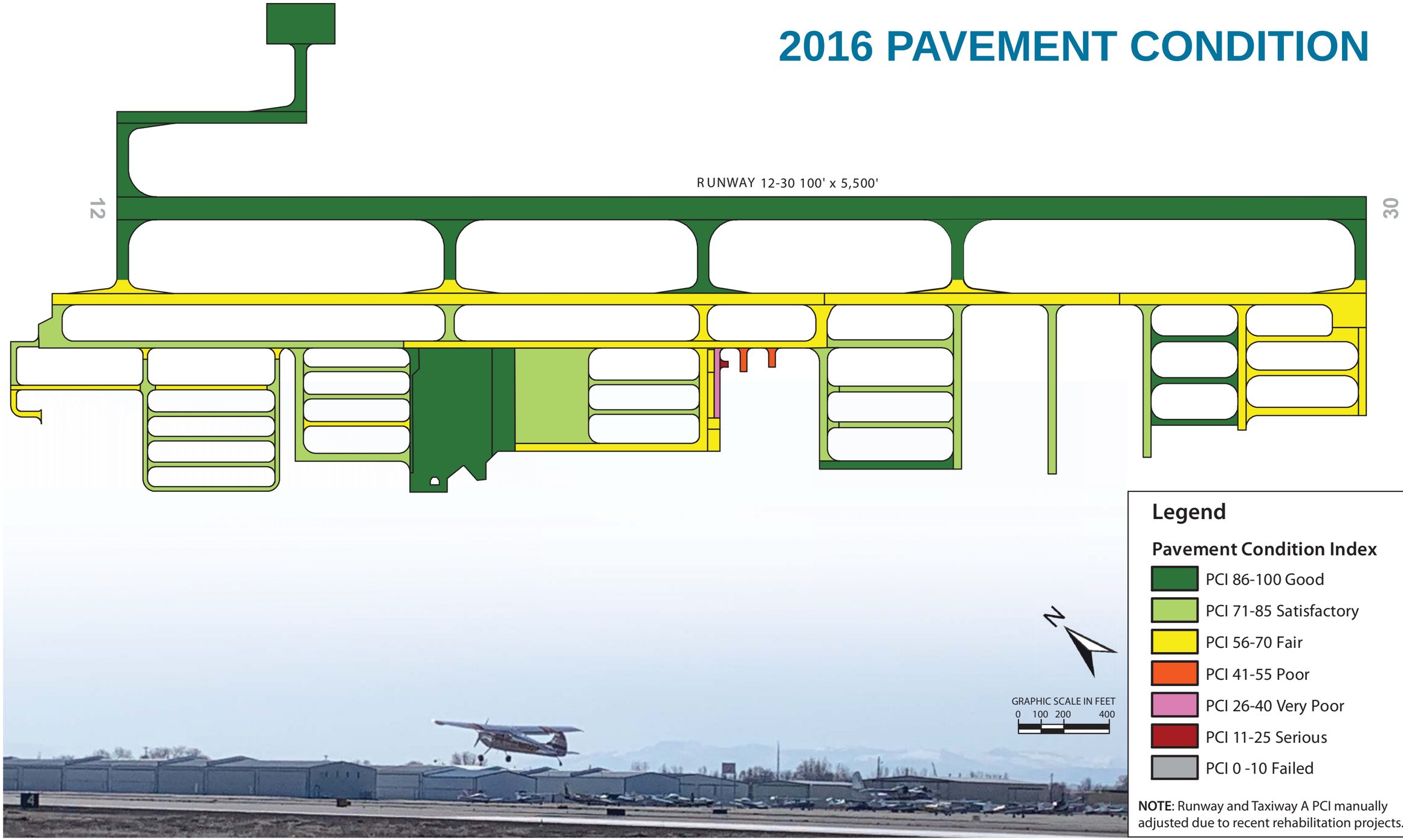
Exhibit 1D shows the current PCI map for EUL. The map has been manually updated to reflect the recent rehabilitation of Runway 12-30 and the planned 2021 rehabilitation of Taxiway A. The primary pavement areas, including Runway 12-30, parallel Taxiway A and the connecting taxiways, range from fair to good condition. The transient apron is in good condition and the local tie-down apron is in satisfactory condition. The terminal apron is in good condition.

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. The lighting systems, categorized by function, are summarized as follows. The Airport owns and maintains all lighting systems and navigational aids.

Identification Lighting: The Airport can be located at night by a rotating beacon. The beacon projects two beams of light that are 180 degrees apart, one white and one green. The rotating beacon is located in the southwest corner of the Airport.

2016 PAVEMENT CONDITION



This page intentionally left blank

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 12-30 is equipped with white medium intensity runway lights (MIRL). The last two thousand feet of the runway in both directions have amber caution zone lights to alert pilots that they are nearing the end of the runway.

Taxiway A and the associated connectors have medium intensity taxiway edge lighting (MITL). Taxiway edge lights are elevated bidirectional lights that are blue in color. These lights are spaced no more than 200 feet apart. The exact spacing is influenced by the layout of the taxiway. As part of the 2020 Taxiway A rehabilitation project, the edge lights will be upgraded to LED. Taxiway B currently has LED edge lights.

The Runway 12 and 30 ends are equipped with threshold lighting to identify the landing threshold. Threshold lighting consists of specially designed light fixtures that are red on one half of the lens and green on the other half of the lens. The green portion of the lights are turned towards landing aircraft and designate the runway landing threshold, while the red portion is visible to aircraft on the runway surface designating the end of the runway.

Visual Glide Slope Approach Aids: Both ends of Runway 12-30 are equipped with precision approach path indicator (PAPI) systems located left of the runway. The PAPI system for Runway 12 is located approximately 800 feet from the threshold, and the PAPI system for Runway 30 is approximately 860 feet from the threshold. The PAPI-4L system for the Airport consists of four light boxes that illuminate either a red or white light that the pilot interprets to determine if they are on the appropriate glide path to the runway. The PAPI-4L systems are set to the standard glide path of 3.00 degrees.

Runway End Identifier Lights (REIL): Runway end identifier lights are strobe lights that provide rapid identification of the runway threshold for up to 20 miles.

After-Hours Lighting: Pilots can activate the MIRL utilizing the pilot-controlled lighting (PCL) system. The PCL will activate the runway edge lights on the airfield via a series of clicks with their microphone transceiver on the common traffic advisory frequency (CTAF) frequency 122.7 MHz. The PAPI's are on 24-hours per day with a photocell control for day v. night brightness.

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 an 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.

Mandatory Instruction Signs: These signs denote an entrance to a runway, critical area, or prohibited areas on an airport. They can be used for holding positions, runway-runway intersections, runway-taxiway intersections, runway approach areas, and instrument landing system (ILS) critical areas. These signs have white inscription with a red background.

Location Signs: These signs identify the runway or taxiway in which the aircraft is located. Location signs have yellow inscription with a black background.

Direction Signs: These signs indicate the direction of other taxiways and runways out of an intersection. Direction signs have black inscription with a yellow background. These signs always contain arrows oriented in the direction of the required turn.

Destination Signs: These signs indicate the general direction to a location on the Airport. Inbound destination signs are used to indicate the general direction to an airport facility. Outbound destination signs indicate a general direction to a runway. Destination signs have black inscription with a yellow background and an arrow oriented in the appropriate direction.

Information Signs: These signs are used to convey information necessary to operate on the airfield and have black inscription with a yellow background.

Runway Distance Remaining Signs: These signs are located on the side of the runway and indicate to pilots the remaining available runway for takeoff or landing. These signs are placed at 1,000-foot intervals in a descending order. Typically, these signs have white numbers on a black background.

WEATHER AND COMMUNICATION AIDS

Wind Indicators: EUL is equipped with two windsocks. The windsocks provide wind direction and intensity to pilots. The primary windsock is lighted and located north of the midpoint of Runway 12-30. This windsock is situated inside a segmented circle, which provides traffic pattern information to pilots. The supplemental windsocks are located south of the transient apron at the fuel farm. There is also a ground level wind indicator between Taxiways A and C immediately north of Taxiway J.

Automated Weather Observation System (AWOS): An AWOS is an airport weather reporting system that provides continuous information such as wind speed, wind direction, temperature, cloud height, visibility, precipitation, dew point, and lightning detection. The Airport is served by an AWOS with a frequency of 135.075 or by calling (208) 454-3953.

Common Traffic Advisory Frequency (CTAF): A CTAF is the frequency that pilots used to communicate their intensions to other pilots near the Airport. The Airport CTAF frequency is 122.7 MHz. In September 2021, Airport staff submitted a request to the FCC to change the CTAF for Caldwell to 123.0 MHz.

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 EUL include a very high frequency omnidirectional range (VOR) facility and the global positioning system (GPS).

VOR: The 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. The Boise VORTAC is located approximately 30 nautical miles (nm) southeast.

GPS: The global positioning system (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 pilots are 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.

ADS-B: Automatic Dependent Surveillance-Broadcast is a newer international technology that will eventually replace radar as the primary method for Air Traffic Control (ATC) and separation of aircraft. ADS-B allows equipped aircraft and ground vehicles to broadcast their identification, position, altitude, and velocity to other aircraft and ATC. This is called ADS-B Out. Being able to receive this information is called ADS-B In.

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 1E**. 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.

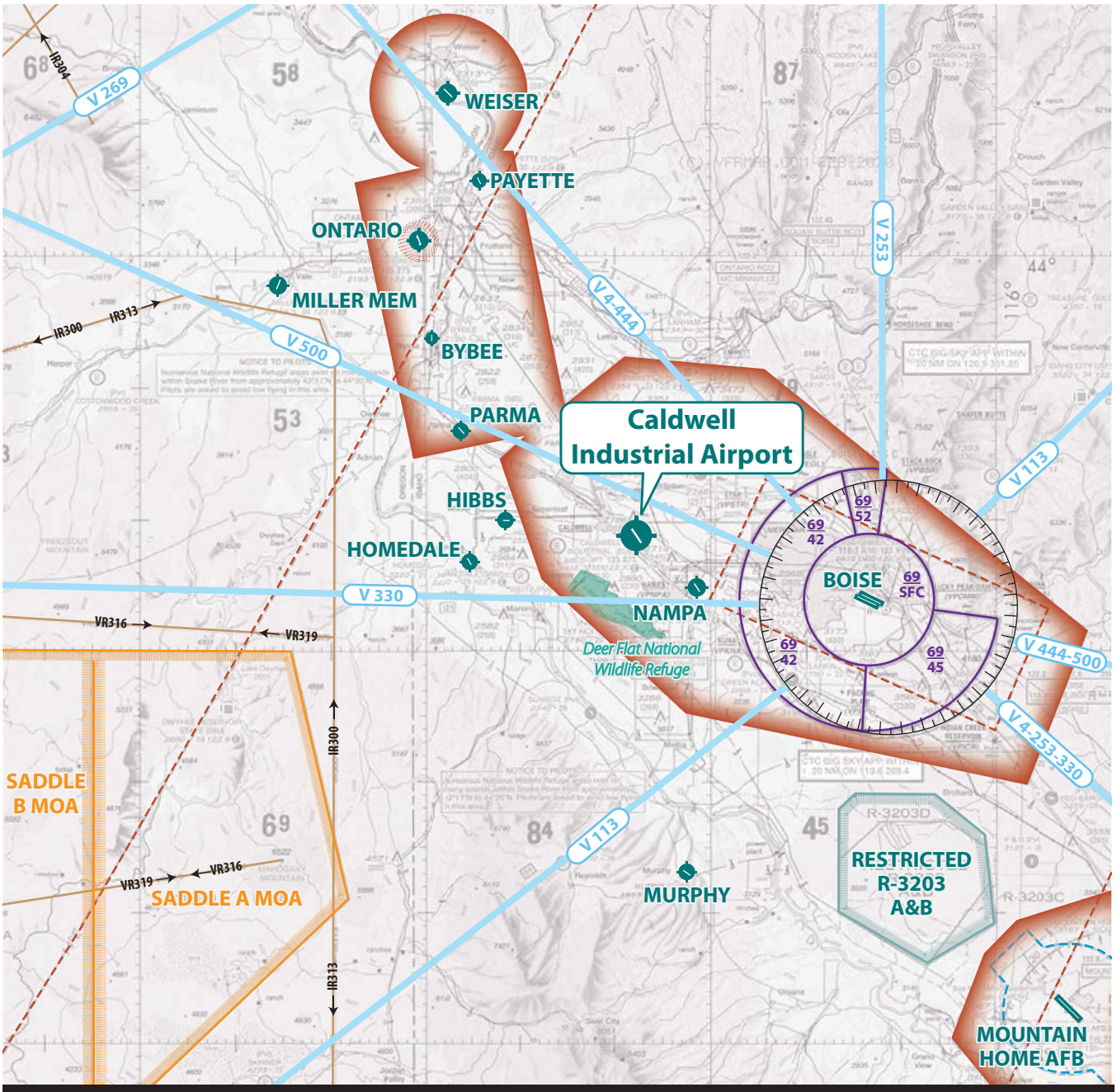
Class A Airspace: Class A airspace includes all airspace from 18,000 feet mean sea level (MSL) to flight level (FL) 600 (60,000 feet MSL). This airspace is designated in Federal Aviation Regulations (F.A.R.) Part 71.193 for positive control of aircraft. The Positive Control Area (PCA) allows flights governed only under instrument flight rules (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 Salt Lake City International Airport approximately 270 nm southeast of EUL in Salt Lake City, Utah. 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 visual flight rules (VFR). There is no Class B airspace that overlies EUL.

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 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-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 ATC. Aircraft may fly below the floor of the Class C airspace, or above the Class C airspace ceiling without establishing communication with ATC. Boise Air Terminal/ Gowen Field is the nearest Class C airspace located approximately 30 nm from EUL.

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. This airspace constitutes a cylinder with a designated horizontal radius from the airport (4.2-mile), extending from the surface up to a vertical limit (3,200 feet) above the airport elevation. When the airport's ATCT is closed, the Class D airspace reverts to Class G airspace up to but not including 700 feet above ground level (AGL), at which point the airspace becomes Class E. The closest Class D airspace is Mountain Home Air Force Base 49 nm southeast of EUL.



LEGEND

- Airport with hard-surfaced runways 1,500' to 8,069' in length
- Compass Rose
- Victor Airways
- Class E (sfc) Airspace
- Terminal Radar Service (TRSA)
- Wildlife Refuge
- Class E (sfc) Airspace with floor 700 ft. above surface that laterally abuts 1200 ft. or higher Class E airspace
- Alert Area - Military Operations Area
- Prohibited, Restricted, and Warning Areas
- Class D Airspace
- Non-directional Radio Beacon (NDB)
- Military Training Routes

NORTH

NOT TO SCALE

Source:
Salt Lake City Sectional Charts, US Department of Commerce, National Oceanic and Atmospheric Administration, March 26, 2020

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 flights can only be conducted if minimum visibility and cloud ceilings exist. The Treasure Valley Executive Airport is overlaid by Class E airspace beginning at 700 feet above the surface.

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 (700 to 1,200 feet AGL) for EUL.

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 prohibited areas, restricted areas, warning areas, military operation areas, alert areas, and controlled firing areas.

The following discusses special use airspace that may impact pilots operating around EUL.

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 Saddle A and B MOA is the closest, located southwest of EUL.

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 EUL, including V500 which travels north of the Airport northwest to southeast.

Restricted Area: Restricted areas contain airspace identified by an area on the surface which the flight of aircraft, while not wholly prohibited, is subject to restrictions. Activities within these areas must be confined because of their nature or limitations imposed upon aircraft operations that are not a part of those activities or both. Restricted areas denote the existence of unusual, often invisible, hazards to aircraft such as artillery firing, aerial gunnery, or guided missiles. The nearest restricted area is R-3203 A & B located approximately 20 nm southeast of the Airport.

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

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 are currently two published instrument approach procedures for the 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.

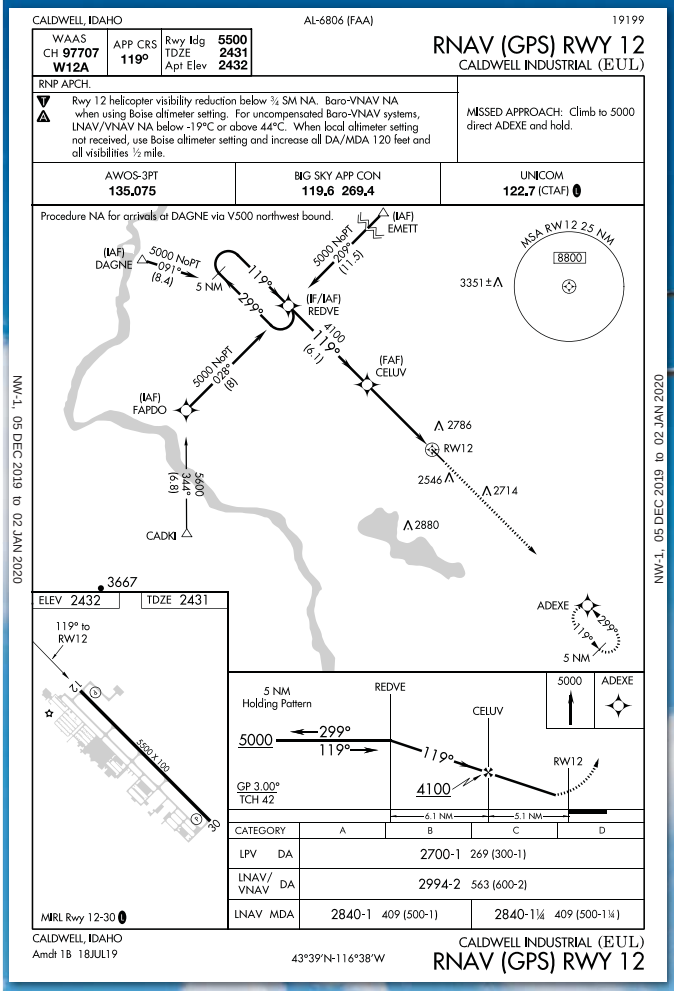
The capability of an instrument approach procedure is defined by the visibility and cloud ceiling minimums associated with the approach. Visibility minimums define the horizontal distance the pilot must be able to see to complete the approach. Cloud ceilings define the lowest level a cloud layer (defined 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 1E** summarizes FAA-approved and published instrument approach procedures, including associated weather minimums for the Treasure Valley Executive Airport.

Instrument approaches based on GPS have become very common across the country. GPS is inexpensive, as it does not require a significant investment in ground-based systems by an airport or FAA. Both Runways 12 and 30 have GPS RNAV approach visibility minimums as low as 1-mile. This is the lowest visibility minimums for the Airport. The current instrument approach plates are shown on **Exhibit 1F**.

LOCAL CONDITIONS AND PROCEDURES

Various pilot information services identify potential obstructions or limitations on or near the Airport of which pilots should be aware. These include:

- 363-foot radio tower located 1.4 miles north.
- Preferred helicopter traffic pattern southwest of runway.
- Transient ramp preferred for use by training helicopters for launch and recovery.
- Preferred parking for jet and turboprop on terminal apron.
- Runway 12 is the calm wind runway.


CALDWELL, IDAHO
AL-6806 (FAA)
19199
WAAS CH 97707 W12A
APP CRS 119°
Rwy Idg 5500
TDZE 2431
Apt Elev 2432
RNAV (GPS) RWY 12
CALDWELL INDUSTRIAL (EUL)
RNP APCH.
Rwy 12 helicopter visibility reduction below ¾ SM NA. Baro-VNAV NA when using Boise altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C or above 44°C. When local altimeter setting not received, use Boise altimeter setting and increase all DA/MDA 120 feet and all visibilities ½ mile.
MISSED APPROACH: Climb to 5000 direct ADEXE and hold.
AWOS-3PT 135.075
BIG SKY APP CON 119.6 269.4
UNICOM 122.7 (CTAF)
Procedure NA for arrivals at DAGNE via V500 northwest bound.
(IAF) DAGNE
(IAF) EMETT
(IF/IAF) REDVE
(FAF) CELUV
(IAF) FAPDO
CADKI
RW12
MSA RW12 25 NM
8800
3351±
ELEV 2432
TDZE 2431
3667
119° to RW12
5500 X 100
5 NM Holding Pattern
5000
299°
119°
4100
GP 3.00°
TCH 42
ADEXE
5 NM
CATEGORY A B C D
LPV DA 2700-1 269 (300-1)
LNAV/VNAV DA 2994-2 563 (600-2)
LNAV MDA 2840-1 409 (500-1) 2840-1¼ 409 (500-1¼)
MIRL Rwy 12-30
CALDWELL, IDAHO
Amdt 1B 18JUL19
43°39'N-116°38'W
CALDWELL INDUSTRIAL (EUL)
RNAV (GPS) RWY 12
NW-1, 05 DEC 2019 to 02 JAN 2020

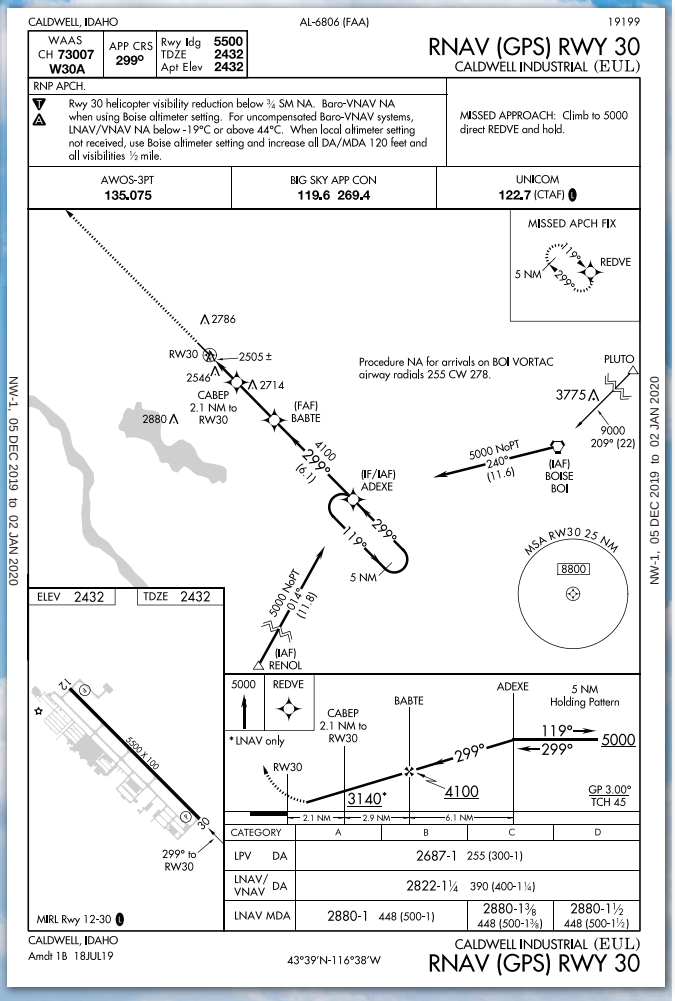

CALDWELL, IDAHO
AL-6806 (FAA)
19199
WAAS CH 73007 W30A
APP CRS 299°
Rwy Idg 5500
TDZE 2432
Apt Elev 2432
RNAV (GPS) RWY 30
CALDWELL INDUSTRIAL (EUL)
RNP APCH.
Rwy 30 helicopter visibility reduction below ¾ SM NA. Baro-VNAV NA when using Boise altimeter setting. For uncompensated Baro-VNAV systems, LNAV/VNAV NA below -19°C or above 44°C. When local altimeter setting not received, use Boise altimeter setting and increase all DA/MDA 120 feet and all visibilities ½ mile.
MISSED APPROACH: Climb to 5000 direct REDVE and hold.
AWOS-3PT 135.075
BIG SKY APP CON 119.6 269.4
UNICOM 122.7 (CTAF)
MISSED APCH FIX
5 NM
REDVE
Procedure NA for arrivals on BOI VORTAC airway radials 255 CW 278.
PLUTO
RW30
2505±
2546
2714
2786
2880
CABEP 2.1 NM to RW30
(FAF) BABTE
4100
299°
(6.1)
(IF/IAF) ADEXE
(IAF) BOISE BOI
5000 NoPT 240° (11.6)
5000 NoPT 314° (11.8)
(IAF) RENOL
MSA RW30 25 NM
8800
ELEV 2432
TDZE 2432
299° to RW30
5500 X 100
5000
REDVE
ADEXE
BABTE
5 NM Holding Pattern
119°
299°
5000
* LNAV only
3140*
GP 3.00°
TCH 45
2.1 NM
2.9 NM
6.1 NM
CATEGORY A B C D
LPV DA 2687-1 255 (300-1)
LNAV/VNAV DA 2822-1¼ 390 (400-1¼)
LNAV MDA 2880-1 448 (500-1) 2880-1⅜ 448 (500-1⅜) 2880-1½ 448 (500-1½)
MIRL Rwy 12-30
CALDWELL, IDAHO
Amdt 1B 18JUL19
43°39'N-116°38'W
CALDWELL INDUSTRIAL (EUL)
RNAV (GPS) RWY 30
NW-1, 05 DEC 2019 to 02 JAN 2020

TABLE 1E | Instrument Approach Procedures
Treasure Valley Executive Airport

	WEATHER MINIMUMS BY AIRCRAFT TYPE			
	Category A	Category B	Category C	Category D
RNAV (GPS) Runway 12				
LPV MDA	269'/1-mile	269'/1-mile	269'/1-mile	269'/1-mile
LNAV/VNAV DA	563'/2-mile	563'/2-mile	563'/2-mile	563'/2-mile
LNAV MDA	409'/1-mile		409'/1¼-mile	
RNAV (GPS) Runway 30				
LPV DA	255'/1-mile			
LNAV/VNAV DA	390'/-1¼mile			
LNAV MDA	448'/1-mile		448'/1 ⅜-mile	448'/1 ½-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)
LP - Localizer Performance (no 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 August, 2019)

RUNWAY USE AND TRAFFIC PATTERNS

The Airport elevation is 2,432 feet above MSL. Traffic pattern altitude (TPA) is 1,000 feet AGL for light aircraft and 1,500 feet AGL for high performance aircraft. Runway 12 is the prevailing runway and the calm wind runway. Helicopters are instructed to utilize Taxiway C and fixed wing aircraft are to use Taxiway A. There is frequent parachute and ultralight activity in the area. The Airport has a non-standard right-hand traffic pattern for Runway 30 and a standard left-hand traffic pattern for Runway 12. The Runway 30 traffic pattern is to keep aircraft away from the more populated areas of the city to the west.

REGIONAL AIRPORTS/AIRPORT SERVICE AREA

The service area for an airport is a generalized geographical area from which an 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. There can be different sized service areas for each aviation segment, such as commercial service and general aviation. For this planning effort, the service area for the Airport is Canyon County.

The service area for an airport may be limited by its proximity to other airports providing a similar level of service. Nampa Municipal Airport likely limits EUL's service area to the south. Weiser Municipal Airport limits the service area to the north. Boise Air Terminal/Gowen Field limits the service area to the east.

The Treasure Valley Executive Airport has the longest runway length (5,500 ft) out of the five non-commercial service airports in the surrounding area. The airport has the most based aircraft at 400 and the most activity with an estimated 148,000 annual operations in 2019. Boise Air Terminal/Gowen Field is the only commercial service airport in the service area and has the longest runway at 9,763 ft and the lowest visibility minimums. **Table 1F** presents information for those public-use airports in proximity to EUL.

TABLE 1F | Area Airports

Airport	Nautical Miles/ Direction from EUL[1]	FAA Service Level[2]	Based Aircraft[1]	Annual Operations[1]	Longest Runway (ft.)[1]	Lowest Visibility Minimum[1]
Caldwell Industrial	**-**	**GA-Regional**	**387**	**147,325**	**5,500**	**1-mile**
Nampa Municipal	6 /SE	GA-Local	300	72,000	5,000	⅞-mile
Emmett Municipal	13/NE	NA	21	12,000	3,307	NA
Boise Air Terminal	19/E	Small Hub	269	137,459	9,763	½-mile
Ontario Municipal	28/NW	GA-Local	32	12,930	5,006	1-mile
Payette Municipal	29/NW	NA	15	5,500	3,534	NA
Weiser Municipal	37/N	GA-Local	47	5,150	4,000	1¼-mile

Sources: [1]www.airnav.com; [2]NPIAS

LANDSIDE FACILITIES

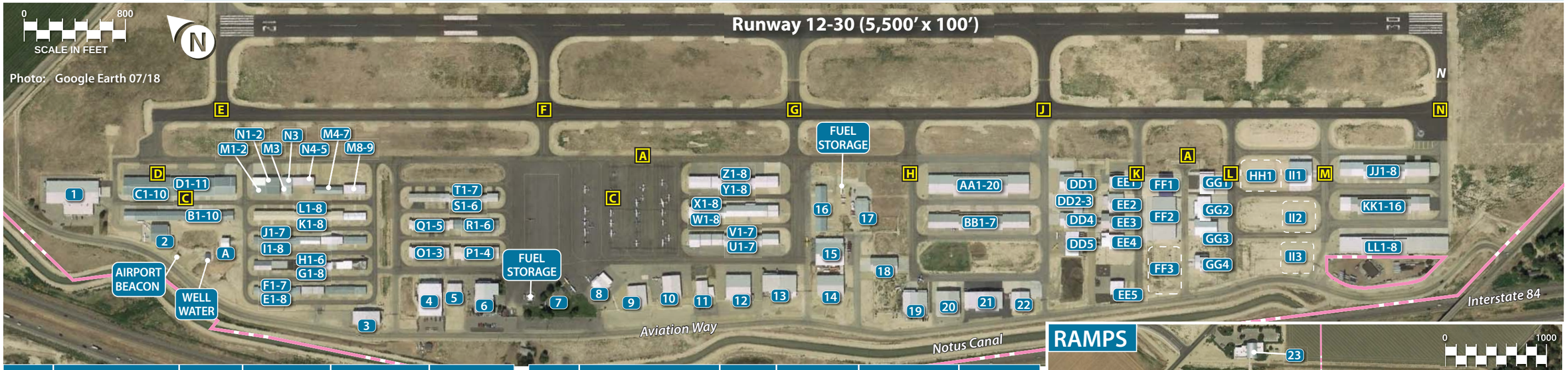
Landside facilities support the aircraft and pilot/passenger transition between air and ground. Typical landside facilities include the passenger terminal complex, on-airport buildings and hangars, general aviation facilities, and support facilities (i.e., fuel storage, vehicle parking, roadway access,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

GENERAL AVIATION TERMINAL

The GA passenger terminal includes the terminal building and landside facilities such as access roads and vehicle parking. Hubler Terminal, located on the north side of the Airport, is a single-level building that includes staff offices, a pilot lounge, conference rooms by reservation, showers, and office spaces to rent. The building is approximately 9,000 square feet and is meant to accommodate transient pilots and passengers flying in on turboprop and jet aircraft. Parking for the terminal is located directly adjacent of the main terminal building on the north side. The parking lot encompasses approximately 18,000 square feet and provides 31 parking spaces.

AIRCRAFT APRON CHARACTERISTICS

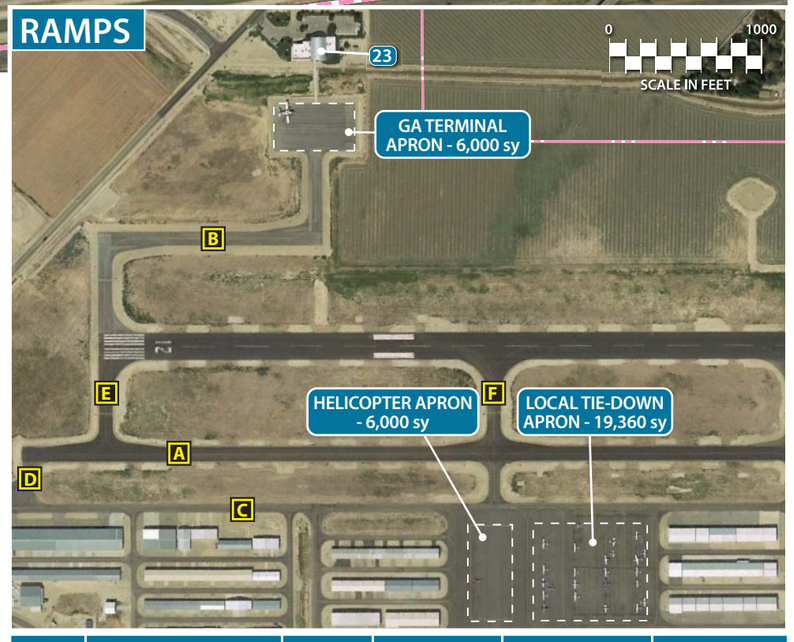
Aircraft aprons are large, paved areas utilized for parking based and transient aircraft. **Exhibit 1G** shows the location of the various aircraft aprons at the Airport. **Table 1G s**ummarizes the aircraft apron characteristics.



HANGAR ID	BUILDING TYPE	TOTAL SF	SF FOR AIRCRAFT (EST.)	AIRCRAFT PARKING SPACES (EST.)	MAINTENANCE /OFFICE
A	Box Hangar	1,600	1,360	1	240
B1-10	Box Hangar	19,600	16,660	10	2,940
C1-10	Box Hangar	20,000	17,000	10	3,000
D1-11	Box Hangar	20,000	17,000	11	3,000
E1-8	T-Hangar	10,000	8,500	8	1,500
F1-7	T-Hangar	10,000	8,500	7	1,500
G1-8	T-Hangar	10,000	8,500	8	1,500
H1-6	Box Hangar	10,000	8,500	6	1,500
I1-8	Box Hangar	10,000	8,500	8	1,500
J1-7	Box Hangar	10,000	8,500	7	1,500
K1-8	Box Hangar	10,000	8,500	8	1,500
L1-8	Box Hangar	10,000	8,500	6	1,500
M1-2	Box Hangar	4,800	4,080	2	720
M3	Box Hangar	1,600	1,360	1	240
M4-7	T-Hangar	4,000	3,400	4	600
M8-9	Box Hangar	4,000	3,400	2	600
N1-2	Box Hangar	4,800	4,080	2	720
N3	Box Hangar	1,600	1,360	1	240
N4-5	Box Hangar	4,000	3,400	2	600
O1-3	Box Hangar	8,600	7,310	3	1,290
P1-4	Box Hangar	10,000	8,500	4	1,500
Q1-5	Box Hangar	8,000	6,800	5	1,200
R1-6	T-Hangar	8,000	6,800	6	1,200
S1-6	T-Hangar	8,000	6,800	6	1,200
T1-7	T-Hangar	8,000	6,800	7	1,200
U1-7	Box Hangar	10,000	8,500	7	1,500
V1-7	Box Hangar	10,000	8,500	7	1,500
W1-8	Box Hangar	10,000	8,500	8	1,500
X1-8	Box Hangar	10,000	8,500	8	1,500
Y1-8	Box Hangar	10,000	8,500	8	1,500
Z1-8	Box Hangar	10,000	8,500	8	1,500
AA1-20	Box Hangar	34,500	29,325	20	5,175
BB1-7	Box Hangar	27,600	23,460	14	4,140
DD1	Box Hangar	6,800	5,780	4	1,020
DD2-3	Box Hangar	4,000	3,400	2	600

HANGAR ID	BUILDING TYPE	TOTAL SF	SF FOR AIRCRAFT (EST.)	AIRCRAFT PARKING SPACES (EST.)	MAINTENANCE /OFFICE
DD4	Box Hangar	6,800	5,780	4	1020
DD5	Box Hangar	6,500	5,525	4	975
EE1	Box Hangar	3,500	2,975	2	525
EE2	Box Hangar	5,600	4,760	3	840
EE3	Box Hangar	6,000	5,100	4	900
EE4	Box Hangar	5,600	4,760	3	840
EE5	Box Hangar	2,800	2,380	2	420
FF1	Box Hangar	6,700	5,695	2	1,005
FF2	Conventional Hangar	20,000	17,000	12	3,000
FF3	Conventional Hangar	9,000	7,650	5	1,350
GG1	Box Hangar	6,000	5,100	4	900
GG2	Box Hangar	6,700	5,695	4	1,005
GG3	Box Hangar	7,000	5,950	4	1,050
GG4	Box Hangar	3,600	3,060	2	540
HH1	Conventional Hangar	12,000	10,200	7	1,800
II1	Box Hangar	10,000	8,500	6	1,500
II2	Box Hangar	10,000	8,500	6	1,500
II3	Box Hangar	4,000	3,400	2	600
JJ1-8	Box Hangar	24,000	20,400	15	3,600
KK1-16	Box Hangar	26,000	22,100	16	3,900
LL1-8	Conventional Hangar	28,000	23,800	17	4,200
1	Box Hangar	27,200	5,000	2	22,200
2	Box Hangar	5,600	4,760	2	840
3	Box Hangar	6,250	5,313	4	938
4	Conventional Hangar	16,500	14,025	10	2,475
5	Box Hangar	5,000	4,250	2	750
6	Conventional Hangar	10,800	9,180	7	1,620
7	Restaurant	2,700	0	0	2,700
8	Box Hangar	3,600	2,100	2	1,500
9	Conventional Hangar	7,200	6,120	4	1,080
10	Conventional Hangar	8,000	6,800	5	1,200
11	Box Hangar	3,700	3,100	2	600
12	Conventional Hangar	12,100	10,285	7	1,815
13	Conventional Hangar	10,500	8,925	6	1,575
14	Conventional Hangar	10,800	0	0	10,800

RAMPS



HANGAR ID	BUILDING TYPE	TOTAL SF	SF FOR AIRCRAFT (EST.)	AIRCRAFT PARKING SPACES (EST.)	MAINTENANCE /OFFICE
15	Conventional Hangar	10,800	9,180	7	1,620
16	T-Hangar	10,400	8,840	9	1,560
17	Box Hangar	5,000	4,250	3	750
18	Box Hangar	5,000	1,500	1	3,500
19	Box Hangar	5,600	4,760	3	840
20	Conventional Hangar	8,500	7,225	5	1,275
21	Conventional Hangar	13,000	11,200	8	1,800
22	Box Hangar	6,000	5,500	4	500
23	Terminal Building	9,000	0	0	9,000
TOTAL		762,550	607,718	438	154,833

This page intentionally left blank

TABLE 1G | Aircraft Ramp Characteristics
Treasure Valley Executive Airport

Location	Apron Area for Aircraft Parking (s.y.)	Total Apron Area Including Taxilanes (s.y.)	Positions/ Aircraft Size
Helicopter Apron	6,000	13,000	12/small
Local Tie-down Apron	19,360	26,000	56/small
Terminal/Transient Apron	6,000	6,000	6/large
Total Apron Area	**31,360**	**45,000**	
		Total Small Aircraft Positions	**68**
		Total Large Aircraft Positions	**6**
		Total Aircraft Positions	**74**

Source: Coffman Associates Analysis

There are 45,000 square yards (sy) of aircraft apron parking space on the Airport. The local general aviation apron encompasses approximately 26,000 square yards of pavement and has 56 small aircraft parking spaces. The transient apron, west of the local tie-down apron, encompasses 13,000 square yards of pavement and has 12 small aircraft/helicopter parking positions. This apron is primarily utilized by the training helicopters based at the Airport. The terminal apron, located on the northern portion of the airfield, is approximately 6,000 square yards and can accommodate six large aircraft.

RUN-UP APRONS

Run-up aprons are typically located adjacent to the ends of runways near the threshold. Operators of piston powered aircraft will use the run-up aprons to perform final preflight engine run-ups and checks. These are also utilized by control tower personnel to temporarily hold aircraft prior to takeoff. There are two run-up aprons on the airfield located on Taxiway D and Taxiway N.

AIRCRAFT HANGARS

It is important to identify 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. There is approximately 745,000 square feet of total hangar space and an estimated 602,618 square feet dedicated for aircraft storage, providing approximately 391 aircraft parking spaces at the Airport. It is also estimated there is an additional 154,000 square feet of aircraft maintenance or office space.

The Airport has a few different classifications of hangars for aircraft storage. T-hangars are typically a single structure with multiple individual aircraft storage units. T-hangars can also be a single stand-alone structure, typically in the shape of a "T," which are often portable. Box hangars are slightly larger than T-hangars and are square or rectangular in shape. Conventional hangars are larger clear-span hangars that are typically larger than 6,000 square feet. Conventional hangars are often utilized for aviation businesses or bulk aircraft storage. **Table 1H** summarizes the hangar types and sizes at the Airport.

TABLE 1H | Hangar Storage Capacity
Treasure Valley Executive Airport

Hangar Type	Estimated Square Footage	Estimated Aircraft Positions
Box Hangars	505,250	245
T-Hangars	68,400	55
Conventional	171,200	91
Total	**744,850**	**391**

Source: Airport records/Coffman Associates analysis

FUEL STORAGE

The Airport has both AvGas (100 LL) and Jet A aviation fuels available. **Table 1J** summarizes the fuel storage capacity. There are 25,000 gallons of capacity for AvGas and 14,000 gallons capacity for Jet A.

Silverhawk Aviation owns a 12,000 gallon above ground AvGas tank and two AvGas fuel trucks with a capacity of 500 gallons each. They own a 12,000 gallon above ground Jet A tank and one Jet A fuel truck with a capacity of 2,000 gallons. Midfield Aviation owns a 12,000 gallon above ground AvGas tank.

TABLE 1J | Fuel Storage Capacity
Treasure Valley Executive Airport

Storage Type	Capacity (gal.)	Fuel Type	Operator
Static Above Ground Tank/Self-serve	12,000	AvGas	Silverhawk Aviation
Static Above Ground Tank	12,000	Jet A	Silverhawk Aviation
Mobile Fuel Truck	2,000	Jet A	Silverhawk Aviation
Mobile Fuel Truck	500	AvGas	Silverhawk Aviation
Mobile Fuel Truck	500	AvGas	Silverhawk Aviation
Static Above Ground Tank/Self-serve	12,000	AvGas	Midfield Aviation
Total Capacity	***39,000 gal.***		
Total AvGas	*25,000 gal.*		
Total Jet A	*14,000 gal.*		

Source: Airport records

SECURITY FENCING

The airfield is equipped with six-foot chain-link security fencing topped with three strands of barbed/razor wire. The fencing currently extends along the entirety of Aviation Way, wrapping around the east and west sides of the Airport, terminating just past the extended runway centerline adjacent Linden Street and Ustick Road. Six access gates are placed along Aviation Way. The north side and portions of the east and west sides of the airfield is not fenced.

Utilities

Water and sanitary sewer services is provided by the City of Caldwell. There are several internet service providers servicing the Airport. Intermountain Gas Company provides natural gas services.

AIRPORT DOCUMENTS

There are several additional documents that the Airport maintains. The following briefly discusses each of these documents.

Minimum Standards and Rules and Regulations: This document outlines the minimum requirements for potential tenants and business operators. The standards outlined in this document are intended to encourage and ensure the provision of adequate services and facilities, economic health, and orderly development of aviation and related aeronautical activities.

Spill Prevention, Control, and Countermeasures Plan: Airport operators are responsible for following local laws and regulations pertaining to spill prevention.

HISTORICAL AERONAUTICAL ACTIVITY

An important aspect of the master planning process is the documentation of activity levels for various aviation demands. For EUL, this will 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. It is recommended to airports that their based aircraft be counted and uploaded to a national database. Only active aircraft (those that fly at least one hour per year), and aircraft based at an airport for at least six months of the year are counted as based. Currently, there are 400 aircraft based at the Airport.

There are 352 single-engine piston aircraft, 20 multi-engine piston, three turboprops, three jets, and 22 helicopters based at EUL.

AIRCRAFT OPERATIONS

Aircraft operations, being a take-off or landing, are classified as either local or itinerant. Local operations may consist of aircraft training operations conducted within the Airport traffic pattern or based aircraft flying for either personal or business use. Itinerant operations are arriving or departing aircraft that are not based and have an origin or destination away from the Airport. Aircraft operations are further subclassified 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, and 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. 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. Most of the general aviation activity is by piston engine aircraft. These operators perform both local and itinerant operations.

Military operations are by military aircraft and can be either local or itinerant in nature. There are no local military operations at the Airport.

Due to the absence of an airport traffic control tower (ATCT) at the Airport, it can be difficult to maintain an accurate count of the Airport's operations. An estimated account of annual activity is available via the FAA Terminal Area Forecast (TAF) publication. This operations data is presented in **Table 1K.**

TABLE 1K | Operations by Aircraft Type
Treasure Valley Executive Airport

Year	ITINERANT			LOCAL	Total Operations
	Air Taxi	General Aviation	Military	General Aviation	
2010	2,476	43,539	402	108,278	154,695
2011	2,067	44,309	300	108,919	155,595
2012	2,102	44,516	300	109,483	156,401
2013	2,000	35,000	325	110,000	147,325
2014	2,000	35,000	325	110,000	147,325
2015	2,000	35,000	325	110,000	147,325
2016	2,000	35,000	325	110,000	147,325
2017	2,000	35,000	325	110,000	147,325
2018	2,000	35,000	325	110,000	147,325
2019	2,032	35,162	325	110,569	148,088
2020	2,064	35,324	325	111,142	148,855
CAGR	**-1.80%**	**-2.07%**	**-2.10%**	**0.26%**	**-0.38%**

CAGR: Compound Annual Growth Rate

Source: Terminal Area Forecast (January 2020)

From March 2019 through February 2020, the Airport did a physical operations count. Motion activated cameras were positioned on both runway end taxiway connectors to capture fixed wing departures. Helicopter operations were estimated based on an interview with the chief pilot for Silverhawk Aviation Academy and were based on flight instruction hours. **Table 1L** summarizes the operations count. At 147,366 operations, the physical count is consistent with the FAA TAF.

TABLE 1L | Estimated Operations by Engine Type (12-Month period from 3.2019-2.2020)
Treasure Valley Executive Airport

Engine Types	[1]Observed Departures[1]	Estimated Arrivals[2]	Estimated Touch & Goes[3]	Total Operations
Single Engine	15,256	15,256	61,024	91,536
Multi-Engine Piston	835	835	3,340	5,010
Turboprop	72	72	288	432
Jet	75	75	300	450
Helicopter	8,193	8,193	32,772	49,158
Ultralight	130	130	520	780
Total	**24,561**	**24,561**	**98,244**	**147,366**

[1] *Observed Departures*: Game cameras were positioned on both runway end connector taxiways capturing fixed wing departures. Rotorcraft departures were based on Silverhawk Aviation Academy monthly flight instruction hours (assumed 1 departure per flight instruction hour).
[2] *Estimated Arrivals*: Fixed wing are estimated arrival per observed departure. Rotorcraft are estimated 1 arrival per flight instruction hour.
[3] *Estimated Touch & Goes*: Based on in-person field observations, fixed wing "touch & goes" are estimated for visual counts at 2 (4 total operations) per observed departure. Based on an interview with Silverhawk Aviation Academy Chief Pilot it's estimated 2 (4 total operations) "touch & goes" per flight instruction hour.

Source: JUB Engineers operations estimate from 3.2019 - 2.2020.

AREA LAND USE

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

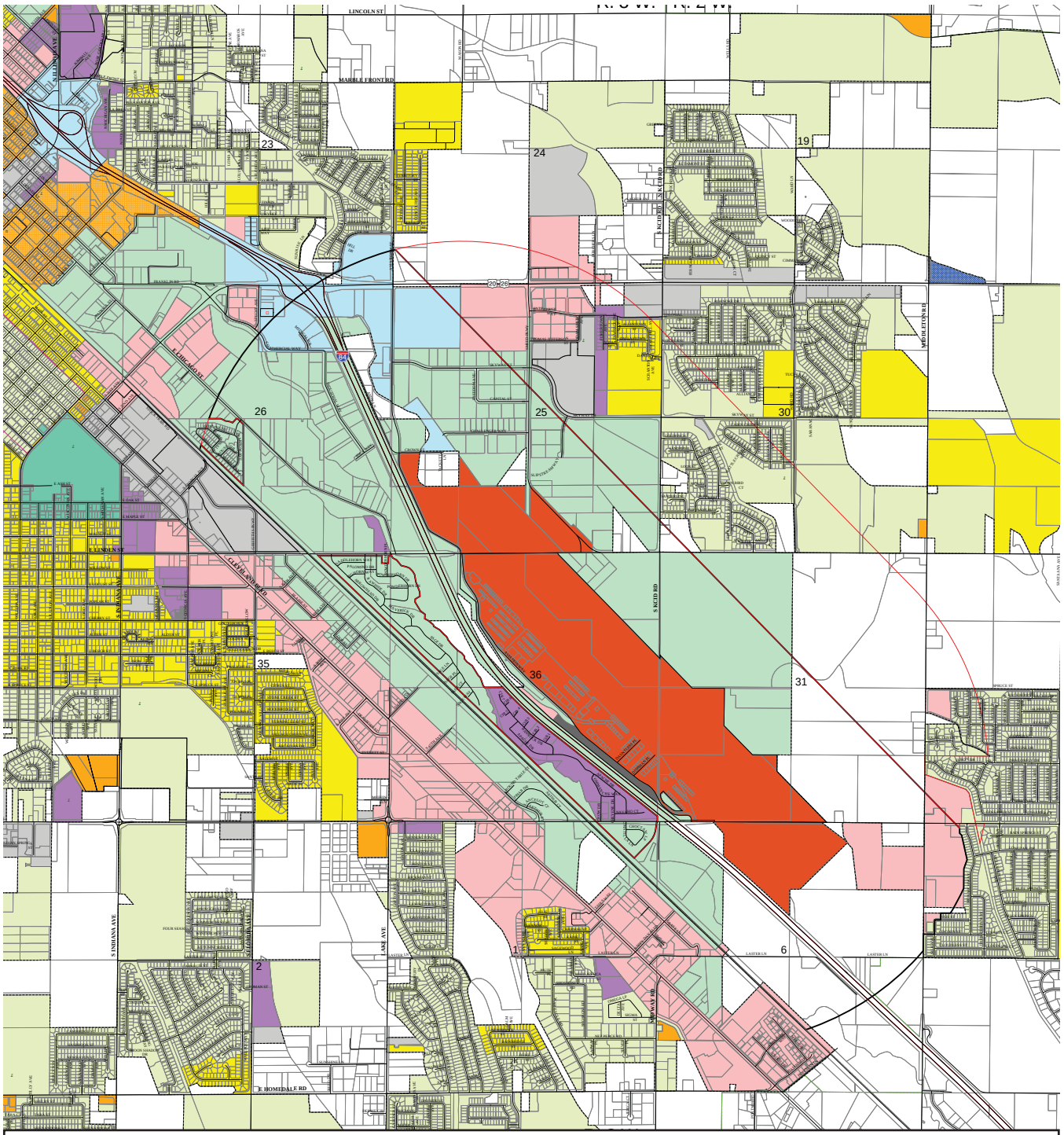
ZONING

Exhibit 1H presents the existing zoning surrounding the airport through the City of Caldwell Zone Map which was updated in 2019. As can be seen on the exhibit, most of the land surrounding the airport is classified as light industrial. Southwest of the airport there is a portion of high-density residential.

PLANNED LAND USES

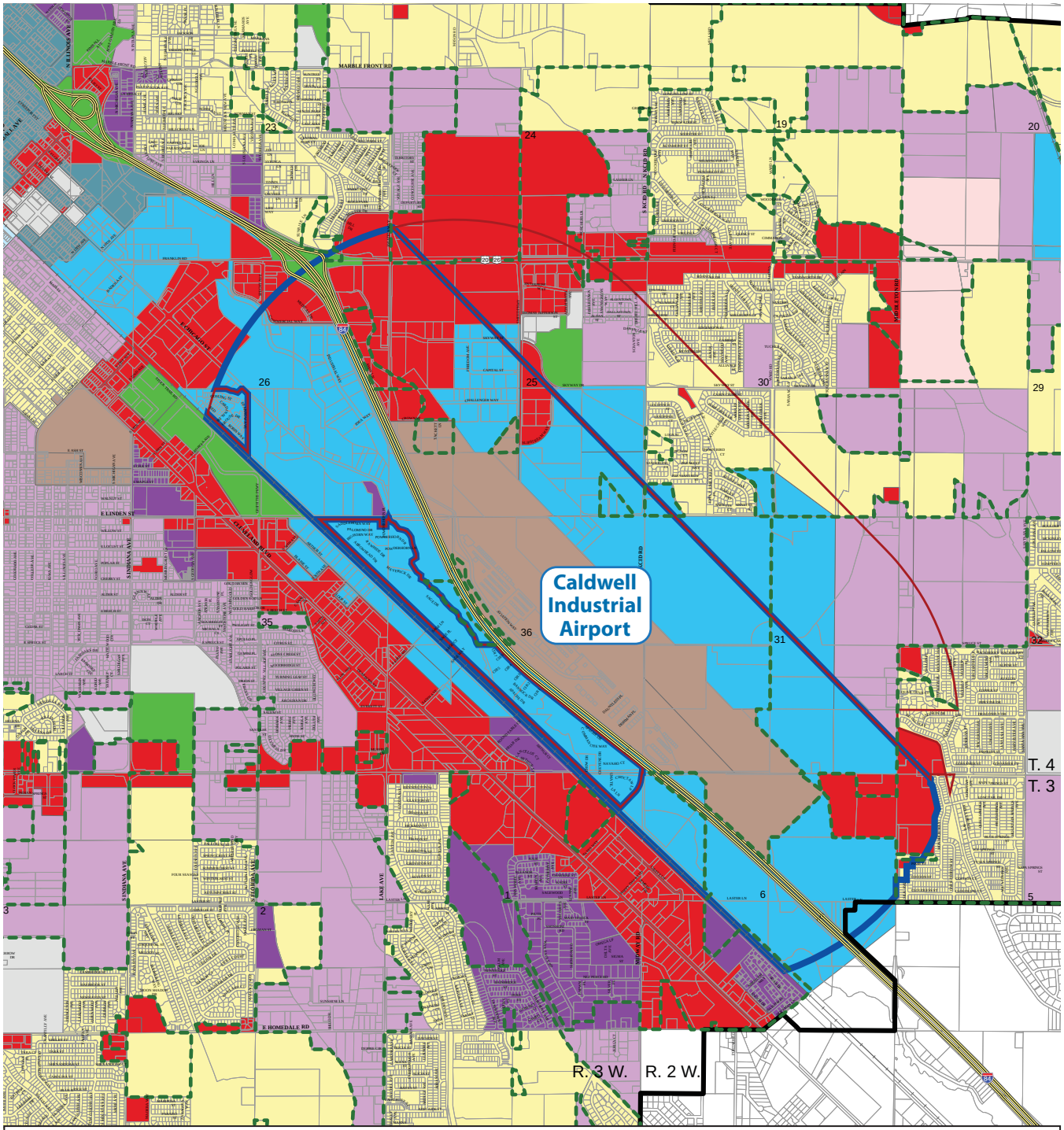
The City of Caldwell Comprehensive Plan updated in 2018 outlines the city's long-term planned land use. The Comprehensive Plan classifies the land that the Airport is located on as industrial. **Exhibit 1J** shows the City of Caldwell Comprehensive Plan, including the areas adjacent EUL. The land immediately to the southwest is planned to be used as residential. The other surrounding areas outside of the Airport property is planned to be used as manufacturing and production.

The City of Caldwell has established an Airport Overlay Zone around the airport. Development in the Airport Overlay Zone must meet two criteria: 1) non-noise-sensitive and 2) compatible with airport operations and activities.



CITY OF CALDWELL ZONE MAP

R-S-1 SEMI-RURAL RESIDENTIAL 1	H-D HOSPITAL DISTRICT	C-C CITY CENTER	A-D AIRPORT DISTRICT	CITY LIMITS	FIRE STATION		
R-S-2 SEMI-RURAL RESIDENTIAL 2	C-1 NEIGHBORHOOD COMMERCIAL	C-D COLLEGE DISTRICT	H-C HIGHWAY CORRIDOR	IMPACT AREA	HOSPITAL	N	
R-1 LOW DENSITY RESIDENTIAL 2	C-2 COMMUNITY COMMERCIAL	I-P INDUSTRIAL PARK	T-N TRADITIONAL NEIGHBORHOOD	PARCELS	PARAMEDIC	W E	
R-2 MEDIUM DENSITY RESIDENTIAL 2	C-3 SERVICE COMMERCIAL	M-1 LIGHT INDUSTRIAL	AIRPORT OVERLAY ZONE 1	INTERSTATE	POLICE	S	
R-3 HIGH DENSITY RESIDENTIAL 2	C-4 INTERCHANGE OR FREEWAY COMMERCIAL	M-2 HEAVY INDUSTRIAL	AIRPORT OVERLAY ZONE 2	SHERIFF	SCHOOL	CALDWELL	



CITY OF CALDWELL - OFFICIAL COMPREHENSIVE PLAN MAP

LEGEND

Comprehensive Plan
- Commercial
- Industrial
- City Center
- Institutional
- Highway Corridor
- Public Open Space
- Public
- Residential Estates
- Environmentally Sensative
- Traditional Neighborhood
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Boise River
- Interstate
- Railroad
- Airport Overlay
- City Limits
- Impact Area
- Taxlots

N W E S

Approved March, 2019

Two Airport Zones have been defined. Airport Overlay Zone 1 is considered the Land Use Limitation Zone. This zone is established to contribute to the safe operation of the Airport, to facilitate, orderly development around the Airport, and to protect future expansion of the Airport. Airport Overlay Zone 2 is considered the Noise Abatement Limitation Zone. This zone is established to control and minimize the impacts on development surrounding the Airport. **Exhibit 1J** shows the Airport Overlay Zones.

ZONING AND HEIGHT RESTRICTIONS

Height restrictions are necessary to ensure objects will not impact flight safety or decrease the operational capability of an airport. Title 14 CFR Part 77, *Objects Affecting Navigable Airspace* establishes imaginary surfaces emanating from the runway and specifies the acceptable height of objects near an airport. The imaginary surfaces consist of the approach surface, conical surface, transitional surface, horizontal surface, and the primary surface. **Exhibit 1K** shows the height and height limitations surrounding the Airport.

SOCIOECONOMIC CHARACTERISTICS

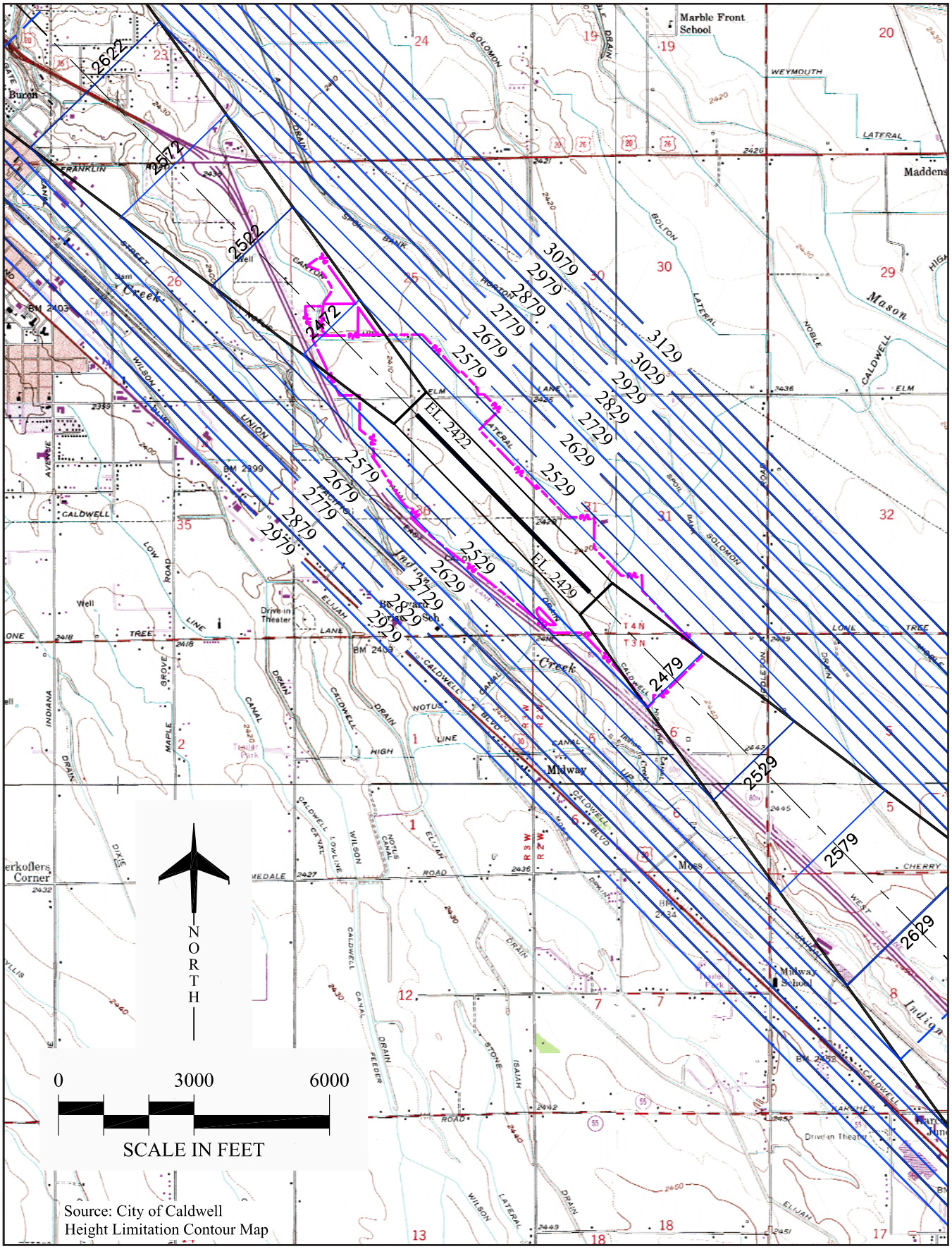
For an airport planning study, socioeconomic characteristics are collected and examined to derive an understanding of the dynamics of growth within the study area. Socioeconomic information related to the approximate airport service area is an important consideration in the master planning process. The primary service area for the Treasure Valley Executive Airport is Canyon County, Idaho. Other nearby counties and communities may influence aviation demand at the Airport but serve as a secondary service area.

The historic trend in elements such as population, employment, and income provide 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.

Historical socioeconomic data was obtained from the Woods & Poole Economics – Complete Economic and Demographic Data Source (CEDDS-2019), for population, employment, and income. CEDDS utilizes census and commerce department information as well as other national and state organizations for historic data and projections. This is an FAA-approved source for socioeconomic data.

Table 1M presents historical socioeconomic data for Canyon County and the State of Idaho. The population of Canyon County has grown at a compound annual growth rate (CAGR) of 1.73 percent since 2010, which is higher than the State of Idaho (1.11 percent).

Employment in Canyon County grew at a CAGR of 2.35 percent from 2010-2019, which is higher than that of the state (1.78 percent). Personal income per capita grew in Canyon County at a CAGR of 1.61 percent, which is 0.44 percent lower than at the state level.



Source: City of Caldwell
Height Limitation Contour Map

TABLE 1M | Socioeconomic Statistics
Treasure Valley Executive Airport

	CANYON COUNTY			STATE OF IDAHO		
Year	Population	Employment	Income	Population	Employment	Income
2010	189,366	75,633	$25,896	1,570,912	868,708	$33,353
2011	191,315	76,232	$26,220	1,583,180	878,539	$34,141
2012	193,620	77,250	$27,107	1,594,673	883,142	$35,187
2013	198,409	79,651	$27,107	1,610,187	902,870	$35,687
2014	202,294	82,361	$27,378	1,630,391	925,195	$36,738
2015	206,621	85,318	$28,371	1,649,324	948,702	$38,575
2016	211,111	87,931	$28,918	1,680,026	975,803	$38,862
2017	216,699	91,489	$29,574	1,716,943	1,002,057	$39,431
2018	220,746	93,661	$29,936	1,735,804	1,020,949	$40,190
2019	224,780	95,453	$30,395	1,754,389	1,036,700	$40,849
CAGR	**1.73%**	**2.35%**	**1.61%**	**1.11%**	**1.78%**	**2.05%**

*Estimate
CAGR: Compound Annual Growth Rate

Source: Woods & Poole Economics - Complete Economic and Demographic Data Source (CEDDS) 2019

ENVIRONMENTAL INVENTORY

This section provides an overview of the environmental conditions and critical resources at the Treasure Valley Executive Airport. It offers the public, and officials at the federal, state, and local levels an understanding of the baseline environmental conditions, to assist in the development of project alternatives that avoid or minimize impacts to critical environmental resources. This environmental baseline inventory evaluates the existing Airport property, which encompasses approximately 528 acres.

This environmental overview section has been developed in accordance with the President's *Council on Environmental Quality Regulations* (CEQ) Title 40 CFR §1500-1508; Federal Aviation Administration (FAA) Order 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions;* FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*; and the FAA's *Environmental Desk Reference for Airport Actions*.

As identified in FAA Order 1050.1F and 5050.4B, this section addresses the following environmental resource categories:

- Air Quality
- Biological Resources (including fish, wildlife, and plants)
- Climate
- Coastal Resources
- Department of Transportation Act, Section 4(f)
- Farmlands
- Hazardous Materials, Solid Waste, and Pollution Prevention
- Historical, Architectural, Archaeological, and Cultural Resources
- Land Use
- Natural Resources and Energy Supply
- Noise and Compatible Land Use

- Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety Risks
- Visual Effects (including light emissions)
- Water Resources (including wetlands, floodplains, surface waters, groundwater, and Wild and Scenic Rivers)

NEPA AND THE ENVIRONMENTAL PLANNING PROCESS

Enacted on January 1, 1970, NEPA requires federal agencies to consider the impact a proposed project would have on the environment, prior to implementing the project. To comply with NEPA regulations, airport projects must go through the NEPA process. Proposed airport actions are evaluated in terms of the type of action and its potential impacts on the environment. As described in FAA Order 1050.1F, projects fall into one of three categories based on the significance and type of the impacts.

Categorical Exclusions (CATEX): Categorically excluded projects involve actions that are found to have no potential for significant environmental impacts under normal conditions. The individual actions considered as categorical exclusions are listed in FAA Orders 1050.1F and 5050.4B.

Environmental Assessment (EA): EAs are prepared to determine the significant impact of the proposed action. The analysis and documentation of an EA is like an Environmental Impact Statement (EIS). If an EA determines that the proposed action will not cause a significant environmental impact, then a Finding of No Significant Impact (FONSI) will be prepared. If the EA identifies significant impact that would result from the proposed action, an EIS will be initiated.

Environmental Impact Statement (EIS): Actions typically requiring an EIS are those projects that are found to have significant impacts. For example, actions that normally require an EIS include, but are not limited to, site selections for a new airport location and approval for the location.

Information presented in this document is not intended to meet NEPA requirements. The information contained in this overview identifies resource categories that may potentially be impacted by future developments at the Airport.

METHODOLOGY

In general, regulatory policies, procedures, and considerations of airport facilities, operations, and improvements are evaluated alongside existing and expected plans and permits. Baseline environmental conditions for the Airport were determined by reviewing existing data from literature searches, databases, and maps. Additional information will be obtained through coordination with agency personnel and during a site visit.

The following sections provide environmental context for the Airport and discuss potential environmental impacts related to the baseline conditions.

Air Quality

Under the *Clean Air Act* (CAA), the Environmental Protection Agency (EPA) has established National Ambient Air Quality Standards (NAAQS) in the interest of protecting human health and the environment against the detrimental effects of outdoor air pollution. NAAQS have been established for the following criteria pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), sulfur dioxide (SO_2), particulate matter ($PM_{2.5}$ and PM_{10}), and lead (Pb).

The CAA requires that air quality conditions be designated with respect to the NAAQS as attainment, maintenance, nonattainment, or unclassifiable. Areas that do not exceed NAAQS are designated as attainment areas. Areas that exceed the NAAQS are designated as nonattainment areas. Maintenance areas are those that were previously designated as nonattainment, but now currently meet the NAAQS and requirements set in the CAA.

Canyon County is in attainment for criteria pollutants as of April 2020 according to the EPA Green Book, however the County is considered an "area of concern" for PM_{10} and O_3 by the Idaho Department of Environmental Quality (IDEQ).

Biological Resources (Including Fish, Wildlife, and Plants)

Section 7 of the *Endangered Species Act* (ESA), as amended, applies to federal agency actions and describes requirements for consultation to determine if a proposed action "may affect" an endangered or threatened species. An animal or plant species in danger of extinction throughout all or a significant portion of its range is considered "endangered," and is protected from harm pursuant to federal and state law; a "threatened" species is one that is likely to become endangered." If an agency determines that an action "may affect" a threatened or endangered species, then Section 7(a)(2) requires each agency, generally the lead agency, to consult with the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS), as appropriate, to ensure that any action the agency approves, funds, or carries out is not likely to jeopardize the continued existence of any federally listed species or result in the destruction or adverse modification of critical habitat.

According to the USFWS Information for Planning and Consultation (IPaC) database, slickspot peppergrass (*Lepidium papilliferum*) is the only ESA-listed species with the potential to exist at the Airport. The species typically grows in "slickspots," defined as small areas (microsites) within larger sagebrush habitat which are often lower than surrounding areas and retain water longer than the surrounding soil (Idaho Governor's Office of Species Conservation). Slickspots are usually surrounded by big sagebrush, native bunchgrasses, wildflowers, mosses, and lichens.

Even though the Airport is located within the range of slickspot peppergrass habitat, the general habitat conditions observed at the Airport include a mix of fragmented and heavily disturbed grass fields surrounded by agricultural fields. No suitable habitat areas for slickspot peppergrass have been identified on and in the immediate vicinity of the Airport, and there have been no documented occurrences of the species either within, or immediately adjacent to, the Airport property.

All Airports must also adhere to the *Migratory Bird Treaty Act* and the *Bald and Golden Eagle Protection Act*. Airports are required to ensure that birds, eggs, and nests are protected during airport activities. The FAA's National Wildlife Strike Database indicates that there has been a total of three reported wildlife strikes at the Airport since January 2015, all of which were avian species. Given the Airport's location between Lake Lowell and the Boise River, impacts to migratory birds should also be accounted for prior to construction activities at the Airport.

Climate

The EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2017* found that the transportation sector, which includes the aviation industry, accounted for 28.9 percent of U.S. greenhouse gas (GHG) emissions in 2017. Of this, aviation contributed approximately 175.0 million metric tons (MMT) of carbon dioxide equivalent (CO_2e), or nearly 9.4 percent of all transportation emissions.[1, 2] Transportation sources include cars, trucks, ships, trains, and aircraft. Most GHG emissions from transportation systems are carbon dioxide (CO_2) emissions resulting from the combustion of petroleum-based products in internal combustion engines. Relatively insignificant amounts of methane (CH_4), hydrofluorocarbon (HFC), and nitrous oxide (N_2O) are emitted during fuel combustion. From 1990 to 2017, total transportation emissions increased. The upward trend is largely due to increased demand for travel; however, much of this travel was done in passenger cars and light-duty trucks. In addition to transportation-related emissions, **Figure 1-1** shows all GHG emissions sources in the U.S. in 2017.

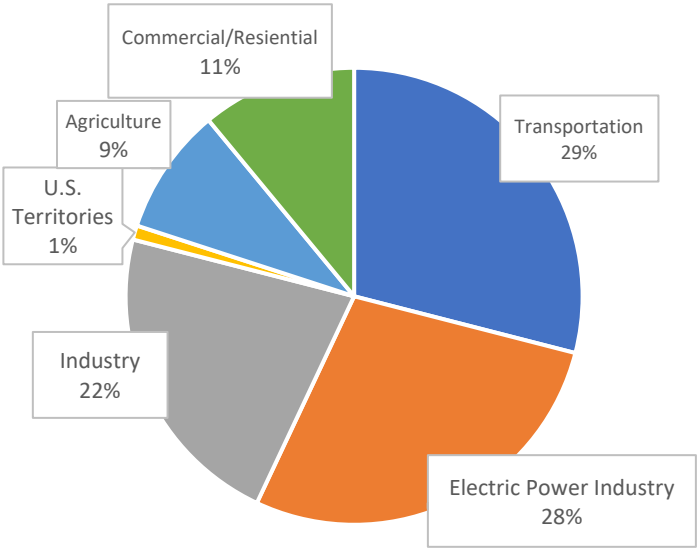


Figure 1-1: 2017 Sources of Greenhouse Gas Emissions in the U.S. Source: U.S. EPA (2019)

Increasing concentrations of GHGs can affect global climate by trapping heat in the Earth's atmosphere. Scientific measurements have shown that the Earth's climate is warming with concurrent impacts, including warmer air temperatures, rising sea levels, increased storm activity, and greater intensity in precipitation events. Climate change is a global phenomenon that can also have local impacts (Intergovernmental Panel on Climate Change, 2014). GHGs, such as water vapor (H_2O), CO_2, CH_4, N_2O, and O_3, are both naturally occurring and anthropogenic (man-made).

[1] Aviation activity consists of emissions from jet fuel and aviation gasoline consumed by commercial aircraft, general aviation, and military aircraft.

[2] Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2017, Table 2-13 (https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2017)

Research established a direct correlation between fuel combustion and GHG emissions. GHGs from anthropogenic sources include CO_2, CH_4, N_2O, HFCs, perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). CO_2 is the most important anthropogenic GHG because it is a long-lived gas that remains in the atmosphere for up to 100 years.

Information regarding the climate for the Airport environs, including wind patterns, temperature, and precipitation, is found earlier in this chapter.

Coastal Resources

Canyon County is inland, and therefore this category is not applicable to the Airport.

Department of Transportation Act: Section 4(f)

Section 4(f) of the *Department of Transportation Act* protects significant publicly owned parks, recreation areas, wildlife and waterfowl refuges, and publicly or privately-owned land historic sites of national state or local significance.

The nearest Section 4(f) property to the Airport is the Canyon Hill Lateral, a documented historical canal that runs from the northwest to the southwest along the eastern border of the Airport. While there are several parks in the vicinity of the Airport, the closest public park is Municipal Park, located approximately 0.2 miles north of the Airport.

A cultural resources survey is to be conducted concurrently with this master plan. The results of that survey will be presented in the environmental overview that takes into consideration the recommendations of this master plan.

Farmlands

Farmlands are protected under the Farmland Protection Policy Act (FPPA), which requires federal agencies to minimize the conversion of farmland to nonagricultural uses so that federal programs do not unnecessarily contribute to the loss of valuable farmlands. Farmlands are categorized by the FPPA as "prime farmland," "unique farmland," and "farmland of statewide or local importance." Farmland subject to FPPA requirements does not have to be currently used in agricultural production; it can be forestland, pastureland, cropland, or other land, but cannot be water or urban built-up land.

The FPPA defines prime farmland as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, oilseed, and other agricultural crops with minimum inputs of fuel, fertilizer, pesticides, and labor. Unique farmland is land other than prime farmland used to produce specific, high-value food and fiber crops. Unique farmland has soil and climatic conditions that can adequately supply economical yields of high-quality crops when managed appropriately. Farmland of statewide or local importance is land other than prime or unique farmland that is determined and designated as such by state or local governments.

The FPPA does not apply to land that has already been developed for urban or built-up uses. Currently, most of the land on the Airport property has been developed for Airport, industrial, or agricultural uses. **Exhibit 1L** details the mapped soils at the Airport. While there is land on the Airport property that is currently used for agricultural purposes, that land is owned by the Airport, and should be considered developed land due to it being existing Airport property.

The Airport and the surrounding land are classified as a U.S. Census designated urban area, Therefore, if in the future the Airport was to expand and acquire new land that is actively used for farming, it is likely that the surrounding lands would be exempt from the FPPA due to the urban area classification and no formal coordination with the USDA/NRCS would be required.

Hazardous Materials, Solid Waste, and Pollution Prevention

The Airport is required to follow applicable laws and regulations regarding hazardous materials and solid waste management. Hazardous materials that generally exist on Airport property are likely to include aviation fuel, motor fuel, pesticides, and substances used for operation and maintenance of aircraft, vehicles, equipment, and buildings. The storage, use, and transport of such materials is controlled by federal, state, and local regulations. According to IDEQ, there are five hazardous waste sites documented on the Airport property which are listed in **Table 1N**.

TABLE 1N | On-Airport Hazardous Waste Sites
Treasure Valley Executive Airport

Site Name	IDEQ Program	Program ID
Caldwell Industrial Airport[1]	RCRA Hazardous Waste Sites	IDD980977789
Caldwell Industrial Airport[1]	RCRA Hazardous Waste Sites	IDD984666198
Caldwell Industrial Airport[1]	Underground Storage Tanks	3-140100
Caldwell Industrial Airport	Underground Storage Tanks	3-140174
Green Arrow Inc.[1]	RCRA Hazardous Waste Sites	IDD980665277

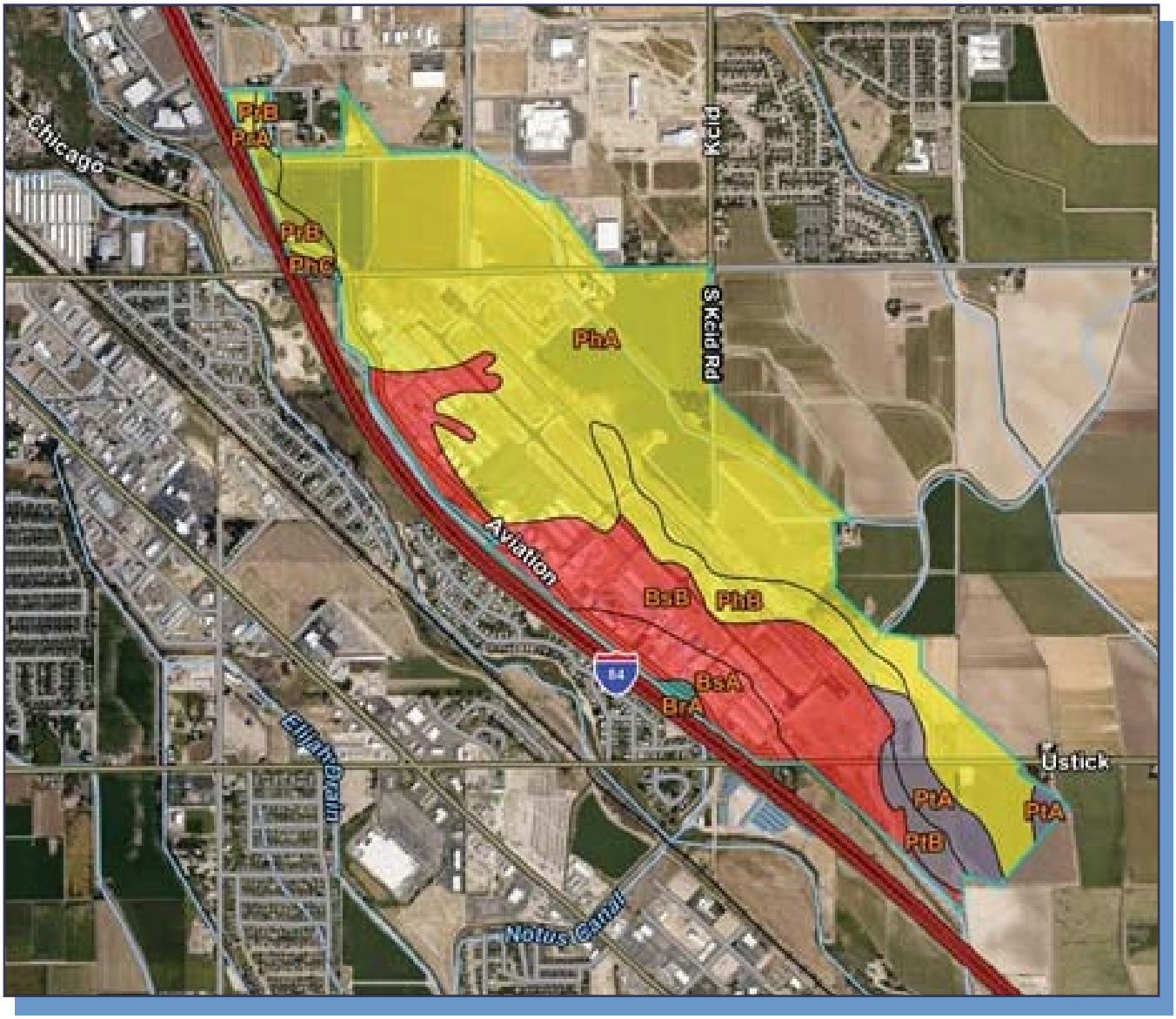
[1] Formal Site Name used prior to airport name change.

Source: Idaho Department of Environmental Quality (IDEQ)

Any planned projects that would impact the sites listed above would likely require additional coordination with IDEQ. Baseline conditions at the Airport, however, are not anticipated to adversely affect human health or the environment, as pertinent best management practices (BMPs) have been, and would be followed, during any construction projects.

Historical, Architectural, Archaeological, and Cultural Resources

NEPA requires federal agencies to consider the effects of proposed projects on historical, architectural, archaeological, and cultural resources. The planned federal actions must also comply with the National Historic Preservation Act (NHPA) (16 USC 470, as amended). Section 106 of the NHPA and its implementing regulations (36 CFR 800) require federal agencies to analyze the effects of their undertakings on



SOIL CLASSIFICATION	MAP SYMBOLS	MAP COLOR	PERCENT OF AIRPORT
Prime Farmland if irrigated and reclaimed of excess salts and sodium	BrA	Blue	0.40%
Prime Farmland if irrigated	PhA, PhB, PrA, PrB	Yellow	68.70%
Farmland of Statewide Importance, if irrigated and reclaimed of excess salts and sodium	PtA, PtB	Purple	5.50%
Farmland of Statewide Importance, if irrigated	PhC	Orange	0.30%
Not Prime Farmland	BsA, BsB	Red	25.10%

historic properties. According to these regulations, a historic property is "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP)…" (36 CFR 800.16).

A cultural resources survey is to be conducted concurrently with this master plan. The results of that survey will be presented in the environmental overview that takes into consideration the recommendations of this master plan.

Land Use

The Airport is located within the City of Caldwell limits, east of the main downtown area. The Airport is bordered by I-84 to the south, and agricultural fields and industrial buildings to the north, south, and east. According to City of Caldwell, the Airport is located within the Airport District. According to the City of Caldwell Code of Ordinances, Chapter 10, Article 1, Section 3, the Airport District is: "to provide areas by zoning procedures in accordance with the comprehensive plan that creates an environment for developing the facilities necessary or desirable for the safe, efficient, convenient and economical operation of the Airport or any other similar airport." Uses in the airport district provide support for airport operations, services to airport users, and protect the public interests and investments made in aviation.

The Airport is also located within two Overlay zones, the APO-1 Airport Land Use Limitation Zone and the APO-2 Airport Noise Abatement Zone. Together, these two overlay zones contribute to the safe operation of the Airport, facilitate development of the Airport, and protect the possibility of future expansion at the Airport, while controlling and minimizing noise levels on development and properties surrounding the Airport.

The Airport is surrounded by "Light Industrial" zoning, which is defined by the City of Caldwell Code of Ordinances, Chapter 10, Article 1, Section 3, as areas that "encourage the grouping together of light industrial uses capable of being operated under such standards as to location, appearance of buildings, and the treatment of land about them so that they will be unobtrusive and not detrimental to surrounding commercial or residential uses."

The current Caldwell Comprehensive Plan also shows the Airport surrounded by the Manufacturing and Production land use category, which "includes land that is suitable for the manufacturing, processing, assembling, packaging or fabricating of previously prepared materials, research and development activities and warehousing."

FAA 1050.1F, *Desk Reference,* describes land use and aviation compatibility and indicates that aviation is typically related to noise impacts as discussed in the noise section below.

Natural Resources and Energy Supply

Canyon County covers approximately 590 square miles and contains an abundance of natural resources. Agricultural land covers most of the land in the Caldwell vicinity. Lake Lowell, the Boise River, Indian Creek, and Mason Creek are the primary natural resources within and adjacent to the City of Caldwell, and they all contribute to a system of canals and drains that provide irrigation water to the surrounding area and support a variety of open space and recreational opportunities. There are no mineral resource lands and no forest resources within the City or near the Airport.

Water and wastewater services at the Airport are provided by the City of Caldwell Water Department. Natural gas is provided by Intermountain Gas, while electricity is provided by Idaho Power. Future operations or development projects at the Airport are not anticipated to have the potential to cause demand to exceed available or future supplies of any of the described resources.

Noise and Compatible Land Use

Noise is defined by the FAA as unwanted sound that can disturb routine activities and cause annoyance. Volume, frequency, atmospheric conditions, ambient sound, and the type of activity generating noise are all factors that influence an individual's perception of noise. Generally, aircraft noise is one of the more intrusive environmental impacts for a given project in an airport environment.

Noise impacts at an airport should be assessed based on current industry standards as they relate to the human environment and, potentially, sensitive species and historic properties. Airport noise is measured in Day Night Average Sound Level (DNL), which represents the average total accumulation of all noise over a 24-hour period. The average total noise accumulation arises from noise associated with all aircraft operations over the course of the 24-hour period, representing the Airport's average annual operations per day.

The FAA's established noise significance threshold for most general aviation airports is 65 decibels (dB) DNL. When considering noise at airports, noise sensitive areas are those found within the 65 DNL contour. In these areas, the DNL threshold does not sufficiently encompass the impact noise would have on quiet areas, such as national parks, wildlife refuges, schools, or hospitals. A site visit and review of Google Earth Imagery illustrates that there are a few residential areas immediately to the southwest of the Airport, however, these areas are separated from the Airport by I-84. Ambient noise in the vicinity of the Airport is relatively high due to the Airport's proximity to the highway. Most of the land directly northeast of the Airport is used for agricultural purposes, and therefore it is likely that noise from the highway dissipates in these areas. While any future construction noise at the Airport is unlikely to surpass existing Airport noise or high background noise in the Airport's vicinity, additional noise studies may be necessary if expansion occurs.

FAA guidance in the 1050.1F Environmental Desk Reference also states that no quantitative noise analysis is required for projects involving Design Group I and II in Approach Categories A through D operating at airports whose forecasted operations do not exceed 90,000 annual propeller operations or 700 jet

operations; below these operations numbers, the 65 DNL generally does not extend beyond airport property limits. Currently, the Airport averages over 150,000 operations, and therefore future developments at the Airport may require a quantitative noise analysis prior. No noise analysis was prepared in the development of this MPU.

Socioeconomics, Environmental Justice, and Children's Environmental Health and Safety

Manufacturing and local government jobs comprise most of the Caldwell's economy. The top five employers in Caldwell comprise of local government, healthcare, and educational institutions, while manufacturing is the primary industry.

The U.S. Census Bureau states that the median household income in Caldwell was approximately $47,459 in 2019. According to the U.S. Bureau of Labor Statistics, the unemployment rate in 2019 was approximately 2.7 percent, slightly slower than the state average of 2.9 percent and the U.S. average of 3.6 percent. Development at the Airport has the potential to result in short-term increased economic activity in the Caldwell community because construction projects generally increase local business demand.

From 2010 to 2019, the Greater Caldwell area's population increased by approximately 21.6%, from 51,836 individuals to 63,028. Data from the U.S. Census indicates that approximately 83.7 percent of the population identifies as white alone, 36.5 percent identifies as Hispanic or Latino, 1.4 percent identifies as American Indian or Alaska Native, 0.8 percent identifies as Asian, 0.5 percent identifies as black or African American, and 0.2 percent identifies as native Hawaiian or other Pacific Islander.

The EPA's Environmental Justice Screening and Mapping tool (EJSCREEN) was referenced to determine the population within a one-mile radius of the Airport. The report states that approximately 14,853 individuals live in the area surrounding the Airport. Of those individuals, approximately 36 percent identify as Hispanic, 60 percent identify as white alone, one percent identify as American Indian, one percent identify as Asian, and three percent identify as two or more races (totals are more than 100 percent due to rounding). Approximately 40 percent of the existing population belongs to a minority group. The U.S. Census data indicates that approximately 20 percent of the total population within a one-mile radius of the Airport meets the criteria to be classified as low income.

The U.S. Census has documented that approximately 4,750 children live within a one-mile radius of the Airport, accounting for approximately 23 percent of the population. Children's environmental health and safety risks are usually impacted by the introduction of new physical hazards into the existing environment. Future development projects at the Airport are not likely to exceed significance thresholds for air quality, noise, and water quality, and no other environmental impacts are anticipated to negatively affect the health and safety of children. Food, drinking water, recreational water, soil, and other products children might come into contact with are unlikely to be influenced by future development projects at the Airport.

Visual Effects (Including Light Emissions)

Visual effects, visual resources, and visual characteristics can be subjective because each category includes personal aesthetic preferences. Visual impacts can include contrasts between a specific area, the existing environment, and the general perception of the community concerning any change in lighting or visual characteristics.

At the Airport, the primary lighting sources consist of existing airport buildings and facilities along with runway and taxiway lighting. Any new lighting associated with future development at the Airport is anticipated to be comparable to what currently exists; therefore, no special lighting studies have been performed as part of this planning process. The Airport is currently located within and surrounded by the Airport District and is protected by the zoning regulations included in the APO-1 Airport Land Use Limitation Zone and the APO-2 Airport Noise Abatement Zone. Any proposed improvements that include changes to the existing lighting, however, would require evaluation prior to implementation and would require certain notification procedures consistent with those described in the City of Caldwell Code Section 10, Article 11, *Airport Overlay Zone*.

Water Resources (Including Wetlands, Floodplains, Surface Waters, Groundwater, and Wild and Scenic Rivers)

Wetlands

Wetlands are defined by the *Clean Water Act* (CWA) as "areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Wetlands provide a variety of benefits to a wide range of ecosystems, and generally consist of swamps, marshes, bogs, and similar areas.

According to the USFWS National Wetlands Inventory (NWI) and the 1981 aerial imagery, both riverine and freshwater emergent wetlands are depicted on the Airport property. While the NWI map suggests that wetlands are located on Airport property, field verification and aerial imagery indicate that no wetlands are present at the Airport. While there are several irrigation canals and laterals in the vicinity of the Airport, no wetlands have been identified. The Airport habitat is dominated almost entirely by upland and invasive grasses, with no segments of riparian vegetation or inundated areas.

Floodplains

The FAA Order 1050.1F Environmental Desk Reference describes floodplains as "lowland areas adjoining inland and coastal waters which are periodically inundated by floodwater, including flood-prone areas of offshore islands." Generally, floodplains are discussed in terms of the 100-year flood, 500-year flood, coastal flood, or undetermined/undesignated area. The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Panel #16027C0244F (dated May 24, 2011) for the area indicates that the entirety of the Airport property is located within Flood Zone X, "Areas of Minimal Flood Hazard." Floodplains are not anticipated to be impacted by any future development at the Airport.

Surface Waters

Rivers, streams, lakes, oceans, ponds, and estuaries are examples of surface waters. The only surface waters in the vicinity of the the Airport are a series of irrigation ditches, canals, drains, and laterals, specifically the Canyon Hill Lateral, the Notus Canal, the Caldwell Drain, and the Caldwell High Line Canal. Indian Creek, an impaired waterway, also flows to the south of the Airport; however, it is separated from the Airport by I-84. If future airport projects were to impact any of the irrigation laterals, canals, or drains, coordination with local irrigation districts and the Bureau of Reclamation (BOR) would be necessary to determine appropriate mitigation measures, and projects would be required to follow all applicable local, state, and federal policies and regulations as they relate to surface water impacts.

Groundwater

Groundwater is the subsurface water that occupies the space between sand, clay, and rock formations. Aquifers are generally discussed in relation to groundwater and are defined as geologic layers that store or transmit groundwater to wells, springs, or other sources. The EPA's Sole Source Aquifer mapping tool was used to determine the presence or absence of sole source aquifers in the vicinity of the Airport. No sole source aquifers were shown to exist in the area surrounding the Airport. The Eastern Snake River Plain Aquifer, the nearest sole source aquifer to the Airport, is approximate 80 miles east. The water supply in the City of Caldwell is derived from 17 deep groundwater wells one of which is located on Airport property in the southwest corner near Hangar A and the rotating beacon.

Wild and Scenic Rivers

The purpose of the Wild and Scenic Rivers Act is to preserve certain rivers that "possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar values" in a free-flowing condition. The National Park Service (NPS) maintains a database of river segments designated as Wild and Scenic. According to the NPS database, there are no designated Wild and Scenic Rivers in the vicinity of the Airport. There are also no river segments on the Nationwide Rivers Inventory that are being considered for Wild and Scenic designation in the general area.

SUMMARY

Airport improvements typically require environmental processes and documentation prior to implementation. Communication with agencies prior to the implementation of any improvement projects would allow the Airport to support and maintain the local economy and environment while completing the actions required to meet existing and future needs. Overall, the current baseline environmental conditions at the Airport suggest that future development would not likely result in significant environmental impacts.

DOCUMENT SOURCES

A variety of sources were used during the inventory process. The following listing reflects a partial compilation of these sources. In addition, considerable information was provided directly to the consultant by Treasure Valley Executive Airport staff.

Airport/Facility Directory, Northwest, U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office. Chart Supplement Northwest U.S. Effective January 30, 2020.

Salt Lake City Sectional Chart, U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office. Effective March 26, 2020.

U.S. Terminal Procedures, Northwest, U.S. Department of Transportation, Federal Aviation Administration, National Aeronautical Charting Office. Effective March 26, 2020.

National Plan of Integrated Airport Systems (NPIAS), U.S. Department of Transportation, Federal Aviation Administration, 2019-2023.

Caldwell Industrial Airport Master Plan – Final Report, 2010. Prepared by Coffman Associates, Inc.

City of Caldwell 2030 Comprehensive Plan, Department of Planning and Zoning.

Idaho Airport System Plan Update – 2010, Idaho Transportation Department – Division of Aeronautics.

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

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

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

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

Canyon County, Idaho: www.canyonco.org

City of Caldwell, Idaho: https://www.cityofcaldwell.org
Treasure Valley Executive Airport at Caldwell: https://www.cityofcaldwell.org/departments/airport

Idaho Division of Aeronautics - Network Pavement Management System:
https://www.arcgis.com/apps/webappviewer/index.html?id=9ef124176f16406595ef6d61f4870ee9

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

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

NOAA 1981-2010 Climate Normals: https://www.ncdc.noaa.gov/cdo-web/datatools/normals

ENVIRONMENTAL REFERENCES

City of Caldwell. "Municipal Code for the City of Caldwell." *American Legal Publishing*, 7 October 2019. Codelibrary.amlegal.com/codes/caldwellid/latest/overview. Accessed 6 March 2020.

Environmental Protection Agency (EPA). "Environmental Justice Screening and Mapping Tool (EJSCREEN)." Version 2019. *EPA*, www.ejscreen.epa.gov/mapper. Accessed 5 March 2020.

EPA. "Interactive Map of Sole Source Aquifers." Version 4.2. *EPA*, www.epa.maps.arcgis.com/apps/webappviewer/indix.html?id=9ebb047ba3ec41ada1877155fe31356b. Accessed 6 March 2020.

Environmental Protection Agency (EPA). "Nonattainment Areas for Criteria Pollutants (Green Book)." *EPA*, 31 March 2020. www.epa.gov/green-book. Accessed 4 March 2020.

Federal Aviation Administration (FAA). "Order 1050.1F – Environmental Impacts: Policies and Procedures." FAA, 16 July 2015. faa.gov/documentLibrary/media/Order/FAA_Order_1050_1F.pdf. Accessed 4 March 2020.

Federal Emergency Management Agency (FEMA). "Flood Insurance Rate Map (FIRM) Panel #16027C0244F." *FEMA*, 24 May 2011. *FEMA Flood Map Service Center*, msc.fema.gov/portal/home. Accessed 10 March 2020.

U.S. Census Bureau. "Quickfacts – Caldwell City, Idaho; United States." *U.S. Census Bureau*, March 2020. www.census.gov/quickfacts/facat/table/caldwellcityidaho.US/PST045219. Accessed 4 March 2020.

U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). "Web Soil Survey." *USDA/NRCS*, 31 July 2019. Websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed 5 March 2020.

U.S. Fish and Wildlife Service (USFWS). "Information for Planning and Consultation (IPaC)." *USFWS*, March 2020. www.ecos.fws.gov/ipac. Accessed 3 March 2020.

USFWS. "National Wetlands Inventory (NWI)." *USFWS,* 8 October 2019. www.fws.gov/wetlands/data/mapper.html. Accessed 6 March 2020.