



Chapter 1

Inventory

The inventory chapter of existing conditions is the initial step in the preparation of the Powell Municipal Airport (POY) Master Plan. The inventory serves as an overview of the airport's physical and operational features, including facilities, users, and activity levels, as well as specific information related to the airspace, air traffic activity, and role of the airport. Finally, a summary of socioeconomic characteristics and review of existing environmental conditions on and adjacent to the airport are thoroughly detailed, which provide further input into the study process.

Information provided in Chapter One serves as the baseline for the remainder of the master plan, which is compiled using a wide variety of resources, including: applicable planning documents; on-site visits; interviews with airport staff, tenants, and users; aerial and ground photography; federal, state, and local publications; and project record drawings. Specific sources are listed below.

Inventory Source Documents:

- 2011 Powell Municipal Airport Layout Plan (ALP)
- City of Powell's airport website (<https://cityofpowell.com/municipal-airport/>)
- Powell Municipal Airport Federal Aviation Administration (FAA) Form 5010, *Airport Master Record*
- 2016 *Wyoming State Aviation System Plan*

AIRPORT SETTING AND BACKGROUND

LOCALE

The City of Powell is located in northwest Wyoming, just south of the Montana border. Powell is situated in a valley between the Big Horn Mountains and the Absaroka Range, approximately 75 miles east of Yellowstone National Park and 90 miles south of Billings, Montana. As of the 2020 Census, the city has a population of 6,419 residents, making it the second-largest city in Park County, after Cody. Park County is a major tourist destination, with visitors from all over the world coming to experience Yellowstone National Park and other attractions. Aside from tourism, major industries include education/health care, agriculture, construction, and retail.

Powell Municipal Airport is situated atop a mesa approximately eight miles north of the city center. The airport encompasses approximately 830 acres and sits at an elevation of 5,095.7 feet above mean sea level (MSL). The airport can be accessed via Highway 295, which runs north-south and borders the airport to the east. From Highway 295, an access road (L 1 H) connects to Powell Municipal Airport. **Exhibit 1A** depicts the airport in its regional setting.



Powell Municipal Airport

AIRPORT ADMINISTRATION

Powell Municipal Airport is owned and operated by the City of Powell. An Airport Advisory Commission is responsible for acting in an advisory capacity to the Powell City Council in matters pertaining to maintenance, operations, and control of the airport. The Commission consists of three members: two residents of the City of Powell and one resident of Park County. The Director of Public Works and a City Council member serve as two non-voting members of the commission. Airport commissioners serve two-year terms and meet quarterly. Day-to-day oversight of the airport and its maintenance is the responsibility of one full-time employee who oversees daily airport operations, fuel sales, and maintenance, and maintains records of city-owned hangars and tenants.

CLIMATE

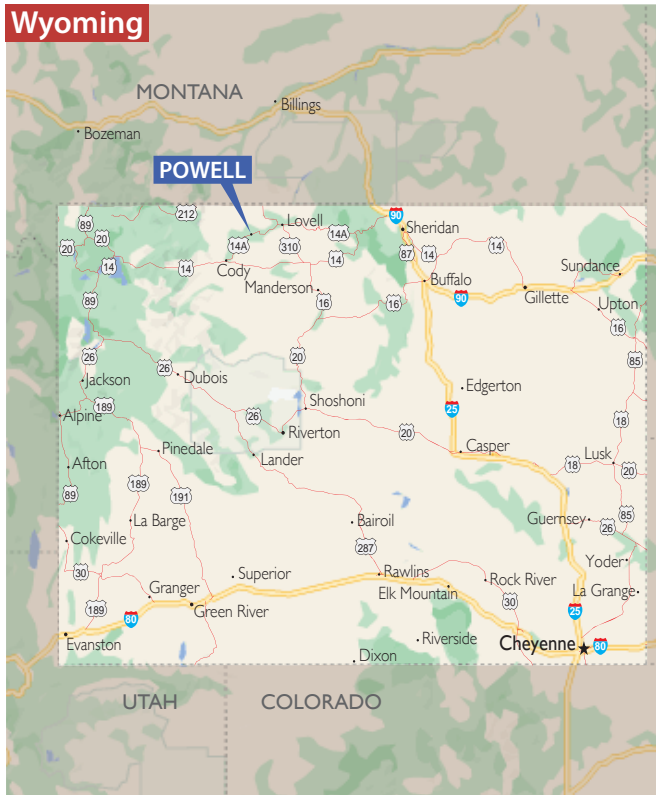
Climate and local weather conditions are an important consideration in the master planning process, as they can significantly impact an airport's operations. For example, high surface temperatures and humidity increase runway length requirements, and runway orientation is dependent on predominant wind patterns for the area. Cloud cover percentages and frequency of other climatic conditions also determine the need for navigational aids and lighting.

Powell experiences a "cold desert" climate that is characterized by warm, dry summers and cold, dry winters. Annual precipitation averages less than seven inches and snowfall is rare. **Exhibit 1B** displays weather patterns in the city. July has the highest average maximum temperature of 85.2 degrees Fahrenheit (F), while January is the coldest month, with an average minimum temperature of 6.1 degrees F. Annual rainfall totals 6.7 inches and is most plentiful during the late spring, with May and June being the rainiest months. Annual snowfall totals 11.2 inches, with January averaging the most snow at 2.6 inches.

Table 1A indicates that visual meteorological conditions (VMC) occur 94.47 percent of the time. When under VMC conditions, pilots can operate using visual flight rules (VFR) and are responsible for maintaining proper separation from objects and other aircraft. Instrument meteorological conditions (IMC) account for all weather conditions less than VMC conditions that still allow for aircraft to safely operate under instrument flight rules (IFR). Under IFR, pilots rely on instruments in the aircraft to accomplish navigation. IMC conditions occur 2.00 percent of the time. Less than IMC, or poor visibility conditions (PVC), are present 3.53 percent of the time. These weather conditions are lower than instrument approach minimums, making the airport inaccessible to most air traffic.



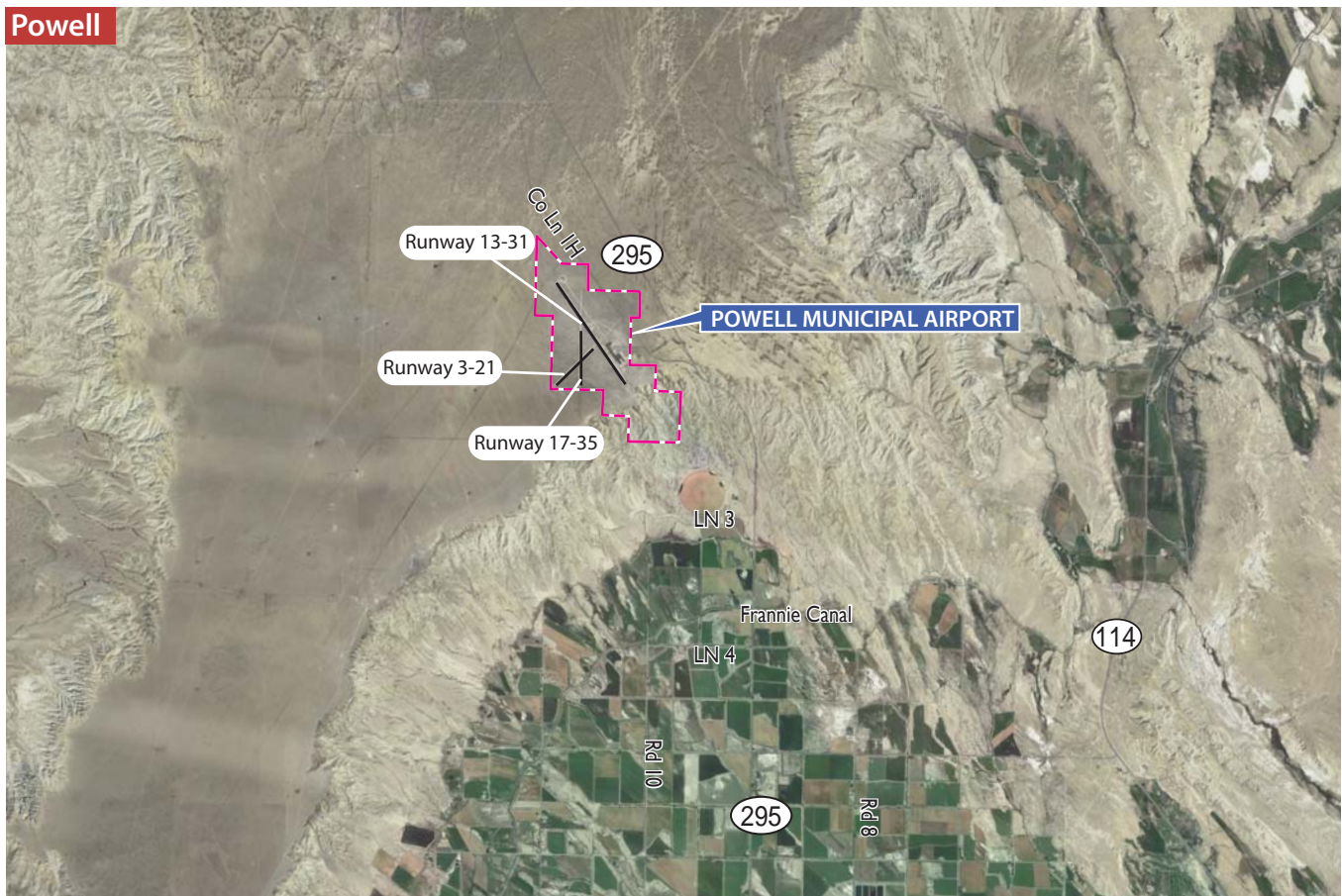
Wyoming



Park County



Powell



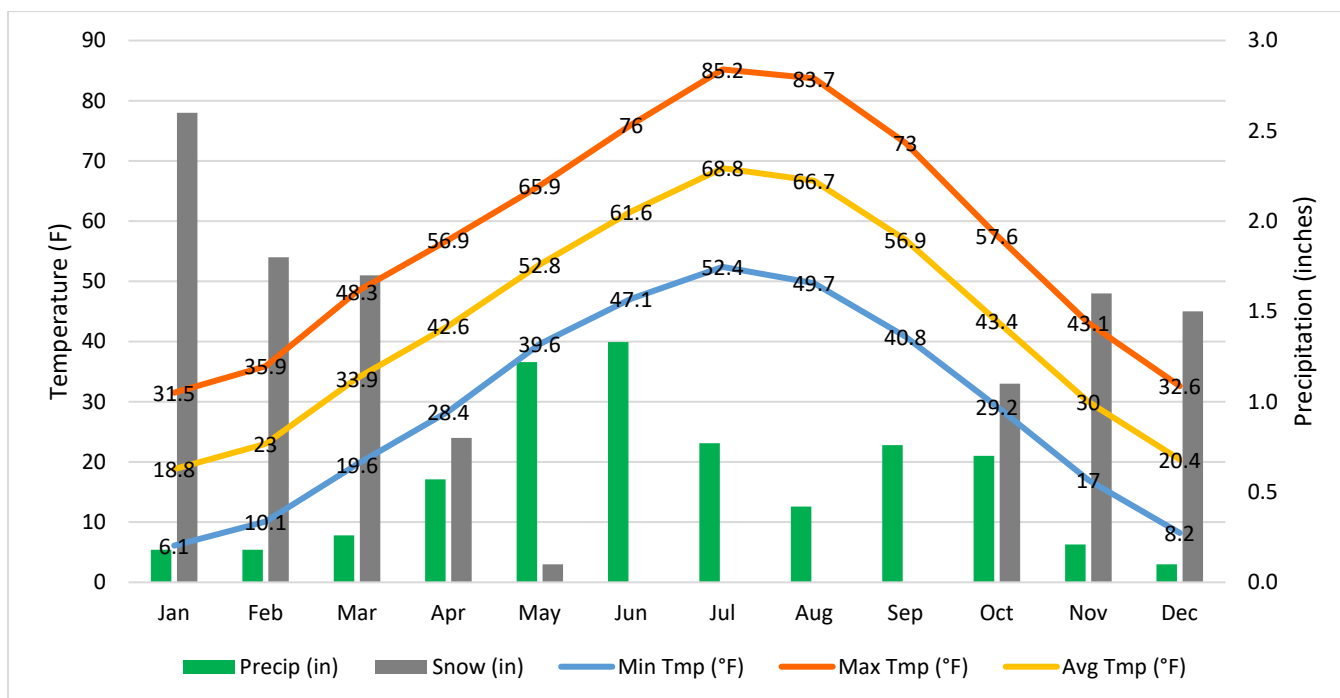


Exhibit 1B – Powell Weather Patterns

TABLE 1A | Weather Conditions

Condition	Cloud Ceiling	Visibility	% of Total
VMC	≥ 1,000' AGL	≥ 3 statute miles	94.47%
IMC	≥ 500' AGL and < 1,000' AGL	≥ 1 to < 3 statute miles	2.00%
PVC	< 500' AGL	< 1 statute mile	3.53%

VMC = visual meteorological conditions
 IMC = instrument meteorological conditions
 PVC = poor visibility conditions
 AGL = above ground level

Source: Station ID 7205199999 POWELL MUNICIPAL, WY, U.S.: 241,750 observations from 1/1/2014 through 12/31/2023

CAPITAL IMPROVEMENT HISTORY

Significant improvements have been made to the airport since its establishment. To assist in funding capital improvements, the FAA and WYDOT-Aeronautics have provided funding assistance to Powell Municipal Airport, primarily through the Airport Improvement Program (AIP). Airport improvement funds are collected through user fees, additional taxes on airline fares, and aviation fuel taxes. As airports grow and safety standards change over time, funding is needed to maintain a safe and efficient airport environment. The *Airport and Airway Development and Revenue Act* of 1970 established the Aviation Trust Fund, which funds the AIP. Generally, federal AIP grants fund 90 percent of FAA-approved airport improvement projects for airports in the State of Wyoming. The remaining ten percent is then split between WYDOT-Aeronautics and the local sponsor, with WYDOT contributing six percent and the local share set at four percent. **Table 1B** summarizes approximately \$4.1 million in capital improvement projects undertaken at the airport since 2005. These funds have included a variety of airport improvement projects, as listed in the table.

**TABLE 1B | POY Capital Improvement History**

Fiscal Year	Grant Number	Project Description	Federal Entitlement	Federal Discretionary	Federal Misc.	State	Local	Total
2005	POY-02X	Master Plan Update and Installation of PACs & SACs	\$150,000	–	–	\$4,737	\$3,158	\$157,895
2010	POY-08A	Construct T/W Turn-Around & Construct Partial Parallel T/W to R/W 13, design and Hangar Access Taxilane, design	\$75,225	–	–	\$2,376	\$1,584	\$79,184
2010	POY-09A	Construct Terminal/SRE Building, PH I	–	–	–	\$145,263	\$2,965	\$148,228
2010	POY-10X	Air Show and Fly-In	–	–	–	\$5,000	\$0	\$5,000
2011	POY-08C	Hangar Taxilane	–	–	–	\$68,647	\$7,627	\$76,274
2011	POY-08B	Partial Parallel & Turn Around, Hangar Access Taxilane, Design & Construction	\$524,775	–	–	\$16,572	\$11,048	\$552,395
2011	POY-12X	2011 Air Show & Fly In	–	–	–	\$5,000	\$0	\$5,000
2011	POY-11A	Beacon Tower Replacement	–	–	–	\$40,000	\$10,000	\$50,000
2012	POY-09B	Construct Terminal/SRE Building	\$300,000	\$16,476	–	\$20,000	\$13,333	\$349,809
2012	POY-13A	Seal Coat & Mark	–	–	–	\$113,127	\$12,570	\$125,697
2012	POY-08B	Partial Parallel & Turn Around, Hangar Access Taxilane, Design & Construction	\$10,161	–	–	\$321	\$214	\$10,696
2012	POY-14X	Air Show and Fly-In. August 17, 2012	–	–	–	\$5,000	\$0	\$5,000
2013	POY-09C	Construct Terminal/SRE Building PH III	\$150,000	–	–	\$10,000	\$6,667	\$166,667
2013	POY-15X	Air Show & Fly In	–	–	–	\$5,000	\$0	\$5,000
2013	POY-09A	Construct Terminal/SRE Building, PH I	–	–	–	\$8,351	\$171	\$8,522
2014	POY-16X	2014 Aviation Encouragement	–	–	–	\$5,000	\$0	\$5,000
2014	POY-17X	2014 NAVAID Maintenance (partial)	–	–	–	\$4,560	\$0	\$4,560
2014	POY-09B	Construct Terminal/SRE Building	\$16,476	–	–	\$1,098	\$733	\$18,307
2015	APOY18X	Acquire SRE	\$201,000	–	–	\$13,400	\$8,933	\$223,333
2015	APOY21A	Seal Coat and Mark Airside Pavements	–	–	–	\$153,900	\$17,100	\$171,000
2015	POY-20X	NAVAID Maintenance 2015	–	–	–	\$7,599	\$0	\$7,599
2015	POY-19X	2015 Aviation Encouragement	–	–	–	\$5,000	\$0	\$5,000
2016	APOY22X	NAVAID Maintenance 2016	–	–	–	\$7,599	\$0	\$7,599
2016	APOY23X	2016 Fly-In (Wings and Wheels)	–	–	–	\$5,000	\$0	\$5,000
2017	APOY24X	2017 NAVAID Maintenance	–	–	–	\$7,979	\$0	\$7,979
2017	APOY25X	2017 Aviation Encouragement	–	–	–	\$2,500	\$0	\$2,500
2019	APO001A	Seal Coat and Mark Pavements	–	–	–	\$186,300	\$20,700	\$207,000
2019	APO002A	Extend T/W A to R/W 13, Design	\$78,000	\$3,661	–	\$5,200	\$3,467	\$90,328
2019	APO006X	2019 Aviation Encouragement	–	–	–	\$2,500	\$0	\$2,500
2019	APO005X	2019 NAVAID Maintenance	–	–	–	\$7,978	\$0	\$7,978
2020	APO002	Extend TW A to RW 13	\$3,661	–	–	\$244	\$163	\$4,068
2020	APO002	Extend TW A to RW 13	\$802,842	–	\$80,284	\$0	\$0	\$883,126
2020	APO001A	Seal Coat and Mark Pavements	–	–	–	\$15,761	\$0	\$15,761
2020	APO009A	CARES Act Operations	–	–	\$30,000	\$0	\$0	\$30,000
2020	APO008X	2020 Aviation Encouragement	–	–	–	\$2,500	\$0	\$2,500
2020	APO007X	2020 NAVAID Maintenance	–	–	–	\$7,978	\$0	\$7,978
2021	APO016A	ARPA Operations	–	–	\$32,000	\$0	\$0	\$32,000
2021	APO014X	2021 NAVAID Maintenance	–	–	–	\$7,978	\$0	\$7,978
2022	APO013A	Acquire Snowplow Attachment	–	–	–	\$45,000	\$5,000	\$50,000
2022	APO017X	2022 NAVAID Maintenance	–	–	–	\$7,978	\$0	\$7,978
2023	APO020X	2022 Aviation Encouragement	–	–	–	\$2,500	\$0	\$2,500
2023	APO027X	2023 Aviation Encouragement	–	–	–	\$2,500	\$0	\$2,500
2023	APO026X	2023 NAVAID Maintenance	–	–	–	\$6,575	\$1,644	\$8,219
2023	APO003A	Conduct Planning Study, Master Plan	\$300,227	–	–	\$20,015	\$13,343	\$333,585
2023	APO004A	Seal Coat and Mark Pavements	–	–	–	\$148,500	\$16,500	\$165,000
TOTALS:			\$2,612,367	\$20,137	\$142,284	\$1,132,535	\$156,919	\$4,064,242

Source: WYDOT records

THE AIRPORT'S SYSTEM ROLE

Airport planning takes place at the local, state, and national levels, each of which has a different emphasis and purpose.

- **Local** | Powell Municipal Airport has an approved airport layout plan (ALP), which was last updated in 2011.
- **State** | Powell Municipal Airport is included in the 2016 *Wyoming State Aviation System Plan*.
- **National** | POY is included in the *National Plan of Integrated Airport Systems*, which categorizes overall airport roles and responsibilities based on input from local and state planning efforts (i.e., master plans and state system plans).

LOCAL AIRPORT PLANNING

2011 Airport Layout Plan | The ALP was most recently approved in 2011. The plan includes a 1,150-foot extension to primary Runway 13-31, as well as construction of a new paved 6,000-foot crosswind Runway 5-23. Full-length parallel taxiways are planned for both runways. Turf Runways 3-21 and 16-34 are shown as abandoned following construction of Runway 5-23. On the landside, additional apron and hangars are planned in the vicinity of existing landside facilities.

STATE AIRPORT PLANNING

The primary planning document for the State of Wyoming is the 2016 *State Aviation System Plan* (WYSASP). The WYSASP provides an inventory and evaluation of all public-use airports in the state, with a focus on keeping Wyoming's airports highly advanced, safe, and responsive to the public's needs. The WYSASP categorizes airports based on the types of facilities and services offered, the types of aircraft accommodated, the type of community being served, the airport's economic impact, and the number of aircraft based at the facility. Powell Municipal Airport is classified as an Intermediate Airport within the WYSASP. Classification criteria for each airport type are included in **Table 1C**.

TABLE 1C | 2016 WYSASP Classification Criteria

Criteria	Commercial Service	Business	Intermediate	Local
Types of Facilities & Services Offered	4 of the following 5, plus scheduled commercial service: <ul style="list-style-type: none"> • Ground transportation • Weather reporting • 24-hour restroom • Phone/cell coverage • Fuel 	4 of the following 5: <ul style="list-style-type: none"> • Ground transportation • Weather reporting • 24-hour restroom • Phone/cell coverage • Fuel 	3 of the following 5: <ul style="list-style-type: none"> • Ground transportation • Weather reporting • 24-hour restroom • Phone/cell coverage • Fuel 	2 of the following 5: <ul style="list-style-type: none"> • Ground transportation • Weather reporting • 24-hour restroom • Phone/cell coverage • Fuel
Type of Aircraft Accommodated	C-III or better	C-II or better	B-II or better	A-I / B-I or better
Type of Community Served	Large economic centers (\$200M+ annual retail sales)	Medium economic centers (\$80M-\$200M annual retail sales)	Small economic centers (\$30M-\$80M annual retail sales)	Smallest economic centers (<\$30M annual retail sales)
Economic Impact	Support a minimum of 200 local jobs; statewide impact of more than \$18 million	Support a minimum of 20 local jobs; statewide impact of more than \$3 million	Support a minimum of 5 local jobs; statewide impact of more than \$1 million	Support a minimum of 2 local jobs; statewide impact of more than \$500,000
Based Aircraft	50+ based aircraft	30+ based aircraft	15+ based aircraft	<15 based aircraft

Source: 2016 Wyoming State Aviation System Plan

FEDERAL AIRPORT PLANNING

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, therefore, mostly due to federal policy that promotes the development of civil aviation. As part of a continuing effort to develop a national airport system, U.S. Congress has maintained a national plan for the development and maintenance of airports.

The FAA maintains a database of airports that are eligible for AIP funding and are for public use called the *National Plan of Integrated Airport Systems* (NPIAS). The NPIAS is published and used by the FAA in administering the AIP, which is the source of federal funds for airport improvement projects across the country. An airport must be included in the NPIAS to be eligible for federal funding assistance through the AIP.

The current plan is the NPIAS 2023-2027, which identified 3,287 existing public-use airports and eight proposed nonprimary airports (anticipated to open by 2027) that are deemed important to national air transportation. The plan estimates that approximately \$62.4 billion in AIP-eligible airport projects will require financial assistance between 2023 and 2027, which is an increase of almost \$19 billion compared to the previous NPIAS report.

The NPIAS categorizes airports by the type of activities they experience, including commercial service, cargo service, reliever operations, and general aviation (GA). Powell Municipal Airport is currently classified as a Local GA airport in the NPIAS. These airports are critical components of the national GA system and account for 36 percent of all NPIAS airports. They are typically located near population centers, experience moderate levels of activity, often accommodate flight training and emergency services, and average approximately 33 based propeller-driven aircraft (no jets) at their facilities.

AIRPORT FACILITIES AND SERVICES

There are three broad categories of facilities and services at the airport: airside, landside, and support.

- **Airside Facilities** | Facilities directly associated with aircraft operations, including runways, taxiways, lighting, markings, navigational aids, and weather reporting.
- **Landside Facilities** | Facilities necessary to provide a safe transition from surface to air transportation and which support aircraft parking, servicing, storage, maintenance, and operational safety.
- **Support Facilities** | Facilities that serve as a critical link to provide the necessary efficiency to aircraft ground operations, such as fuel storage, airport maintenance, firefighting, and fencing.

AIRSIDE FACILITIES

Runways

As depicted on **Exhibit 1C**, Powell Municipal Airport has three runways: one constructed of asphalt and two that are dirt/turf. The runways and their features are detailed as follows.

Runway 13-31 | Runway 13-31 is the airport's primary runway and measures 6,200 feet long by 100 feet wide. The runway is oriented northwest/southeast and is constructed of asphalt, which is reported to be in good condition. Runway 13-31 has a weight-bearing capacity of 15,000 pounds for single wheel aircraft (S). Both runway ends are equipped



Runway 31 Threshold

with non-precision markings, which support the localizer performance with vertical guidance (LPV) global positioning system (GPS) approaches that are available to each runway end. The runway generally slopes down from the Runway 31 end at a longitudinal gradient of 1.59 percent.

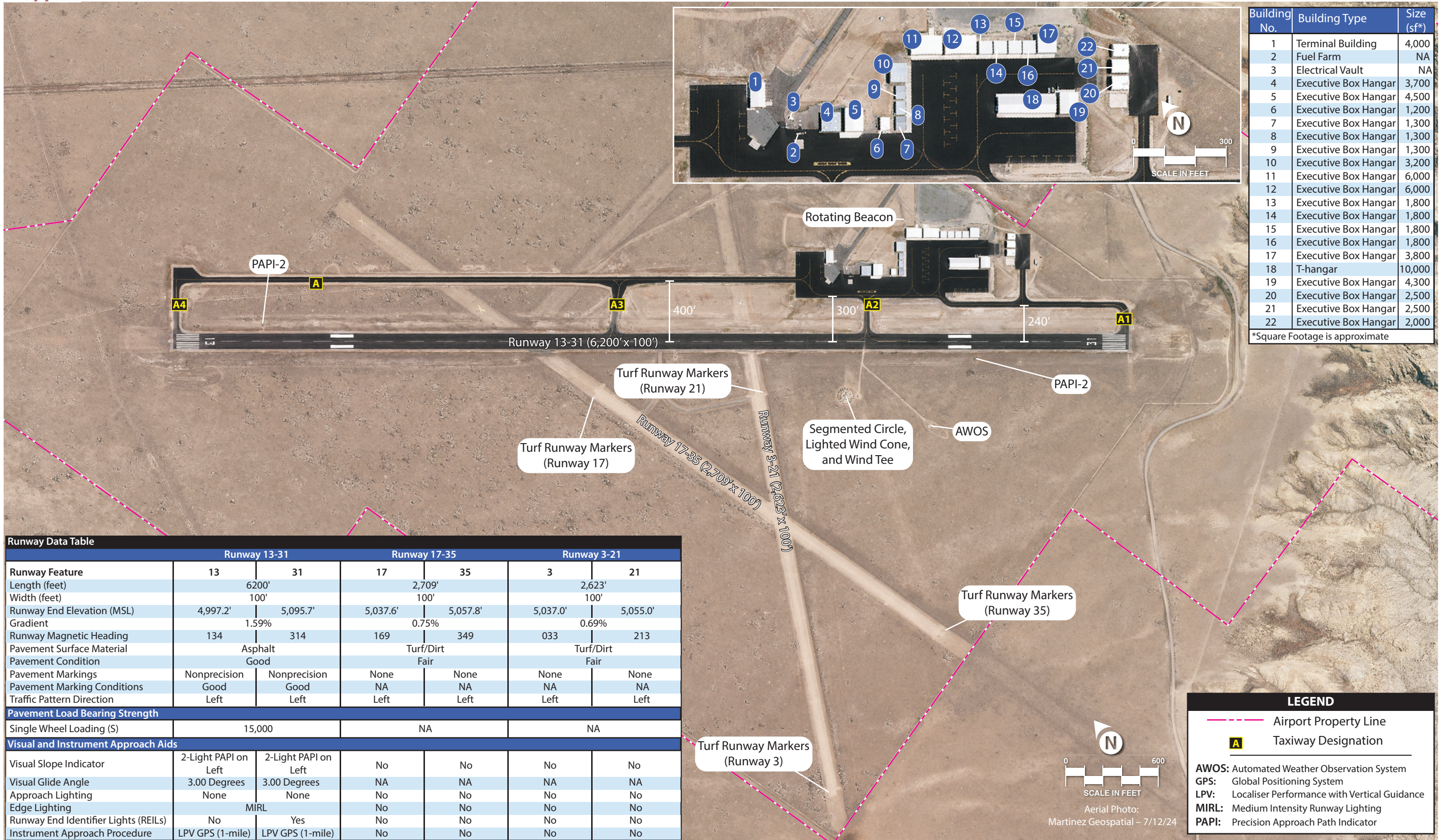
Pavement conditions, which are shown on the back of **Exhibit 1C**, are the result of a visual inspection conducted as part of the 2022 Wyoming Airport Pavement Management System. Pavement condition index (PCI) ratings range from 0 (failed) to 100 (excellent). As of the 2022 pavement inspection, Runway 13-31 has a PCI of 68. WYDOT-Aeronautics has established a critical PCI threshold of 65 for runways at general aviation airports. Major rehabilitation or reconstruction is recommended for pavements with PCI values below the critical level.

Runway 17-35 | Runway 17-35 is oriented north/south and is a dirt/turf runway that measures 2,709 feet long by 100 feet wide. It is equipped with retro-reflectors at each runway end, and the edges are defined by mowing limits.

Runway 3-21 | Runway 3-21 is the airport's other turf/dirt runway. It has a length of 2,623 feet and a width of 100 feet and is oriented northeast/southwest. Like Runway 17-35, Runway 3-21 is equipped with retro-reflectors at each runway end, and the edges are also defined by mowing limits.

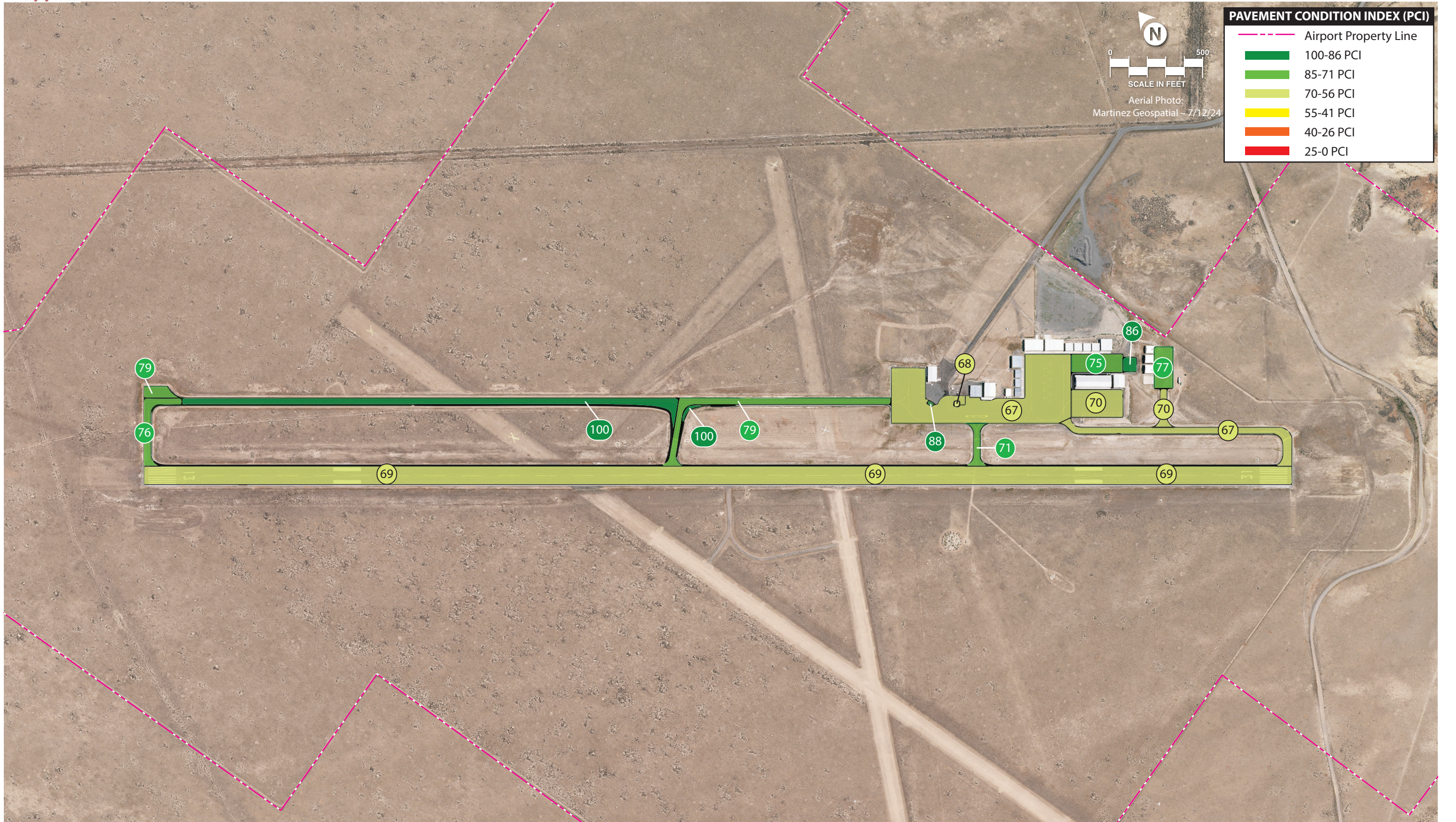
Taxiways

The taxiway system at Powell Municipal Airport is identified on **Exhibit 1C**. A full-length parallel taxiway, Taxiway A, serves Runway 13-31. The taxiway is 35 feet wide, with four connector taxiways providing entry/exit points from Runway 13-31. North of the terminal apron, parallel Taxiway A is separated from the Runway 13-31 centerline by 400 feet. Measuring from the runway centerline to the centerline on the terminal apron, there is a separation of 300 feet until the taxiway jogs to the west, separating from the apron and resulting in a runway-taxiway separation of 240 feet. The north end of the parallel taxiway includes a holding bay area for aircraft to perform engine runup checks prior to departure, which also allows aircraft to pass one another. Runways 17 and 21 are accessed via a turf/dirt taxiway that connects to Runway 13-31 at its approximate midpoint.



Building No.	Building Type	Size (sf*)
1	Terminal Building	4,000
2	Fuel Farm	NA
3	Electrical Vault	NA
4	Executive Box Hangar	3,700
5	Executive Box Hangar	4,500
6	Executive Box Hangar	1,200
7	Executive Box Hangar	1,300
8	Executive Box Hangar	1,300
9	Executive Box Hangar	1,300
10	Executive Box Hangar	3,200
11	Executive Box Hangar	6,000
12	Executive Box Hangar	6,000
13	Executive Box Hangar	1,800
14	Executive Box Hangar	1,800
15	Executive Box Hangar	1,800
16	Executive Box Hangar	1,800
17	Executive Box Hangar	3,800
18	T-hangar	10,000
19	Executive Box Hangar	4,300
20	Executive Box Hangar	2,500
21	Executive Box Hangar	2,500
22	Executive Box Hangar	2,000

*Square Footage is approximate



Source: WYDOT-Aeronautics, Airport Pavement Management Program, 2022 Inspection

Airfield Lighting

Airfield lighting systems extend an airport's usefulness into periods of darkness and/or poor visibility. Various lighting systems are installed at the airport for this purpose. These lighting systems, categorized by function, are summarized as follows.

Airport Identification Lighting | The location of the airport at night is universally identified by a rotating beacon. The rotating beacon projects two beams of light, one white and one green, 180 degrees apart. The beacon operates from sunset to sunrise and is located on the east side of airport property, south of the airport access road and adjacent to the hangar area.



Hangar with Rotating Beacon in Background

Pavement Edge Lighting | Pavement edge lighting defines the lateral limits of the pavement to ensure safe operations during night and/or times of low visibility, and to help maintain safe and efficient access to and from the runway and aircraft parking areas. Runway 13-31 is equipped with medium intensity runway lighting (MIRL). Each runway end is equipped with threshold lights, which emit green light outward from the runway and emit red light toward the runway. The green lights indicate the landing threshold to arriving aircraft and the red lights indicate the end of the runway for departing or landing aircraft. Taxiway A and entrance/exit taxiways at the airport are equipped with taxiway edge reflectors.

Visual Approach Aids | Visual approach aids are installed at airports to assist pilots in determining the correct descent path to the runway end during landing. Runway 13-31 is equipped with a two-box precision approach path indicator (PAPI-2) system on each runway end. The PAPIs are installed on the left side of the runway and have been set at the standard 3.00-degree glide path. PAPIs have an effective visual range of three miles during the day and 20 miles at night.

Runway end identification lights (REILs) provide a visual identification of the runway end for landing aircraft. The REILs consist of two synchronized flashing lights, located laterally on each side of the runway end, facing the approaching aircraft. These flashing lights can be seen day or night for up to 20 miles, depending on visibility conditions. Runway 31 is equipped with REILs.

Pilot-Controlled Lighting | During nighttime hours, pilots can use the pilot-controlled lighting (PCL) system to activate the airfield lights and visual approach aids from their aircraft through a series of clicks of their radio transmitter using the common traffic advisory frequency (CTAF) (122.7 megahertz [MHz]).

Airfield Signage and Markings

Airfield identification signs assist pilots in identifying runways, taxiway routes, holding positions, and critical areas. Powell Municipal Airport is equipped with lighted runway and taxiway designations and routing/directional signage.

Pavement markings aid in the movement of aircraft along surfaces at the airport and identify closed or hazardous areas. The airport provides and maintains marking systems in accordance with FAA Advisory Circular (AC) 150/5340-1, *Standards for Airport Marking*. As mentioned previously, Runway 13-31 is equipped with non-precision markings that include the runway centerline, designation, threshold markings, and aiming points.

All taxiways at the airport are marked with yellow centerline, holding position markings, and leadoff lines on normally used exits. Centerline markings assist pilots in maintaining proper clearance from pavement edges and objects near the taxiway edges. Aircraft holding positions are marked at each runway/taxiway intersection. All taxiways serving Runway 13-31 are marked with holding positions located 200 feet from the runway centerline.

Navigational Aids and Instrument Approach Procedures

Navigational aids are electronic devices that transmit radio frequencies that pilots in properly equipped aircraft can translate into point-to-point guidance and position information. The very high omnidirectional range (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 Powell area is served by one VOR/DME at Cody, located 16.5 nautical miles (nm) southwest.

A non-directional beacon (NDB) is a radio transmitter at a known location that is used as an aviation or marine navigational aid. The signal transmitted does not include *inherent* directional information, in contrast to other navigational aids, such as a VOR. NDB signals follow the curvature of the earth, so they can be received at much greater distances at lower altitudes – a major advantage over VOR. The Cowley and Greybull NDBs, located 15.2 nm and 37.2 nm away, respectively, serve aircraft operating in the vicinity of Powell Municipal Airport. NDBs are generally being phased out of use by the FAA.

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 an NDB or VOR in that it does not require pilots 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.

Instrument approach procedures assist pilots in locating and landing at an airport during low visibility and cloud ceiling conditions. They are categorized as either precision, approach with vertical guidance (APV), or non-precision. Precision instrument approach aids provide an exact course alignment and vertical descent path for an aircraft on final approach to a runway with a height above threshold (HATh) lower than 250 feet and visibility lower than $\frac{3}{4}$ -mile. APVs also provide course alignment and vertical guidance but have HAThs of 250 feet or more and visibility minimums of $\frac{3}{4}$ -mile or greater. Non-precision instrument approaches provide only course alignment information with no vertical guidance.

Approach minimums are published for different aircraft categories (aircraft categories are described in greater detail in Chapter Two) and consist of a minimum decision altitude and required visibility. According to Title 14 Code of Federal Regulations (CFR) 91.175, a pilot must be able to make a safe landing, have the runway in sight, and the visibility requirement be met. For a precision approach or approach with vertical guidance, the decision altitude (DA) is the point at which the pilot must meet all three criteria for landing, otherwise they cannot land using the published instrument approach. For a non-precision approach, the minimum descent altitude (MDA) is a specified altitude at which the required visual reference must be made, or a missed approach initiated.

At Powell Municipal Airport, GPS provides for localizer performance with vertical guidance (LPV) via an area navigation (RNAV) GPS instrument approach to each end of Runway 13-31. **Table 1D** details the instrument approach procedures at Powell Municipal Airport.

TABLE 1D | Instrument Approach Procedures

	WEATHER MINIMUMS BY AIRCRAFT TYPE			
	Category A	Category B	Category C	Category D
RNAV (GPS) Runway 13				
LPV DA	5,296' / 1-mile			
LNAV/VNAV DA	5,296' / 1-mile			
LNAV MDA	5,300' / 1-mile			
Circling	5,500' / 1-mile	5,560' / 1-mile	5,560' / 1½-mile	5,660' / 2-mile
RNAV (GPS) Runway 31				
LPV DA	5,346' / 1-mile			
LNAV/VNAV DA	5,346' / 1-mile			
LNAV MDA	5,380' / 1-mile			
Circling	5,500' / 1-mile	5,560' / 1-mile	5,560' / 1½-mile	5,660' / 2-mile
(xxx' / x-mile) = decision altitude/visibility minimum				
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:				
<ul style="list-style-type: none"> • 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) 				

Source: AirNav (<https://www.airnav.com/airport/KPOY>)

WEATHER AND COMMUNICATION

Powell Municipal Airport is served by an automated weather observing system (AWOS-3). The system updates weather observations every minute, continuously reporting changes that can be accessed via radio frequency 119.275 MHz or by calling (307) 754-7093. The AWOS reports cloud ceiling, visibility, temperature, dew point, wind direction, wind speed, altimeter setting (barometric pressure), and density altitude (airfield elevation corrected for temperature). The AWOS is centrally located on airport property, southwest of Runway 13-31 near the Runway 31 end.



Lighted Wind Cone and Segmented Circle

Powell Municipal Airport also has a lighted wind cone and wind tee co-located with a segmented circle approximately 550 feet north of the AWOS equipment. The wind cone informs pilots of the wind direction and speed, while the wind tee indicates wind direction only. The segmented circle informs pilots of the traffic pattern.

AREA AIRSPACE AND AIR TRAFFIC CONTROL

The *Federal Aviation Act of 1958* established the FAA as the responsible agency for the control and use of navigable airspace within the U.S. The FAA has established the National Airspace System (NAS) to protect persons and property on the ground, in addition to establishing 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.

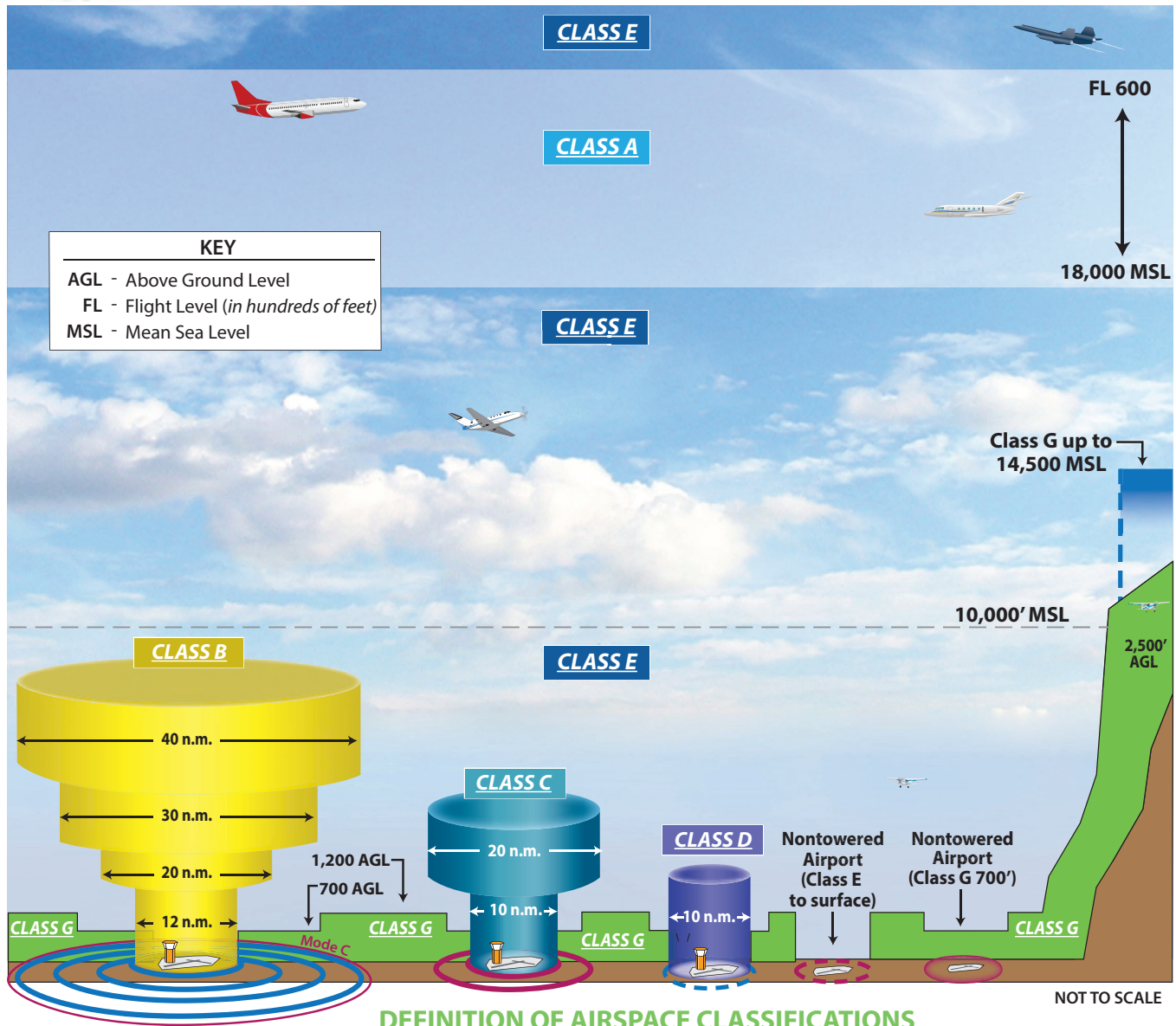
AIRSPACE STRUCTURE

Airspace within the U.S. 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 U.S., as shown on **Exhibit 1D**. 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. Airspace near Powell Municipal Airport is depicted on **Exhibit 1E**.

Class A Airspace | Class A airspace includes all airspace from 18,000 feet MSL to flight level (FL) 600 (approximately 60,000 feet MSL) over the contiguous 48 states and Alaska. This airspace is designated in 14 CFR Part 71.33 for positive control of aircraft. All aircraft must be on an IFR clearance to operate within Class A airspace.

Class B Airspace | Class B airspace has been designated around some of the country’s major airports, such as Salt Lake City International Airport (SLC), to separate all aircraft within a specified radius of the primary airport. Each Class B airspace is specifically tailored for its primary airport. This airspace is the most restrictive controlled airspace routinely encountered by pilots operating under VFR in an uncontrolled environment. In order 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. A pilot is required to have at least a private pilot 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. Aircraft are also required to utilize a Mode C transponder within a 30-nm range of the center of the Class B airspace. A Mode C transponder allows the airport traffic control tower (ATCT) to track the location and altitude of the aircraft.

Class C Airspace | The FAA has established Class C airspace at approximately 120 airports around the country that have significant levels of IFR traffic. 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 major airports. To fly inside Class C airspace, an aircraft must have a two-way radio and an encoding transponder and must have established communication with the air traffic control (ATC) facility. Aircraft may fly below the floor of the Class C airspace or above the Class C airspace ceiling without establishing communication with ATC. The nearest Class C airspace to Powell Municipal Airport surrounds Billings Logan International Airport in Billings, Montana, approximately 60 nm to the northeast.



CLASS A

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

CLASS B

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

CLASS C

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

CLASS D

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

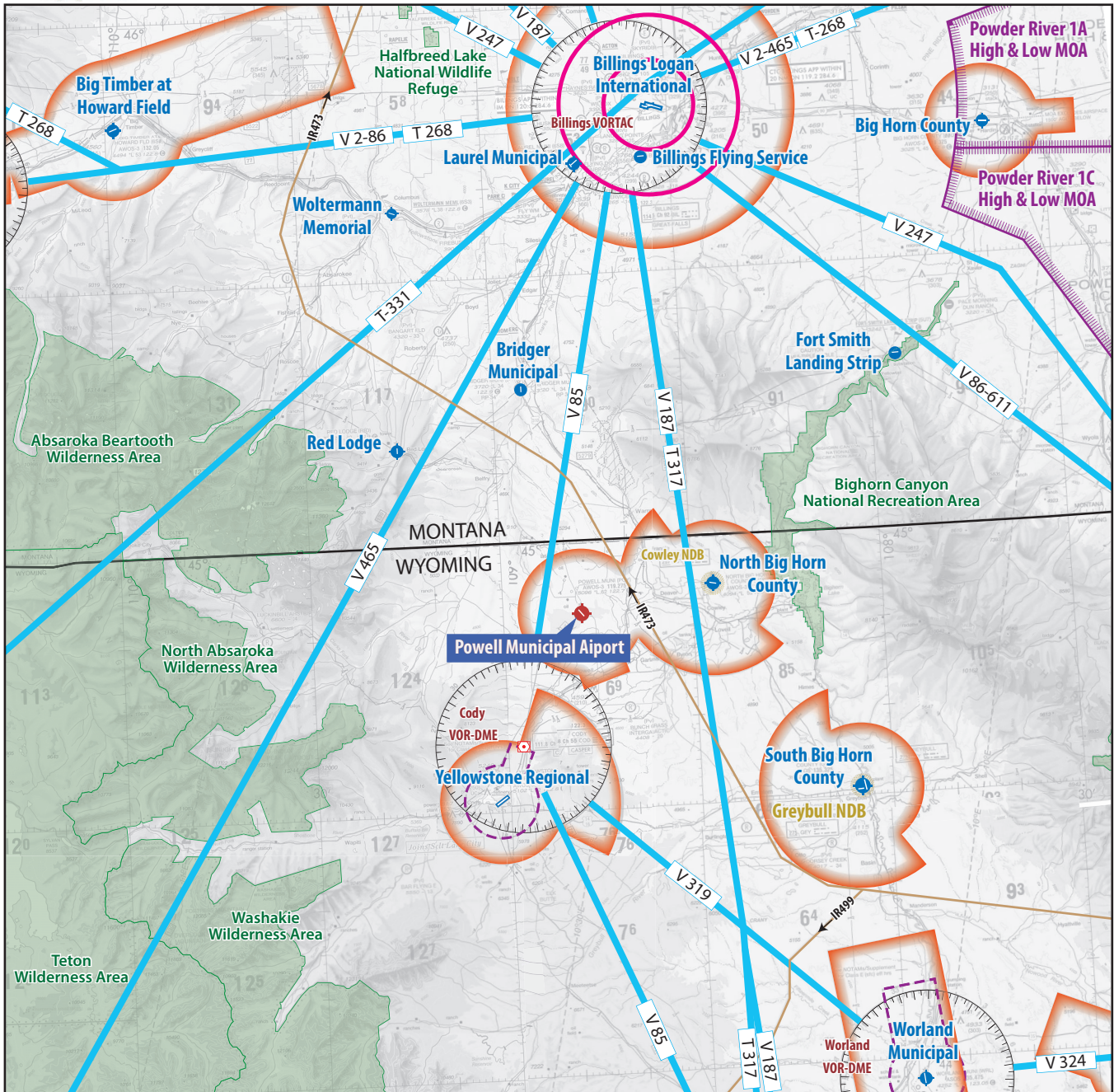
CLASS E

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


CLASS G

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

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



LEGEND

- | | | | |
|---|---|---|--|
|  | Airports with hard-surfaced runways 1,500' to 8,069' in length |  | Class C Airspace |
|  | Airports with hard-surfaced runways greater than 8,069' or some multiple runways less than 8,069' |  | Class E Airspace starting at 700' AGL |
|  | Compass Rose |  | Class E Airspace starting at the surface |
|  | Wilderness Area |  | Victor Airways |
|  | Non-Directional Beacon (NDB) |  | Alert Area and Military Operations Area |
|  | VOR-DME |  | Military Training Routes |

Sources: Billings Sectional Chart, US Department of Commerce, National Oceanic and Atmospheric Administration. August 10, 2023
 Cheyenne Sectional Chart, US Department of Commerce, National Oceanic and Atmospheric Administration. August 10, 2023
 Great Falls Sectional Chart, US Department of Commerce, National Oceanic and Atmospheric Administration. August 10, 2023
 Salt Lake City Sectional Chart, US Department of Commerce, National Oceanic and Atmospheric Administration. August 10, 2023

Class D Airspace | Class D airspace is controlled airspace surrounding airports with an ATCT. The Class D airspace typically constitutes a cylinder with a horizontal radius of four or five nm from the airport, extending from the surface up to a designated vertical limit, which is typically set at approximately 2,500 feet above the airport elevation. Aircraft operators planning to operate within Class D airspace are required to contact ATC prior to entering or departing airspace and must maintain contact while within the controlled airspace to land or transverse the area. The nearest Class D airspace surrounds Bozeman Yellowstone International Airport, approximately 114 nm northwest of Powell Municipal Airport.

Class E Airspace | Class E airspace is 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 ATC when operating in Class E airspace. While aircraft conducting visual flights in Class E airspace are not required to be in radio communication with ATC facilities, visual flight can only be conducted if minimum visibility and cloud ceilings exist. Powell Municipal Airport is in Class E airspace, with the surface beginning at 700 feet above ground level (AGL). The airspace below 700 feet AGL surrounding the airport is Class G airspace.

Class G Airspace | Airspace not designated as Class A, B, C, D, or E is considered uncontrolled, or Class G, airspace. ATC 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 overlying Class E airspace (700 feet AGL).

While aircraft may technically operate within this Class G airspace without any contact with ATC, it is unlikely that many aircraft will operate this low to the ground. Furthermore, federal regulations specify minimum altitudes for flight. F.A.R. Part 91.119, *Minimum Safe Altitudes*, generally states that except when necessary for takeoff or landing, pilots must not operate an aircraft over any congested area of a city, town, or settlement, or over any open-air assembly of persons, below an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft.

Over less congested areas, pilots must maintain an altitude of 500 feet above the surface, except over open water or sparsely populated areas. In those cases, the aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure. Helicopters may be operated at less than the minimums prescribed above if the operation is conducted without hazard to persons or property on the surface. In addition, each person operating a helicopter shall comply with any routes or altitudes specifically prescribed for helicopters by the FAA.

Victor Airways | For aircraft arriving or departing the regional area using 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. Victor Airways near Powell Municipal Airport are identified on **Exhibit 1E**.

Alert Areas / Military Operations Areas (MOAs) and Military Training Routes (MTRs) / Restricted Areas | Alert areas, MOAs, MTRs, and restricted areas are depicted on aeronautical charts to inform nonparticipating pilots of areas that may contain a high volume of pilot training, military operations/activities, or an unusual type of aerial activity. Pilots should exercise caution near and within these areas.

All activity within these areas, if granted by the controlling agency, should be conducted in accordance with regulations and without waiver; pilots of participating aircraft and pilots transitioning the area are equally responsible for collision avoidance. The nearest MOA to the airport is the Powder River MOA, 70 nm to the northeast. There are no restricted areas in the vicinity of POY.

Wilderness Areas | When operating near designated wilderness areas, aircraft are requested to maintain a minimum altitude of 2,000 feet above the surface of designated National Park areas, which includes wilderness areas and designated breeding grounds. FAA AC 91-36C defines the surface as the highest terrain within 2,000 feet laterally of the route of flight or the uppermost rim of a canyon or valley. The nearest wilderness area to Powell Municipal Airport is the North Absaroka Wilderness Area to the east.

AIRSPACE CONTROL

The FAA has established 21 air route traffic control centers (ARTCCs) throughout the continental U.S. to control aircraft operating under IFR within controlled airspace and while en route. An ARTCC assigns specific routes and altitudes along Federal Airways to maintain separation and orderly traffic flow. The Salt Lake City Center ARTCC controls IFR airspace en route to and from Powell Municipal Airport at altitudes greater than 10,000 feet AGL.

Flight service stations (FSS) are air traffic facilities that provide pilot briefings, flight plan processing, inflight radio communications, search and rescue (SAR) services, and assistance to lost aircraft and aircraft in emergency situations. FSSs also relay ATC clearances, process Notice to Air Missions (NOTAMs), and broadcast aviation meteorological and aeronautical information. The Casper FSS is the nearest to Powell Municipal Airport.

LOCAL OPERATING PROCEDURES

The traffic pattern at the airport is maintained to provide the safest and most efficient use of the airspace. At Powell Municipal Airport, all runways use a left-hand traffic pattern, which means aircraft conduct left-hand turns within the traffic pattern when operating on the runway. The typical traffic pattern altitude is 500 feet AGL for rotorcraft; between 800 and 1,000 feet AGL for piston aircraft; and 1,500 feet AGL for turbine aircraft.

REGIONAL AIRPORTS

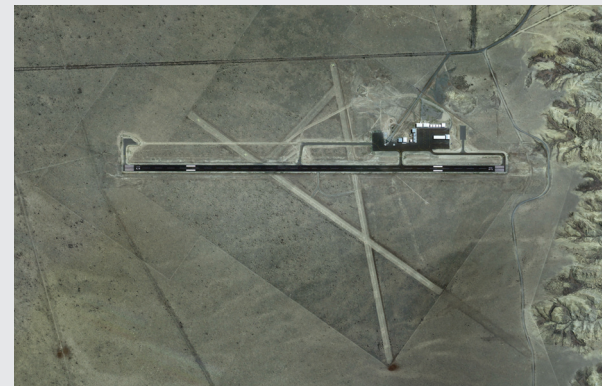
A review of other public-use airports with at least one paved runway within a 30-nm radius of Powell Municipal Airport was conducted to identify and distinguish the types of air service provided in the region. It is important to consider the capabilities and limitations of these airports when planning for future changes or improvements at Powell Municipal Airport. **Exhibit 1F** provides basic information on the public-use airports within the vicinity of Powell Municipal Airport.

NORTH BIG HORN COUNTY AIRPORT (U68)



Distance from POY 15 nm E
 FAA Service Level Basic GA
 Based Aircraft 13
 Operations 5,850
 Longest Runway 5,200
 Lowest Visibility Minimums 1-mile

POWELL MUNICIPAL (POY)



FAA Service Level Local GA
Based Aircraft 27
Operations..... 4,804
Longest Runway..... 6,200
Lowest Visibility Minimums..... 1-mile

RED LODGE AIRPORT (RED)



Distance from POY 27.4 nm NW
 FAA Service Level Local GA
 Based Aircraft 28
 Operations 1,500
 Longest Runway 4,000
 Lowest Visibility Minimums Visual Only

YELLOWSTONE REGIONAL (COD)

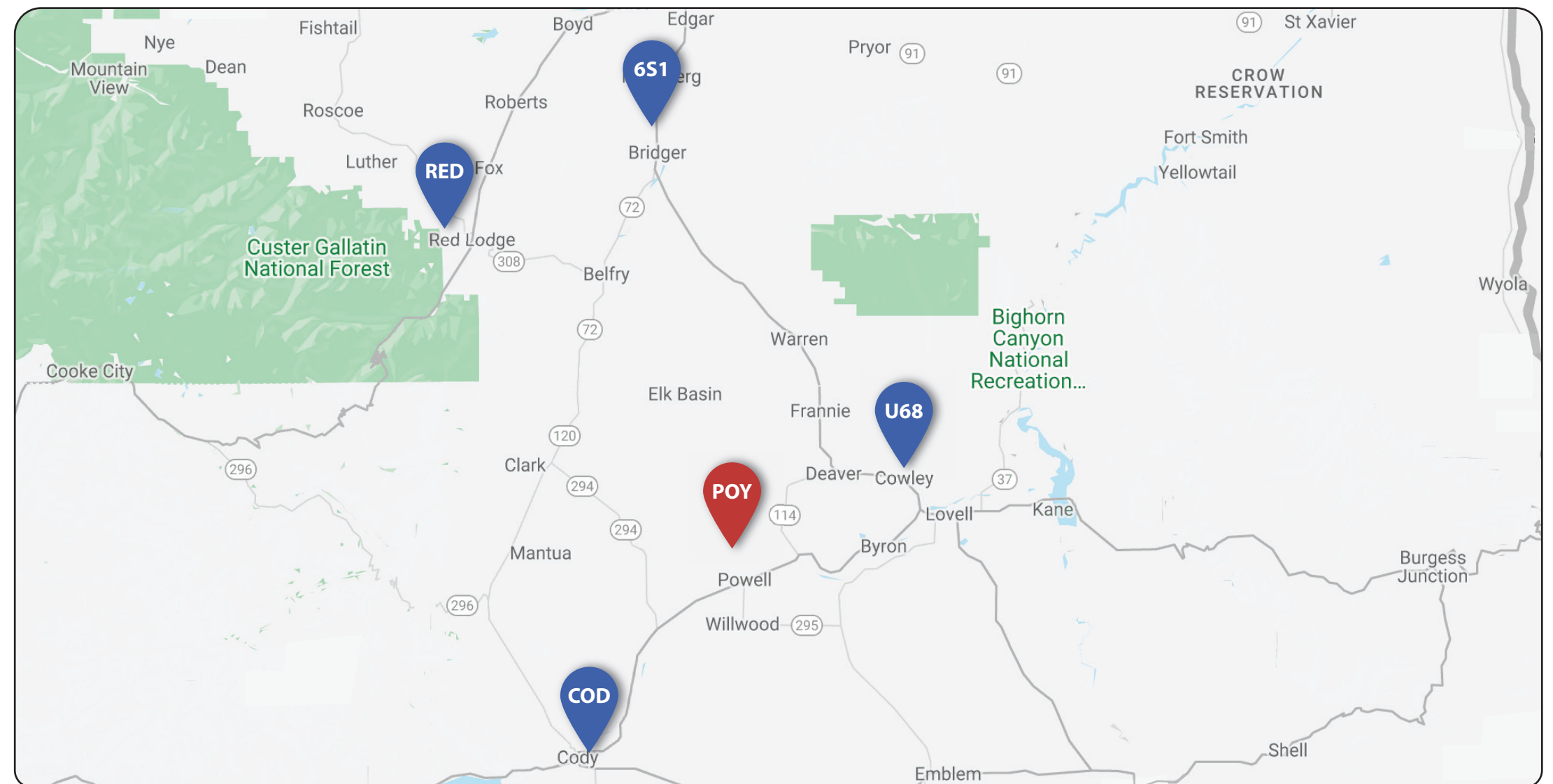


Distance from POY 23.0 nm SSW
 FAA Service Level ... Primary Commercial Service - Nonhub
 Based Aircraft NA
 Operations 25,238
 Longest Runway 8,268
 Lowest Visibility Minimums 1-mile

BRIDGER MUNICIPAL AIRPORT (6S1)



Distance from POY 26.1 nm NNW
 FAA Service Level NA
 Based Aircraft 2
 Operations 1,500
 Longest Runway 3,400
 Lowest Visibility Minimums Visual Only



Sources: FAA Form 5010, Airport Master Record; airnav.com; FAA's Validated Based Aircraft Database

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LANDSIDE FACILITIES

TERMINAL BUILDING

The terminal building at Powell Municipal Airport was constructed in 2013 and is located at midfield on the north end of the landside development area. From the airside, it can be accessed via Taxiway A. From the landside, it is accessible from the airport access road (L 1 H), which connects to Highway 295. The building is unstaffed but is open to airport users 24 hours per day. The terminal features a lobby area, a pilots' lounge, a kitchen, vending machines, and restrooms. Two courtesy cars are also available.



Terminal Building

FIXED BASE OPERATOR AND AVIATION BUSINESSES

The City of Powell serves as the airport's fixed base operator (FBO) and provides fuel (100LL and Jet A) via self-service pump, tiedowns, and hangar rentals. One on-site business, GT Aeronautics, develops unmanned aerial system (UAS) aircraft for military and commercial applications and provides UAS flight training services.

AIRCRAFT HANGAR FACILITIES

Existing hangar facilities at Powell Municipal Airport are all located on the east side of the airport, as shown previously on **Exhibit 1C**. These aircraft storage facilities consist of T-hangars, which are designed to accommodate individual smaller aircraft, and executive box hangars, which can accommodate larger aircraft and typically range in size from 2,500 square feet (sf) to 10,000 sf. There are no conventional hangars on the airport. Conventional hangars are typically greater than 10,000 sf in size and are used to store larger aircraft, including jets.



Aircraft Hangars

There is one city-owned T-hangar facility that offers eight individual storage units and comprises approximately 10,000 sf of storage space. There are also 18 executive box hangars, ranging in size from 1,200 to 6,000 sf, which have a combined storage capacity of approximately 50,800 sf. As of April 2024, all hangars are occupied and there are three individuals on a waiting list.

AIRCRAFT PARKING APRONS

As shown on **Exhibit 1G**, there are five aprons at Powell Municipal Airport: the terminal apron, the central apron, the north hangar apron, and the T-hangar apron. The terminal apron offers approximately 6,000 square yards (sy) of pavement and includes five marked parking positions for fixed-wing aircraft. The central apron, which includes the self-service fuel pumps, comprises approximately 7,700 sy of pavement. The north hangar apron, located immediately to the south of the central apron and serving the majority of the airport's box hangars, is approximately 8,900 sy and provides 12 marked tiedown positions. The T-hangar apron has six tiedown positions and is approximately 7,600 sy, and the south hangar apron is approximately 2,500 sy and does not have any marked aircraft parking.

VEHICLE PARKING

There is one public vehicle parking lot at Powell Municipal Airport adjacent to the terminal building. The lot consists of seven parking places, including one handicapped space. Tenants of the hangar facilities on the airport are authorized to pass through secured gates with their vehicles, so most of these facilities do not have separate vehicle parking areas.

SUPPORT FACILITIES

Fuel Storage | Fuel storage facilities at Powell Municipal Airport are located on the central apron, south of the terminal building, as shown previously on **Exhibit 1C**. There are two underground tanks: one for 100LL fuel and one for Jet A. Both tanks have a 9,500-gallon capacity and are owned by the City of Powell. Both fuel types are dispensed via self-service pumps on the central apron and are equipped with a credit card reader.



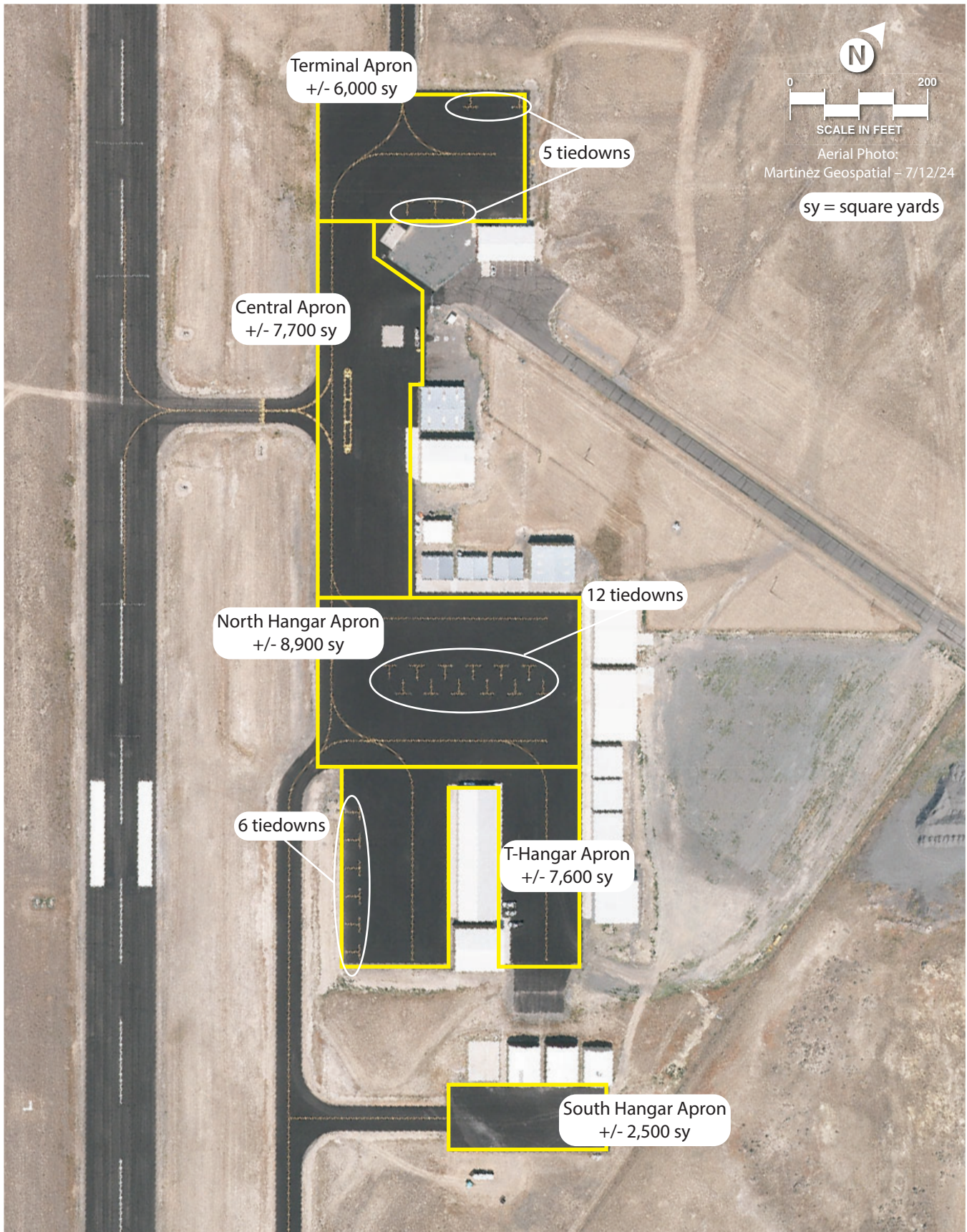
Self-Serve Fuel Pumps and Underground Storage Tanks

Firefighting Services | As a general aviation airport, Powell Municipal Airport is not required to maintain on-site aircraft rescue and firefighting (ARFF) equipment or services. Firefighting services are provided by the Powell Volunteer Fire Department, which operates from a station located at 1101 E. South Street on the city's east side, approximately 10 miles south of the airport.

Airport Maintenance Facilities | Maintenance equipment is stored in the terminal building's garages on the north side. Equipment includes a 1991 GMC TopKick with plow, a 2015 John Deere loader with plow and broom, a John Deere mower, and a truck.

PERIMETER FENCING

The airfield perimeter is fully enclosed with eight-foot-tall wildlife fencing to restrict entry by unauthorized persons, vehicles, and wildlife. One motorized gate allows access to landside areas to authorized personnel only. Three chain-link gates are accessible from the airport's access road, with two located on the north side and one on the south side.



UTILITIES

The availability and capacity of the utilities serving the airport are factors in determining the development potential of the airport property, as well as the land immediately adjacent to the facility. Of primary concern in the inventory investigation is the availability of water, gas, sewer, and power sources. Providers are detailed below:

- Gas – Montana-Dakota Utilities
- Electric – Garland Power & Light
- Water/Sanitary Sewer – City of Powell
- Solid Waste – Park County Solid Waste Division

COMMUNITY PROFILE

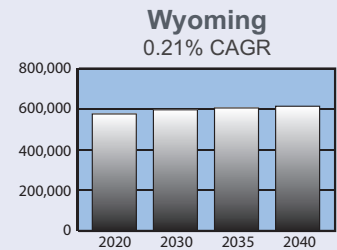
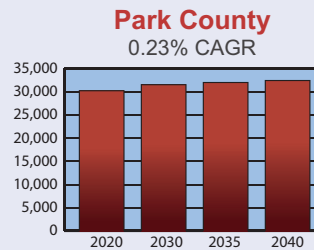
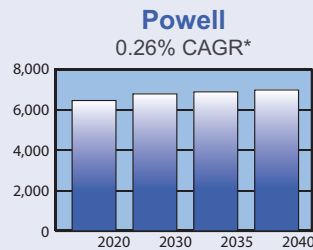
For an airport planning study, a profile of the local community, including its socioeconomic characteristics, is created and examined in order to understand the growth dynamics of the study area. The community profile for the City of Powell on **Exhibit 1H** is derived from several sources, including the U.S. Census Bureau and the Wyoming Department of Administration & Information.

ENVIRONMENTAL INVENTORY

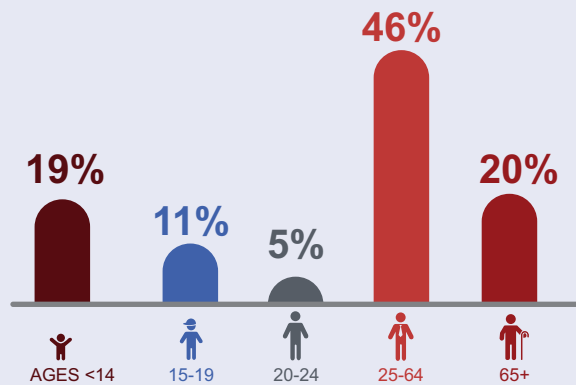
The purpose of the following environmental inventory is to identify potential environmental sensitivities that should be considered when planning future improvements at the airport. Research was performed for each of the 13 impact categories within FAA Order 1050.1G, *FAA National Environmental Policy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

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

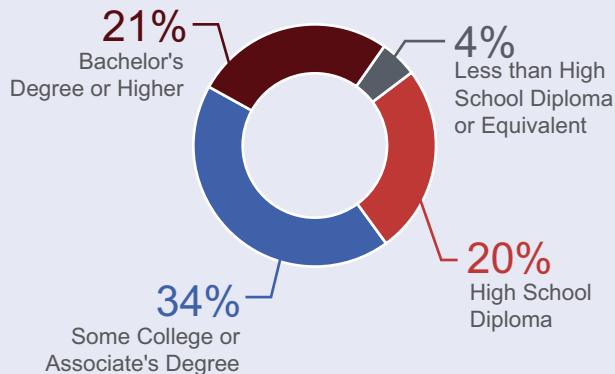
POPULATION PROJECTIONS



POPULATION BY AGE



EDUCATION

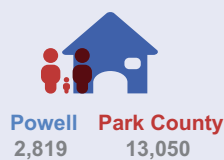


HOUSEHOLDS

MEDIAN HOUSEHOLD INCOME

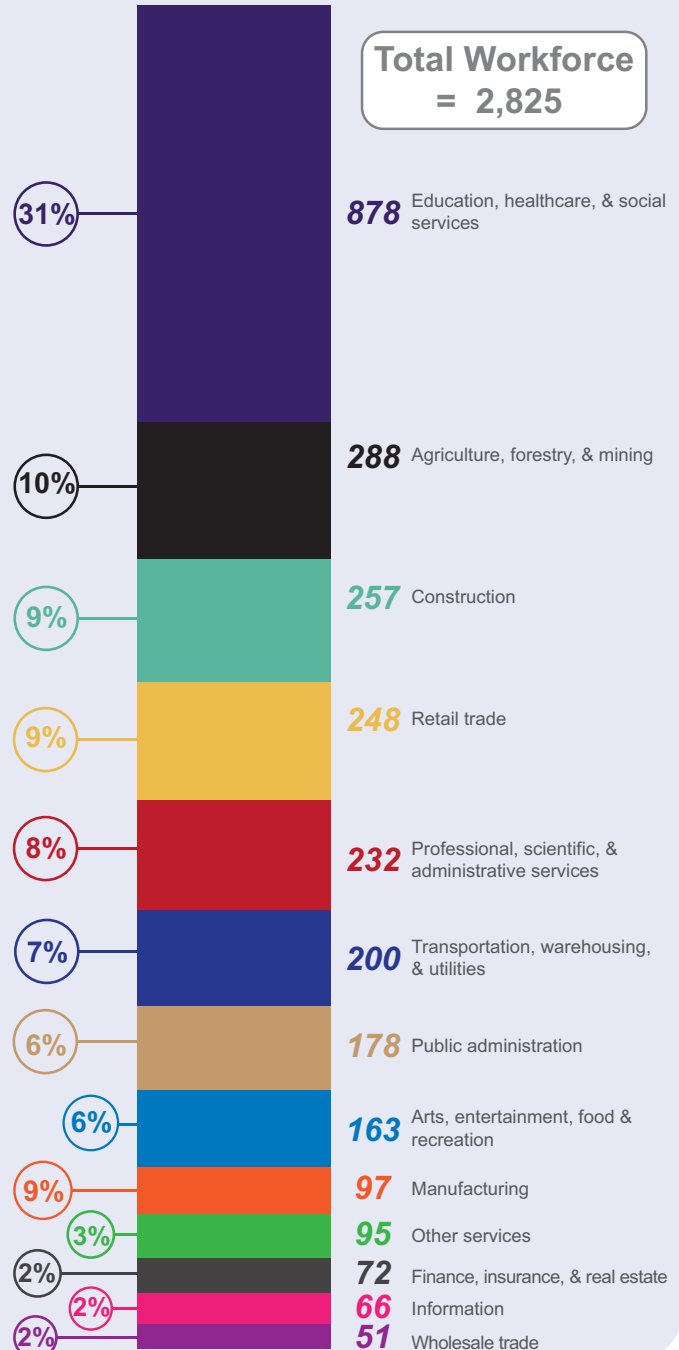


TOTAL HOUSEHOLDS



EMPLOYMENT BY SECTOR

Total Workforce
= 2,825



CAGR* - Compound Annual Growth Rate

Sources: U.S. Census Bureau (2020 Decennial Census & 2022 American Community Survey); Wyoming Department of Administration & Information, Economic Analysis Division

AVIATION EMISSIONS AND AIR QUALITY

The concentration of various pollutants in the atmosphere defines the local air quality. The significance of a pollutant's concentration is determined by comparing it to the state and federal air quality standards. In 1971, the U.S. Environmental Protection Agency (EPA) established standards that specify the maximum permissible short- and long-term concentrations of various air contaminants. The National Ambient Air Quality Standards (NAAQS) consist of primary and secondary standards for criteria pollutants: ozone (O₃), carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), coarse particulate matter (PM₁₀), fine particulate matter (PM_{2.5}), and lead (Pb).

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

The airport is Park County, Wyoming, located off State Highway 295, eight miles north of Powell. Park County is in attainment for all federal criteria pollutants.¹

BIOLOGICAL RESOURCES

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

The U.S. Fish and Wildlife Service (USFWS) is charged with overseeing the requirements contained within Section 7 of the *Endangered Species Act* (ESA). The ESA provides a framework to conserve and protect animal or plant species whose populations are threatened by human activities. The FAA and USFWS review projects to determine if a significant impact to protected species will result from the implementation of a proposed project. Significant impacts occur when a proposed action could jeopardize the continued existence of a protected species or would result in the destruction or adverse modification of federally designated critical habitat in the area. If a species has been listed as a candidate species, Section 7(a)(4) requires that each agency must confer with USFWS on any action that is likely to jeopardize the continued existence of the proposed species or result in the destruction or adverse modification of proposed critical habitat. The USFWS's Information for Planning and Consultation (IPaC) resource list describes species and habitat protected under the ESA within the vicinity of the airport (**Table 1E**).

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

Seven avian species were listed on the IPaC report as birds of particular concern, including bald and/or golden eagles, due to their protections under the *Migratory Bird Treaty Act* (MBTA) and the *Bald and Golden Eagle Protection Act* (BGEPA).

¹ U.S. EPA, Wyoming Nonattainment/Maintenance Status for Each County by Year for All Criteria Pollutants (https://www3.epa.gov/airquality/greenbook/anayo_wy.html), December 31, 2023

TABLE 1E | Species Protected Under ESA Section 7 with Potential to Occur at the Airport

Common Name (Scientific Name)	Federal Status*	Habitat and Range	Potential for Occurrence
MAMMALS			
grizzly bear (<i>Ursus arctos horribilis</i>)	Threatened	Grizzly bears are found in open or semi-forested areas on all parts of their range and are generally observed in alpine and subalpine terrain or on the tundra. Grizzly bears are typically restricted to the confines of national parks and wilderness areas in Washington, Idaho, Montana, and Wyoming.	Unlikely to occur. Grizzly bears are unlikely to be found in areas inhabited by human activity.
INSECTS			
monarch butterfly (<i>Danaus plexippus</i>)	Candidate	The monarch butterfly is a migratory species found in a variety of habitats and requires milkweed (<i>Asclepias</i> spp.) for breeding. In the southwestern United States, migrating monarch butterflies often occur near water sources (e.g., rivers, creeks, riparian corridors, roadside ditches, and irrigated gardens).	May occur. Milkweed has been observed in Wyoming.
*USFWS Status Definitions Candidate = a species for which the USFWS has sufficient information on biological vulnerability and threats to support proposals to list as endangered or threatened under the ESA; however, these proposed rules have not yet been issued because such actions are precluded at present by other listing activity Threatened = an animal or plant species in danger of extinction throughout all or a significant portion of its habitat range Sources: USFWS, IPaC (https://ipac.ecosphere.fws.gov/); USFWS, Species (https://www.fws.gov/species)			

COASTAL RESOURCES

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

The airport is not located within a coastal zone. The closest National Marine Sanctuary is the Olympic Coast National Marine Sanctuary, located 759 miles away.²

DEPARTMENT OF TRANSPORTATION ACT, SECTION 4(F)

Section 4(f) of the *Department of Transportation Act*, which was recodified and renumbered as Section 303(c) of 49 United States Code, provides that the Secretary of Transportation will not approve any program or project that requires the use of any publicly or privately owned historic sites, public parks or recreation areas, or waterfowl and wildlife refuges of national, state, regional, or local importance, unless there is no feasible and prudent alternative to the use of such land and the project includes all possible planning to minimize harm resulting from the use.³

There are no Section 4(f) resources within one mile of the airport.

² National Oceanic and Atmospheric Administration, National Marine Sanctuary System (<https://sanctuaries.noaa.gov/>); Google Earth Aerial Imagery, May 2023

³ Title 49 U.S. Code § 303, Policy on Lands, Wildlife and Waterfowl Refuges, and Historic Sites

There are no National Register of Historic Places (NRHP)-listed resources within one mile of the airport.

There are no waterfowl and wildlife refuges within one mile of the airport. The nearest wilderness and national recreation areas are listed below:

- Nearest wilderness area: North Absaroka Wilderness (30 miles from the airport)
- Nearest national recreation area: Bighorn Canyon (24 miles from the airport)

FARMLANDS

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

The USDA Natural Resources Conservation Service (USDA-NRCS) Web Soil Survey shows the types of soils and their farmland classification on and adjacent to the airport. The airport is not located in an urbanized area, as identified by the U.S. Census;⁴ however, all the airport is classified as “not prime farmland.”

Table 1F describes the farmland classification based on the soil within the airport’s boundaries.

TABLE 1F Farmland Classification – Summary by Map Unit – Park County Area, Wyoming, Eastern Part (WY629)		
Web Soil Survey Symbol	Soil Type	Farmland Rating
2148	Maysdorf fine sandy loam, 2 to 4 percent slopes	Not prime farmland
2255	Maysdorf-Copeman complex, 2 to 6 percent slopes	Not prime farmland

Source: USDA-NRCS, Web Soil Survey (<https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx>)

HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

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

The closest recycling center is Powell Valley Recycling, located eight miles south of airport property on the northern side of U.S. Route 14. The closest landfill is Park County SWDD – Powell Landfill, located 10 miles southwest of the airport.

⁴ U.S. EPA, NEPAAssist (<https://ejscreen.epa.gov/mapper/>), December 2022

National Pollutant Discharge Elimination System (NPDES) permits outline the regulatory requirements of municipal stormwater management programs and establish requirements to help protect the beneficial uses of the receiving waters. They require permittees to develop and implement best management practices (BMPs) to control/reduce the discharge of pollutants to waters of the United States to the maximum extent practicable (MEP). The NPDES program manages wastewater, construction, stormwater, and pretreatment.

In Wyoming, the U.S. EPA issues all NPDES permits on recognized tribal lands. All other permits are issued by the Wyoming Department of Environmental Quality. Point-source pollutant discharges into surface waters are regulated by the state under the Wyoming Pollutant Discharge Elimination System (WYPDES) Program.⁵ Permits like the WYPDES discharge permit outline requirements for compliance with the surface water quality standards.

HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

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

There are no NRHP-listed resources within one mile of the airport. No cultural surveys have been conducted at the airport. Based on a review of historic aerials at the airport, the oldest buildings on airport property are a series of executive box hangars on the north side of the airport which were constructed between 1965 and 1981.⁶

The nearest tribal land to Powell Municipal Airport is the Crow Reservation, located more than 28 miles northeast of the airport along the Montana and Wyoming Border.⁷

LAND USE

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

⁵ Wyoming Department of Environmental Quality, Water Quality, WYPDES, Discharge Permitting, accessed January 2024

⁶ Historic Aerials (<https://www.historicaerials.com/viewer>), accessed January 2024

⁷ U.S. EPA, EJSscreen Mapper (<https://ejsscreen.epa.gov/mapper/>), accessed January 2024

Park County recently updated its land use plan, adopting the *Park County Land Use Plan* in January 2024. Prior to this, the last land use plan was completed in 1998. In the *Park County Land Use Plan*, the future land use map shows an airport overlay over Powell Municipal Airport. The intent of airport overlay is to protect nearby and adjacent land by enforcing adopted regulations that would restrict the establishment of uses and equipment that would interfere with airport navigation and communication systems in order to promote a safe and efficient operation of Powell Municipal Airport.

Based on Park County's land use map, the majority of the land surrounding the airport is owned by the Bureau of Land Management and is currently exempt from land use designations. There are currently no urban or rural land uses on this land. Land parcels to the northeast and southwest of the airport are designated for agricultural uses. The airport's future land use is designated Ranch/Rangeland.⁸

Powell Municipal Airport is zoned as I-G (Industrial General). Most of the land adjacent to the airport has no zoning designation; however, the land abutting the southwestern portion of the airport is zoned as GR-P.⁹

NATURAL RESOURCES AND ENERGY SUPPLY

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

The Wyoming Department of Environmental Quality (DEQ) was created in 1973 and has acted as the state's regulatory agency charged with protecting the state's natural resources (i.e., land, air, and water) for existing and future generations through the regulation of state and federal environmental laws.¹⁰

In addition to the regulatory policies outlined by the DEQ, Park County has a natural resource management plan (NRMP).¹¹ The *Natural Resource Management Plan for State and Federal Lands in Park County, Wyoming* outlines the existing conditions of federal and state resources, objectives for the use or conservation of each resource from a county perspective, and how the county would like to see the objectives achieved. While the plan does not actively mention the airport, it contains applicable resource management objectives, such as the encouragement of adopting new technologies for existing energy usages.

⁸ Park County Land Use Plan Map Portal (<https://pcpz.maps.arcgis.com/apps/MapSeries/index.html?appid=a2f243245f554178845041de5882114c>), accessed January 2024

⁹ Park County Land Use Plan Map Portal, Zoning (<https://pcpz.maps.arcgis.com/apps/MapSeries/index.html?appid=a2f243245f554178845041de5882114c>), accessed January 2024

¹⁰ Wyoming Department of Environmental Quality, About WDEQ (<https://deq.wyoming.gov/about/>)

¹¹ A NRMP is as a document that serves as a guide for communication and coordination between federal and state entities on natural resource management issues (e.g., water, land, etc.) that influence the local area and economy.

The City of Powell buys its water from the Shoshone Municipal Pipeline.¹² The Shoshone Municipal Pipeline obtains its water from the Buffalo Bill Reservoir.

NOISE AND NOISE-COMPATIBLE LAND USE

Federal land use compatibility guidelines are established under Title 14 CFR Part 150, *Airport Noise Compatibility Planning*. According to 14 CFR Part 150, residential land and schools are noise-sensitive land uses that are not considered compatible with a 65-decibel (dB) day-night average sound level (Ldn or DNL).¹³ Other noise-sensitive land uses (such as religious facilities, hospitals, or nursing homes), if located within a 65-dB DNL contour, are generally compatible when an interior noise level reduction of 25 dB is incorporated into the design and construction of the structure. Special consideration should also be given to noise-sensitive areas within Section 4(f) properties where the land use compatibility guidelines in 14 CFR Part 150 do not account for the value, significance, and enjoyment of the area in question.¹⁴

The closest residential areas are located six miles south of the airport across from Lane 8. There are also no Section 4(f) resources located within one mile of the airport; thus, there are no noise-sensitive land uses near the airport.

SOCIOECONOMICS AND CHILDREN'S ENVIRONMENTAL HEALTH AND SAFETY RISKS

Socioeconomics

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

The FAA has identified factors to consider when evaluating the context and intensity of potential environmental impacts, including whether the proposed action would have the potential to:

- Directly or indirectly induce substantial economic growth in an area;
- Disrupt or divide the physical arrangement of an established community;
- Cause extensive relocation when sufficient replacement housing is unavailable;
- Cause extensive relocation of community business that would cause severe economic hardship for affected communities;

¹² City of Powell, FAQ (<https://cityofpowell.com/faq/#:~:text=Where%20does%20our%20water%20come,water%20from%20Shoshone%20Municipal%20Pipeline>), accessed January 2024

¹³ The DNL accounts for the increased sensitivity to noise at night (10:00 p.m. to 7:00 a.m.) and is the metric preferred by FAA, the U.S. EPA, and the U.S. Department of Housing and Urban Development as an appropriate measure of cumulative noise exposure.

¹⁴ Title 49 U.S. Code § 47141, Compatible Land Use Planning and Projects by State and Local Governments

- Disrupt local traffic patterns and substantially reduce the levels of service of roads serving an airport and its surrounding communities; or
- Produce a substantial change in the community tax base.

Children's Environmental Health and Safety

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

There are no parks, schools, homes, or other recreational areas that cater to children within five miles of the airport. The airport is located several miles north of the developed areas of the city.

VISUAL EFFECTS

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

Light Emissions

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

Airfield lighting at the airport includes a rotating beacon, medium intensity runway lighting (MIRL) at Runway 13-31, threshold lights at each runway end, two-box precision approach path indicator (PAPI) lights at Runway 13-31, and runway end identification lights (REILs) at Runway 31. The airfield lights utilize pilot-controlled lighting (PCL); thus, the airfield lights are only illuminated when activated by pilots using the airport. For further information, see the discussion of the types of airfield lighting and visual approach aids earlier in the inventory.

Visual Resources and Visual Character

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

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

The airport environment is not within an urban area, and it is visually characterized by vegetated open areas. Views of the airport are accessible from surrounding roadways due to the vegetation being spread out and low to the ground, rather than densely; however, long-range views are not readily available due to the relatively flat topography of the airport environs.

America's Byways are 184 distinct and diverse roads designated by the U.S. Secretary of Transportation. These roads include both National Scenic Byways (i.e., a road that meets at least one of the six following qualities: archeological, cultural, historic, natural, recreational, and scenic) and All-American Roads (i.e., a byway that meets at least two criteria: intrinsic qualities, being nationally significant, and having one-of-a-kind features that do not exist elsewhere).

According to the Federal Highway Administration, the State of Wyoming contains two All-American Roads (Beartooth Highway and Flaming Gorge – Green River Basin Scenic Byway); however, neither road is located near the airport.¹⁵ There are no National Scenic Byways in Wyoming.

WATER RESOURCES

Wetlands

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

The USFWS manages the National Wetlands Inventory on behalf of all federal agencies. The National Wetlands Inventory identifies surface waters and wetlands in the nation. Within airport boundaries,

¹⁵ U.S. DOT, Federal Highway Administration (<https://fhwaapps.fhwa.dot.gov/bywaysp/States/Show/WY>)

riverines are mapped south of the approach end of Runway 31.¹⁶ Based on Google Earth aerial imagery, these waterways appear to flow south into manmade irrigation or flood control canals and are not likely to be considered jurisdictional waters under current CWA Section 404 regulations and rules.

Floodplains

E.O. 11988, *Floodplain Management*, directs federal agencies to take action to reduce the risk of flood loss; minimize the impact of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by the floodplains. U.S. Department of Transportation (DOT) Order 5650.2, *Floodplain Management and Protection*, implements the guidelines contained in E.O. 11988.

A review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel numbers 56029C0900D and 56029C1425D (effective June 18, 2010) indicates that the airport is in Zone X, an area of minimal flood hazard.¹⁷ This area is not located within a 100-year or 500-year floodplain.

Surface Waters

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

Powell Municipal Airport is in the Upper Cottonwood Creek and Bitter Creek watersheds. There are no impaired waters within the Upper Cottonwood Creek watershed; however, there is an impaired waterbody in the Bitter Creek watershed south of the airport.¹⁸

Groundwater

Groundwater is subsurface water that occupies the space between sand, clay, and rock formations. The term aquifer is used to describe the geologic layers that store or transmit groundwater, such as wells, springs, and other water sources. Examples of direct impacts to groundwater could include withdrawal of groundwater for operational purposes or reduction of infiltration or recharge area due to new impervious surfaces.¹⁹

¹⁶ USFWS, National Wetlands Inventory (<https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/>)

¹⁷ FEMA, Flood Map (<https://msc.fema.gov/portal/search?AddressQuery=powell%20municipal%20airport>)

¹⁸ U.S. EPA, How's My Waterway (<https://mywaterway.epa.gov/community/powell%20municipal%20airport/overview>)

¹⁹ United States Geological Survey, What is Groundwater? (<https://www.usgs.gov/faqs/what-groundwater>)

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

*"If the Administrator determines, on his own initiative or upon petition, that an area has an aquifer which is the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health, he shall publish notice of that determination in the Federal Register."*²⁰

According to the U.S. EPA's *Sole Source Aquifers for Drinking Water* website, there are no sole source aquifers located within airport boundaries. The nearest sole source aquifer is the Eastern Snake River Plain Aquifer Source Area, located more than 82 miles from the airport.²¹

Wild and Scenic Rivers

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

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

The closest designated National Wild and Scenic River identified is the Clarks Fork of the Yellowstone River, located 20 miles from the airport.²² The nearest National River Inventory feature is Crooked Creek, located 24 miles from the airport.²³

²⁰ U.S. EPA, Overview of the Drinking Water Sole Source Aquifer Program (<https://www.epa.gov/dwssa/overview-drinking-water-sole-source-aquifer-program#Authority>)

²¹ U.S. EPA, Sole Source Aquifers (<https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b>)

²² National Park Service, National Wild and Scenic River System in the U.S. (<https://nps.maps.arcgis.com/apps/MapJournal/index.html?appid=ba6debd907c7431ea765071e9502d5ac#>)

²³ Nationwide Rivers Inventory (<https://www.nps.gov/maps/full.html?mapId=8adbe798-0d7e-40fb-bd48-225513d64977>)