



WAYNE WONDERLAND AIRPORT

DRAFT AIRPORT MASTER PLAN

Wayne County, UT

May 2023

Working Paper No. 1





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Chapter 1

Introduction



Wayne County is preparing an Airport Master Plan Update for Wayne Wonderland Airport in cooperation with the Federal Aviation Administration (FAA) to address the airport's needs for the next 20 years. The Airport Master Plan provides specific guidance in making the improvements necessary to maintain a safe and efficient airport that is economically, environmentally, and socially sustainable.

Study Purpose

The purpose of the Airport Master Plan (AMP) is to define the current, short-term, and long-term needs of the Airport through a comprehensive evaluation of facilities, conditions and FAA airport planning and design standards. The study addresses elements of local planning (land use, transportation, environmental, economic development, etc.) that have the potential of affecting the planning, development, and operation of the Airport.

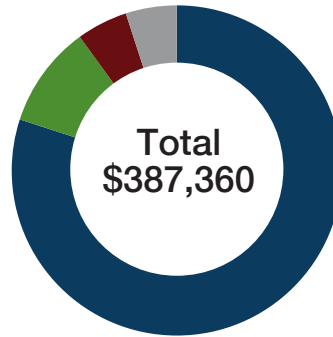
Project Need

The FAA requires airports to periodically update their master plans as conditions change to maintain current planning and satisfy future facility requirements. The last Airport Layout Plan Report was completed in 2002. Wayne County in consultation with the FAA identified the need to develop a new Airport Master Plan that would reflect the community vision for the airport and provide a document to guide the community and Airport into the future.



Project Funding

Funding for the Airport Master Plan Update is being provided through an FAA Airport Improvement Program (AIP) grant of \$310,000 (80.03%), a Bipartisan Infrastructure Law (BIL) grant of \$41,064 (10.60%), a state grant of \$18,148 (4.69%) with a local match of \$18,148 (4.69%) provided by Wayne County for a total project cost of \$387,360. The AIP is a dedicated fund administered by FAA with the specific



- FAA Funds \$310,000
- BIL Funds \$41,064
- State Grant \$18,148
- Wayne County Local Match \$18,148

purpose of maintaining and improving the nation’s public use airports. The AIP is funded exclusively through fees paid by users of general aviation and commercial aviation. The BIL passed in 2021 was created to fund projects related to ports, airports, rails and roads among other infrastructure improvements.

Goals of the Master Plan

The primary goal of the master plan is to provide the framework and vision needed to guide future development at Wayne Wonderland Airport. The FAA establishes goals and objectives each master plan should meet to ensure future development will satisfy aviation demand and also consider potential environmental and socio-economic impacts.

- | | |
|---|--|
| <p>1 Define the vision for the Airport to effectively serve the community, airport users, and the region. Assess known issue including, runway length, ability to accommodate development, auto parking, fencing, and land use to develop a realistic sustainable plan to improve the airport.</p> | <p>6 Identify potential environmental and land use requirements that may impact development.</p> |
| <p>2 Document existing activity, condition of airfield facilities, and policies that impact airport operations and development opportunities.</p> | <p>7 Explore alternatives to address facility needs. Work collaboratively with all stakeholders to develop workable solutions to address needs.</p> |
| <p>3 Forecast future activity based on accepted methodology.</p> | <p>8 Develop an Airport Layout Plan to graphically depict proposed improvements consistent with FAA standards as a road map to future development. Prepare a supporting Capital Improvement Plan to summarize costs and priorities.</p> |
| <p>4 Evaluate facilities and conformance with applicable local, state, and FAA standards.</p> | <p>9 Provide recommendations to improve land use, zoning, and County oversight of the airport to remove barriers to appropriate growth at the Airport.</p> |
| <p>5 Identify facility improvements to address conformance issues and accommodate demand.</p> | <p>10 Summarize the collective vision and plan for the airport in the Airport Master Plan report.</p> |

Planning Process

The three phase planning process is designed to provide multiple feedback loops intended to maintain the flow of information and ideas among the community and project stakeholders and ultimately maximize public involvement.

DEVELOP UNDERSTANDING

A comprehensive understanding of the issues and opportunities, existing conditions, and an identified level of future aviation activity that would mandate facility improvements required to satisfy future demand.

Analysis

- Develop Scope of Work
- Public Involvement Strategy
- AGIS Survey
- Existing Conditions and Facilities
- Aviation Activity Forecasts

Project Meetings

- Bi-Weekly Planning Team Meetings
- Project Kick-off Meeting
- Planning Advisory Committee (PAC) Meetings

Work Product

- Introduction
- Existing Conditions
- Aviation Activity Forecasts

EXPLORE SOLUTIONS

A collaborative exploration of local airport needs, goals, and facility requirements in sequence with the development of community generated ideas, solutions, and development alternatives.

Analysis

- Define Updated Airfield Design Standards
- Perform Demand/Capacity Analysis
- Define Facility Goals and Requirements
- Identify & Prepare Development Alternatives
- Evaluate Development Alternatives

Project Meetings

- Bi-Weekly Planning Team Meetings
- Planning Advisory Committee (PAC) Meetings
- Public Open House

Work Product

- Facility Goals & Requirements
- Airport Development Alternatives

IMPLEMENTATION

An implementation program with recommended strategies and actions for future land use, transportation, and environmental requirements; a realistic and workable CIP; and current ALP drawings that graphically depict existing conditions at the airport and proposed development projects.

Analysis

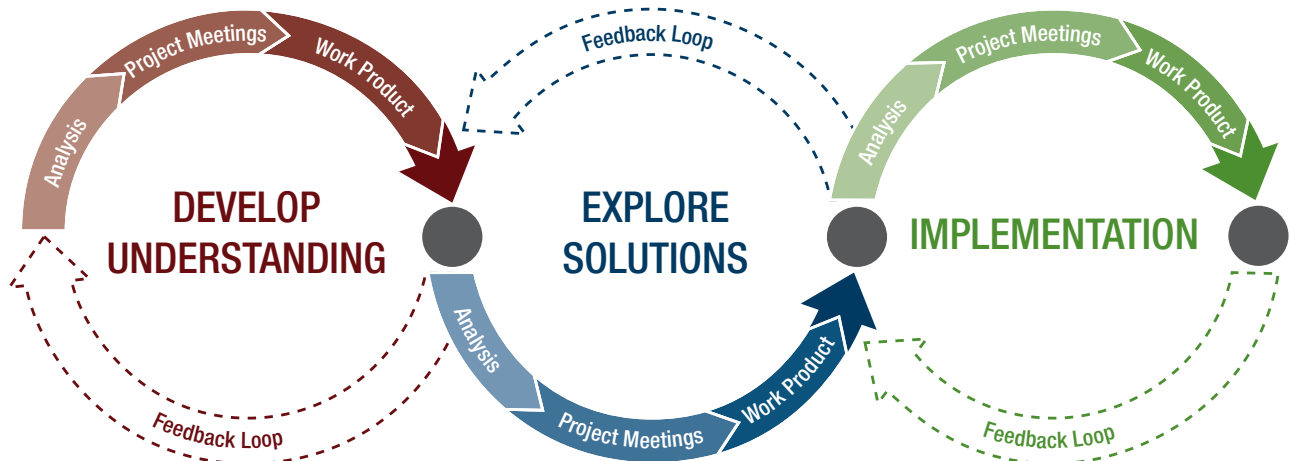
- Develop Strategies & Actions
- Develop CIP/Phasing/Financial Plan
- Develop ALP Drawing Set

Project Meetings

- Bi-Weekly Planning Team Meetings
- Planning Advisory Committee (PAC) Meetings

Work Product

- Strategies & Actions
- Financial Plan (CIP/Phasing)
- ALP Drawing Set (Draft & Final)
- Draft Report
- Final Report





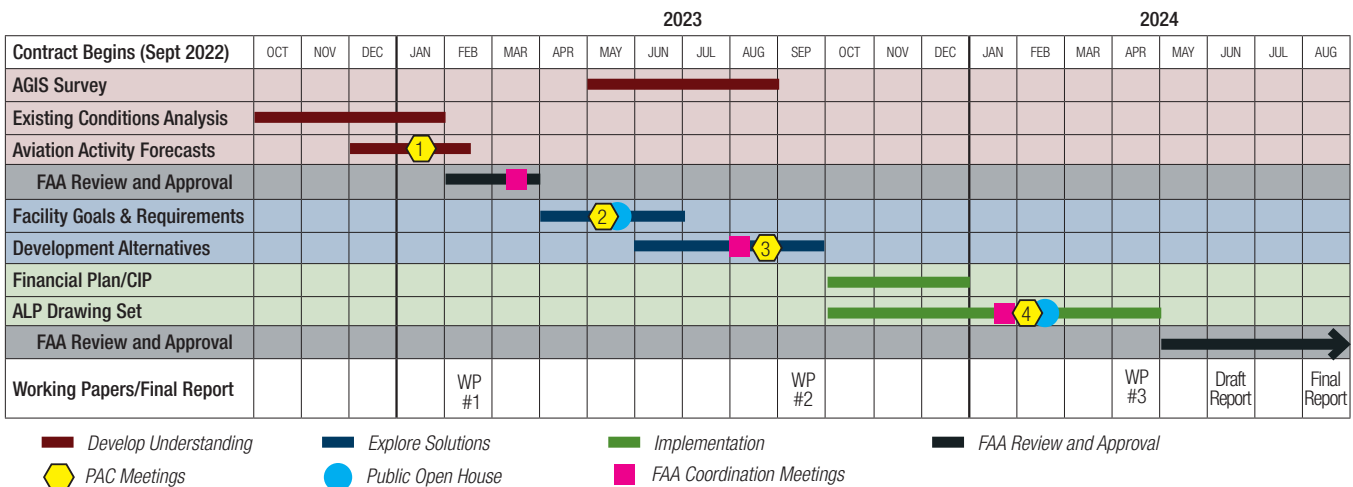
Framework of the Airport Master Plan

The framework of the Airport Master Plan provides a clear structure to inform and steer future planning decisions and serve as a tool to guide a process that allows the plan to take shape through flexibility, iteration, and adaptation. The framework is based upon an airport-urban interface model intended to analyze the regional setting of the Airport, its landside and airside elements, and the management and administration functions associated with the Airport. The framework provides guidance, while being flexible enough to adapt to changing conditions to maximize opportunities to develop understanding, explore solutions, and implement the preferred development alternative for the Airport that is compatible with its adjacent urban and rural environments.

	Regional Setting	Airside Elements	Landside Elements	Airport Administration
Develop Understanding	Location & Vicinity Socio-Economic Data Airport Role Airport History	Area Airspace Instrument Flight Procedures Runway/Helipad	Terminal Building Hangars Airport Fencing	Airport Ownership & Management Airport Financials Airport Rates and Charges
Explore Solutions	Area Airports Context Airport Operations Relevant Studies Environmental Data	Taxiways/Taxilanes Aprons/Tiedowns Pavement Condition Airside Support Facilities	Airport Surface Roads Vehicle Parking Utilities	Airport Rates and Charges Local Rules & Regulations FAA Compliance Overview
Implementation	Local Surface Transportation Land Use/Zoning			

Project Schedule

The Wayne Wonderland Airport Master Plan schedule is expected to occur over the course of 18-24 months. Phase 1 - Develop Understanding will take approximately 6-7 months, excluding the AGIS element; Phase 2 - Explore Solutions will take approximately 8-9 months; and Phase 3 - Implementation will take approximately 8-9 months including 3 months for FAA review and approvals. Final FAA approvals may require additional time depending on staff workload.





Public Involvement Process

A comprehensive and engaging public involvement process is a key element to a successful AMP. Therefore, numerous opportunities for public input are built into the planning process. This AMP included up to four Planning Advisory Committee (PAC) meetings, two Public Open House meetings, three FAA coordination meetings, a project website, and ongoing communication and coordination between County staff and the project planning team over the course of the project.

PLANNING ADVISORY COMMITTEE (PAC) MEETINGS

The PAC is assembled by County leaders to provide input and allow for public dissemination of data. Airport tenants, pilots, local and regional economic development interests, neighbors of the Airport, and staff/representatives of the County were identified by County leaders as members of the PAC. The FAA Denver Airports District Office (ADO) project manager will interact with the project team throughout the project and may attend one or more of the PAC meetings. The FAA has primary responsibility for technical review, comment, and project approval.

The proposed PAC meeting schedule may be in-person, remote (video conferences), or a combination thereof depending on the current pandemic climate, and directions provided by state and local government. PAC meeting summaries are available for review in **Appendix A**.

PAC Meeting #1

The Consultant will review the goals and objectives of an AMP Report, and present the existing conditions of the Airport, community, and aviation industry; as well as the preliminary aviation activity forecasts that have been submitted to FAA for review and approval following local review.

PAC Meeting #2 / Public Open House

PAC Meeting #2 is an interactive discussion with the PAC that focuses on the Airport's facility needs required to satisfy FAA standards, future growth, as well as the vision of the County and its users. The Consultant will present a series of preliminary alternative concepts capable of satisfying future demand and address any non-standard conditions to seek input from the PAC and public.

PAC Meeting #3

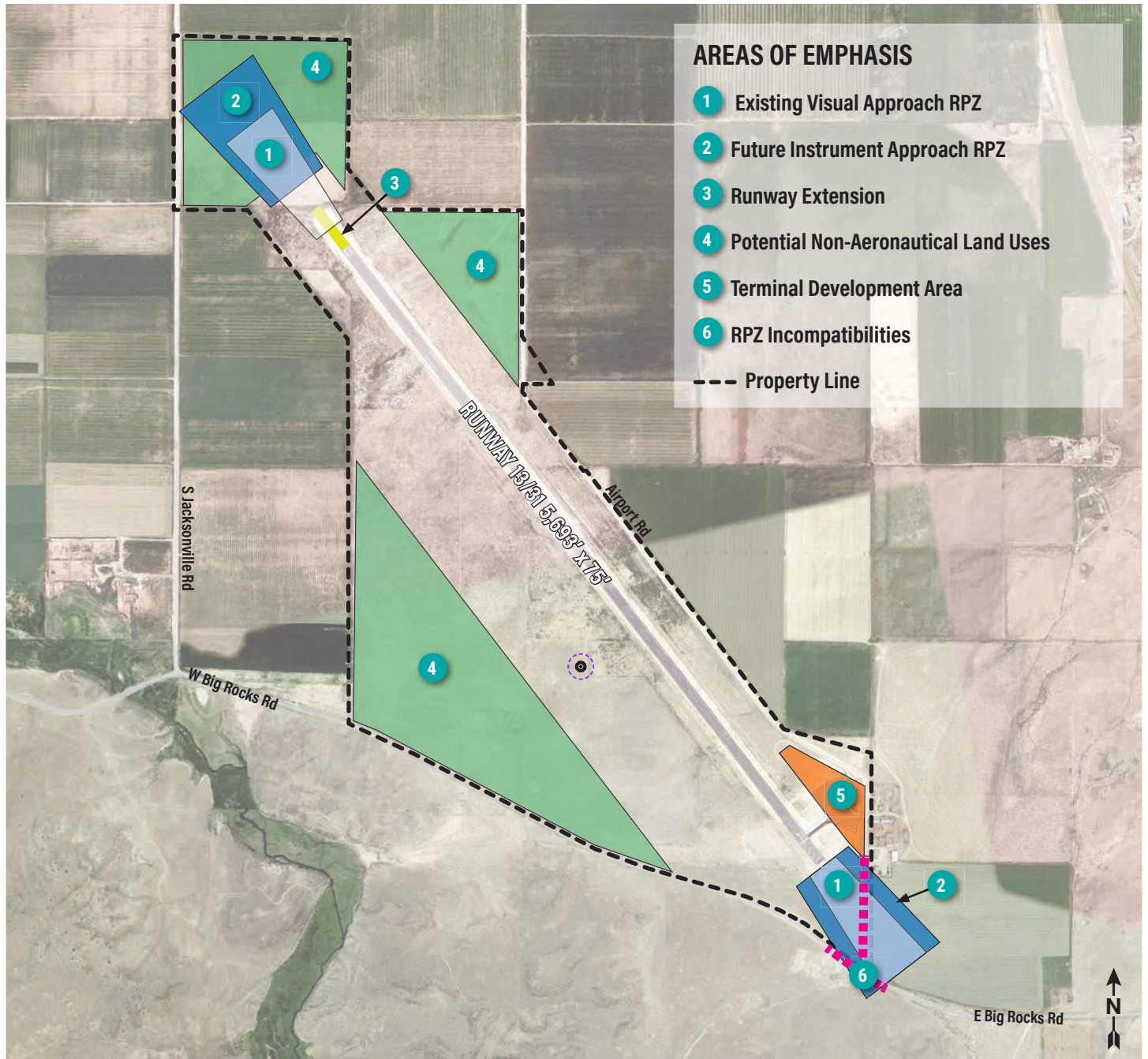
The input provided in PAC #2 and Public Open House is used to refine the proposed development alternatives, and based on technical evaluations, public input and coordination with the County, a recommended preferred alternative will be presented to the PAC. All alternatives considered in this process will be consistent with all applicable FAA technical standards and regulations.

PAC Meeting #4/Open House

The Consultant will present an implementation program with recommended strategies and actions for future land use, transportation, and environmental requirements; a realistic and workable CIP; and AMP drawings that graphically depicted existing conditions at the Airport.

Known Issues & Opportunities

At the outset of the AMP there were several known issues and opportunities identified by the FAA, County staff, and users of the Airport. These issues and opportunities identified below served as focus areas during the completion of the master plan to ensure a comprehensive and thorough assessment resulted in proposed solutions that lead to future implementation.





AIRCRAFT OPERATIONS ANALYSIS

The Wayne Wonderland Airport facilitates medical evacuation flights, fire attack/support, recreation aircraft, air charter, business use aircraft, and Utah Division of Wildlife aircraft. In this AMP, a documentation of operational estimates was developed to guide subsequent development of aviation activity forecasts. Like many rural airports with limited operational data available, developing reliable estimates can be challenging and somewhat unreliable. Consultants utilized some validated data from the FAA, estimates provided by airport users, and standard estimating methodologies recommended by FAA to develop operational estimates.

INSTRUMENT APPROACH PROCEDURE

In recent years there has been interest from recreation and business airport users to obtain an instrument approach procedure at Wayne Wonderland Airport. To help ensure access by medevac aircraft and other airport users during inclement weather conditions an evaluation of requesting and coordinating implementation of an approach procedure was considered during the completion of the AMP.

AIRPORT GIS SURVEY

An AGIS survey was completed as part of this AMP. The AGIS survey supports current and future infrastructure improvement projects. Projects supported by the AGIS include new pavement construction, obstruction mitigation adjacent to the runway, within runway approaches, and Runway Protection Zones (RPZs) improvements. The AGIS survey also provides additional information to be used in the update of the Airport Layout Plan (ALP) drawing set and implementation of a future instrument approach procedure.

RUNWAY EXTENSION

The 2002 ALP identified a 407-foot extension for a total runway length of 6,100 feet. This AMP evaluates potential facility requirements to increase runway length and provides practical alternatives to address any potential runway extension at the Airport.

RPZ LAND USE COMPATIBILITY EVALUATION

The RPZ is a protection zone that serves to enhance the protection of people and property on the ground. Airport owner control and implementation of compatible land use principles for each runway RPZ is the optimum method of ensuring the public's safety in these areas. The AMP reviews existing and future RPZs for consistency with FAA land use compatibility policy.

AIRPORT LAND USE PLAN

With the most recent FAA Airport Reauthorization Bill, Congress directed the FAA to streamline the process for facilitating development of compatible non-aeronautical land uses on airports. The most direct method is to clearly depict all current and future aeronautical land use areas on the airfield, then identify remaining land areas for potential non-aeronautical development. An overall evaluation of existing and preferred future land uses on the Airport will be conducted during the AMP process resulting in the County's preferred land use plan for the Airport.



TERMINAL AREA IMPROVEMENTS

Construction of a pilot lounge with restrooms has been identified as critical improvements necessary to modernize the Airport and provide basic facilities for itinerant pilots. The construction of a pilot lounge and appurtenant facilities also requires drilling a well and construction of a septic tank in the hangar development area. This critical improvement will be considered throughout the planning process to support future capital improvement planning.

COMPETITIVE FUEL PRICING

The Wayne County staff have expressed the importance of maintaining competitive fuel prices and other relevant rates and charges to increase itinerant traffic operations and generate revenue to support the maintenance of the Airport. The AMP will include an analysis and summary of airport management goals and opportunities to support and maintain the ongoing operation and management of the Airport.

OTHER ISSUES

The AMP provides an opportunity to address previous planning assumptions, and development priorities defined during previous planning studies and coordination with FAA. At the outset of the plan several issues and opportunities are identified and considered during the completion of the AMP. These include updating the existing 1250 gallon AvGas tank to a 2500 gal tank, installation of a JetA fuel tank, installation of a vehicle access gate, acquisition of a courtesy car, painting and maintenance of pavement facilities, and the construction of a new beacon tower and electrical improvements.

Chapter 2

Existing Conditions Analysis



The existing conditions analysis documents existing airfield facilities and conditions that affect the operation and development of the airport within the context of the regional setting, landside, airside, and administrative functions of the Airport. The existing conditions analysis utilized previous planning and design documents related to the Airport in addition to numerous meetings with tenants, stakeholders, and County staff, to support the effort. The findings documented in the Existing Conditions Analysis chapter are used to support subsequent recommendations throughout the development of the master plan.

Regional Setting

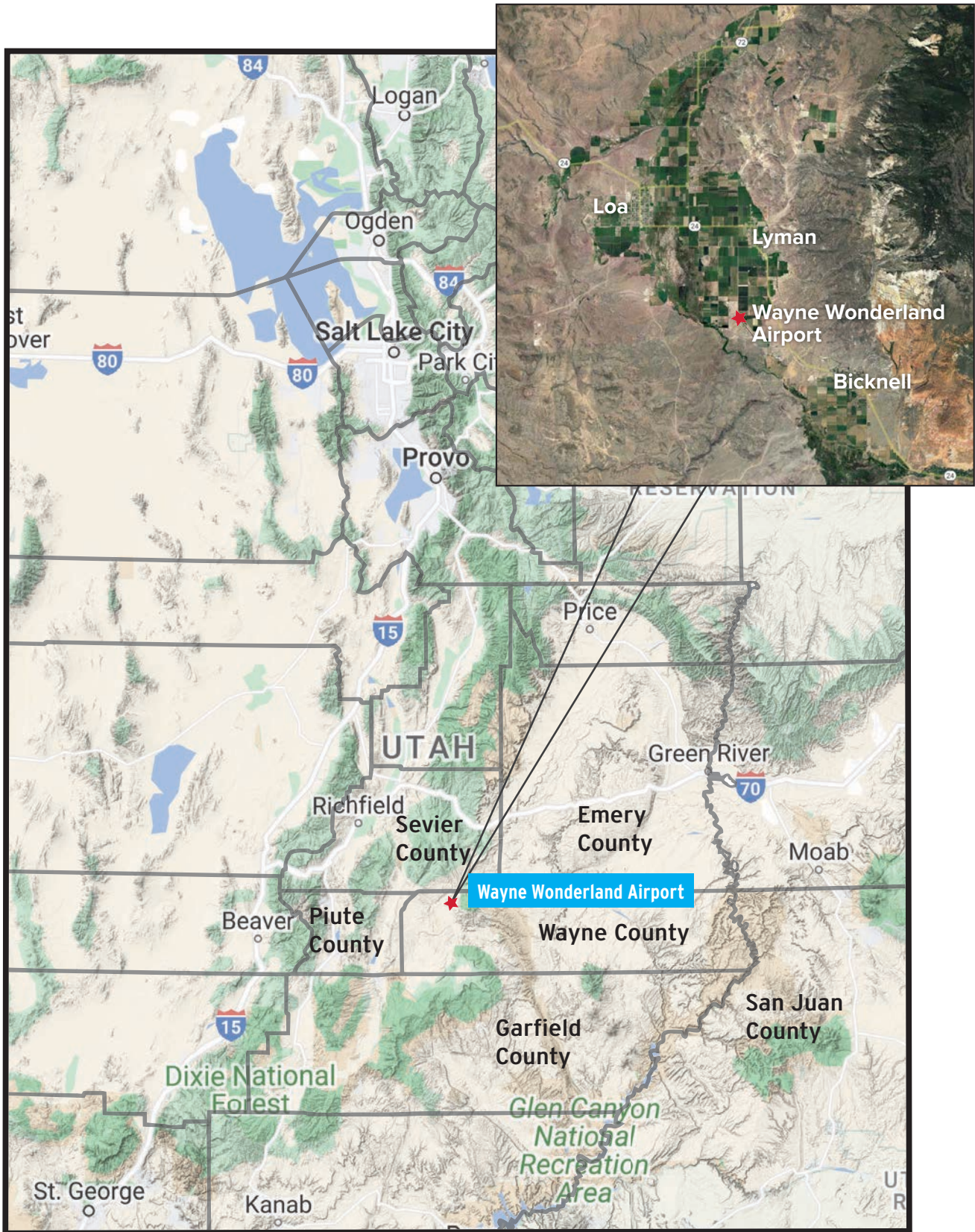
The Regional Setting section is comprised primarily of the features that provide higher level context of the Airport to ensure a better understanding of the social, economic, and environmental impacts airports can have in a region, county, and local communities. This section of the existing conditions analysis includes a discussion of the location & vicinity of the Wayne Wonderland Airport as well as the socio-economic conditions, airport history, airport role, area airports context, historic airport operations, relevant studies, environmental data, and the land use on and around the Airport.

LOCATION & VICINITY

The Wayne Wonderland Airport is located between the towns of Lyman and Bicknell, Utah. The Airport is about one mile west of State Highway 24 and about four miles southeast of Loa, Utah. Wayne County is in the south-central portion of Utah. It is bordered by Sevier, Emery (north); San Juan (east); Garfield (south); and Piute (west) counties.

The Airport is surrounded by mountainous terrain set in the high mountain Rabbit Valley. The elevation of the Airport is 7,023 feet above mean sea level. The Awapa Plateau is located on the west side of the Airport; the Fishlake National Forest is north and east of the Airport; and the Dixie National Forest is south of the Airport.

FIGURE 2-1: LOCATION & VICINITY MAP



Source: Google Maps



Socio-Economic Data

The information presented in **Tables 2-1** through **2-3** is intended to provide a contextual summary of the local and regional economic conditions that may affect activity at the Wayne Wonderland Airport.

Population

Historical population data obtained from the Kem C. Gardner Policy Institute (**Table 2-1**) show that recent population in Wayne County has experienced declination over the past decade. According to this data, the state of Utah has had a positive average annual growth rate (AAGR) in the past decade.

Wayne County’s AAGR during the period fluctuated from -1.35% to -0.64%, with a 10-year AAGR of -1.09%. The net decrease in county population during the period is 149 (-5.61%). The state of Utah saw a net increase in population during this period. Additionally, the neighboring county of Sevier also saw a slight increase in population, while Piute county also experienced a decrease in population. It is noted that these population changes occurred during the early recovery from The Great Recession and the first two years of the COVID pandemic.

TABLE 2-1: HISTORICAL POPULATION

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
State of Utah	2,906,021	2,946,989	3,003,791	3,062,384	3,122,477	3,176,342	3,231,108	3,271,616	3,343,552	3,403,190
AAGR	-	1.41%	1.67%	1.76%	1.81%	1.79%	1.78%	1.71%	1.77%	1.77%
										AAGR 1.73%
Wayne County	2,657	2,621	2,579	2,545	2,536	2,522	2,496	2,486	2,504	2,508
AAGR	-	-1.35%	-1.48%	-1.43%	-1.16%	-1.04%	-1.04%	-0.95%	-0.74%	-0.64%
										AAGR -1.09%
Sevier County	20,746	20,743	20,798	20,992	21,154	21,232	21,438	21,522	21,799	22,004
AAGR	-	-0.01%	0.13%	0.39%	0.49%	0.46%	0.55%	0.53%	0.62%	0.66%
										AAGR 0.43%
Piute County	1,510	1,473	1,482	1,426	1,401	1,428	1,449	1,438	1,479	1,496
AAGR	-	-2.45%	-0.93%	-1.89%	-1.86%	-1.11%	-0.68%	-0.70%	-0.26%	-0.10%
										AAGR -1.10%

Source: University of Utah, Kem C. Gardner Policy Institute State and County Projections 2020-2060; U.S. Census Bureau (2020)

Economic Indicators

Gross Regional Product (GRP) and Personal Income per capita (PI) can serve as indicators of economic growth or decline of a particular area. According to data provided by the Utah Department of Workforce Services, summarized in **Tables 2-2 and 2-3**, the GRP and PI for Wayne County showed net growth overall, through the ten-year period. Neighboring counties Sevier and Piute and the state of Utah also saw a net growth in GRP and PI from 2013 to 2019.

Data for 2020 to 2022 was not available at the time of this AMP publication.



TABLE 2-2: HISTORICAL GROSS REGIONAL PRODUCT

	2013	2014	2015	2016	2017	2018	2019
Wayne County	\$80,701	\$85,521	\$90,379	\$88,130	\$92,879	\$105,390	\$113,378
AAGR	-	5.97%	5.83%	2.98%	3.58%	5.48%	5.83%
							AAGR 4.94%
Sevier County	\$863,076	\$928,657	\$929,132	\$989,382	\$1,068,203	\$1,035,713	\$1,036,601
AAGR	-	7.60%	3.76%	4.66%	5.48%	3.71%	3.10%
							AAGR 4.72%
Piute County	\$23,437	\$27,831	\$51,414	\$71,482	\$83,153	\$86,867	\$73,881
AAGR	-	18.75%	48.11%	45.02%	37.24%	29.95%	21.09%
							AAGR 33.36%
Utah	\$132,169,115	\$136,325,200	\$141,601,979	\$147,555,499	\$153,986,001	\$162,574,417	\$168,792,742
AAGR	-	3.14%	3.51%	3.74%	3.89%	4.23%	4.16%
							AAGR 3.78%

Source: Utah Department of Workforce Services

TABLE 2-3: HISTORICAL PER CAPITA INCOME

	2013	2014	2015	2016	2017	2018	2019
Wayne County	\$29,399	\$31,789	\$34,023	\$34,922	\$38,074	\$40,894	\$42,426
AAGR	-	8.13%	7.58%	5.91%	6.68%	6.82%	6.30%
							AAGR 6.90%
Sevier County	\$27,655	\$29,179	\$30,744	\$31,359	\$33,057	\$36,126	\$37,558
AAGR	-	5.51%	5.44%	4.28%	4.56%	5.49%	5.23%
							AAGR 5.09%
Piute County	\$25,065	\$28,196	\$36,974	\$37,668	\$44,175	\$44,494	\$44,169
AAGR	-	12.49%	21.45%	14.54%	15.22%	12.16%	9.90%
							AAGR 14.30%
Utah	\$36,729	\$38,524	\$40,899	\$42,375	\$44,178	\$47,008	\$48,939
AAGR	-	4.89%	5.52%	4.88%	4.72%	5.06%	4.90%
							AAGR 5.00%

Source: Utah Department of Workforce Services

More detailed socio-economic data and analysis is presented in Chapter 3: Aviation Activity Forecasts to supplement the updated projections of future aviation activity.

AIRPORT HISTORY

A summary of Wayne Wonderland Airport’s recent AIP grant history is presented in **Table 2-4**. Since 2007 federal investment in the Airport has totaled over \$4.9 million towards improvements and upgrades. Additional AIP funds were awarded in 2022 for the Airport Master Plan update.



TABLE 2-4: FAA AIP GRANT HISTORY

Fiscal Year	Project Description	Entitlement	Discretionary	CARES General	CARES Local Match	COVID Relief General
2007	Acquire land for approaches	\$122,093				
2007	Rehabilitate apron	\$369,999				
2010	Environmental mitigation	\$300,000				
2011	Improve runway safety area	\$125,512	\$6,663			
2011	Install perimeter fencing	\$100,000				
2011	Rehabilitate runway lighting	\$207,908				
2014	Construct apron	\$27,687				
2014	Construct building	\$30,075				
2014	Construct taxiway	\$27,687				
2014	Remove obstructions	\$27,687				
2015	Construct apron	\$165,467				
2015	Construct building	\$165,467				
2015	Construct taxiway	\$369,611				
2015	Remove obstructions	\$16,777				
2019	Rehabilitate runway	\$146,436				
2020	CARES act funds			\$20,000		
2020	Rehabilitate runway	\$2,345,000	\$96,551		\$242,443	
2021	CRRSA act funds					\$9,000
	Totals	\$4,547,406	\$103,214	\$20,000	\$242,443	\$9,000

Source: FAA AIP Grant Look Up Tool (Accessed 11/09/2022)

AIRPORT ROLE

Understanding the various roles that the Airport fulfills is instrumental in establishing the long-term vision and development needs of the facility. The role of an airport may vary slightly between National, State, and Local systems.

National Role

The FAA maintains an inventory of U.S. aviation facilities through the National Plan of Integrated Airport Systems (NPIAS). The NPIAS lists existing and proposed airports significant to the air transportation system of the United States, and thus are eligible for federal funding through the Airport Improvement Program (AIP) which cover 90.63% of eligible costs of planning and development projects. According to the 2021 National Plan of Integrated Airport Systems (2021-2025), Report to Congress, the Wayne Wonderland Airport is classified as a Basic General Aviation Airport and as such, provides a means for general aviation flying and link the community to the national airport system. Basic airports support general aviation activities such as emergency response, air ambulance service, flight training, and personal flying.

State Role

Utah categorizes its airports into four classes: UT-I Commercial Service; UT-II Corporate/Tourism/Freight; UT-III Recreation and Community Access; and UT-IV Essential Access. Each airport is assigned to a category based on the market it serves. The Wayne Wonderland Airport is categorized as a UT-IV Essential Access airport. The airport primarily supports visitors who travel to the area for outdoor recreation and is a critical link for emergency medical providers and firefighters.

Local Role

The Wayne Wonderland Airport serves the western third of Wayne County and parts of Piute and Sevier counties. The Airport is a critical component of the transportation network in Wayne County which is a remote and scenic location in south-central Utah. The draw of the high plateaus, Canyon Lands National Park, Capitol Reef National Park, and many other geographical features brings people through this area of the state. At 7,000 feet above mean sea level (MSL), the remote agriculturally based community serves as a terminal point for two Utah Scenic Byways, provides access to national forest areas, and supports a local community of approximately 500 residents. These factors and more make the Airport integral to tourism, economic development, and emergency services for the local communities.



AREA AIRPORTS CONTEXTUAL ANALYSIS

An analysis of the airport service area refers to the geographic area surrounding an airport that is directly affected by the activities at that airport. Normally, a 30 or 60-minute surface travel time is used to approximate the boundaries of a service area. Airports located beyond a 60-minute travel time have less impact on local airport activity due largely to the redundancy provided by closer facilities. With numerous airports in the vicinity, service areas often overlap, creating competition between airports. Having several airports located within a relatively short distance affects user demand for items such as hangar space, fuel and aviation services. These items are sensitive to cost, convenience, and the quality of facilities or services.

The Wayne Wonderland Airport has overlapping service areas with several other airports. These airports are summarized in **Table 2-5** and depicted in **Figure 2-1**.

TABLE 2-5: AREA AIRPORTS COMPARISON

Airport	Location	Runway Dimension (feet)	Surface	Lighted Runway	Published Procedures	Fuel Available
Wayne Wonderland (38U)		5,693' x 75'	Asphalt	Yes	None	Yes
Richfield Municipal (RIF)	32.5 nm NW	7,100' x 100'	Asphalt	Yes	Yes	Yes
Hanksville (HVE)	42.1 nm E	5,001' x 75'	Asphalt	Yes	None	None
Escalante Municipal (1L7)	37.1 nm S	5,032' x 60'	Asphalt	Yes	None	Yes
Bryce Canyon (BCE)	47.2 nm SW	7,394' x 75'	Asphalt	Yes	Yes	Yes
Panguitch Municipal (U55)	48.8 nm SW	5,700' x 75'	Asphalt	Yes	None	None
Beaver Municipal (U52)	51.4 nm W	4,984' x 75'	Asphalt	Yes	Yes	Yes
Canyonlands Regional (CNY)	89.6 nm NE	7,360' x 100' (runway 3/21)	Asphalt	Yes	Yes	Yes

Source: FAA 5010 Airport Master Record (Accessed 11/2/2022)

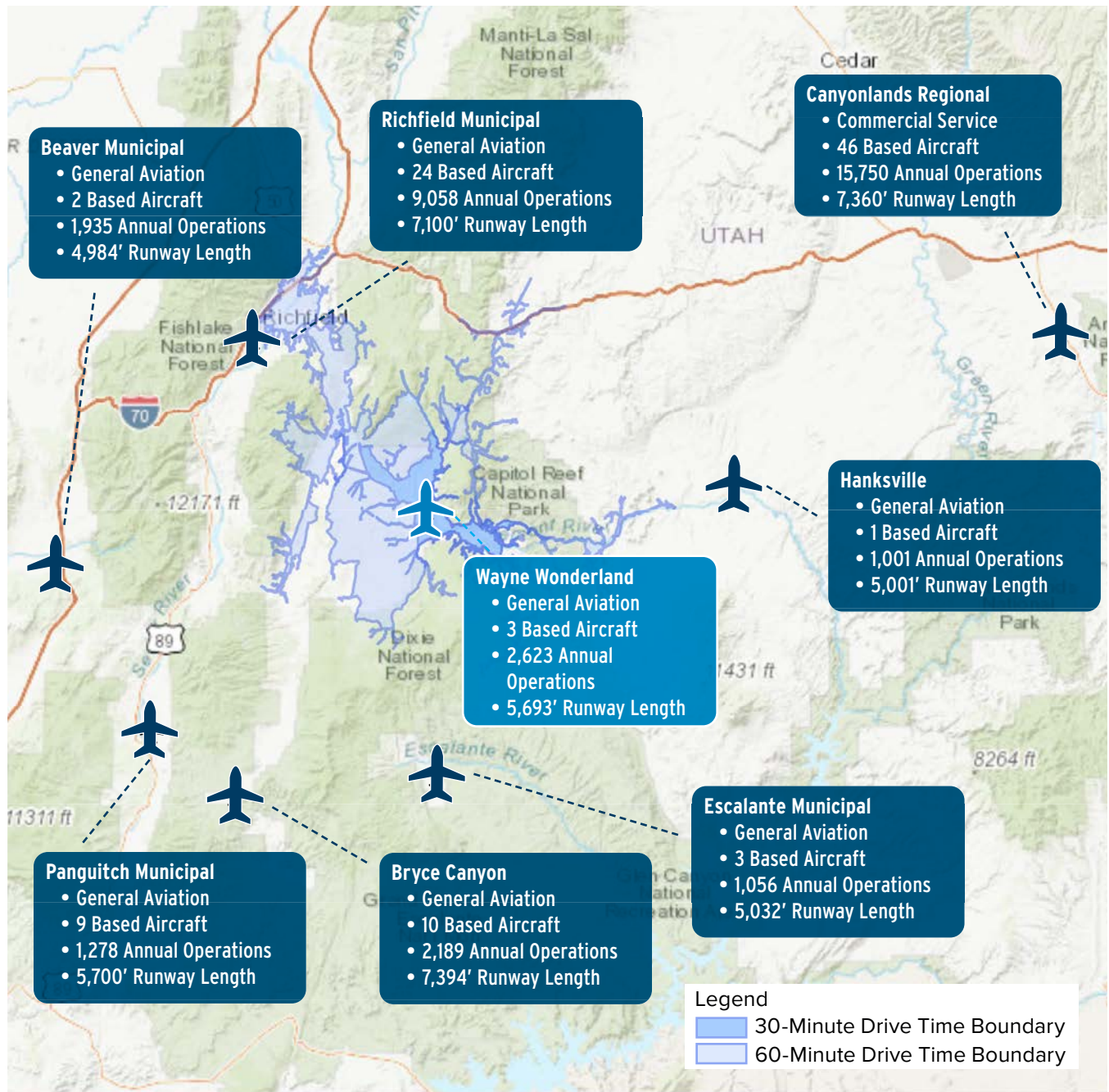
The FAA 5010 Airport Master Record for Wayne Wonderland Airport and the other airports in the service area are summarized in **Table 2-6**. These data are unverified and are presented for reference only.

TABLE 2-6: FAA 5010 DATA

	Wayne Wonderland	Richfield Municipal	Hanksville	Escalante Municipal	Bryce Canyon	Panguitch Municipal	Beaver Municipal	Canyonlands Regional
Air Carrier	0	0	0	0	0	0	0	0
Air Taxi	47	170	41	30	140	40	50	4,350
GA Local	327	2,286	254	260	911	377	573	6,800
GA Itinerant	2,249	6,602	706	766	1,138	861	1,312	4,350
Military	0	0	0	0	0	0	0	250
TOTAL OPERATIONS	2,623	9,058	1,001	1,056	2,189	1,278	1,935	15,750
TOTAL BASED AIRCRAFT	3	24	1	3	10	9	2	46
Single Engine	3	24	1	2	8	9	2	40
Multi Engine	0	0	0	0	1	0	0	1
Jet	0	0	0	0	0	0	0	3
Helicopters	0	0	0	0	1	0	0	0
Glider	0	0	0	1	0	0	0	0
Military	0	0	0	0	0	0	0	0
Ultra-Light	0	0	0	0	0	0	0	2
OPBA	874	377	1,001	352	219	142	968	342

Source: AirportIQ 5010 Airport Master Records and Reports (AirportIQ5010.com, Accessed 11/8/2022)

FIGURE 2-2: AREA AIRPORTS





AIRPORT OPERATIONS AND BASED AIRCRAFT SUMMARY

Wayne Wonderland Airport accommodates primarily small single-engine aircraft and the occasional corporate jet or turboprop aircraft. **Table 2-7** details the based aircraft and operations data recorded on the FAA 5010 record and an estimate of the 2022 operations described further below.

TABLE 2-7: WAYNE WONDERLAND BASED AIRCRAFT AND OPERATIONS DATA

	Wayne Wonderland 5010 Data	Wayne Wonderland 2022 Updated Operations Estimate
Air Carrier	0	0
Air Taxi	47	30
GA Local	327	110
GA Itinerant	2,249	640
Military	0	0
TOTAL OPERATIONS	2,623	780
TOTAL BASED AIRCRAFT	3	3
Single Engine	3	3
Multi Engine	0	0
Jet	0	0
Helicopters	0	0
Glider	0	0
Military	0	0
Ultra-Light	0	0
OPBA	874	260

Source: AirportIQ 5010 Airport Master Records and Reports (AirportIQ5010.com, Accessed 11/8/2022)

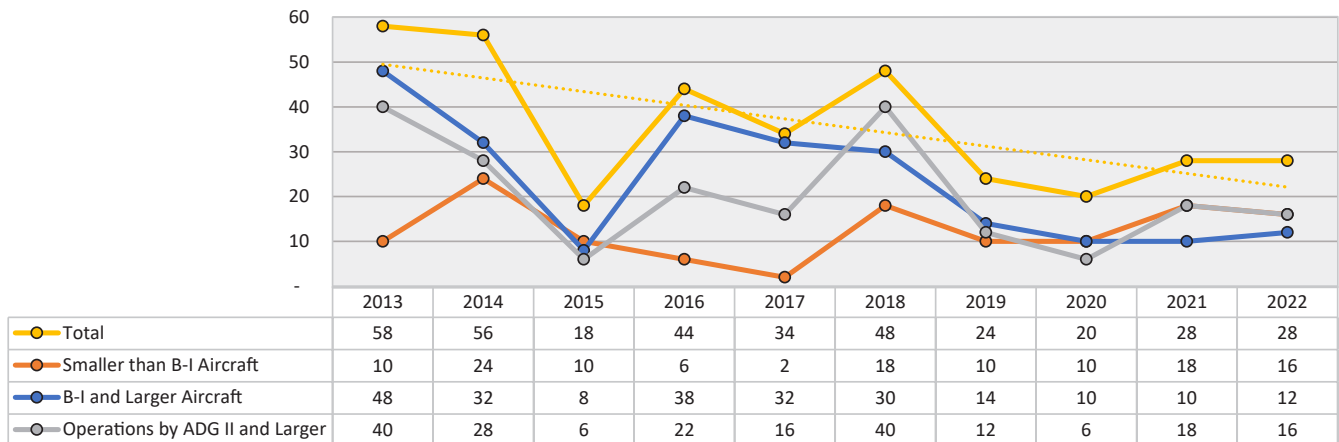
It is important to note that aircraft takeoffs and landings (operations) at non-towered airports, including Wayne Wonderland Airport, are not routinely recorded. As such, flight activity is typically estimated through a variety of methods.

One method often used to develop an estimate of operations is the calculation of Operations per Based Aircraft (OPBA). Using the OPBA methodology, operations are estimated by multiplying the number of based aircraft by use of an FAA standard multiplier. For general aviation airports like Wayne Wonderland, classified in the NPIAS as Basic GA, the OPBA multiplier used is 250.

As seen in **Figure 2-3**, FAA Traffic Flow Management System Counts (TFMSC) operations data provides some verifiable operational data for various aircraft groups from 2013 to 2022 that operated at Wayne Wonderland under Instrument Flight Rules (IFR). According to this data, there is an overall downward trend in number of operations for all types of aircraft at Wayne Wonderland Airport.



FIGURE 2-3: TFMSC IFR OPERATIONS DATA



Upon further review of the TFMSC data coupled with additional data obtained in Freedom of Information Act (FOIA) planners were able to determine the majority of the aircraft captured in the TFMSC data were air taxi operators. Therefore, to develop the 2022 operations estimate for Wayne Wonderland Airport, an estimate of 30 aircraft operations (based on the TFMSC data counts) was applied to Air Taxi operators as seen in **Table 2-7**. The remaining GA Local and GA Itinerant operations were determined using the 250 OPBA standard provided by the FAA for a total of 750 General Aviation (GA) operations which breaks down further to 110 - GA Local operations and 640 - GA Itinerant Operations using the previous splits provided in the 5010 data. The resulting estimate of 780 total operations per year equates to 260 OPBA for Wayne Wonderland Airport.

Aircraft identified in the TFMSC data that have used Wayne Wonderland Airport in the past decade are listed in **Table 2-8**.

TABLE 2-8: TFMSC IDENTIFIED JET/TURBOPROP AIRCRAFT

Aircraft	Aircraft Design Category (ADG)
C56X - Cessna Excel/XLS	B-II
BE40 - Raytheon/Beech Beechjet 400/T-1	B-I
C560 - Cessna Citation V/Ultra/Encore	B-II
BE20 - Beech 200 Super King	B-II
LJ60 - Bombardier Learjet 60	C-I
BE9L - Beech King Air 90	B-II
PC12 - Pilatus PC-12	A-II
CL30 - Bombardier (Canadair) Challenger 300	B-II
C750 - Cessna Citation X	B-II
F900 - Dassault Falcon 900	B-II
HDJT - HONDA HA-420 HondaJet	B-I
C525 - Cessna CitationJet/CJ1	B-I
LJ70 - Learjet 70	C-II
CL60 - Bombardier Challenger 600/601/604	C-II
E50P - Embraer Phenom 100	B-I

Until recently, based aircraft counts were primarily self-reported to the Airport Master Record 5010 by airport sponsors with little validation performed to ensure that aircraft were in fact active and based at the airport. This led to instances of missed counts, double counting of aircraft, counting of non-operational aircraft, and an often-unreliable estimation of the based aircraft fleet at many airports.

In February 2023, staff at Wayne County undertook a survey of based aircraft at the Airport. The resulting inventory of three aircraft was submitted and validated in the national database at www.basedaircraft.com. This number was used as a baseline count for the based aircraft forecasts developed in Chapter 3 – Aviation Activity Forecasts.



RELEVANT STUDIES

There are numerous local, regional, and statewide studies available for reference that contain a significant amount of information as it relates to the Airport or the greater community. The relevant studies summarized below have been incorporated into the planning process to provide greater context when developing understanding, exploring solutions, or implementing the plan.

2002 Airport Layout Plan Report

In 2002 an Airport Layout Plan (ALP) Report was developed by Jones & DeMille Engineering with the purpose of showing the location of existing and proposed airport facilities. Additionally, the report indicates recommendations for the airport to conform to the Federal Aviation Administration (FAA) standards. Some of the recommendations included extending the runway; general maintenance (crack seal, fog seal and paint striping; additional apron, terminal building and access road; RPZ easements; and an additional taxiway. Several of these recommendations have been addressed by completion of the task or are being considered in the annual FAA capital improvement planning process.

Wayne County Transportation Plan

Wayne County published a transportation plan most recently in 2019. This plan details the county's travel and transportation management. Various modes of travel are documented as areas of focus to ensure that each are supported including motorized, non-motorized, mechanized, animal-powered, and air travel. Wayne Wonderland Airport is not referenced within the Wayne County Transportation plan, but air travel is documented throughout the plan as mode of travel to support.

Wayne County Economic Development Plan

In 2019 an economic development plan was created to *"guide the creation and maintenance of a vibrant rural economy in Wayne County."* Airports and airstrips are specifically noted as target areas for community-level infrastructure improvements.

2020 Utah Statewide Airport Economic Impact Study

The Utah Department of Transportation (UDOT) published airport economic impact study to provide information pertaining to the economic impact of public airports within the state. Primary objectives of this study include:

- Estimate the annual economic impacts that the state economy realizes from the day-to-day operation of eight commercial and 38 public general aviation airports.
- Estimate the annual economic impact realized as a result of aviation-related business tenants located at study airports.
- Estimate the annual economic impacts resulting from capital investment at the study airports.
- Estimate the economic impacts from spending associated with visitors who arrive in Utah on privately owned general aviation aircraft at all 46 study airports and on scheduled commercial airline flights at the eight commercial airports.
- Estimate the annual state and local tax revenues supported activities associated with study airports.

Through this study it was found that the annual economic activity summed to \$12.7 billion (from Utah's 46 public airports. This study documents that the Wayne Wonderland Airport annual economic benefit is greater than its investment need with direct spending of \$524,800 and annual economic activity totaling \$720,500. At the time of the study, the Airport directly employed 3 people and indirectly employed 4 people with a total direct/indirect payroll of \$195,700.

Utah Aviation Development Strategy – Wayne Wonderland Airport (38U)

UDOT details a statewide aviation system plan for public airports. Using standard FAA system planning methodologies, existing conditions are evaluated, and forecasts made to improve the statewide aviation network. Each airport in the state of Utah is analyzed as to whether it meets various regulatory requirements and objectives including: Pavement Conditions Index (PCI); Terminal Facilities; Auto Parking; Runway Dimensions; Approach and Weather Reporting Equipment; NAVAIDs Equipment; Fuel Services; Perimeter Fencing; and Ground Transportation Services.



Wayne Wonderland Airport is documented as a B-II Airport with a Basic NPIAS role. The forecasted based aircraft count remains at 4 aircraft with forecasted operations of 1,182 through the year 2028. The Airport is one of 21 Utah airports in proximity to U.S. National Bicycle Routes and Corridors. Overall, Wayne Wonderland received an evaluation score of 11.5 out of 63 (the state’s airports averaging 27 points). This score is used in determining the Airport’s role in the state of Utah system of airports.

Several objectives were not met by Wayne Wonderland including: Pavement Condition Index, Terminal/Administration Facility Square Footage, and Auto Parking.

ENVIRONMENTAL DATA

The Wayne Wonderland Airport is located in the valley below Thousand Lake Mountain, Boulder Mountain, and Mytoge Mountain. The following sections describe local climate and environmental conditions for the Airport and area.

Area Climate and Temperature

The climate in the area is arid, with an average of less than 8 inches of precipitation in Rabbit Valley. The warm season lasts for 3.3 months, from June 4 to September 13, with an average daily high temperature above 72°F. The hottest month of the year in Loa is July, with an average high of 82°F and low of 52°F.

The cold season lasts for 3.3 months, from November 20 to February 28, with an average daily high temperature below 43°F. The coldest month of the year in Loa is January, with an average low of 13°F and high of 34°F. Temperatures in 2022 are presented in **Figure 2-4**.

Cloud Cover

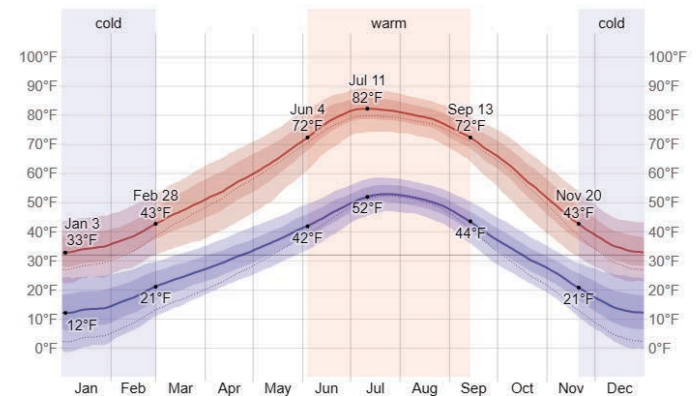
Cloud cover in Loa, Utah experiences seasonal variation over the course of the year (**Figure 2-5**). The months of June, July, August, September, and October experience the least amount of cloud cover. The clearest month of the year in Loa is September, during which on average the sky is clear, mostly clear, or partly cloudy 80% of the time.

The cloudier part of the year begins around October 30 and concludes around May 30. The cloudiest month of the year in Loa is February, during which on average the sky is overcast or mostly cloudy 44% of the time.

Wind

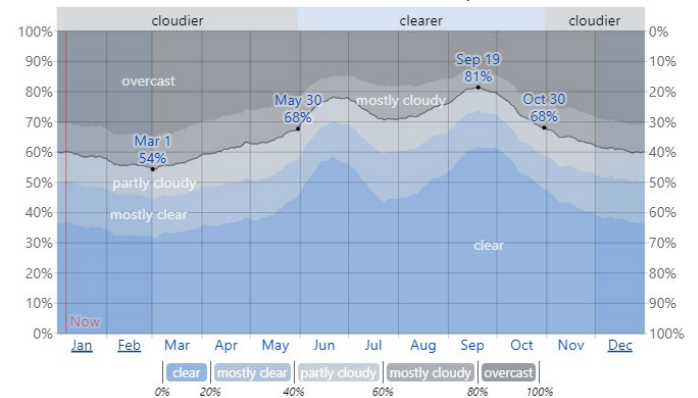
The average hourly wind speed in Loa experiences significant seasonal variation over the course of the year (**Figure 2-6**). The windier part of the year lasts for 6 months, from mid-December 21 to mid-June. The windiest month of the year in Loa is April, with an average hourly wind speed of 8.8 miles per hour. The calmest month of the year in Loa is August, with an average hourly wind speed of 5.6 miles per hour.

FIGURE 2-4: AVERAGE HIGH AND LOW TEMPERATURE IN LOA, UTAH



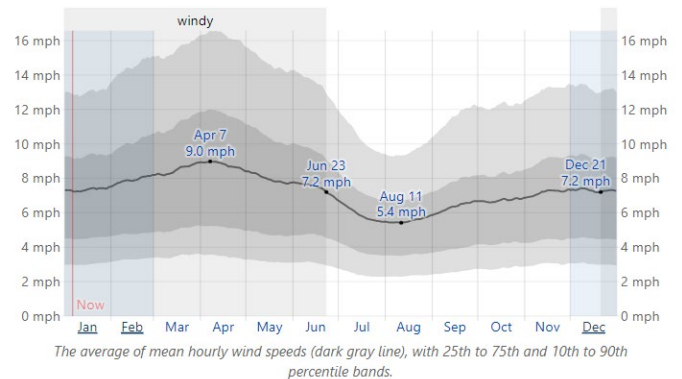
Source: www.weatherspark.com

FIGURE 2-5: CLOUD COVER CATEGORIES IN LOA, UTAH



Source: www.weatherspark.com

FIGURE 2-6: ANNUAL WIND DATA



The average of mean hourly wind speeds (dark gray line), with 25th to 75th and 10th to 90th percentile bands.

Source: www.weatherspark.com



ENVIRONMENTAL SCREENING/NEPA CATEGORIES

An environmental screening for the following environmental impact categories were included as part of the Master Plan. The full analysis is provided in **Appendix B**.

- Air Quality
- Biological Resources
- Climate
- Coastal Resources
- Department of Transportation Act, Section 4(f)
- Farmlands
- Cultural Resources
- Land Use
- Natural Resources
- Visual Effects
- Water Resources

Several major resource categories are summarized below:

Federal and State Endangered Species

Utah prairie dogs are known to occur within the airport boundary and burrows have been recorded directly adjacent to the runway. This species is considered “Threatened” according to the U.S. Fish and Wildlife Service (USFWS).

The state of Utah identifies Species of Greatest Conservation Need in which the following species were identified within a 2-mile radius of the Airport: American white pelican, burrowing owl, golden eagle, bald eagle, and ferruginous hawk.

Farmlands

Based on previous coordination with the Natural Resources Conservation Service (NRCS), farmlands protected under the Farmland Protection Policy Act do not occur within the current airport boundary. Prime farmlands and farmland of statewide importance largely surround the airport as shown on map 3 in **Appendix B**.

Noise and Compatible Land Use

The airport is in a relatively isolated area, with agricultural lands immediately surrounding the facility and undeveloped public lands surrounding the larger area. Receptors (land uses that are sensitive to noise impacts) in the area are mainly residences; there are approximately 220 people in 134 housing units residing within 2 miles of the airport (EPA 2022d). Wayne High School is approximately 2 miles east, Wayne Middle School is 2.5 miles east, and Loa School is 2.8 miles northwest of the airport. Noise in the surrounding area is predominantly from operation of agricultural equipment during the growing season and highway and local traffic year-round.

LOCAL SURFACE TRANSPORTATION

Vehicle access to the Airport’s landside facilities is provided on the southeast side of the Airport via South Airport Road. South Airport Road connects to West Big Rocks Road, which runs east to Highway 24 or west to the town of Loa. Vehicles currently have open access to the aprons and hangar areas.

As depicted in the 2002 ALP, the Airport has considered an expansion of the Runway Protection Zone (RPZ) which would be beneficial to providing lower visibility minimums for any future instrument approach procedure. This expansion along with the existing RPZ results in RPZ incompatibilities which may require the relocation of South Airport Road. This known issue is analyzed in future sections of the master plan.

AREA LAND USE/ZONING

Wayne Wonderland Airport and the surrounding airspace is located within Wayne County. All land use actions related to the airport site, and its immediate surroundings are under the County’s jurisdiction. The Airport’s FAR Part 77 airspace extends over areas of Wayne County which is responsible for protection of the FAR Part 77 airspace surfaces for the Airport. Part of the conical surface is over the Town of Lyman, which is a separate jurisdiction from Wayne County.

A majority of the 307-acre airport is undeveloped. Based on aerial imagery from 2019, approximately 40 acres within the airport boundary appear to be regularly irrigated and harvested. Zoning information is not readily available for Wayne County, and there are no known planned or future uses within the airport boundaries.



Airside Elements

The Airside Elements section is comprised of the facilities that facilitate the movement and operation of aircraft on the ground and in the air around the Wayne Wonderland Airport. This section of the existing conditions analysis includes a discussion of the area airspace, instrument flight procedures, runways, taxiways/taxilanes, aprons/tiedowns/aircraft parking, airfield pavement condition, and airside support facilities.

AREA AIRSPACE

In addition to the airspace classifications and operating environment pilots are more familiar with (described in the Airspace Classifications section below) there are a variety of rules, regulations, design standards, and policies associated with the protection of airspace, evaluation of proposed objects on and near airports, and their effects on navigable airspace. Airport Cooperative Research Program (ACRP) Report 38 - Understanding Airspace, Objects, and Their Effects on Airports provides a comprehensive description of the regulations, standards, evaluation criteria, and processes designed to protect the airspace surrounding airports and is summarized below for additional context of airspace evaluation and design to serve the Wayne Wonderland Airport.

Part 77—Objects Affecting Navigable Airspace

FAR Part 77 airspace, depicted in **Figure 2-7**, is the central regulation governing airspace protection, with cross-references to many other criteria documents. It sets forth the requirements for notifying the FAA of proposed construction; defines obstruction criteria; and describes aeronautical studies required to assess hazard status.

Wayne County has not yet codified airport land or FAR Part 77 Airspace within the county.

FAA Order 8260.3B—United States Standard for Terminal Instrument Procedures (TERPS)

This Order, along with several derivative orders in the 8260 series and other related orders, define criteria that FAA flight procedure designers utilize when designing instrument flight procedures. Airspace protection requirements for instrument flight procedures are one of the types of obstruction standards referenced in FAR Part 77; they are also one of the most common criteria analyzed for hazard status in aeronautical studies.

Wayne Wonderland Airport TERPS surfaces are depicted in the Airport Layout Plan Drawing Set presented later in the master plan.

FAA AC 150/5300-13B—Airport Design

This AC is the principal document utilized by the FAA, airport sponsors, and planning consultants when planning and designing new airports or modifications to airports. Airspace clearances for key runway end features are defined in the AC's discussion of Runway End Siting Surfaces.

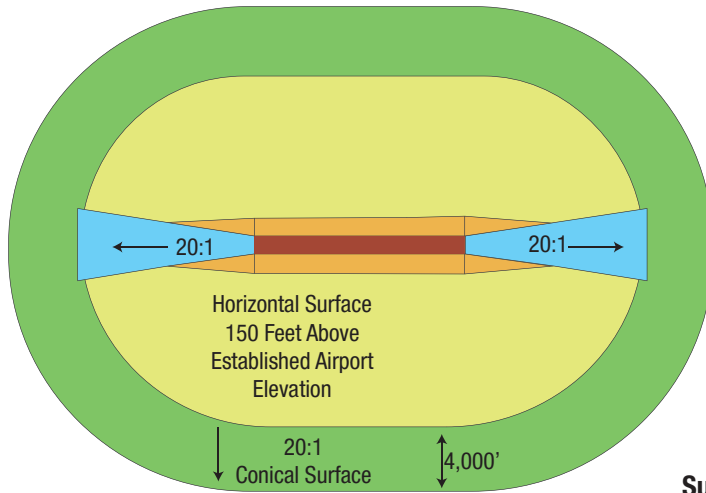
Airspace Classifications

Airspace within the United States is classified by the FAA as “controlled” or “uncontrolled” with altitudes extending from the surface upward to 60,000 feet above MSL. Controlled airspace classifications include Class A, B, C, D, and E. Class G airspace is uncontrolled. **Figure 2-8** depicts these airspace classes.

Aircraft operating within controlled airspace are subject to varying levels of positive air traffic control that are unique to each airspace classification. Requirements to operate within controlled airspace vary, with the most stringent requirements associated with very large commercial airports in high traffic areas. Uncontrolled airspace is typically found in remote areas similar to Wayne County and is limited to a 700 or 1,200-foot Above Ground Level (AGL) layer above the surface and below controlled airspace.

FIGURE 2-7: PART 77 AIRSPACE

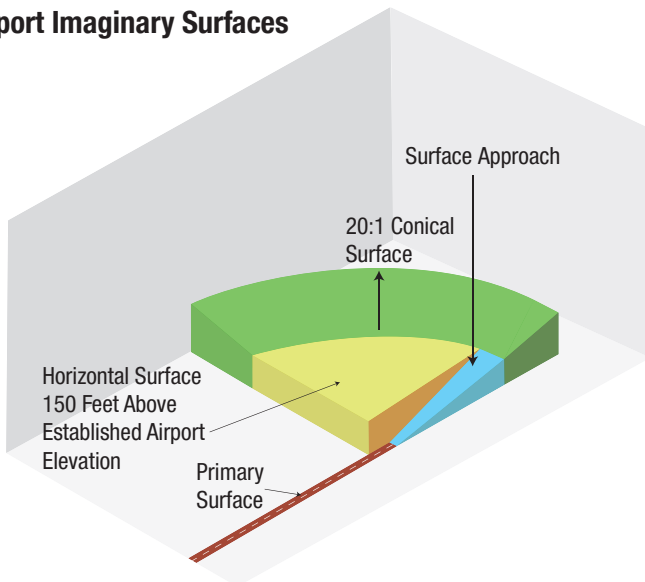
**Plan View of Part 77
Civil Airport Imaginary Surfaces**



Surface Slope Key

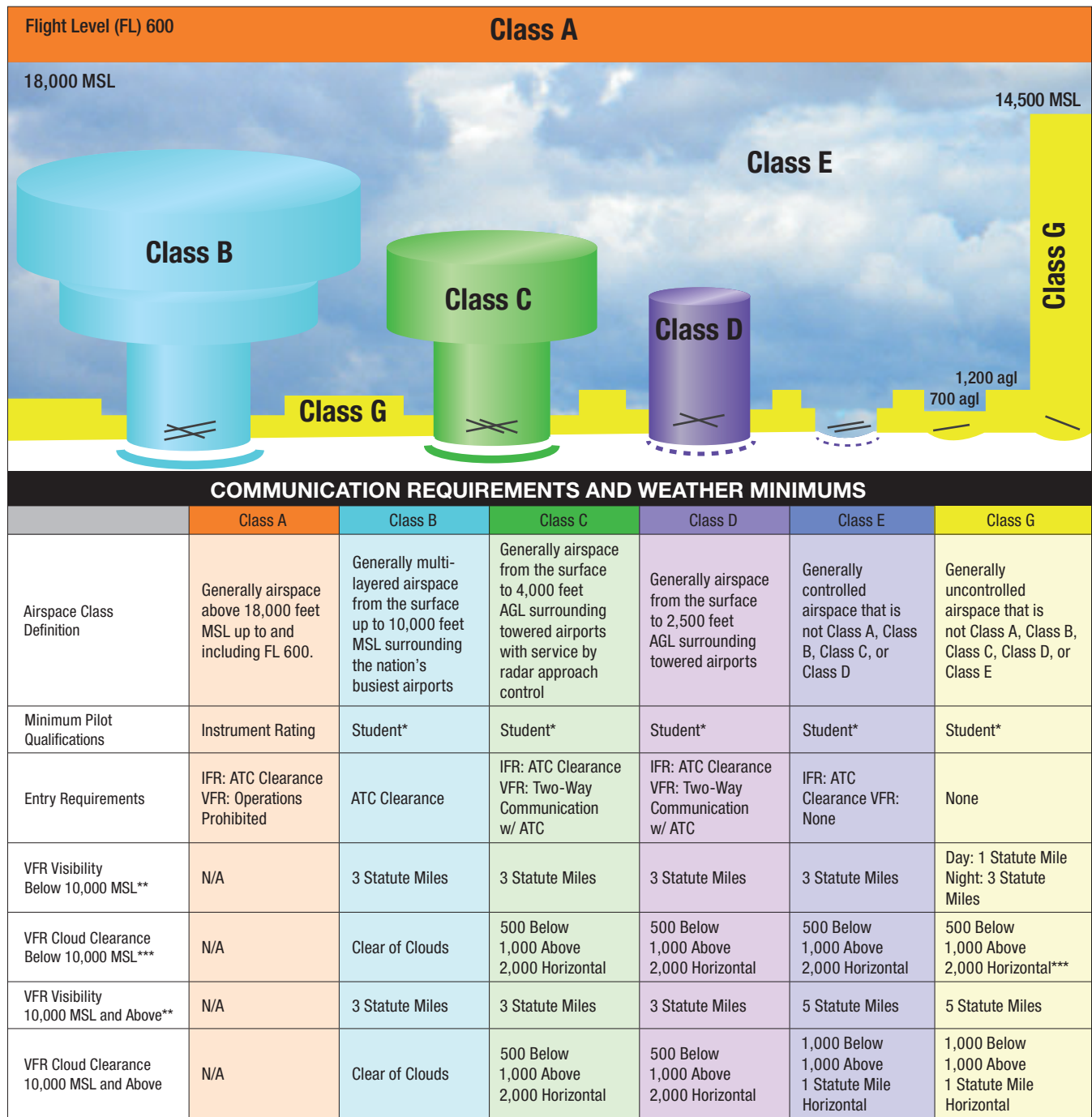
- Primary Surface
- Transitional Surface
- Horizontal Surface
- Conical Surface
- Approach Surface

**Isometric View of Part 77
Civil Airport Imaginary Surfaces**



For Wayne Wonderland Airport, the approach surfaces for the runway extend 5,000 feet beyond each runway (beginning 200 beyond the runway end).

FIGURE 2-8: AIRSPACE CLASSIFICATIONS



* Prior to operating within Class B, C, or D airspace (or Class E airspace with an operating control tower), student, sport, and recreational pilots must meet the applicable FAR Part 61 training and endorsement requirements. Solo student, sport, and recreational pilot operations are prohibited at those airports listed in FAR Part 91, appendix D, section 4.

** Student pilot operations require at least 3 statute miles visibility during the day and 5 statute miles visibility at night.

*** Class G VFR cloud clearance at 1,200 agl and below (day); clear of clouds.

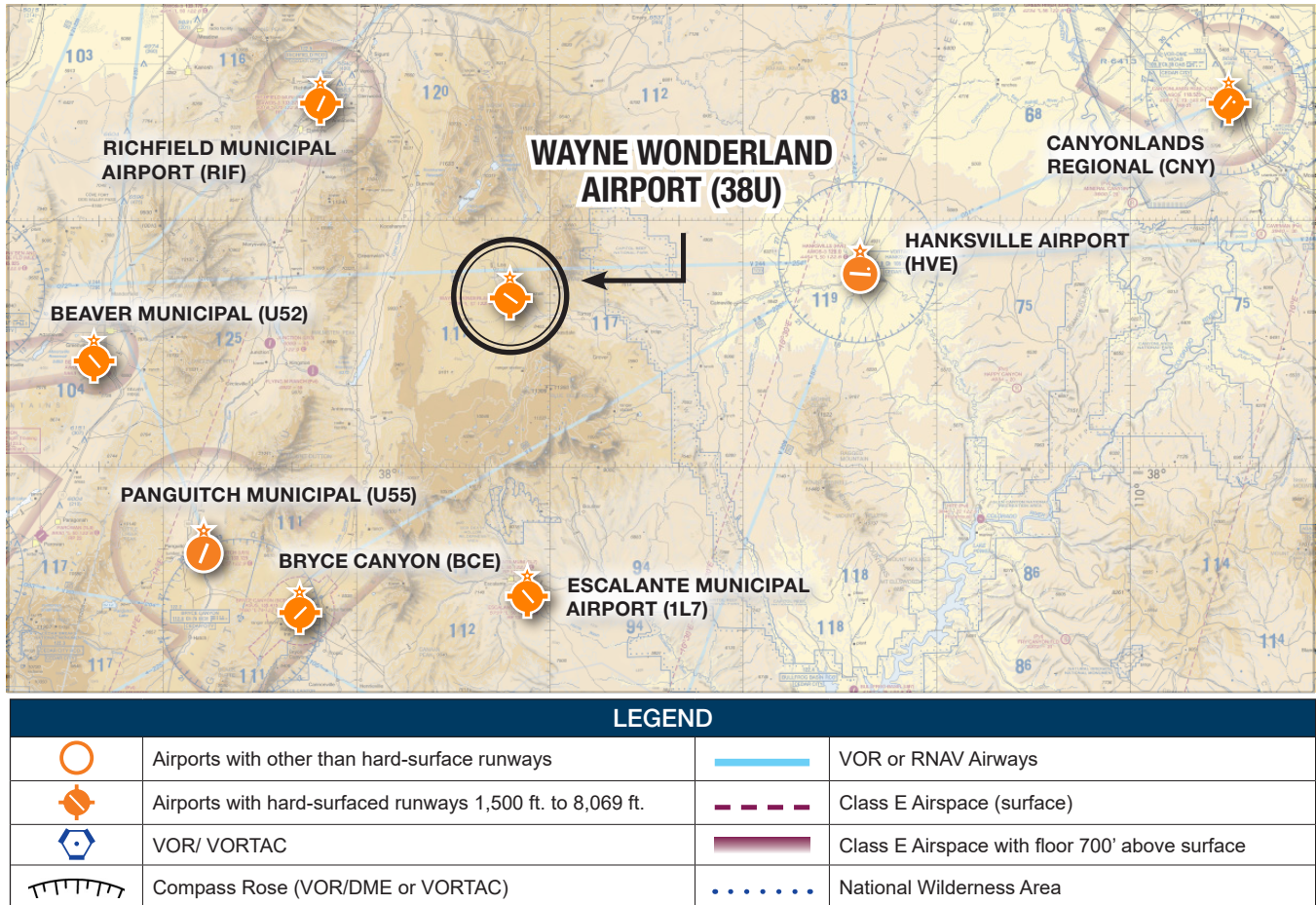
Source: Federal Aviation Administration (FAA)

Local Area Airspace Structure

The Las Vegas Sectional Aeronautical Chart depicts nearby airports, notable obstructions, special airspace designations and instrument airways in the vicinity of Wayne Wonderland Airport as depicted in **Figure 2-9**.

Wayne Wonderland Airport is located in an area of Class G airspace up to 1200 feet AGL, where it becomes Class E airspace. Radio communication is not required for visual flight rules (VFR) operations in Class G or E airspace, although pilots are encouraged to use the common traffic advisory frequency (CTAF) when operating at the airport. However, aircraft are required to obtain an air traffic control (ATC) clearance prior to operating in Class E airspace when operating under instrument flight rules (IFR).

FIGURE 2-9: AREA AIRSPACE - LAS VEGAS/DENVER SECTIONAL CHART



Special Use Airspace

The closest area of special use airspace to the Wayne Wonderland Airport is the Sevier Military Operations Area (MOA) located approximately 90 miles northwest of the airport.

Controlled & Uncontrolled Airspace

Wayne Wonderland Airport is an uncontrolled field and pilots use the airport Unicom/common traffic advisory frequency (CTAF) for communications on the ground and in the vicinity of the Airport.

Instrument Flight Procedures

Instrument approach and departure procedures are developed by the FAA using electronic navigational aids to guide aircraft through a series of prescribed maneuvers in and out of an airport’s terminal airspace. The procedures are designed to enable continued airport operation during instrument meteorological conditions (IMC), but are also used during visual conditions, particularly in conjunction with an instrument flight plan. The capabilities of each instrument approach are defined by the technical performance of the procedure platform (ground based navigational aids or satellite navigational aids) and the presence of nearby obstructions, which



may affect the cloud ceiling and visibility minimums for the approach, and the routing for both the approach and missed approach procedure segments. The aircraft approach speed and corresponding descent rate may also affect approach minimums for different types of aircraft.

There are no published instrument approach procedures (IAP) at Wayne Wonderland Airport. However, implementing an FAA approved instrument approach is explored further within this AMP.

RUNWAY

As depicted in **Figure 2-10** Wayne Wonderland has one paved runway (13/31) that is oriented in a (128-308 magnetic/142-322 true degree bearing). Runway 13/31, which was recently reconstructed in 2020, is 5,693 x 75 feet and is equipped with medium intensity runway edge lights.

A summary of runway conditions is provided below:

- **Runway Pavement:** Asphalt, good condition.
- **Runway Markings:** Both ends of Runway 13/31 have visual markings, consisting of runway numbers and a centerline stripe.
- **Runway Gradient:** FAA 5010 data reports that the end of Runway 31 is the high point with an elevation of 7,027.3 feet and the runway gradient is 0.08%.
- **Runway Lighting:** Medium Intensity Runway Lighting (MIRL) system.
- **Weight Bearing Capacity:** 16,000 pound, single wheel load capacity

A 407-foot runway extension to an ultimate length of 6,100 feet has been depicted on previous planning documents. The FAA requires justification to allow for a runway extension to be shown on an Airport Layout Plan and often further justification that demand exists before they will fund a runway extension project. The FAA planning process clearly defines the process required to justify a runway extension and all other facility improvements on the airport. The process starts by determining the Design Aircraft in subsequent sections of the master plan. The Design Aircraft is the most demanding aircraft at the airport that has at least 500 annual operations (take offs or landings). Through the existing conditions analysis and forecasts portions of the project we will investigate current based and transient aircraft that use the airport and estimate annual operations to define the Design Aircraft. The dimensions and performance requirements of the Design Aircraft will determine what type of runway extension may be justified at Wayne Wonderland.

FAA DESIGN STANDARDS AND EXISTING NON-STANDARD CONDITIONS

The FAA defines several recommended standards for airport design in AC 150/5300-13B, Airport Design. Some of the most critical standards are those related to the design of runways, which are listed below.

- **Runway Safety Area (RSA)** – The RSA is a defined surface surrounding the runway that is prepared or suitable for reducing the risk of damage to airplanes in the event of an airplane undershoot, overshoot, or an excursion from the runway.
- **Object Free Area (OFA)** –The OFA is an area on the ground centered on the runway, taxiway, or taxilane centerline that is provided to enhance the safety of aircraft operations. No above ground objects are allowed except for those that need to be in the OFA for air navigation or aircraft ground maneuvering purposes.
- **Object Free Zone (OFZ)** – The OFZ is a volume of airspace that is required to be clear of obstacles, except for frangible items required for the navigation of aircraft. It is centered along the runway and extended runway centerline.
- **Runway Protection Zone (RPZ)** – The Runway Protection Zone (RPZ) is a trapezoidal area off each runway end intended to enhance the protection of people and property on the ground. The dimensions of an RPZ are a function of the runway ARC and approach visibility minimums. The FAA recommends that RPZs be clear of all residences and places of public assembly (churches, schools, hospitals, etc.) and that airports own the land within the RPZs.

During preliminary analysis, two non-standard conditions associated with Runway 13-31 were identified and are depicted on **Figures 2-10 and 2-11**. First, Runway 31 RPZ is intersected by Airport Road. FAA guidance provided in AC 150/5300-13B identifies public roadway as an incompatible land use which should be mitigated. Second, the direct access to Runway 13-31 from the apron area provided by the taxiway connector is a layout that will need to be discussed and considered in future sections of the master plan.

FIGURE 2-10: EXISTING CONDITIONS

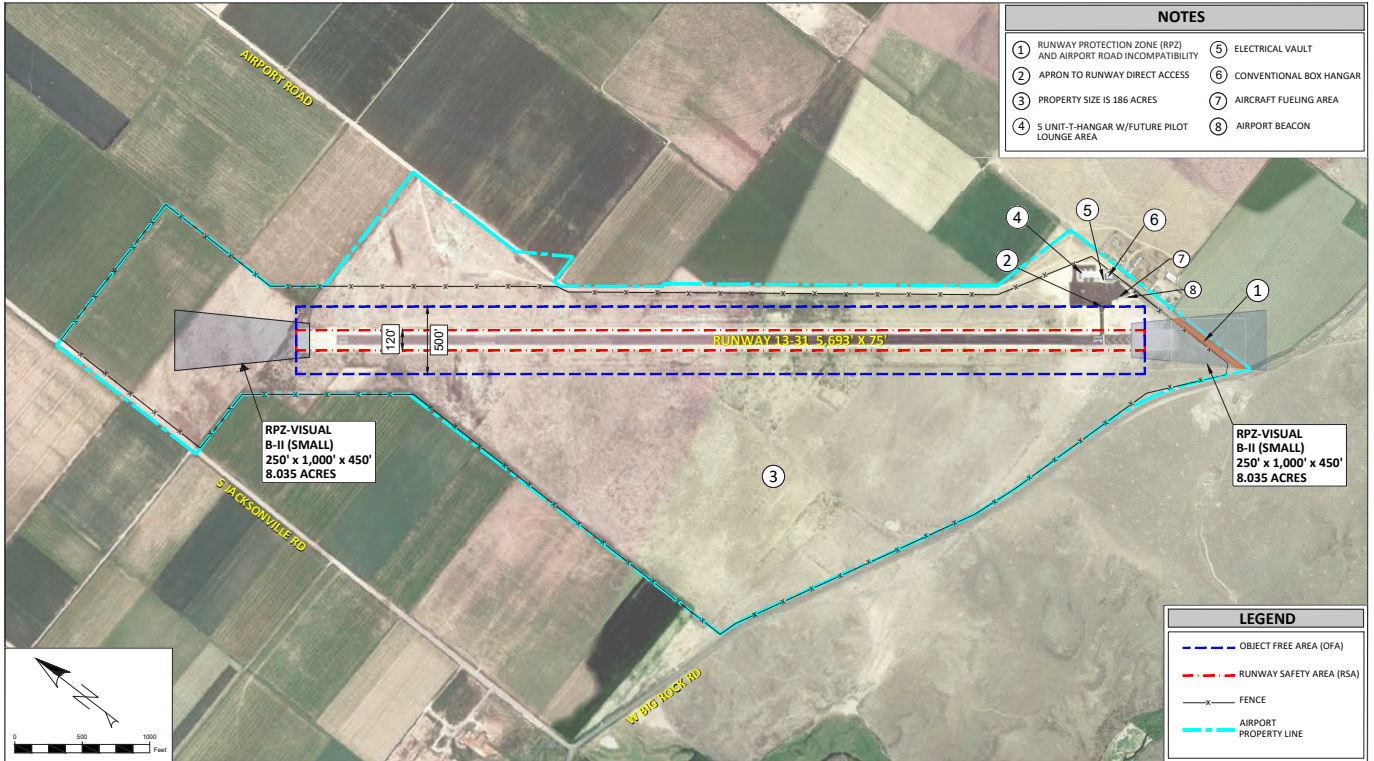
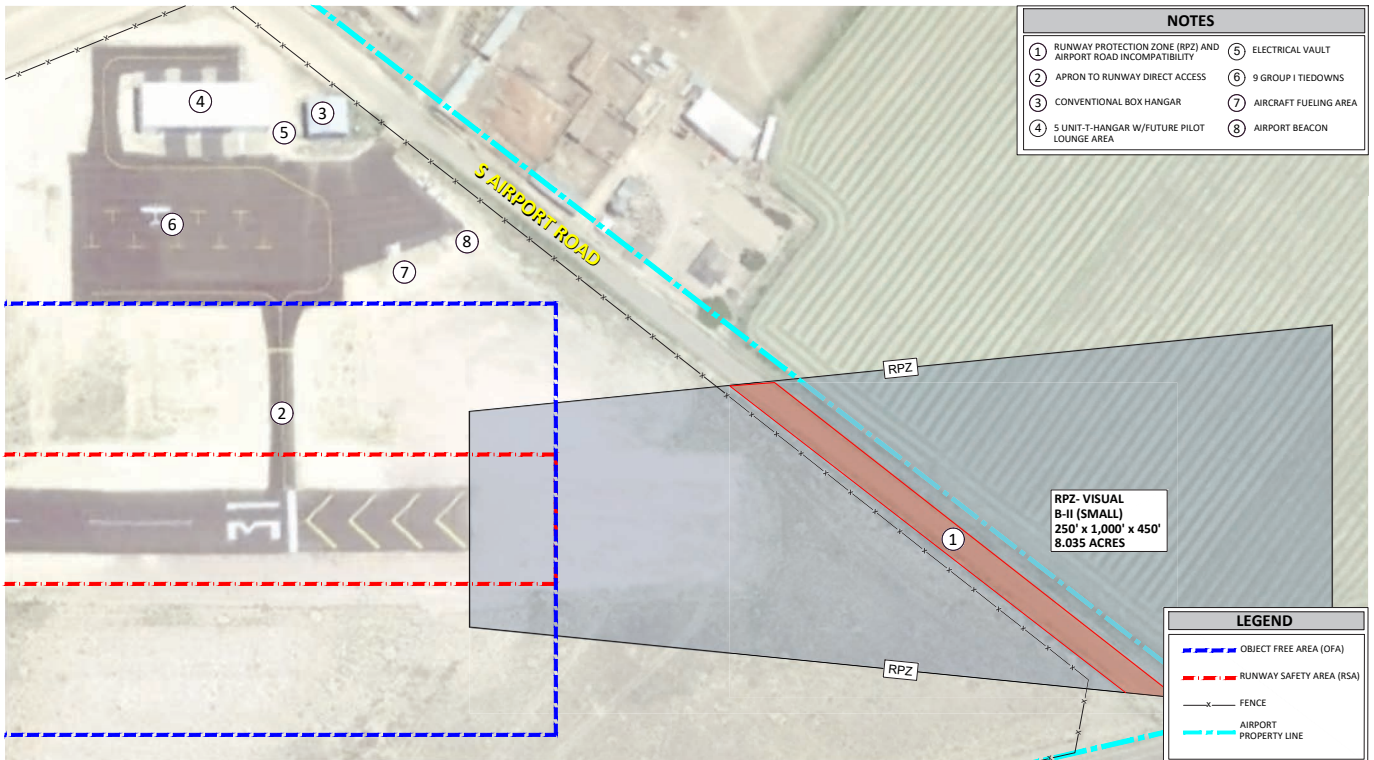


FIGURE 2-11: EXISTING CONDITIONS - TERMINAL AREA



Source: Century West Engineering

Taxiway/Taxilanes

There is a 25-foot-wide asphalt paved taxiway connector which connects the apron directly to the Runway 31 end. Access to Runway 13 is achieved via “back-taxi” on the Runway. Previous planning efforts depicted a full-length parallel taxiway on the south side of the runway.

Aprons/Tiedowns

As depicted in **Figure 2-11** the 68,000 square foot asphalt paved apron area consists of nine tie-downs for aircraft parking along with appurtenant taxilanes providing access to hangar areas, vehicle parking, and taxiway/runway facilities.



Taxiway Connector

Airfield Pavement Conditions

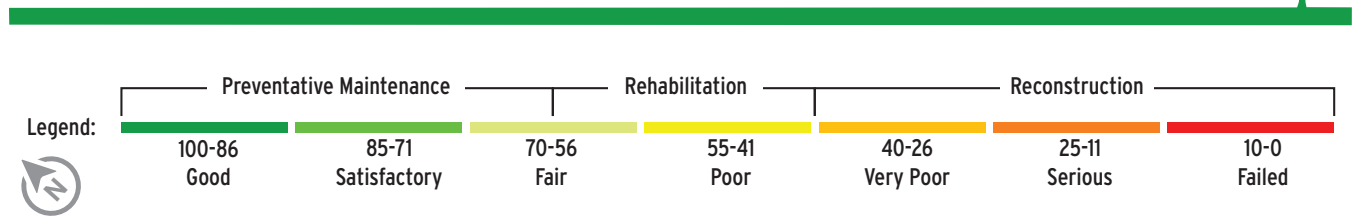
Airfield pavement conditions are monitored by UDOT Aeronautics using MicroPAVER software which is a pavement management program used to collect, store, and retrieve decision-making information to make maximum use of pavement maintenance funding. The last on-site inspection of airfield pavements was September 2018 and Runway 13/31 was reconstructed in summer 2020.

As seen in **Figure 2-12** Pavement at the Airport is in generally good condition with Pavement Condition Index (PCI) ratings for all airfield pavements in the “preservation” category. The predicted PCI layout provided by UDOT indicates that pavement areas on the apron will require pavement maintenance before the runway or taxiway/taxilane pavements. The latest CIP planning has programmed a pavement maintenance project for all airfield pavements in 2024.



Apron

FIGURE 2-12: PAVEMENT CONDITIONS



Source: UDOT

AIRFIELD SUPPORT FACILITIES

Support facilities generally include airside support facilities such as airfield lighting, signage, weather reporting equipment and visual aids. Wayne Wonderland Airport accommodates day and night operations in visual meteorological conditions (VMC) and the corresponding visual flight rules (VFR) for aircraft.

Airfield Lighting

The runway is equipped with a Medium Intensity Runway Lighting (MIRL) system, which includes white edge lights and split lens (green/red) threshold lights. The runway lights are at 200-foot intervals along the length of the runway and are about 10 feet off the pavement edge on each side of the runway. There are two sets of three runway end lights at each end of the runway. The taxiway is unlit.

Airfield Signage

There is no airfield signage.

Weather Reporting

There is no weather reporting station located on the Airport. The nearest airport with weather is Richfield location 32.6 miles northwest.

Navigation Aids (NAVAIDS)

There is a rotating beacon on the apron, east of the hangar. The beacon light is functioning but the tower has irreparable damage from rust and corrosion and both have reached the end of their useful life. The Airport has a segmented circle located on the west side about midway of the runway. There is a lighted wind cone located north of the beacon and fuel tanks. A second wind cone with a segmented circle is located on the west side of the runway.

Aircraft Fuel

100LL (blue) fuel is available from a 1,250 gallon fuel tank with a self-service card reader.



Runway Lighting



Rotating Beacon



Fuel Tank

Landside Elements

The landside elements section includes the facilities designed to support airport operations but not those dedicated to aircraft operations. This section of the existing conditions analysis includes a discussion of the Terminal Building/Facilities, Hangars, Airport Fencing, Airport Surface Roads, Vehicle Parking, and Utilities.

Terminal Building/Facilities

The Airport currently has a port-a-potty available for visitors to the airport. There is a future plan for a pilot's lounge (approximately 1200 square feet) to be constructed within the existing 5-unit T-hangar structure. The floor plan includes an office, lounge area, storage room, two restrooms, a utility area and entryway as seen in **Figure 2-13**.

Hangars

There are two hangars at the Airport. The larger of the two is approximately 7,700 square feet with 6,500 square feet for hangars and five aircraft entry doors and 1200 square feet for pilots lounge. The smaller hangar is approximately 1,500 square feet.

Airport Fencing

The Airport currently has approximately 19,250 linear feet of wildlife fencing, that was installed in 2011. The fence is approximately 8 feet tall, with barbed wire lining the top of the fence above the woven wire. There are three double 10-foot gates north of the runway, one double 10-foot gate at the southeast border of the airport and one 4-foot man gate near the hangars.

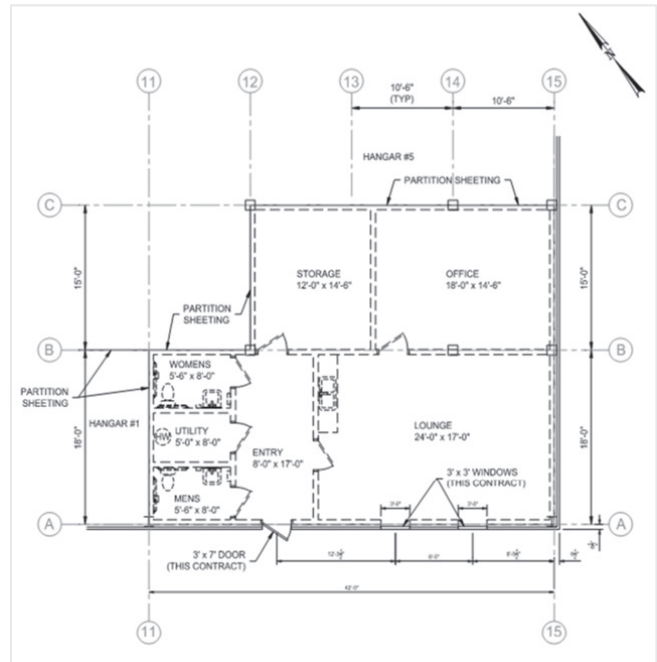
Airport Surface Roads/Vehicle Parking

There are currently no designated automobile roads within the Airport. Vehicles access the Airport via Airport Road and use the apron pavements. Automobiles generally park on the edge of the apron or within or adjacent to hangars. There are currently no designated vehicle parking spaces on the Airport.

Utilities

There is electrical power, internet, and telephone service at the Airport, but no water or sanitary sewer services are currently available.

FIGURE 2-13: PROPOSED PILOT'S LOUNGE



Source: Wayne Wonderland Airport Capital Improvement Plan Update (FY 2023)



Vehicle Parking



Airport Administration

The Airport Administration section provides a summary of Airport Ownership & Management, Airport Finance, Rates and Charges, Rules and Regulations, and overview of FAA Grant Assurances and Compliance.

AIRPORT OWNERSHIP & MANAGEMENT

Wayne Wonderland Airport is owned and operated by Wayne County. The County is responsible for the day-to-day management of the Airport, in addition to any contractors who perform airfield maintenance as needed. Airport tenants are responsible for managing their facilities and leased areas to meet the requirements defined in their leases.

AIRPORT FINANCE

The Airport operates within the County's General Fund, with all revenue generated through operations remaining in the Airport's budget. This is required by FAA to prevent revenue diversion from airport operations to the sponsor's general services. The primary revenue generating sources for the Airport include ground leases and rents from County-owned hangars and other buildings and fuel sales. The primary expenditures for the Airport include fuel, airport administration, maintenance, and facility improvements. Wayne Wonderland Airport's capital improvement projects are typically funded through FAA grants with a local match. Pavement maintenance projects are typically funded by Utah Division of Aeronautics grants with a local match.

RULES AND REGULATIONS

Wayne County operates the Airport for the use and benefit of the public in order to make it available to all types, kinds, and classes of aeronautical activity on fair and reasonable terms and without unjust discrimination.

FAA Grant Assurances and Compliance

The FAA's Airport Compliance Program defines the interpretation, administration, and oversight of federal sponsor obligations contained in grant assurances. The Airport Compliance Manual defines policies and procedures for the Airport Compliance Program. Although it is not regulatory or controlling with regard to airport sponsor conduct, it establishes the policies and procedures for FAA personnel to follow in carrying out the FAA's responsibilities for ensuring compliance by the sponsor.

The Airport Compliance Manual states the FAA Airport Compliance Program is: "...designed to monitor and enforce obligations agreed to by airport sponsors in exchange for valuable benefits and rights granted by the United States in return for substantial direct grants of funds and for conveyances of federal property for airport purposes. The Airport Compliance Program is designed to protect the public interest in civil aviation. Grants and property conveyances are made in exchange for binding commitments (federal obligations) designed to ensure that the public interest in civil aviation will be served. The FAA bears the important responsibility of seeing that these commitments are met. This order addresses the types of commitments, how they apply to airports, and what FAA personnel are required to do to enforce them."

According to the FAA, cooperation between the FAA, state, and local agencies should result in an airport system with the following attributes:

- Airports should be safe and efficient, located at optimum sites, and be developed and maintained to appropriate standards;
- Airports should be operated efficiently both for aeronautical users and the government, relying primarily on user fees and placing minimal burden on the general revenues of the local, state, and federal governments;
- Airports should be flexible and expandable, able to meet increased demand and accommodates new aircraft types;
- Airports should be permanent, with assurance that they will remain open for aeronautical use over the long-term;



- Airports should be compatible with surrounding communities, maintaining a balance between the needs of aviation and the requirements of residents in neighboring areas;
- Airports should be developed in concert with improvements to the air traffic control system;
- The airport system should support national objectives for defense, emergency readiness, and postal delivery;
- The airport system should be extensive, providing as many people as possible with convenient access to air transportation, typically not more than 20 miles of travel to the nearest NPIAS airport; and
- The airport system should help air transportation contribute to a productive national economy and international competitiveness.

The airport sponsor should have a clear understanding of and comply with all assurances. The following sections describe the selected assurances in more detail.

Project Planning, Design, and Contracting

Sponsor Fund Availability (Assurance #3)

Once a grant is given to the airport sponsor, the sponsor commits to providing the funding to cover their portion of the total project cost. Currently this amount is 9.37% of the total eligible project cost, although it may be higher depending on the particular project components or makeup. Once the project has been completed, the receiving airport also commits to having adequate funds to maintain and operate the airport in the appropriate manner to protect the investment in accordance with the terms of the assurances attached to and made a part of the grant agreement.

Consistency with Local Plans (Assurance #6)

All projects must be consistent with city and county comprehensive plans, transportation plans, zoning ordinances, development codes, and hazard mitigation plans. The airport sponsor should familiarize themselves with local planning documents before a project is considered to ensure that all projects follow local plans and ordinances.

Accounting System Audit and Record Keeping (Assurance #13)

All project accounts and records must be made available at any time. Records should include documentation of cost, how monies were actually spent, funds paid by other sources, and any other financial records associated with the project at hand. Any books, records, documents, or papers that pertain to the project should be available at all times for an audit or examination.

General Airport Assurances

Good title (Assurance #4)

The airport sponsor must have a Good Title to affected property when considering projects associated with land, building, or equipment. Good Title means the sponsor can show complete ownership of the property without any legal questions, or show it will soon be acquired.

Preserving Rights and Powers (Assurance #5)

No actions are allowed, which might take away any rights or powers from the sponsor, which are necessary for the sponsor to perform or fulfill any condition set forth by the assurance included as part of the grant agreement.

Airport Layout Plan (ALP) (Assurance #29)

Wayne Wonderland Airport should maintain an up-to-date ALP, which should include current and future property boundaries, existing facilities/structures, locations of non-aviation areas, and existing and proposed improvements. FAA requires proposed improvements to be depicted on the ALP in order to be eligible for FAA funding. If changes are made to the airport without authorization from the FAA, the FAA may require the airport to change the alternation back to the original condition or jeopardize future grant funding.

Disposal of Land (Assurance #31)

Land purchased with the financial participation of an FAA Grant cannot be sold or disposed of by the airport sponsor at their sole discretion. Disposal of such lands are subject to FAA approval and a definitive process established by the FAA. If airport land is no longer considered necessary for airport purposes, and the sale is authorized by the FAA, the land must be sold at fair market value. Proceeds from the sale of the land must either be repaid to the FAA, or reinvested in another eligible airport improvement project.



Airport Operations and Land Use

Pavement Preventative Maintenance (Assurance #11)

Since January 1995, the FAA has mandated that it will only give a grant for airport pavement replacement or reconstruction projects if an effective airport pavement maintenance-management program is in place. The Utah Department of Transportation prepares and updates pavement condition reports for Wayne Wonderland Airport. These reports identify the maintenance of all pavements funded with federal financial assistance and provides a pavement condition index (PCI) rating (0 to 100) for various sections of aprons, runways, and taxiways; including, a score for overall airport pavements.

Operations and Maintenance (Assurance #19)

All federally funded airport facilities must operate at all times in a safe and serviceable manner and in accordance with the minimum standards as may be required or prescribed by applicable Federal, State, and Local agencies for maintenance and operations.

Compatible Land Use (Assurance #21)

Land uses around an airport should be planned and implemented in a manner that ensures surrounding development and activities are compatible with the airport. The airport is located within Wayne County. The airport sponsor should work with land use authority (Wayne County) to ensure there are zoning laws that protect the airport from incompatible land uses. Incompatible land uses around airports represents one of the greatest threats to the future viability of airports.

Day-to-Day Airport Management

Economic Non-Discrimination (Assurance #22)

Any reasonable aeronautical activity offering service to the public should be permitted to operate at the airport as long as the activity complies with airport established standards for that activity. Any contractor agreement made with the airport will have provisions making certain the person, firm, or corporation will not be discriminatory when it comes to services rendered including rates or prices charged to customers.

Exclusive Rights (Assurance #23)

No exclusive right for the use of the airport by any person providing, or intending to provide, aeronautical services to the public. However, an exception may be made if the airport sponsor can prove that permitting a similar business would be unreasonably costly, impractical, or result in a safety concern, the sponsor may consider granting an exclusive right.

Leases and Finances

Fee and Rental Structure (Assurance #24)

An airport's fee and rental structure should be implemented with the goal of generating enough revenue from airport related fees and rents to become self-sufficient in funding the day-to-day operational needs. Airports should update their fees and rents on a regular basis to meet fair market value, often done through an appraisal or fee survey of nearby similar airports. Common fees charged by airports include fuel flowage fees, tie-down fees, landing fees, and hangar or ground lease rents.

Airport Revenue (Assurance #25)

Revenue generated by airport activities must be used to support the continued operation and maintenance of the airport. Use of airport revenue to support or subsidize non-aviation activities or to fund other County departments who are not using the funds for airport specific purposes is not allowed and is considered revenue diversion. Revenue diversion is a significant compliance issue for FAA.

For additional information on FAA Grant Assurances, please go to: https://www.faa.gov/airports/aip/grant_assurances/#current-assurances.



Existing Conditions Analysis Summary

The existing conditions analysis of the regional setting, airside, landside, and airport administrative elements of the Wayne Wonderland Airport identified several conditions that affect the operation and development of the Airport and reaffirmed several known issues and opportunities. The findings documented in the Existing Conditions Analysis chapter and summarized below will be used to support subsequent studies and recommendations throughout the development of the master plan.

REGIONAL SETTING

- Wayne County has experienced decline in population in recent years
- Over the past 15 years approximately \$5 million dollars of federal funded has been granted to the Airport
- Local role of Airport is consistent with similar Local GA airports in rural Utah
- Aircraft operations and based aircraft have remained relatively constant
- Minimal environmental impacts identified during environmental screening
- No existing land use ordinance in County to protect airspace or adjacent incompatibilities

AIRSIDE ELEMENTS

- Airspace – Approach surface is clear – County needs to implement local zoning ordinance to protect for potential airspace obstructions
- Approach Procedures – There are no published instrument approach procedures at the Airport
- Runway – Runway length appears to satisfy requirements but will require further analysis and coordination. Runway pavement is in good condition
- Taxiways/taxilanes – There is a taxiway connector which connects the apron directly to the Runway 31 end. Access to Runway 13 is achieved via “back-taxi” on the Runway
- Apron/Tiedowns – There are nine tie-downs for aircraft parking and the apron pavement is in good condition
- Pavement Condition – The airport pavement is in generally good condition throughout the Airport. Pavement maintenance is planned for 2024
- Support Facilities – Generally in good condition except for the beacon which needs to be replaced in the short-term

LANDSIDE ELEMENTS

- Terminal Building – There is a future plan for a pilot’s lounge to be developed and serve as a terminal building in one of the existing hangars
- Hangars – Two hangar buildings (5-unit T-hangar and single box hangar) serve the Airport for aircraft parking and storage
- Airport Surface Roads – No major issues
- Fencing – Constructed in 2011 and is in good condition
- Vehicle Parking – No major issues
- Utilities – Utility service to the Airport property includes telephone service and electrical power, but no water or sanitary sewer services are currently available. Plans are in place to develop a well and septic system for future airport development.

AIRPORT ADMINISTRATION

- Airport is owned and operated by Wayne County
- County should periodically assess their fees for services and airport staffing and compare them to other regional airports like Wayne Wonderland
- County should consider conducting an Airport Business Plan to further pursue new revenue potential and other development opportunities
- Airport is understood to be in compliance with all local, state and federal laws and requirements

Chapter 3

Aviation Activity Forecasts



Introduction

This chapter provides updated aviation activity forecasts for Wayne Wonderland Airport (38U) for the 20-year master plan (2022-2042). The most recent Federal Aviation Administration (FAA) approved aviation activity forecasts for Wayne Wonderland Airport were developed in the 2002 Airport Layout Plan Report.

The forecasts presented in this chapter are consistent with the current and historic role as a local general aviation airport. Wayne Wonderland Airport is capable of accommodating a full range of general aviation activity, including small single engine piston aircraft, business class turboprops, small business jets and helicopters. This level of capability expands the Airport's role beyond the local community and accommodates users throughout the region, which is acknowledged in the 2021 Utah Aviation Development Strategy.

Wayne Wonderland Airport is designated a Category UT-IV: Essential Access airport in UTAP 2021. The definition for Category UT- IV airports is: "These airports support primarily single-engine general aviation aircraft but can accommodate smaller twin-engine general aviation aircraft. These airports support local air transportation needs and special-use aviation activities."

The forecasts of activity are unconstrained and assume Wayne County will be able to make the facility improvements necessary to accommodate the anticipated demand unless specifically noted. The County will consider if any unconstrained demand will not or cannot be reasonably met through the evaluation of airport development alternatives later in the master plan.



FAA Forecasting Process

The FAA provides aviation activity forecasting guidance for airport master planning projects. *FAA Advisory Circular (AC) 150/5070-6B, Airport Master Plans*, outlines seven standard steps involved in the forecast process:

- 1. Identify Aviation Activity Measures:** The level and type of aviation activities likely to impact facility needs. For general aviation, this typically includes based aircraft and operations.
- 2. Previous Airport Forecasts:** May include the FAA Terminal Area Forecast (TAF), state or regional system plans, and previous master plans.
- 3. Gather Data:** Determine what data are required to prepare the forecasts, identify data sources, and collect historical and forecast data.
- 4. Select Forecast Methods:** There are several appropriate methodologies and techniques available, including regression analysis, trend analysis, market share or ratio analysis, exponential smoothing, econometric modeling, comparison with other airports, survey techniques, cohort analysis, choice and distribution models, range projections, and professional judgment.
- 5. Apply Forecast Methods and Evaluate Results:** Prepare the actual forecasts and evaluate for reasonableness.
- 6. Summarize and Document Results:** Provide supporting text and tables as necessary.
- 7. Compare Forecast Results with FAA's TAF:** Follow guidance in FAA Order 5090.5, Field Formulation of the National Plan of Integrated Airport Systems and Airport Capital Improvement Program. In part, the Order indicates that forecasts should not vary significantly (more than 10%) from the TAF. When there is a greater than 10% variance, supporting documentation should be supplied to the FAA. The aviation demand forecasts are then submitted to the FAA for their approval.

KEY ACTIVITY ELEMENTS

As noted above, general aviation airport activity forecasting focuses on two key activity segments: based aircraft and aircraft operations (takeoffs & landings). Detailed breakdowns of these activity segments include:

- Aircraft fleet mix;
- Peak activity;
- Distribution of local and itinerant operations; and
- Determination of the critical aircraft (also referred to as the design aircraft).

The critical aircraft represents the most demanding aircraft type or family of aircraft that uses an airport on a regular basis (a minimum of 500 annual takeoffs & landings). The critical aircraft is used to establish a variety of FAA design categories, which then establish design standards for airfield facilities. FAA airport design standard groupings reflect the physical requirements of specific aircraft types and sizes. Design items, such as runway length evaluations, are determined by the requirements of current/future critical aircraft. The activity forecasts also support the evaluation of several demand-based facility requirements including runway and taxiway capacity, aircraft parking, and hangar capacity.



Population and Economic Conditions

Historically, downturns in general aviation activity often occur during periods of weak economic conditions while growth typically coincides with favorable economic conditions. The 2008 economic recession and the slow recovery that followed, has constrained general aviation activity locally, statewide, and throughout the national airport system. However, the FAA’s national long-term aviation forecasts reflect overall strength in both the U.S. and regional economies. This forecast economic strength is expected to sustain modest growth in aviation activity over the long-term, in the absence of extended economic downturn.

POPULATION

The population within an airport’s service area, in broad terms, affects the type and scale of aviation facilities and services that can be supported. Changes in population often reflect broader economic conditions that may also affect airport activity. The Wayne Wonderland Airport serves the western third of Wayne County and parts of Piute and Sevier counties. For the purpose of forecasting aviation activity, an evaluation of Wayne, Sevier, and Piute counties’ population trends provides a reasonable indication of activity.

The Wayne County population has decreased slightly since the 2010 Census. Annual population growth over the last 10 years has decreased with an Average Annual Growth Rate (AAGR) of -1.32% opposed to the statewide growth with an AAGR of 1.76%. Sevier County showed a slight increase in population with an AAGR of 0.15%, while Piute County population decreased with an AAGR of -1.05%. Recent historic population data and average growth rates for the Wayne, Sevier, and Piute counties, and the state of Utah are summarized in **Table 3-1**.

TABLE 3-1: WAYNE COUNTY POPULATION SUMMARY

	AAGR	2010	2017	2018	2019	2020	2021
State of Utah	1.76%	2,763,885	3,122,477	3,176,342	3,231,108	3,271,616	3,343,552
Wayne County	-1.32%	2,778	2,536	2,522	2,496	2,486	2,504
Sevier County	0.15%	20,802	21,154	21,232	21,438	21,522	21,799
Piute County	-1.05%	1,556	1,401	1,428	1,449	1,438	1,479

Source: University of Utah, Kem C. Gardner Policy Institute State and County Projections 2020-2060; U.S. Census Bureau (2010;2020)

The Kem C. Gardner Policy Institute at the University of Utah prepares long-term population forecasts for the state of Utah, counties, and cities. The current forecast for Wayne, Sevier, and Piute counties was published in January 2022.

This forecast provides projections from 2020 to 2060. The 2042 projection approximates the end of the current airport master planning period (2022-2041) and provides relevant information about future population expectations for Wayne County.

The Wayne County population is expected to grow at an average annual rate of 0.37% over the planning period and will result in approximately 2,700 residents in 2042. The state of Utah will grow to over 4.5 million over the same time period, reflecting an AAGR of 1.72%. A detailed summary of the population forecasts for the state of Utah; Wayne, Sevier and Piute counties is presented in **Table 3-2**.



TABLE 3-2: POPULATION FORECAST SUMMARY

	AAGR	2020	2025	2030	2035	2040	2042
State of Utah	1.72%	3,271,616	3,588,325	3,879,161	4,158,181	4,440,560	4,551,744
Wayne County	0.37%	2,486	2,525	2,556	2,626	2,712	2,745
Sevier County	0.62%	21,522	22,555	22,739	22,846	23,044	23,118
Piute County	1.07%	1,438	1,546	1,577	1,598	1,625	1,634

Source: University of Utah, Kem C. Gardner Policy Institute State and County Projections 2020-2060; U.S. Census Bureau (2020)

EMPLOYMENT

The U.S. Census Bureau reports the total employment for Wayne County in 2020 was 623 workers. In that same year the average income among all industries was \$49,299 compared to the Utah average of \$74,197. Employment counts and average monthly wages for Wayne County and the state of Utah are summarized in **Table 3-3** below.

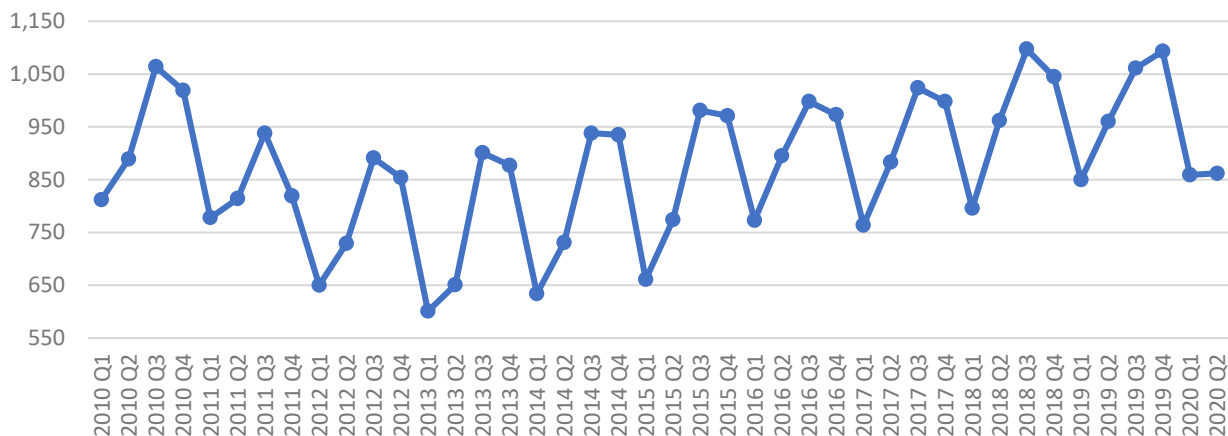
TABLE 3-3: EMPLOYMENT AND MONTHLY WAGES

	Employment		Average Monthly Wages (Inflation Adjusted)	
	Wayne County	Utah	Wayne County	Utah
2010	1,019	1,127,957	\$980.64	\$1,484.00
2016	973	1,372,559	\$988.48	\$1,544.00
2017	998	1,415,668	\$1,026.84	\$1,554.00
2018	1,045	1,463,661	\$1,043.38	\$1,580.00
2019	1,093	1,500,448	\$1,076.10	\$1,624.00
2020	623	1,405,666	\$1,156.83	\$1,736.00

Source: Department of Workforce Services; U.S. Census Bureau (2010, 2020)

Employment in Wayne County experiences seasonal fluctuations. In **Figure 3-1** these trends are depicted graphically year over year from 2010 to 2021. Quarter 1 of each year shows the lowest employment, while Quarter 3 shows the highest employment.

FIGURE 3-1: WAYNE COUNTY QUARTERLY EMPLOYMENT DATA



Source: Department of Workforce Services



Wayne County employment data shows that the largest industries are Accommodation/Food Services and Construction with 280 and 152 employees, respectively (**Table 3-4**). With several National Parks within a 100-mile radius, seasonal employment due to tourism affecting Accommodation/Food Services and weather affecting Construction aligns with the fluctuation shown in **Figure 3-1**.

The state of Utah employment forecast by industry is presented in **Figure 3-2**. Overall employment in the state of Utah is expected to grow by about 15% in the next 10 years and nearly 30% in the next 20 years. Employment in the Health Care and Social Assistance and Professional Scientific and Technical Services industries are projected to experience the greatest growth in the next 10 years.

TABLE 3-4: WAYNE COUNTY EMPLOYMENT BY INDUSTRY IN 2019

Industry	Number of Employees
Accommodation/Food Services	280
Construction	152
Retail Trade	134
Educational Services	112
Healthcare/Social Services	100
Public Administration	59
Wholesale Trade	22
Arts/Entertainment/Recreation	20
Other Services	18
Prof/Scientific/Technical Services	14
Mining	13
Transportation/Warehousing	12
Manufacturing	5

FIGURE 3-2: UTAH STATE INDUSTRY EMPLOYMENT FORECAST, 2022-2042

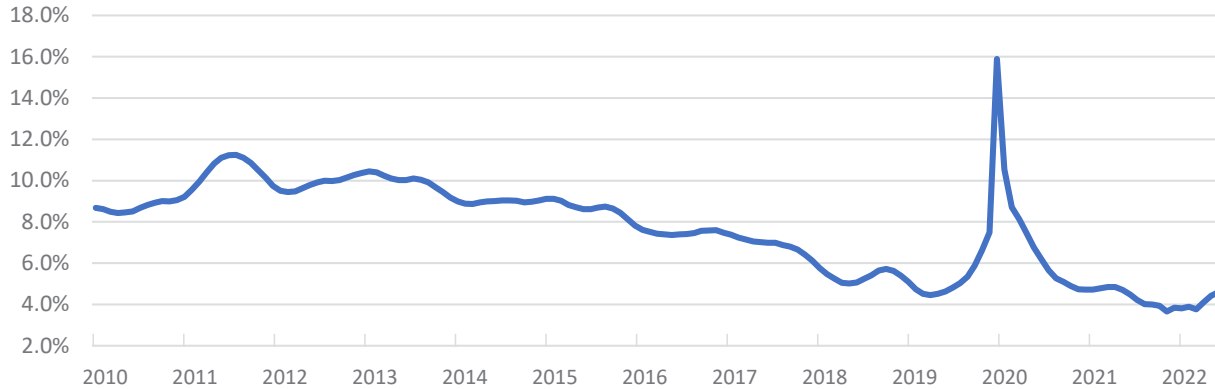
Year	2022	2032	% Change	2042	% Change
Total Jobs	2,274,964	2,621,574	15.2%	2,934,566	29.0%
Health Care and Social Assistance	188,528	242,806	28.8%	287,579	52.5%
Professional, Scientific, and Technical Services	195,590	251,537	28.6%	313,213	60.1%
Forestry, Fishing, and Hunting	4,566	5,676	24.3%	6,601	44.6%
Accommodation and Food Services	134,951	167,447	24.1%	174,864	29.6%
Construction	156,163	192,569	23.3%	246,980	58.2%
Arts, Entertainment, and Recreation	54,424	66,797	22.7%	72,130	32.5%
Administrative, Support, Waste Management, and Remediation Services	131,308	159,975	21.8%	187,767	43.0%
Other Services (Except Public Administration)	121,715	145,940	19.9%	157,104	29.1%
State Government	81,638	95,373	16.8%	107,680	31.9%
Information	48,098	56,128	16.7%	66,981	39.3%
Wholesale Trade	63,615	73,954	16.3%	71,363	12.2%
Local Government	128,641	148,118	15.1%	164,986	28.3%
Manufacturing	152,016	174,557	14.8%	183,595	20.8%
Transportation and Warehousing	98,595	106,586	8.1%	99,877	1.3%
Educational Services; Private	82,653	88,850	7.5%	94,211	14.0%
Real Estate and Rental and Leasing	133,417	142,152	6.5%	134,021	0.5%
Farm	18,926	19,775	4.5%	19,872	5.0%
Management Of Companies and Enterprises	34,573	35,893	3.8%	34,731	0.5%
Federal Civilian	39,098	40,393	3.3%	41,301	5.6%
Federal Military	16,526	16,936	2.5%	17,323	4.8%
Retail Trade	216,640	219,889	1.5%	264,654	22.2%
Mining	12,415	12,560	1.2%	13,278	7.0%
Finance and Insurance	156,724	154,764	-1.3%	172,297	9.9%
Utilities	4,146	2,901	-30.0%	2,160	-47.9%

Source: University of Utah, Kem C. Gardner Policy Institute State and County Projections 2020-2060



Figure 3-3 illustrates the unemployment rates for Wayne County over the past decade. It should be noted that the COVID-19 pandemic caused a large spike in unemployment reaching approximately 16% in 2020.

FIGURE 3-3: WAYNE COUNTY HISTORIC UNEMPLOYMENT DATA



Source: Wayne County Clerk Office

Updated Aviation Activity Forecasts

As discussed in Chapter 2 - Existing Conditions, the historic based aircraft and operations numbers provided in the Terminal Area Forecast (TAF) are estimates provided via submissions to the 5010 Airport Master Record. These data are often the result of sponsor inputs that are not validated by the FAA. In this case, the 5010 data appear to be overestimated when compared to the know capacity of the Airport. As such, current based aircraft and operations estimates were derived for Wayne Wonderland Airport in 2022, using FAA recommended methodologies. Revised activity forecasts were developed using these updated estimates and are presented in **Figure 3-4**.

BASED AIRCRAFT

Five based aircraft forecast scenarios were developed based on generally accepted models. Growth trends established by those models were applied to the updated based aircraft counts.

Terminal Area Forecast 10-year Historic Trend

The TAF for Wayne Wonderland Airport projects that there will be 3 based aircraft at the airport between 2022 and 2045.

FAA Aerospace Forecast (Fiscal Years 2022-2042)

The FAA performs annual assessments of U.S. aviation activity through the FAA Aerospace Forecast. The 20-year forecasts are updated annually by evaluating recent events and established trends affecting a wide range of commercial and general aviation segments. The current version, FAA Aerospace Forecast - Fiscal Years (2022-2042), provides projections of key activity segments in 5-year increments beginning with the 2022 forecast.

A Modified FAA Aerospace GA Fleet Model was developed to use growth rates for each aircraft classification established in the forecast to project counts for each type of aircraft for the 20-year current planning period. Furthermore, this model developed for the Wayne Wonderland Airport assumes that at such times that a single-engine piston aircraft is projected to be removed from the Airport’s fleet, it will be replaced by a light sport aircraft (LSA) and/or experimental aircraft which are cheaper to buy, own and operate, and are rapidly growing in popularity nationwide. This assumption is supported by the anticipated 0.9% decrease in single-engine pistons and the projected 3.4% increase in LSAs nationwide.



The Modified FAA Aerospace GA Fleet Model, when applied to all aircraft, projects an AAGR of 0.1%. This results in 3 based aircraft in 2042, remaining constant over the planning period.

The three based aircraft (as of Dec. 2022) at Wayne Wonderland Airport fall under the Single Engine and LSA categories. Therefore, the growth rates of these categories may be analyzed further for the purpose of planning at the Airport. Using an average of the -0.9% Single-Engine and 3.4% LSA growth rate, results in an AGR of 2.5%. Applying the growth rate to the current based aircraft count (3 aircraft) results in a projected based aircraft count of 5, in 2042.

Wayne County Wages Trend

According to the state of Utah Department of Workforce Services, the 2020 median household income for Wayne County is \$54,790 and a per capita income of \$46,145. Over the past 20 years, the median household income has increased from \$33,000 to \$55,000. The 20-year average growth rate of wages in Wayne County is 2.59%. An increase in wages may lead to an increase in disposable income. This suggests, although not empirically, that an increase in wages could correlate with an increase in total based aircraft in a region.

Building Permits

Wayne County provided historic building permits for the purpose of this model. **Table 3-5** presents the number of building permits issued in Wayne County between 2014 and 2022. The AAGR over this time period was 7.9%. Applying this growth rate to the current based aircraft count (3 aircraft) results in a forecasted 14 based aircraft.

TABLE 3-5: HISTORICAL BUILDING PERMITS

	2014	2015	2016	2017	2018	2019	2020	2021	2022
Wayne County	41	59	54	68	53	57	66	61	73
Wayne Co. AAGR		43.9%	-8.5%	25.9%	-22.1%	7.5%	15.8%	-7.6%	19.7%

Source: Wayne County Clerk Office

RECOMMENDED BASED AIRCRAFT SUMMARY

The Modified FAA National Aerospace Forecast (Single Engine and Light Sport Aircraft) is recommended as the preferred based aircraft model for use in the Wayne Wonderland Airport Master Plan. The preferred forecast results in a net increase of 2 based aircraft over the planning period, which reflects an AAGR of 2.5%. The based aircraft forecast models that were developed, including the recommended model, are summarized in **Table 3-6** and **Figure 3-4**.

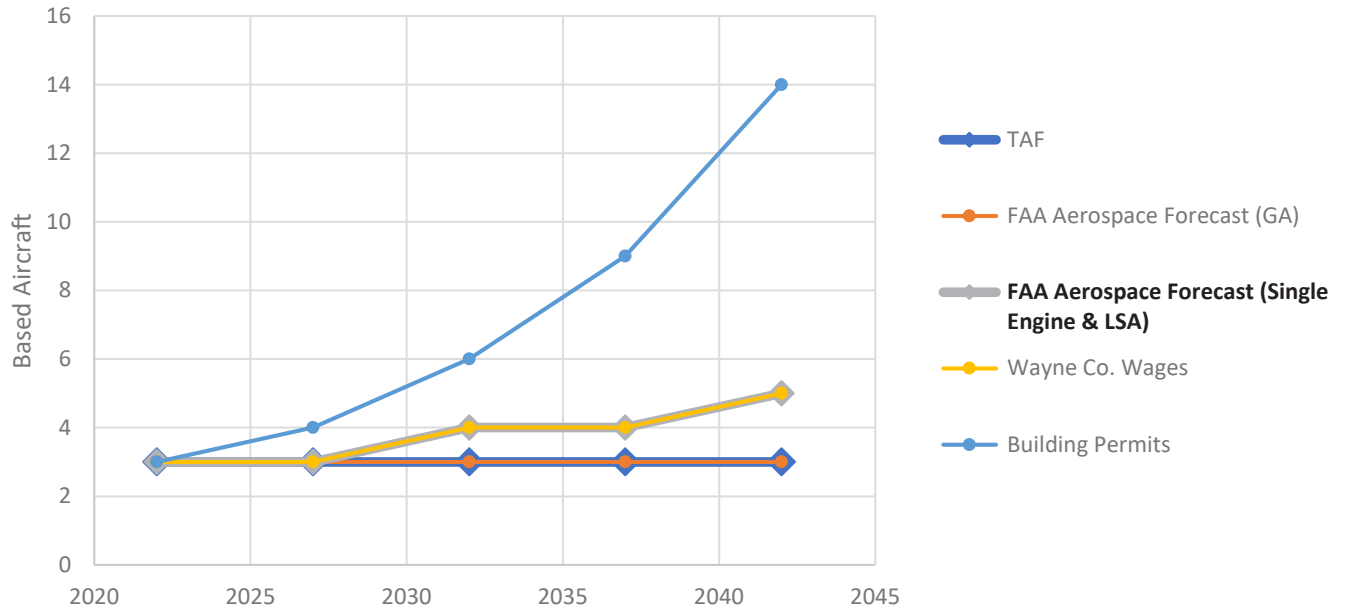
TABLE 3-6: BASED AIRCRAFT FORECAST MODEL

	Growth Rate	2022	2027	2032	2037	2042
TAF	0%	3	3	3	3	3
FAA Aerospace Forecast (GA)	0.1%	3	3	3	3	3
FAA Aerospace Forecast (Single-engine & LSA) – Preferred Model	2.5%	3	3	4	4	5
Wayne County Wages per Capita	2.59%	3	3	4	4	5
Building Permits	7.9%	3	4	6	9	14

Source: Century West Engineering



FIGURE 3-4: BASED AIRCRAFT FORECAST MODELS



Based aircraft forecasts are primarily intended to identify future facility needs in forthcoming sections of the master plan, particularly aircraft storage – apron parking and hangar space. Identifying development reserves is recommended for defining activity-dependent facility needs that may exceed forecasted growth. The proposed development reserve should have the capacity to accommodate 100% of the projected net increase of based aircraft (+2) over the planning period.

BASED AIRCRAFT FLEET MIX

The airport’s current based fleet is comprised of single-engine piston aircraft. **Table 3-7** summarizes the current and forecasted fleet mix for the planning period. The based aircraft fleet mix at Wayne Wonderland Airport is expected to become slightly more diverse as it is anticipated that as a portion of the single-engine piston aircraft are retired over time, they are likely be replaced by LSA or experimental home-built aircraft, following national trends.

TABLE 3-7: BASED AIRCRAFT FLEET MIX SUMMARY

Aircraft Type	Updated Aircraft Count (2022)	2027	2032	2037	2042
Single Engine/LSA	3	3	4	4	5
Multi Engine Piston/Turboprop	0	0	0	0	0
Jet	0	0	0	0	0
Helicopters	0	0	0	0	0
Glider	0	0	0	0	0
Military	0	0	0	0	0
Ultra-Light	0	0	0	0	0

Source: Century West Engineering



AIRCRAFT OPERATIONS

Eight operations forecasts were prepared for the master plan. The first four apply growth rates established by previous regional and national planning efforts (FAA TAF and 2022 FAA Aerospace Forecasts). The fifth model applies operations per based aircraft (OPBA) formulas recognized by FAA for estimating activity at non-towered GA airports. The sixth and seventh models use a calculated growth rate of visitors to national and state parks located near the Airport. The eighth model analyzes the historic fuel sales data in relation to operations.

Terminal Area Forecast (Operations)

The FAA Terminal Area Forecast (TAF) reports the aircraft operations forecast for 2021-2045 which was issued in March 2022. Total operations are forecasted to remain at a constant 2,623 civil operations per year.

FAA Aerospace Forecast (Operations)

The FAA performs annual assessments of U.S. aviation activity through the FAA Aerospace Forecasts (FAA Aerospace Forecasts Fiscal Years (2022-2042)). The 20-year forecasts are updated annually by evaluating recent events and established trends affecting a wide range of commercial and general aviation segments.

The 2022 forecast update model projects a 1.5% average annual increase in Total Combined (Air Carrier, Air Taxi/Commuter, General Aviation, and Military) operations. Applying this growth rate to the estimated number of operations at Wayne Wonderland Airport results in 1,051 operations in 2042. This reflects an increase of 271 operations or 34.7% growth over the planning period.

Considering General Aviation alone, the forecast projects a 0.6% growth between 2022-2042. Applying this growth rate to the operations at Wayne Wonderland Airport results in a projected 879 operations in 2042.

The FAA Aerospace Forecast documents fuel consumption related to different types of aircraft. Single engine piston aircraft fuel consumption is expected to decrease by 0.9%, while multi-engine, experimental/other, and light sport aircraft are expected to increase by 0.2, 1.9, and 3.5%, respectively. For the purpose of analyzing Wayne Wonderland Airport these four fuel consumption rates were combined for an average growth rate of 1.175%. When applied to the current estimate of Airport operations, this results in a forecasted 985 operations in 2042.

FAA NPIAS Operations per Based Aircraft (OPBA) Formula

FAA Order 5090.5 Formulation of the NPIAS and ACIP, suggests a forecast methodology for non-towered airports that relies on a general formula for estimating operations by utilizing an activity ratio that is applied to current and forecast based aircraft. The Order identifies a typical range of 250 to 450 operations per based aircraft (OPBA) for different types of general aviation airports depending on the airport's role in the NPIAS.

The NPIAS OPBA model uses a fixed 250 OPBA – the recommended multiplier for a Basic General Aviation airport and applies it to the preferred based aircraft projections presented previously. Applying this OPBA multiplier, 250, to the current based aircraft count (3) results in an estimated 750 current operations. This is below the updated current operations estimate which was described previously in Chapter 2.

The recommended based aircraft forecast growth rate (AAGR 2.5%) was then applied to the current operations estimate to project future activity through the 20-year planning period. This approach assumes that aircraft operations at Wayne Wonderland Airport will increase at a rate comparable to forecast based aircraft. Applying the model to the base year operations estimate results in 1,278 total operations in 2042, an increase of 498 operations (63.8%) over the 20-year planning period.



Utah State and National Parks

Wayne Wonderland is a gateway to surrounding state and national parks in Utah. Table 3-8 documents the neighboring national parks by distance to the Airport and historic visitation data from 2012 to 2021.

TABLE 3-8: NATIONAL PARKS NEAR WAYNE WONDERLAND AIRPORT

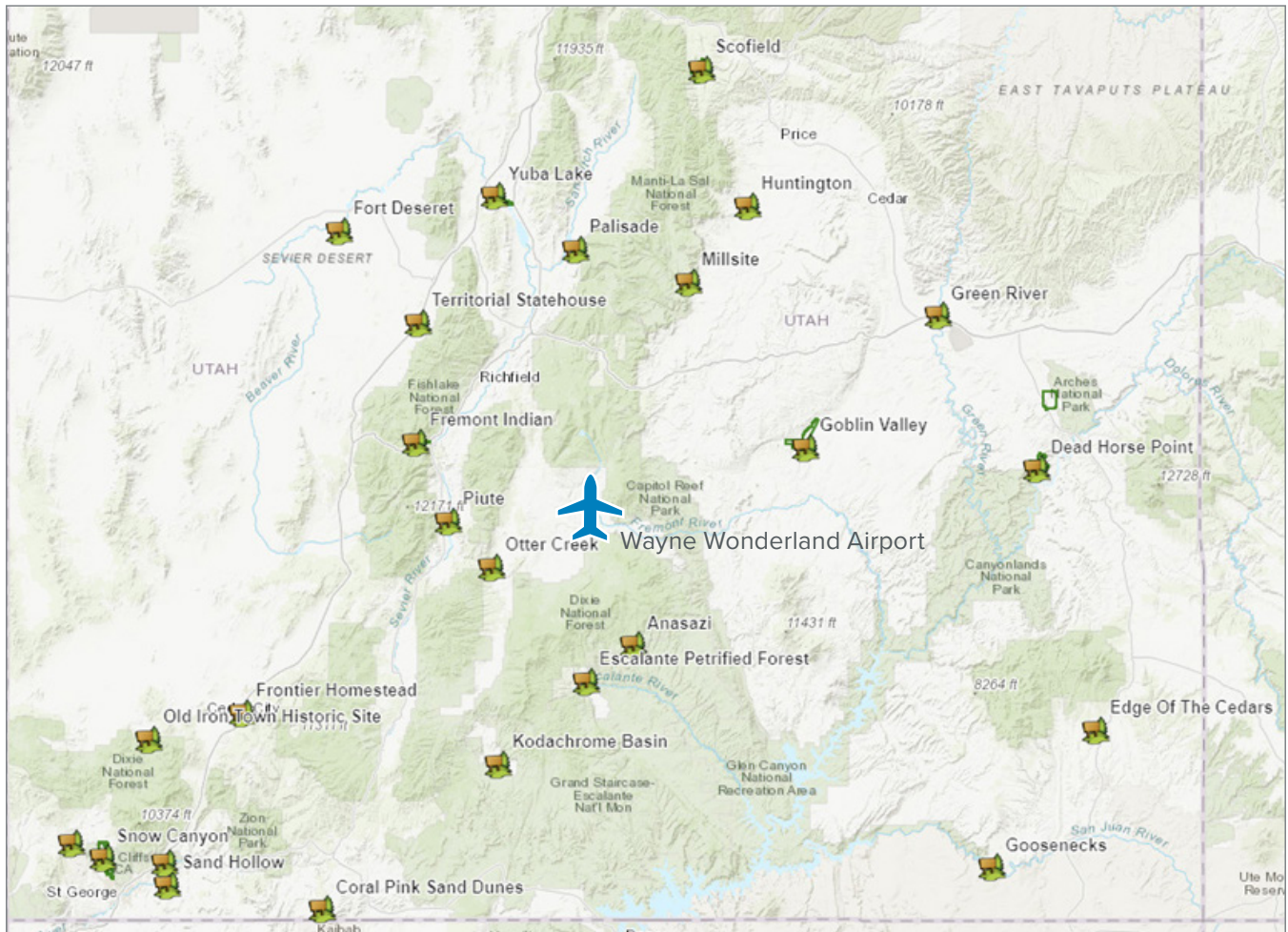
National Park	Distance from Wayne Wonderland Airport (Driving Miles)	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Capitol Reef	15.6	673,345	663,670	786,514	941,029	1,064,904	1,150,165	1,227,627	1,226,519	981,038	1,405,353
Bryce Canyon	96.4	1,385,352	1,311,875	1,435,741	1,745,804	2,365,110	2,571,684	2,679,478	2,594,904	1,464,655	2,104,600
Glen Canyon	95.4	2,061,328	1,991,924	2,368,452	2,495,093	3,239,525	4,574,940	4,219,441	4,330,563	2,553,392	3,144,318
Canyonlands	172	452,952	462,242	542,431	634,607	776,218	742,271	739,449	733,996	493,914	911,594
Arches	160	1,070,577	1,082,866	1,284,767	1,399,247	1,585,718	1,539,028	1,663,557	1,659,702	1,238,083	1,806,865
Zion	170	2,973,607	2,807,387	3,189,696	3,648,846	4,295,127	4,504,812	4,320,033	4,488,268	3,591,254	5,039,835
Total:		8,617,161	8,319,964	9,607,601	10,864,626	13,326,602	15,082,900	14,849,585	15,033,952	10,322,336	14,412,565

Source: National Park Service Database

The AAGR of the total national park visitation from 2012 to 2021 is 7.7%, with an overall increase of over 5 million visitors per year in 2021 compared to 2012. Applying this 7.7% growth rate to the estimated operations at Wayne Wonderland Airport (780 operations), the number of operations in 2042 would be 3,439 operations.

In addition to national parks, there are many state parks surrounding Wayne Wonderland Airport. **Figure 3-5** shows Utah state parks in the vicinity of the Airport.

FIGURE 3-5: UTAH STATE PARKS SURROUNDING WAYNE WONDERLAND AIRPORT



Source: Utah Department of Natural Resources

The total Utah state park visitation data for years 2011-2022 is presented in **Table 3-9**. The AAGR over this time period is 8.8% with an increase of over 5.9 million visitors. Using the 8.8% growth rate to forecast operations at the Airport, results in 4,213 operations in 2042.

TABLE 3-9: STATE PARK HISTORIC VISITATION DATA

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Visitation	4,803,770	5,081,558	4,063,382	3,740,896	4,482,866	5,175,615	5,690,677	6,711,932	7,423,513	8,705,377	12,080,456	10,794,965

Source: Utah Department of Natural Resources



Wayne Wonderland Airport Fuel Sales

Aviation Gasoline (AvGas) is available for sale at Wayne Wonderland Airport through a self-service fueling system. A review of the last six years of fuel sales data identified an upward trend overall, as documented in **Table 3-10**.

TABLE 3-10: HISTORIC FUEL SALES AT WAYNE WONDERLAND AIRPORT

Year	2017	2018	2019	2020	2021	2022
Gallons	602	719	588	671	1,333	1550*
AGR		19.4%	-18.2%	14.1%	98.7%	16.3%

*Estimate provided by Wayne Wonderland Airport manager

In 2022, the airport saw 2,995 gallons of fuel sold, resulting in a fuel sales AAGR of 47.7%. It should be noted that in 2022 the Airport fuel price was lower than other airports in the area. According to the Airport manager, about 1,200 gallons were sold in less than a month. After this spike, the Airport raised the prices and saw a decline in aircraft traveling to Wayne Wonderland Airport to purchase fuel.

The Airport manager provided an estimate of 1,550 gallons in 2022, as an approximate figure to replace the inflated yearly total resulting from the low fuel price sales. Using 1,550 gallons of fuel sold in 2022, the AAGR is reduced to 26.1%. Applying this growth rate to the current operations estimate, the forecasted operations in 2042 is 80,611. This number of operations is well outside of the range of forecasted operations estimated by the various models previously presented; therefore, this model will be excluded from further analysis.

RECOMMENDED AIRCRAFT OPERATIONS SUMMARY

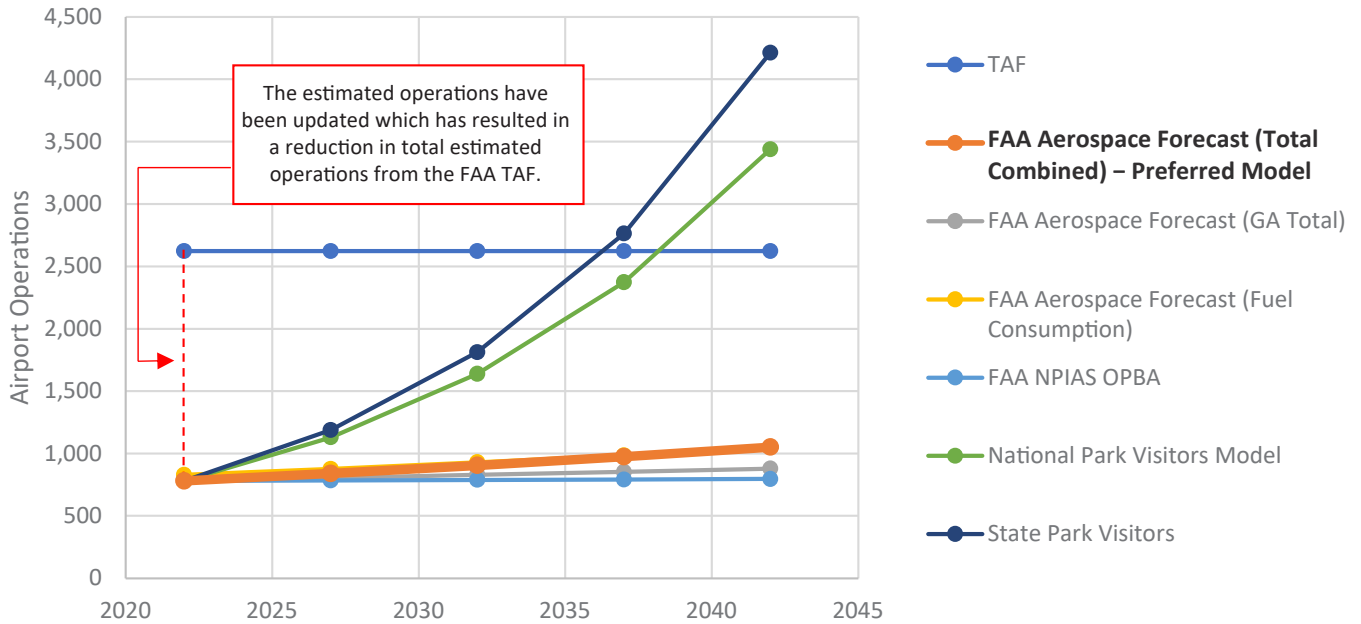
The recommended forecast of aircraft operations at Wayne Wonderland Airport is the FAA Aerospace Forecast (Total Combined). This model projects an AAGR in operations of 1.5% over the planning period, resulting in 1,051 aircraft operations in 2042. The use of this model is consistent with FAA guidance for estimating operations at non-towered airports and the projected estimates derived from the model are in line with operational estimates of other area airports of similar size and characteristics. The aircraft operations forecast models that were evaluated, including the recommended model, are summarized in **Table 3-11** and depicted in **Figure 3-6**.

TABLE 3-11: AIRCRAFT OPERATIONS FORECAST MODELS

Forecast Model	Growth Rate	2022	2027	2032	2037	2042
TAF	0%	2,623	2,623	2,623	2,623	2,623
FAA Aerospace Forecast (Total Combined)	1.5%	780	840	905	975	1,051
FAA Aerospace Forecast (GA Total)	0.6%	780	804	828	853	879
FAA Aerospace Forecast (Fuel Consumption)	1.175%	780	829	877	929	985
FAA NPIAS OPBA	2.5%	780	882	998	1,130	1,278
National Park Visitors	7.7%	780	1,130	1,638	2,373	3,439
State Park Visitors	8.8%	780	1,189	1,812	2,763	4,213

Source: Century West Engineering

FIGURE 3-6: AIRPORT OPERATIONS FORECAST MODELS



Source: Century West Engineering

LOCAL AND ITINERANT OPERATIONS

General aviation (GA) operations consist of aircraft takeoffs and landings conducted by GA aircraft. All aircraft operations are classified as local or itinerant. Local operations are conducted in the vicinity of an airport and include flights that begin and end at the airport. These include aerial applicators, flight training, touch and go operations, and other flights that do not involve a landing at another airport. Itinerant operations include flights between airports, including cross-country flights. Itinerant operations reflect specific travel between multiple points, often associated with business and personal travel.

The 2022 Updated Operations Estimate data (as presented in Chapter 2) for Wayne Wonderland Airport shows a local to itinerant operations split of 14.1% to 85.9%, respectively. The local and itinerant distribution for each forecast year is summarized in **Table 3-12**. The forecasted counts for Itinerant and Local operations are based off the recommended operations annual growth rate 1.5%.

TABLE 3-12: ITINERANT/LOCAL OPERATIONS MIX

Activity	2022	2027	2032	2037	2042
Itinerant Operations	670	722	778	838	902
Local Operations	110	119	128	138	148
Total Operations	780	840	905	975	1,051

Source: Century West Engineering



AIRCRAFT OPERATIONS FLEET MIX

Single engine piston aircraft currently account for approximately 95% of airport operations, followed by jets, turbo props, multi engine piston, and helicopters. It is expected that the mix of air traffic at Wayne Wonderland Airport will shift slightly during the 20-year planning period to include more turboprops and less multi engine piston based on current trends in aircraft manufacturing and the composition of airport users. The GA aircraft operations fleet mix forecast is summarized in **Table 3-13**.

TABLE 3-13: OPERATIONS FLEET MIX

AIRCRAFT TYPE	2022	2027	2032	2037	2042
Single Engine Piston ¹	741	798	860	926	998
Jet	16	17	18	20	21
Turbo Prop	12	13	14	20	21
Multi Engine Piston	8	8	9	5	5
Helicopters	4	4	5	5	5
Total Operations	780	840	905	975	1051

1. Includes LSA and Experimental AC
Source: Century West Engineering

Critical Aircraft

The selection of design standards for airfield facilities is based upon the characteristics of the most demanding aircraft that are expected to use the airport. This group of aircraft or aircraft type is designated as the “critical aircraft.” The FAA provides the following definitions: “The critical aircraft is the most demanding aircraft type, or grouping of aircraft with similar characteristics, that make regular use of the airport. Regular use is 500 annual operations, including both itinerant and local operations, but excluding touch-and-go operations. An operation is either a takeoff or landing.” (FAA AC 150/5000-17)

The FAA group aircraft into five categories (A-E) based upon their approach speeds. Aircraft Approach Categories A and B include small propeller aircraft, many small or medium business jet aircraft, and some larger aircraft with approach speeds of less than 121 knots (nautical miles per hour). Categories C, D, and E consist of the remaining business jets as well as larger jet and propeller aircraft generally associated with commercial and military use with approach speeds of 121 knots or more. The FAA also establishes six airplane design groups (I-VI), based on the wingspan and tail height of the aircraft. The categories range from Airplane Design Group (ADG) I, for aircraft with wingspans of less than 49 feet, to ADG VI for the largest commercial and military aircraft. The combination of airplane design group and aircraft approach speed for the critical aircraft creates the Airplane Design Group/ Aircraft Approach Category (ADG/AAC), which is used to define applicable airfield design standards.

AIRPLANE DESIGN GROUP/AIRCRAFT APPROACH CATEGORY (ADG/AAC)

The design aircraft represents the most demanding aircraft using the airport on a regular basis and determines the appropriate ADG/AAC and airport design standards for airport development. **Table 3-14** summarizes FAA technical criteria used to determine the applicable ADG/AAC for aircraft based on physical characteristics; representative aircraft are also depicted.

TABLE 3-14: REPRESENTATIVE DESIGN AIRCRAFT BY ADG AND AAC

Aircraft Approach Category	Aircraft Approach Speed	Airplane Design Group	Aircraft Wingspan
A	Less than or equal to 91	I – Existing/Future	Less than or equal to 49'
B	92 to 121	II – Previous	50' to 79'
C	122 to 141	III	80' to 118'
D	142 to 166	IV	119' to 171'

Existing/Future Critical Aircraft		Previous Critical Aircraft	
A-I 12,500 lbs. or less	<p>Beech Baron 55 Beech Bonanza Cessna 182 Piper Archer</p>	B-I(small) 12,500 lbs. or less	<p>Beech Baron 58 Beech King Air C90 Cessna 402 Cessna 421</p>
A-II, B-II 12,500 lbs. or less	<p>Beech Super King Air 200 Pilatus PC-12 DHC-6 Twin Otter Cessna Caravan</p>	ARC - B-II Greater than 12,500 lbs.	<p>Super King Air 300, 350 Beech 1900 Cessna Citation Falcon 20, 50</p>
A-III, B-III Greater than 12,500 lbs.	<p>DHC Dash 7, Dash 8 Q-200, Q-300 DC-3 Convair 580</p>	C-I, D-I	<p>Lear 25, 35, 55, 60 Israeli Westwind HS 125-700</p>
C-II, D-II	<p>Gulfstream II, III, IV Canadair 600 Canadair Regional Jet Lockheed JetStar</p>	C-III, D-III	<p>Boeing Business Jet Gulfstream 650 B 737-300 Series MD-80, DC-9</p>
C-IV, D-IV	<p>B - 757 B - 767 DC - 8-70 DC - 10</p>		

Source: Century West Engineering

Prior to this master plan, Wayne Wonderland Airport estimated operations which aligned with the ADG/AAC B-II (Small). However, analysis of updated data and Traffic Flow Management System Counts (TFMSC) data does not show 500 operations of ADG II aircraft, therefore FAA standards require the Airport to change code to ADG I, resulting in A/B-I (small).



The identification of the current critical aircraft for an airport is required to define the appropriate design standard for airport facilities. The design aircraft which represents the A/B-I (small) category is the Beech Baron 58.

CRITICAL AIRCRAFT CONCLUSION

Wayne Wonderland accommodates a variety of aircraft types. Fixed wing activity is dominated by single-engine (A-I) activity. There is also evidence of use by ADG II aircraft, though not enough to meet the FAA’s threshold of significant use.

It is recommended that the current ADG/AAC for Wayne Wonderland Airport should change to A/B-I (small) and the design aircraft Beech Baron 58. Specifications about these critical aircraft are presented in **Figure 3-7**.

FIGURE 3-7: CRITICAL AIRCRAFT SPECIFICATIONS

Previous Critical Aircraft	Existing/Future Critical Aircraft
Beech Super King Air B200 <ul style="list-style-type: none"> • 55’ Wingspan • 96 knot Approach Speed (Vref) 	Beech Baron 58 <ul style="list-style-type: none"> • 38’ Wingspan • 96 knot Approach Speed (Vref)
	

Operational Peaks

Activity peaking is evaluated to identify potential capacity related issues that may need to be addressed through facility improvements or operational changes.

The Peak Month represents the month of the year with the greatest number of aircraft operations (takeoffs and landings). The peak month for most general aviation airports occurs during the summer when weather conditions and daylight are optimal. The peak month at Wayne Wonderland Airport is estimated to account for approximately 11% of annual aircraft operations. This level of peaking is consistent with other airports with similar levels of flight activity.

Peak Day operations are defined by the average day in the peak month (Design Day) and the busy day in the typical week during peak month (Busy Day). The Design Day is calculated by dividing peak month operations by 30. For planning purposes, the Busy Day is often estimated to be 25% higher than the average day in the peak month (Design Day x 1.25), unless the airport routinely experiences significant seasonal or daily surges in traffic.

The peak activity period in the Design Day is the Design Hour. For planning purposes, the Design Hour operations are estimated to account for 20% of Design Day operations (Design Day x 0.20).



The operational peaks for each forecast year are summarized in **Table 3-15**. This level of peaking is consistent with the mix of airport traffic and is expected to remain relatively unchanged during the planning period. These measures of activity are considered when calculating runway/taxiway capacity and transient aircraft parking requirements. No significant runway or taxiway capacity issues have been identified based on current or forecast activity levels.

TABLE 3-15: PEAK OPERATIONS

	2022	2027	2032	2037	2042
Annual Operations	780	840	905	975	1051
Peak Month Operations (11%)	86	92	100	107	116
Design Day Operations (average day in peak month)	3	3	3	4	4
Busy Day Operations (assumed 125% of design day)	4	4	4	5	5
Design Hour Operations (assumed 20% of design day)	1	1	1	1	1

Source: Century West Engineering

Military Activity

The FAA Terminal Area Forecast (TAF) lists no military flight activity at Wayne Wonderland Airport. However, occasional military use with helicopters or small fixed-wing aircraft in support of emergency response, search and rescue, and training activities would be consistent with activity experienced at other general aviation airports. Military flight activity at the airport is limited by available airfield capabilities and is assumed at zero annual operations during the planning period.

Air Taxi Activity

Air Taxi Activity includes for-hire charter flights and some scheduled commercial air carriers operating under FAR Part 135. Wayne Wonderland Airport accommodates cargo flights. These aircraft as well as the medevac activity is operated under Part 135. Additional charter flight activity at the Airport would also be conducted under Part 135.

The updated airport operations estimates put the number of annual Air Taxi operations at 14 or 1.8% of all operations at the airport. Since the number of Air Taxi operations is likely to increase with the other activity at the Airport, the proportion of activity attributed to Air Taxi is assumed to remain constant over the planning period.

Forecast Summary

A summary of the based aircraft and annual aircraft operations is presented in **Table 3-16**. These forecasts project slight to modest growth over the 20-year planning period that is consistent with FAA’s long-term expectations for general aviation in the region. Based aircraft and operations are forecast to increase at an average annual rate of 2.5% and 1.5%, respectively, between 2022 and 2042.



TABLE 3-16: FORECAST SUMMARY

Activity	2022	2027	2032	2037	2042
Itinerant Operations	670	722	778	838	902
General Aviation	656	707	762	820	883
Air Taxi (Cargo & Medevac)	14	15	16	18	19
Military	0	0	0	0	0
Total Itinerant Operations	670	722	778	838	902
Local Operations	110	119	128	138	148
Total Local & Itinerant Operations	780	840	905	975	1,051
Based Aircraft	3	3	4	4	5
Operations per Based Aircraft	260	280	226	244	210

Source: Century West Engineering

TERMINAL AREA FORECAST COMPARISON

As discussed previously, the data presented in the TAF are the result of erroneous operational data provided to the FAA via the Airport Master Record 5010 and any comparison to the TAF would not likely be an appropriate method of validating the updated estimates. The concerns with the TAF data and steps taken to address them are discussed in Chapter 2.

The based aircraft projections presented in the TAF show 3 aircraft based at the Airport in 2022, and remains at that count through 2042. The aircraft operations estimates presented in the TAF show 2,623 ops in 2022, and remains at that count through 2042. While the based aircraft count has been confirmed by airport users and management, the operations are overestimated and both forecasts do not account for any growth at the airport.

As a result of the erroneous baseline operations estimates provided to the FAA for the TAF, the projected operations counts for Wayne Wonderland Airport deviate from the TAF forecasted estimates by approximately 60% at the end of the planning period. The absence of anticipated growth in the TAF based aircraft projection results in a 25% difference between the two models in 2042. FAA review will be required for both the based aircraft and the aircraft operations models as a result. A detailed comparison of the forecasts, both based aircraft and aircraft operations, is summarized in **Table 3-17** and **Figure 3-8**.

TABLE 3-17: TAF COMPARISON

Based Aircraft	2022	2027	2032	2037	2042
Preferred Forecast	3	3	4	4	5
TAF	3	3	3	3	3
Percent Difference	0%	0%	25%	25%	40%

Aircraft Operations	2022	2027	2032	2037	2042
Preferred Forecast	780	840	905	975	1,051
TAF	2,623	2,623	2,623	2,623	2,623
Percent Difference	70.3%	68.0%	65.5%	62.8%	60.0%

Source: Century West Engineering



FIGURE 3-8: FAA TAF FORECAST COMPARISON

Wayne Wonderland Airport - Airport Planning Forecasts

A. Forecast Levels and Growth Rates

Specify base year: 2022

	Base Yr. Level	Base Yr.+1yr.	Base Yr.+5yrs.	Base Yr.+10yrs.	Base Yr.+15yrs.	Average Annual Compound Growth Rates			
						Base Yr. to +1	Base Yr. to +5	Base Yr. to +10	Base Yr. to +15
Passenger Enplanements									
Air Carrier	0	0	0	0	0	0%	0%	0%	0%
Commuter	0	0	0	0	0	0%	0%	0%	0%
TOTAL	0	0	0	0	0	0%	0%	0%	0%
Operations									
<u>Linerant</u>									
Air carrier	0	0	0	0	0	0%	0%	0%	0%
Commuter/air taxi	14	14	15	16	18	1.5%	1.5%	1.5%	1.5%
Total Commercial Operations	14	14	15	16	18	1.5%	1.5%	1.5%	1.5%
General aviation	656	666	707	761	820	1.5%	1.5%	1.5%	1.5%
Military	0	0	0	0	0	0%	0%	0%	0%
<u>Local</u>									
General aviation	110	112	119	128	138	1.5%	1.5%	1.5%	1.5%
Military	0	0	0	0	0	0%	0%	0%	0%
TOTAL OPERATIONS	780	792	840	905	975	1.5%	1.5%	1.5%	1.5%
Instrument Operations	NA	NA	NA	NA	NA	0%	0%	0%	0%
Peak Hour Operations	1	1	1	1	1	0%	0%	0%	0%
Cargo/mail (enplaned + deplaned tons)	0	0	0	0	0	0%	0%	0%	0%
Based Aircraft									
Single Engine (Nonjet)	3	3	3	4	4	2.5%	2.5%	2.5%	2.5%
Multi Engine (Nonjet)	0	0	0	0	0	0%	0%	0%	0%
Jet Engine	0	0	0	0	0	0%	0%	0%	0%
Helicopter	0	0	0	0	0	0%	0%	0%	0%
Other	0	0	0	0	0	0%	0%	0%	0%
TOTAL	3	3	3	4	4	2.5%	2.5%	2.5%	2.5%

B. Operational Factors

	Base Yr. Level	Base Yr.+1yr.	Base Yr.+5yrs.	Base Yr.+10yrs.	Base Yr.+15yrs.
Average aircraft size (seats)					
Air carrier	0	0	0	0	0
Commuter	0	0	0	0	0
Average enplaning load factor					
Air carrier	0%	0%	0%	0%	0%
Commuter	0%	0%	0%	0%	0%
GA operations per based aircraft	260	264	280	226	244

Notes:

1. Instrument Operations Forecast were not included as part of this forecasting effort.

Wayne Wonderland Airport - Airport Planning and TAF Forecasts Comparison

	Year	Airport Forecast	TAF	AF/TAF (% Difference)
Passenger Enplanements				
Base yr.	2022	0	0	0.0%
Base yr. + 5yrs.	2027	0	0	0.0%
Base yr. + 10yrs.	2032	0	0	0.0%
Base yr. + 15yrs.	2037	0	0	0.0%
Commercial Operations/Air Taxi				
Base yr.	2022	14	47	70.2%
Base yr. + 5yrs.	2027	15	47	68.1%
Base yr. + 10yrs.	2032	16	47	66.0%
Base yr. + 15yrs.	2037	18	47	61.7%
Total Operations				
Base yr.	2022	780	2,623	70.3%
Base yr. + 5yrs.	2027	840	2,623	68.0%
Base yr. + 10yrs.	2032	905	2,623	65.5%
Base yr. + 15yrs.	2037	975	2,623	62.8%

Note: TAF data is on a U.S. government fiscal year basis (October through September).

FAA FORECAST APPROVAL LETTER

From: [Yaffa, Christine \(FAA\)](#)
To: [Wayne County Clerk Ryan Torgerson](#)
Cc: [Mike Dane](#); [John Spendlove](#)
Subject: 38U Forecast Approval AIP #3-49-0015-015-2022
Date: Monday, April 10, 2023 06:17:50
Attachments: [image005.png](#)
[Wayne Wonderland WP 1 3.13.23.pdf](#)
[image002.png](#)



U.S. Department
of Transportation
**Federal Aviation
Administration**

Northwest Mountain Region
Colorado · Idaho · Montana · Oregon · Utah
Washington · Wyoming

Denver Airports District Office
26805 E. 68th Ave., Suite 224
Denver, CO 80249

April 10, 2023

Ryan Torgerson, Wayne County Clerk
Wayne County Utah
P.O. Box 189
Loa, UT 84747

Wayne Wonderland Airport
Loa, Utah
AIP: 3-49-0015-015-2022
Forecast Approval

Dear Mr. Torgerson:

The Federal Aviation Administration (FAA) reviewed forecast information for the subject airport. The forecast was received March 13, 2023. FAA approves the attached forecast. The FAA also approves Beech Baron 58 for the existing and future critical aircraft. We found the forecast to be supported by reasonable planning assumptions and current data. Your forecast appears to be developed using acceptable forecasting methodologies.

This forecast was prepared at the same time as the evolving impacts of the COVID-19 public health emergency. Forecast approval is based on the methodology, data, and conclusions at the time the document was prepared. However, consideration of the impacts of the COVID-19 public health emergency on aviation activity is warranted to acknowledge the reduced confidence in growth projections using currently-available data.

Accordingly, FAA approval of this forecast does not constitute justification for future projects.

Justification for future projects will be made based on activity levels at the time the project is requested for development. Documentation of actual activity levels meeting planning activity levels will be necessary to justify AIP funding for eligible projects.

The approval of the forecast and critical aircraft does not automatically constitute a commitment on the part of the United States to participate in any development recommended in the master plan or shown on the ALP. All future development will need to be justified by current activity levels at the time of proposed implementation. [See *FAA Order 5100.38D, Airport Improvement Program, Paragraph 3-12, for ADO options.*] Further, the approved forecasts may be subject to additional analysis or the FAA may request a sensitivity analysis if this data is to be used for environmental or Part 150 noise planning purposes.

If you have questions, please call me at 303-342-1280.

Thank you,

Christy Yaffa

Community Planner (UT/WY)
FAA Denver Airports District Office

Phone 303-342-1280 **Fax** 303-342-1260

Email christine.yaffa@faa.gov

26805 E. 68th Ave., Ste 224, Denver, CO 80249-6361





WAYNE WONDERLAND
AIRPORT MASTER PLAN

Appendix A

PAC Meeting Summaries

Meeting Summary – PAC Meeting #1 – January 25, 2023

Commissioner Roger Brian started the meeting at 2:00 PM as scheduled and handed the meeting over to John Spendlove and Mike Dane from the consulting team. Mike and John facilitated a discussion with the PAC members in attendance. No members of the public were present.

The following topics were discussed:

After introductions and general housekeeping items, consultants provided an overview of the planning process, project schedule, project funding, and why the project is being completed. It was explained that the focus of this meeting was to discuss the existing conditions and aviation activity forecasts.

Regional Setting

During the presentation of the Regional Setting the conversation was mostly focused on topics such as aircraft operations, based aircraft, and the County zoning ordinance. The following bullet points provide a summary of the discussion topics:

- Aircraft Operations
 - One PAC member indicated he could place a game camera on his hangar to watch the taxiway entrance to the apron.
 - The idea of placing a highway department traffic counter across the taxiway could work as well. Consultants indicated this as the preferred option due to efficiency.
 - Consultants briefly explained the operations by B-I (small) vs B-II (small) aircraft and the implications for justification of a design aircraft in future sections of the planning project.
- Based Aircraft
 - The number of based aircraft was originally estimated at 3 as is validated on Basedaircraft.com, but PAC members estimated that the number of based aircraft may actually be 5 aircraft. Felicia Snow (Clerk/Airport Manager) is going to work with Ryan Torgerson to get this information updated to confirm the final number.
 - PAC member indicated that one of the based aircraft is a “motorglider” with a 50’ wingspan and that glider ops could increase during the planning period as regionally based glider clubs are pushed out of busier airports in the region.
- Is there an opportunity for designated glider operations area? The PAC discussed the potential tourism benefits from focusing on accommodating glider operations. It was acknowledged that this topic could be revisited in the Facility Goals and Requirements section of the project.
- PAC members indicated that the use of recreational aircraft is generally increasing.
- PAC members discussed the County zoning ordinance and understood that it needs to include provisions for the airport airspace surfaces and compatible zoning.

Airside Elements

During the presentation of the Airside Elements the conversation was primarily focused on the runway length, runway width, the benefits of an AWOS, and the taxiway on the north side of the hangar area. The following bullet points provide a summary of the discussion topics:

- Runway length was discussed, and the group discussion indicated that there was not a high demand for any additional runway length. The group was unsure how the 6,100’ length

identified on the current ALP was determined, but the pilots present indicated that additional length was likely not necessary to accommodate a majority of the users at the Airport.

- Runway width was discussed and consultants explained how establishing the airport reference code/runway design code as B-I (small) could result in the runway being narrowed from 75' to 60' at some point in the future. Due to the recent reconstruction of the runway at 75' it is unlikely that the FAA would require the runway to be narrowed to 60' during the planning period. However, pilots in the room indicated that the runway already seems somewhat narrow when approaching due to the relatively long length.
- Airport users on the PAC expressed that having an AWOS would be helpful for planning cross country flights to the airport, even for flights originating from as close as Richfield. Consultants advised that installation of an AWOS is the next step in securing an instrument approach procedure at the Airport.
- One of the hangar owners on the PAC indicated that there is a berm on backside of hangars that feels a bit close to the taxilane. Consultants acknowledge that the berm may be a taxilane object free area (TLOFA) issue and would look into the matter further.

Landside Elements

During the presentation of the Landside Elements the conversation was primarily focused on the future construction of the pilot lounge, the hangar waitlist, opportunities for future non-aeronautical land uses around the Airport and on Airport property that may be underutilized for aviation related uses. The following bullet points provide a summary of the discussion topics:

- The PAC discussed the future construction/improvements to develop the pilot lounge. Users of the Airport expressed this as a high priority. PAC members speculated that providing a pilot lounge and coded access gate along with a courtesy car would likely result in an uptick in jet traffic to the Airport.
- Hangars were discussed. All the current hangars are full and 3 to 4 people are currently on the hangar waitlist.
- The PAC discussed future opportunities for non-aeronautical uses on different parts of Airport property that are not in use for aviation operations. Several of the ideas discussed include a business park, agricultural uses, and a solar farm.
- The PAC discussed adding a security gate at the airport entrance, which is planned for construction next year. It was mentioned that it may help bring in larger aircraft. Pilots want to know that their aircraft is secure when it is parked on the apron.

Airport Administration

During the presentation of the Airport Administration topic the conversation was primarily focused on FAA grant assurances, sponsor obligations, and opportunities to improve the user experience at the Airport. The following bullet points provide a summary of the discussion topics:

- County staff had expressed a desire to provide a courtesy car for Airport users. Commissioner Brian had indicated there were several old County vehicles that could be located at the Airport.
- Increase public outreach efforts for tourism and marketing for the Airport
 - \$100 hamburger
 - Local tourism
 - Fly-ins

Commissioner Brian closed the meeting at 4:30 PM.



WAYNE WONDERLAND
AIRPORT MASTER PLAN

Appendix B

Environmental Memo



MEMORANDUM

Date: January 23, 2023

To: Mike Dane, Senior Airport Planner, Century West Engineering

From: Jenna Jorgensen, Environmental Coordinator

Project: Wayne Wonderland Airport Master Plan & AGIS

JDE Project #: 2106-050

Subject: Environmental Baseline

1. Introduction

This memorandum presents the findings and observations of a desktop analysis and site review of the environmental baseline conditions at the Wayne Wonderland Airport Master Plan study area. The study area includes the existing facility (see map 1 in Appendix A) and surrounding areas as appropriate.

Categories of environmental impacts were identified in the FAA Order 1050.1F and FAA Order 5050.4B; the following resources are considered in this evaluation: 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, archeological, 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); and Water resources (including wetlands, floodplains, surface waters, groundwater, and Wild and Scenic Rivers).

2. Air quality

Wayne County is rural and does not have large emission sources. Most emissions in the area result from vehicle use and seasonal operation of agricultural equipment. The airport is located at the north end of the Awapa Plateau in Rabbit Valley, at an elevation of about 7,000 feet above sea level. The site is in the valley below Thousand Lake Mountain, Boulder Mountain, and Mytoge Mountain (see map 2 in Appendix A); the dispersal of air pollutant emissions from the site could be hindered by the surrounding topography, but air quality data is limited.

The Environmental Protection Agency (EPA) designates areas in the U.S. for "attainment" or "non-attainment" of National Ambient Air Quality Standards (NAAQS). The criteria pollutants include nitrogen oxides (NO₂), sulfur oxides (SO₂), particulate matter (PM), ozone (O₃), carbon monoxide (CO), and lead (Pb). According to the EPA's AirData Air Quality Monitors website, Wayne County is not designated as a non-attainment area for any criteria pollutants, or in other words, Wayne County is in attainment for air

1535 South 100 West
Richfield, UT 84701
435.896.8266

50 South Main, Suite 4
Manti, UT 84642
435.835.4540

38 West 100 North
Vernal, UT 84078
435.781.1988

1675 South Highway 10
Price, UT 84501
435.637.8266

520 West Highway 40
Roosevelt, UT 84066
435.722.8267

775 West 1200 North
Suite 200A
Springville, UT 84663
801.692.0219

1664 South Dixie Drive
Building C
St. George, UT 84770
435.986.3622

7 South Main Street
Suite 107/109
Tooele, UT 84074
435.268.8089

696 North Main Street
PO Box 577
Monticello, UT 84535
435.587.9100

545 East Cheyenne Drive
Suite C
Evanston, WY 82930
307.288.2005

quality standards. Capitol Reef National Park, which is designated as a Class 1 area, is over 10 miles east of the airport. The nearest monitoring station is in Capitol Reef National Park (EPA 2022a).

3. Biological resources (including fish, wildlife, and plants)

3.1. Federally Listed Species

An official species list was obtained from the U.S. Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system on November 29, 2022 (see Appendix B). The official species list identified the following species as potentially present within the analysis area:

- Utah prairie dog (*Cynomys parvidens*) – Threatened: Utah prairie dogs are known to occur within the airport boundary, and burrows have been recorded directly adjacent to the runway. The Programmatic Sensitive Species Habitat Management Plan (FAA 2010) provides guidance for addressing impacts to the species that allows the airport to continue with activities while remaining in compliance with the Endangered Species Act.
- Southwestern willow flycatcher (*Empidonax traillii extimus*) – Endangered: The nearest critical habitat is over 78 miles away from the project area. Potentially suitable riparian nesting habitat as described in Sogge et al. (2010) does not occur within 1 mile of the project area. Southwestern willow flycatchers are unlikely to occur in the area.
- Monarch butterfly (*Danaus plexippus*) – Candidate: Monarchs require milkweed, nectar sources, overwintering habitat, and migration habitat (USFWS 2020); the project area provides flowering nectar sources that monarchs could forage on, but overwintering occurs along the Pacific Coast.
- Last Chance townsendia (*Townsendia aprica*) – Threatened: Suitable habitat of shale soils (USFWS 1993) do not occur in the project area.

There are no critical habitats at this location.

3.2. State Species of Concern

To determine the occurrence of State of Utah Species of Greatest Conservation Need, a Utah Natural Heritage Program Online species records search was conducted on November 16, 2022 (see Appendix C). The following species were identified within a 2-mile radius of the airport:

- American white pelican (*Pelecanus erythrorhynchos*): Suitable freshwater habitats do not occur within the airport boundary, but do occur in association with the Fremont River to the southwest (Utah Wildlife Action Plan Joint Team 2015).
- Burrowing owl (*Athene cunicularia*): Burrowing owls nest in burrows in open and short-grass habitats (Utah Wildlife Action Plan Joint Team 2015); while these habitats occur within and around the airport, no burrowing owls were observed during intensive prairie dog surveys in 2020.
- Golden eagle (*Aquila chrysaetos*): Suitable cliff or tree nesting habitat (Utah Wildlife Action Plan Joint Team 2015) does not occur within 1 mile of the airport, but golden eagles may forage and scavenge throughout the valley.
- Bald eagle (*Haliaeetus leucocephalus*): Suitable large nest trees (Utah Wildlife Action Plan Joint Team 2015) do not occur within 1 mile of the airport, but bald eagles may forage and scavenge throughout the valley.



- Ferruginous hawk (*Buteo regalis*): Ferruginous hawks could nest and forage within the immediate project area, though there are no known nests in the airport boundaries.

3.1. Migratory Birds

Migratory birds that are likely present in the area were identified in the IPaC report (see Appendix B). Although these species may occur in the larger area, suitable nesting habitats for bald eagle, Cassin's finch (*Carpodacus cassinii*), Lewis's woodpecker (*Melanerpes lewis*), and pinyon jay (*Gymnorhinus cyanocephalus*) do not occur within or near the project area due to a lack of trees.

3.2. Non-designated Wildlife

The analysis area also includes Utah Division of Wildlife Resources (UDWR)-mapped habitats for numerous wildlife species (UDWR 2022). The airport is within year-long white-tailed jackrabbit (*Lepus townsendii*) and winter crucial mule deer (*Odocoileus hemionus*) habitats, and overlaps year-long substantial ring-necked pheasant (*Phasianus colchicus*) and spring-fall substantial band-tailed pigeon (*Patagioenas fasciata*) habitats. The airport boundary is within 200 feet of the Parker Mountain greater sage-grouse (*Centrocercus urophasianus*) management area boundary.

3.3. Fish

Fish and aquatic habitats do not occur in the project area.

3.4. Vegetation

Vegetation in the area includes scattered sagebrush (*Artemisia* spp.), dense areas of rabbitbrush (*Ericameria nauseosa*), sparse prickly pear cactus (*Opuntia* spp.), bunch grasses, and Russian thistle (*Salsola tragus*).

4. Climate

The climate in the area is arid, with an average of less than 8 inches of precipitation in Rabbit Valley; minimum temperatures are around 40 °F in January and maximum temperatures are around 83 °F in July (Western Regional Climate Center 2022).

Changes in climate may result in warmer temperatures, changes in precipitation, and different weather patterns. The prevailing belief is that higher temperatures will result in “drought, increased wildfire risk, and flooding from extreme precipitation” (Utah Department of Public Safety 2022).

5. Coastal resources

Coastal resources do not occur in Utah, which is an inland state.

6. Department of Transportation Act, Section 4(f)

Section 4(f) properties (publicly owned parks, recreation areas, and wildlife or waterfowl refuges of national, state, or local significance or land from a historic site of national, state, or local significance) do not occur within or adjacent to the airport.

7. Farmlands

Based on previous coordination with the Natural Resources Conservation Service (NRCS), farmlands protected under the Farmland Protection Policy Act do not occur within the current airport boundary.



Prime farmlands and farmland of statewide importance largely surround the airport as shown on map 3 in Appendix A.

8. Hazardous materials, solid waste, and pollution prevention

The nearest solid waste facility is the Wayne County landfill, which is approximately 4 miles west of the airport (FEMA 2022a). There are no known hazardous waste sites within 10 miles of the airport (EPA 2022b), and no Superfund sites in Wayne County (EPA 2022c). There is a 1,250-gallon double-lined petroleum storage tank at the airport.

9. Historical, architectural, archeological, and cultural resources

Based on review of the National Register of Historic Places (NRHP; National Park Service 2022a), there are no listed sites within or near the airport. The airport runway itself is historic. The FAA recommended the runway as ineligible for listing on the NRHP in a letter dated Jun 6, 2019; the Utah State Historic Preservation Office (SHPO) concurred with that determination in a letter dated June 7, 2019 (see Appendix D).

10. Land use

A majority of the 307-acre airport is undeveloped. Based on aerial imagery from 2019, approximately 40 acres within the airport boundary appear to be regularly irrigated and harvested. Zoning information is not readily available for Wayne County, and there are no known planned or future uses within the airport boundaries.

11. Natural resources and energy supply

There are no power plants or sewage disposal utilities within 25 miles of the airport, but a 138-kV PacifiCorp overhead power line runs north/south at least 1 mile east of the airport (FEMA 2022a). Garkane Energy provides electrical power to the airport. There is currently no water connection for the facility, but a well will be drilled in 2024 to provide water for the airport. There are no producing oil or gas wells within 10 miles of the airport (UDOGM 2022).

12. Noise and compatible land use

The airport is in a relatively isolated area, with agricultural lands immediately surrounding the facility and undeveloped public lands surrounding the larger area. Receptors (land uses that are sensitive to noise impacts) in the area are mainly residences; there are approximately 220 people in 134 housing units residing within 2 miles of the airport (EPA 2022d). Wayne High School is approximately 2 miles east, Wayne Middle School is 2.5 miles east, and Loa School is 2.8 miles northwest of the airport. Noise in the surrounding area is predominantly from operation of agricultural equipment during the growing season and highway and local traffic year-round.

13. Socioeconomics, environmental justice, and children's environmental health and safety risks

The local population centers are Loa 2.5 miles to the northwest, Lyman 2.0 miles to the north, and Bicknell 2.5 miles to the southeast (see map 2 in Appendix A). Demographic and socioeconomic factors for these areas are provided in Table 13-1.



Table 13-1. Demographic and socioeconomic factor data for local population centers near Wayne Wonderland Airport (EPA 2022d)

Factor	Loa	Lyman	Bicknell
Total Population Estimate	596	227	330
Population density (per square mile)	628	126	577
Race – percent white alone	96%	96%	88%
Race – percent American Indian alone	1%	1%	0%
Race – percent Asian alone	0%	0%	0%
Race – percent Pacific Islander	2%	2%	0%
Race – percent Hispanic	1%	1%	12%
Owner-occupied housing unit rate – percent	69%	69%	77%
Percent female	44%	44%	53%
Highschool graduate – percent	86%	86%	93%
Unemployment – percent	0%	0%	2%
Per capita income	\$23,923	\$23,923	\$22,427

Wayne County is a single census tract (49055979100); up to 11 percent of the population is below the poverty level (EPA 2022d).

The economy in the county is predominantly based in agriculture, with alfalfa hay being the major crop and livestock commodities providing the largest cash receipts in 2017 (USU 2019). Nonfarm jobs in 2021-2022 were mainly government (25 percent) and leisure/hospitality (24 percent; Utah Department of Workforce Services 2022).

14. Visual effects (including light emissions)

14.1. Light Emissions

The airport has the following sources of light:

- Airport beacon
- Runway lighting system
- Lighted wind cone

The airport beacon has a photocell light sensor and is always on in the dark. The runway lights and the lighted wind cone are keyed to a pilot's radio; the runway and wind cone lights are only on during active runway operations.

Other sources of light in the viewshed include isolated residential and agricultural developments, and vehicular traffic on the highway and local roads. Due to the remote location and the surrounding topography, lights emissions from the airport are generally not noticeable from most residences or points along the highway.

14.2. Visual Resources and Visual Character

The visual character of the area is predominantly rural, with scattered residential and agricultural development visible from most points in the valley that limit aesthetic value overall. The airport does



not noticeably contrast the other visible developments. There are no known protected visual resources in this area.

15. Water resources

15.1. Wetlands

Based on previous site visits to complete intensive wildlife surveys, there are no wetlands within the airport boundaries.

15.2. Floodplains

The airport is in an area that is unmapped by the Federal Emergency Management Agency (FEMA) for regulatory floodplains (FEMA 2022b). The soil report indicates that the area does not flood (NRCS 2022).

15.3. Surface water

There are no surface waters within the airport boundaries. Stormwater drains southwest through the airport into the Fremont River, which is less than 900 feet away. The airport is within the Fremont River-2 (UT14070003-005) assessment unit that the state assesses for EPA water quality criteria and beneficial uses. This unit is impaired for pH, phosphorus, *E.coli*, and temperature (Utah Division of Water Quality 2022). A TMDL for the Fremont River Watershed was approved by the EPA in 2022 (Millennium Science and Engineering 2022).

The nearest sole source aquifer is over 100 miles east of the airport (EPA 2022e).

15.4. Groundwater

The Bicknell Town water system has a groundwater protection zone around Brinkerhoff Spring that is over 0.5 mile southeast of the airport (Utah DEQ 2022). Based on two well drilling reports from wells near the airport, groundwater in the area is between 72 and 97 feet deep (Utah Division of Water Rights 2022).

15.5. Wild and Scenic Rivers

Wild and scenic rivers do not occur in Wayne County (National Wild and Scenic Rivers System 2022). Nationwide Rivers Inventory (NRI) segments do not occur within 16 miles of the airport; the nearest segment is the Fremont River through Capitol Reef National Park, east of the airport (National Park Service 2022b).

16. References

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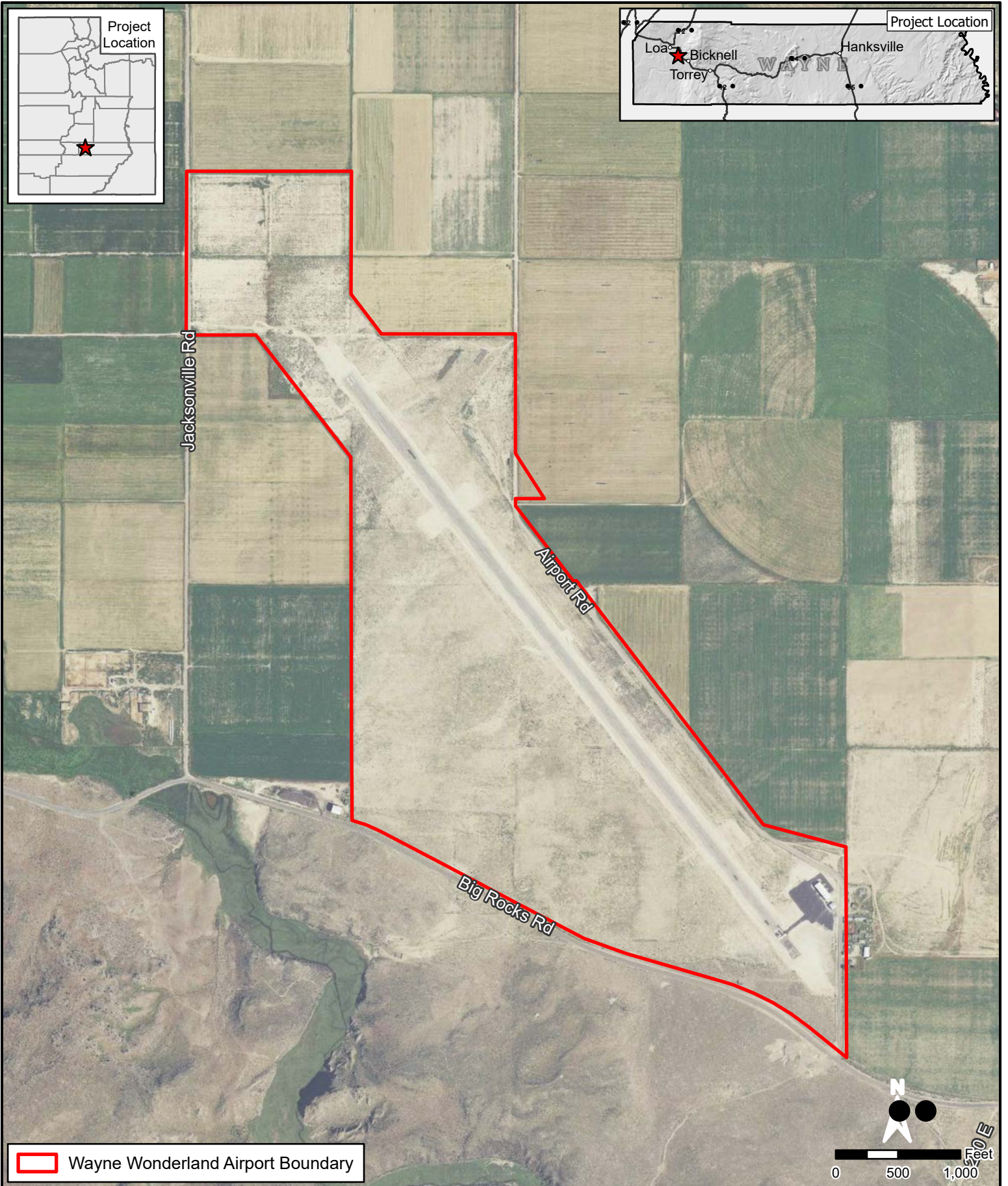
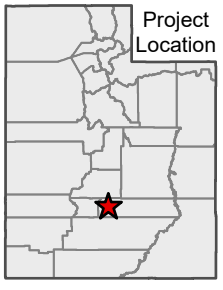


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Appendix A. Maps





 Wayne Wonderland Airport Boundary



**Jones & DeMille
Engineering**

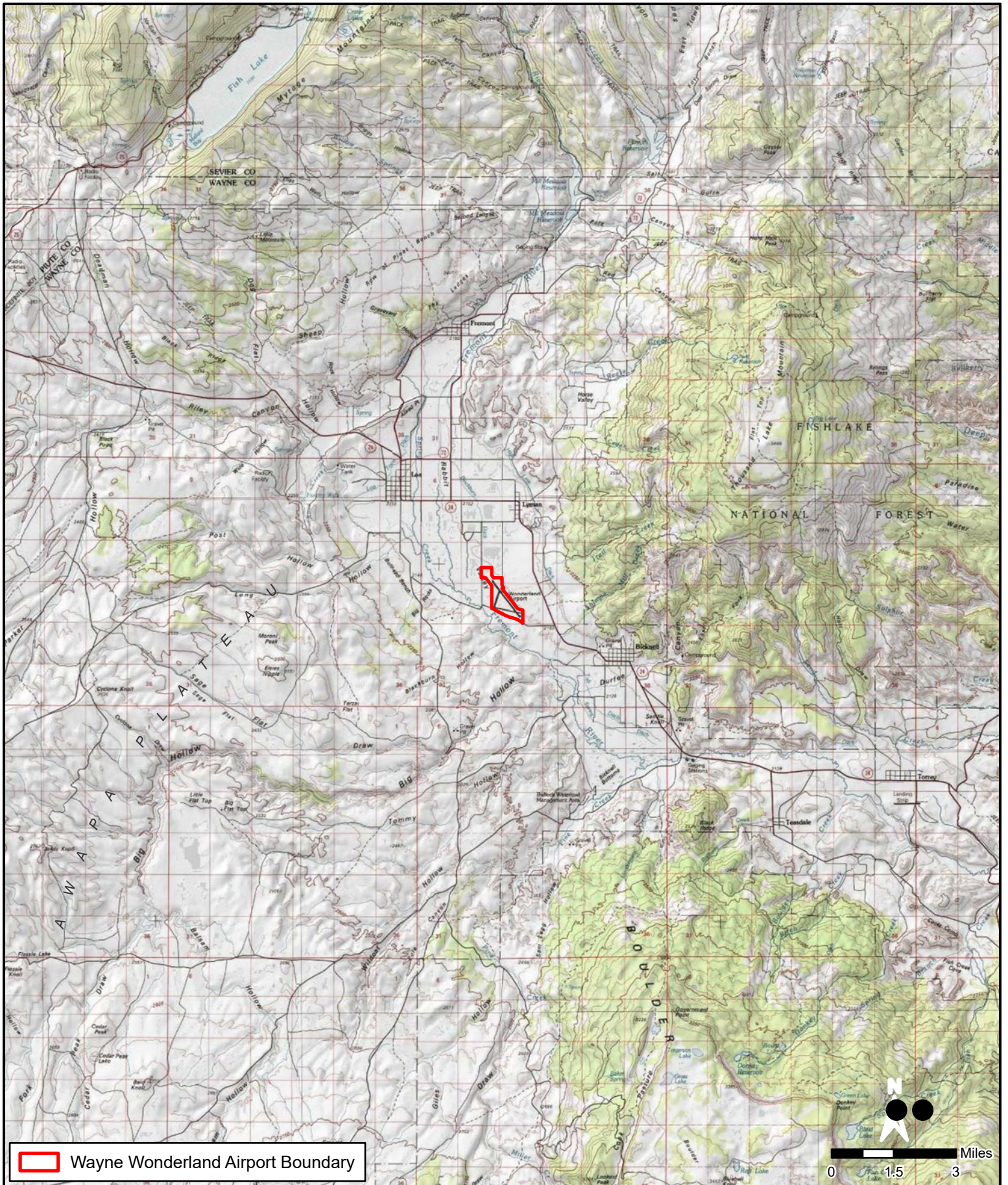
- Shaping the Quality of Life -
800.748.5275 www.jonesanddemille.com


Wayne County	
Wayne Wonderland Airport Master Plan & AGIS Project Overview Map	
Map Name: H:\JD\Proj\2106-050\Design\GIS\Projects\2106-050_Env\2106-050_Env.aprx - Exh_1_Project_Overview	
Project Number: 2106-050	Drawn by: ALP 12-22
Last Edit: 12/12/2022	

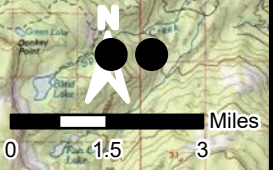
Wayne County

Scale: 1" = 1,000'

1



 Wayne Wonderland Airport Boundary




**Jones & DeMille
Engineering**

- Shaping the Quality of Life -
800.748.5275 www.jonesanddemille.com

Wayne County

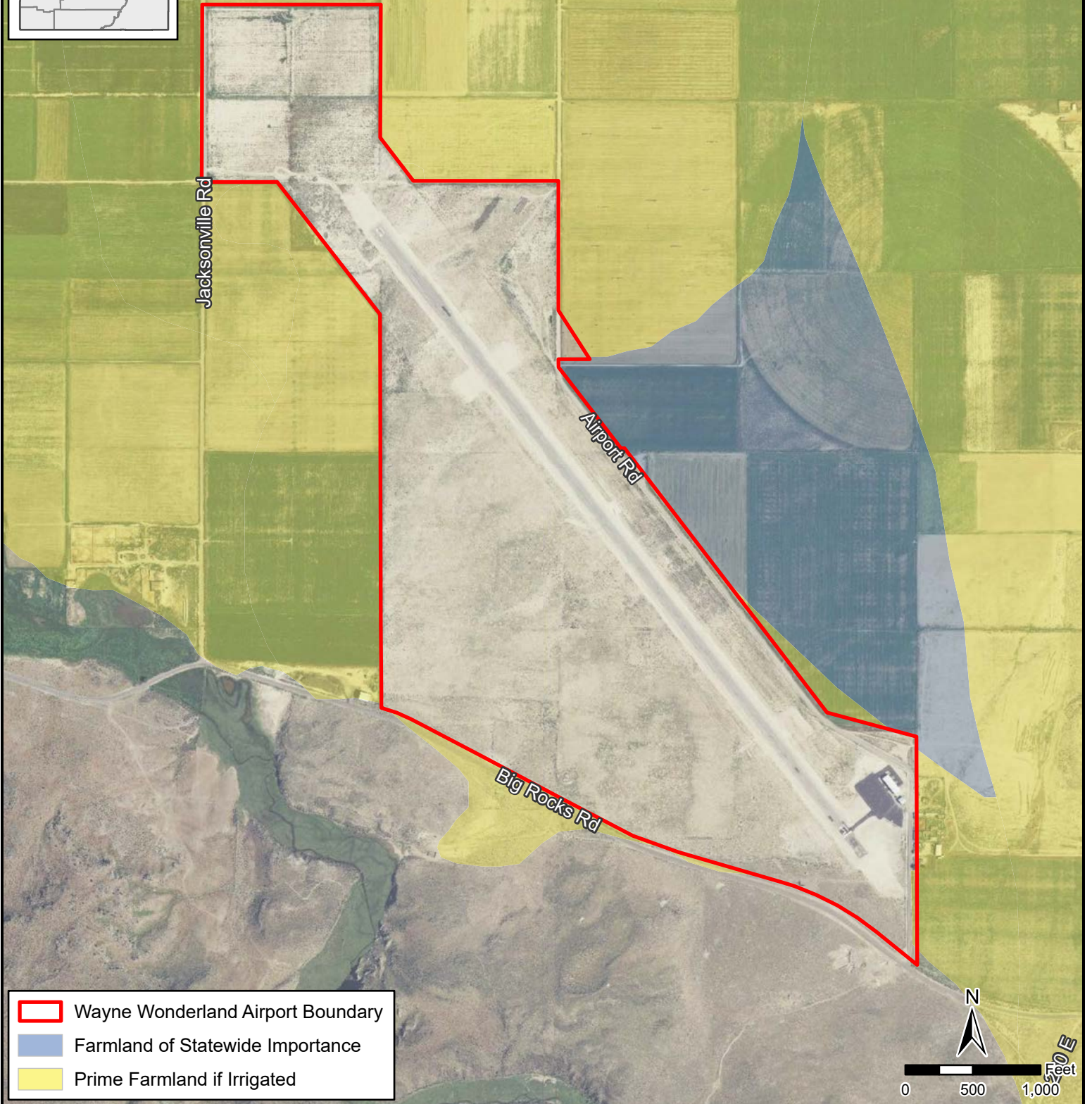
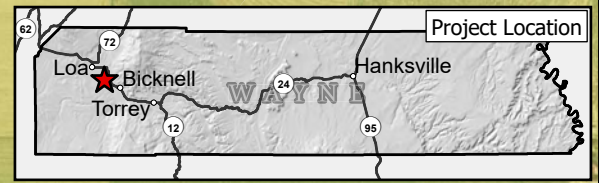
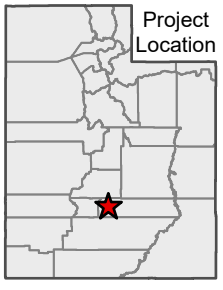
**Wayne Wonderland Airport Master Plan & AGIS
Project Location Map**

Map Name: H:\JD\Proj\2106-050\Design\GIS\Projects\2106-050_Env\2106-050_Env.aprx - Exh_2_Project_Location
Project Number: 2106-050 Drawn by: ALP 12-22 Last Edit: 12/12/2022

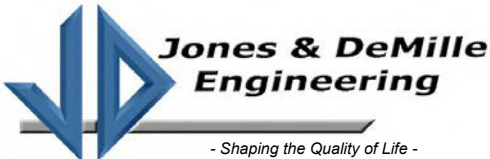
Wayne County

Scale: 1" = 3 miles

2



- Wayne Wonderland Airport Boundary
- Farmland of Statewide Importance
- Prime Farmland if Irrigated



Wayne County	
Wayne Wonderland Airport Master Plan & AGIS Prime and Unique Farmland Map	
Map Name: H:\JD\Proj\2106-050\Design\GIS\Projects\2106-050_Env\2106-050_Env.aprx - Exh_3_Prime_Unique_Farmland	Project Number: 2106-050
Drawn by: ALP 1-23	Last Edit: 1/23/2023

Wayne County
Scale: 1" = 1,000'
3

Appendix B. USFWS Official Species List





United States Department of the Interior



FISH AND WILDLIFE SERVICE

Utah Ecological Services Field Office

2369 West Orton Circle, Suite 50

West Valley City, UT 84119-7603

Phone: (801) 975-3330 Fax: (801) 975-3331

<https://fws.gov/office/utah-ecological-services>

In Reply Refer To:

Project Code: 2023-0019788

Project Name: Wayne Wonderland Airport Master Plan & AGIS

November 29, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
 - Migratory Birds
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Utah Ecological Services Field Office

2369 West Orton Circle, Suite 50

West Valley City, UT 84119-7603

(801) 975-3330

Project Summary

Project Code: 2023-0019788

Project Name: Wayne Wonderland Airport Master Plan & AGIS

Project Type: Airport - Maintenance/Modification

Project Description: Airport Master Planning

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.36383765,-111.59844479986279,14z>



Counties: Wayne County, Utah

Endangered Species Act Species

There is a total of 4 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Utah Prairie Dog <i>Cynomys parvidens</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5517	Threatened

Birds

NAME	STATUS
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Flowering Plants

NAME	STATUS
Last Chance Townsendia <i>Townsendia aprica</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2897	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern \(BCC\) list](#) or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Dec 1 to Aug 31
Cassin's Finch <i>Carpodacus cassinii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462	Breeds May 15 to Jul 15

NAME	BREEDING SEASON
<p>Lewis's Woodpecker <i>Melanerpes lewis</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9408</p>	Breeds Apr 20 to Sep 30
<p>Pinyon Jay <i>Gymnorhinus cyanocephalus</i></p> <p>This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> <p>https://ecos.fws.gov/ecp/species/9420</p>	Breeds Feb 15 to Jul 15

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

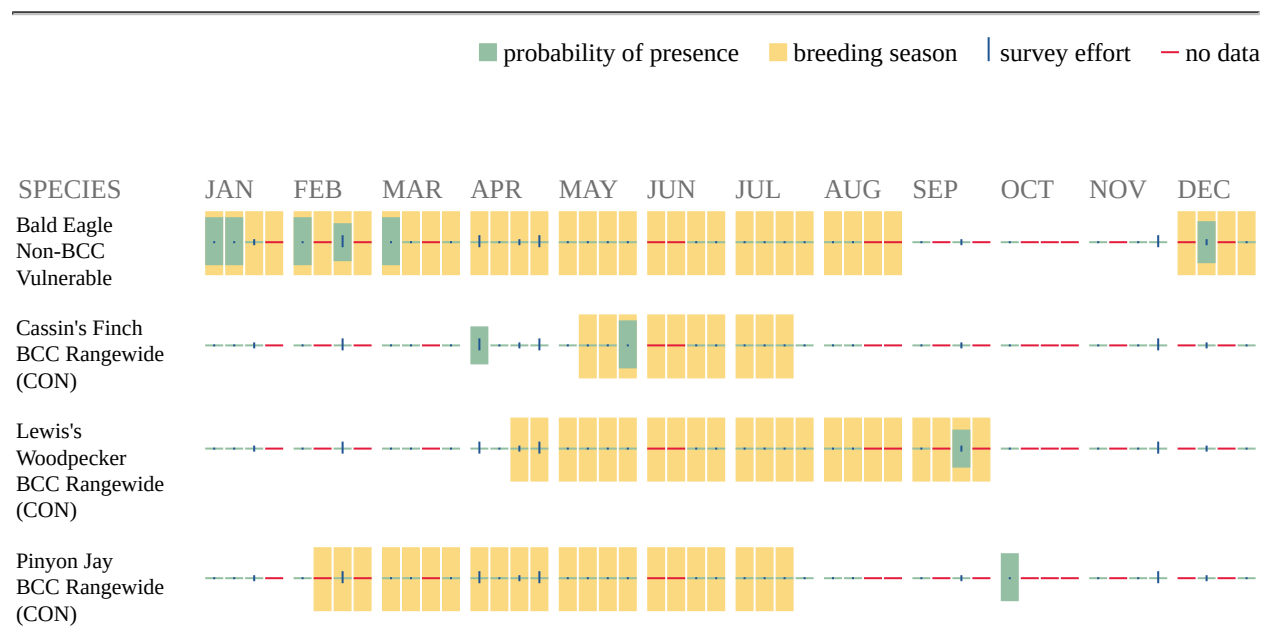
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (-)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <https://www.fws.gov/program/migratory-birds/species>
- Measures for avoiding and minimizing impacts to birds <https://www.fws.gov/library/collections/avoiding-and-minimizing-incident-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of

certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

IPaC User Contact Information

Agency: Federal Aviation Administration

Name: Jenna Jorgensen

Address: 1535 S. 100 W.

City: Richfield

State: UT

Zip: 84701

Email jenna.j@jonesanddemille.com

Phone: 4358935203

Appendix C. Utah Natural Heritage Program Online Species Search Report





Utah Natural Heritage Program Online Species Search Report

Project Information

Project Name

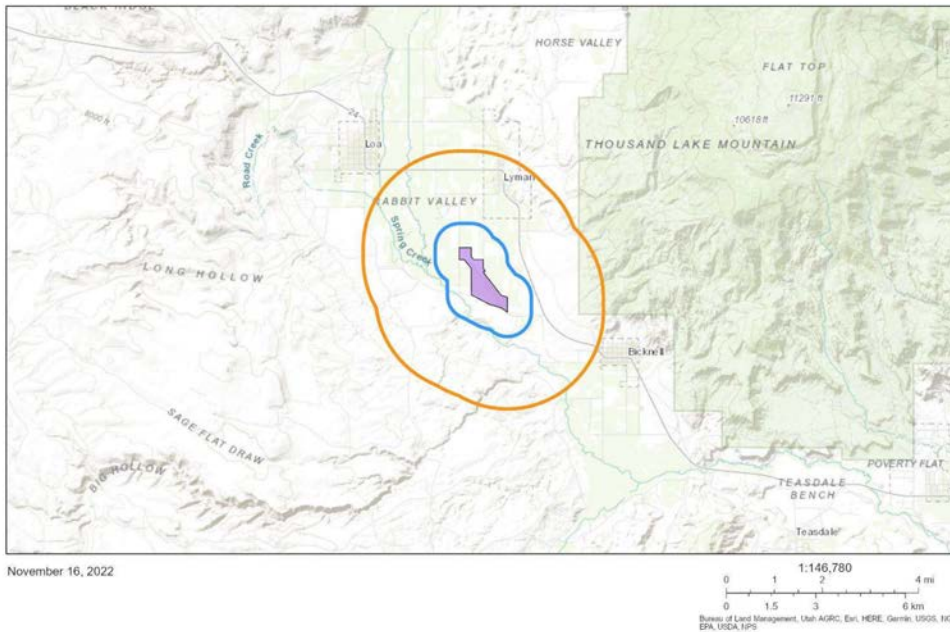
Wayne Wonderland Airport Master Plan

Project Description

Airport Master Planning

Location Description

Wayne Wonderland Airport



Animals within a 1/2 mile radius

Common Name	Scientific Name	State Status	U.S. ESA Status	Last Observation Year
American White Pelican	<i>Pelecanus erythrorhynchos</i>	SGCN		1982
Burrowing Owl	<i>Athene cunicularia</i>	SGCN		1988
Golden Eagle	<i>Aquila chrysaetos</i>	SGCN		1988
Utah Prairie Dog	<i>Cynomys parvidens</i>	SGCN	LT	2013

Plants within a 1/2 mile radius

Common Name	Scientific Name	State Status	U.S. ESA Status	Last Observation Year
No Species Found				

Animals within a 2 mile radius

Common Name	Scientific Name	State Status	U.S. ESA Status	Last Observation Year
American White Pelican	Pelecanus erythrorhynchos	SGCN		1982
Bald Eagle	Haliaeetus leucocephalus	SGCN		1994
Burrowing Owl	Athene cunicularia	SGCN		1988
Ferruginous Hawk	Buteo regalis	SGCN		1995
Golden Eagle	Aquila chrysaetos	SGCN		1988
Utah Prairie Dog	Cynomys parvidens	SGCN	LT	2013

Plants within a 2 mile radius

Common Name	Scientific Name	State Status	U.S. ESA Status	Last Observation Year
No Species Found				

Definitions

State Status

SGCN	Species of greatest conservation need listed in the Utah Wildlife Action Plan
------	---

U.S. Endangered Species Act

LE	A taxon that is listed by the U.S. Fish and Wildlife Service as "endangered" with the probability of worldwide extinction
LT	A taxon that is listed by the U.S. Fish and Wildlife Service as "threatened" with becoming endangered
LE;XN	An "endangered" taxon that is considered by the U.S. Fish and Wildlife Service to be "experimental and nonessential" in its designated use areas in Utah
C	A taxon for which the U.S. Fish and Wildlife Service has on file sufficient information on biological vulnerability and threats to justify it being a "candidate" for listing as endangered or threatened
PT/PE	A taxon "proposed" to be listed as "endangered" or "threatened" by the U.S. Fish and Wildlife Service

Disclaimer

The information provided in this report is based on data existing in the Utah Division of Wildlife Resources' central database at the time of the request. It should not be regarded as a final statement on the occurrence of any species on or near the designated site, nor should it be considered a substitute for on-the-ground biological surveys. Moreover, because the Utah Division of Wildlife Resources' central database is continually updated, any given response is only appropriate for its respective request.

The UDWR provides no warranty, nor accepts any liability, occurring from any incorrect, incomplete, or misleading data, or from any incorrect, incomplete, or misleading use of these data.

The results are a query of species tracked by the Utah Natural Heritage Program, which includes all species listed under the U.S. Endangered Species Act and species on the Utah Wildlife Action Plan. Other significant wildlife values might also be present on the designated site. Please [contact](#) UDWR's regional habitat manager if you have any questions.

For additional information about species listed under the Endangered Species Act and their Critical Habitats that may be affected by activities in this area or for information about Section 7 consultation under the Endangered Species Act, please visit <https://ecos.fws.gov/ipac/> or contact the [U.S. Fish and Wildlife Service Utah Ecological Services Field Office](#) at (801) 975-3330 or utahfieldoffice_esa@fws.gov.

Please contact our office at (801) 538-4759 or habitat@utah.gov if you require further assistance.

Your project is located in the following UDWR region(s): Southern region

Report generated for:

Jenna Jorgensen
Jones and DeMille Engineering
1535 S. 100 W.
Richfield, UT 84754
(435) 896-8266
jenna.j@jonesanddemille.com



Appendix D. Previous SHPO Correspondence





U.S. Department
of Transportation
**Federal Aviation
Administration**

Northwest Mountain Region
Denver Airports District Office
26805 E 68th Avenue, Suite 224
Denver, CO 80249-6361

June 6, 2019

Mr. Chris Merritt
Utah State Historic Preservation Office
300 South Rio Grande Street
Salt Lake City, UT 84101

Re: Determination of Effect for the Wayne Wonderland Airport

Dear Mr. Merritt:

The Federal Aviation Administration (FAA) determined that a Section 106 finding of a *No Historic Properties Affected* is applicable for the proposed improvements at the Wayne Wonderland Airport. The FAA respectfully requests the Utah State Historic Preservation Office to provide written concurrence with the Section 106 determinations of *No Historic Properties Affected*.

If you have any comments, questions, or concerns regarding the analyses and conclusions used to determine the potential effects of the proposed project on historic, cultural, and archaeological resources, or have any questions regarding the project, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Kandice Krull', with a large, stylized flourish at the end.

Kandice Krull
Environmental Protection Specialist
FAA - Denver Airport District Office
303-342-1261

Enclosure: Wayne Wonderland Airport No Historic Properties Affected Finding

**FEDERAL AVIATION ADMINISTRATION
DOCUMENTATION OF SECTION 106 FINDING OF
NO HISTORIC PROPERTIES AFFECTED
SUBMITTED TO THE UTAH STATE HISTORIC PRESERVATION OFFICER
PURSUANT TO 36 CFR Section 800.4(d)(1) for the
WAYNE WONDERLAND AIRPORT IMPROVEMENT PROJECTS
WAYNE COUNTY, UTAH**

1. DESCRIPTION OF THE UNDERTAKING

The Wayne Wonderland Airport (Airport) is located between the Cities of Lyman (approximately 2.5 miles north of the Airport) and Bicknell (approximately 2.5 miles southeast of the Airport) in Wayne County. The proposed improvements include the reconstruction of Runway 13/31, grading of the runway safety areas, replacement of the drainage culverts, and the installation of utility sleeves.

2. AREA OF POTENTIAL EFFECT

The Area of Potential Effect (APE) is the area within which an undertaking may directly or indirectly affect a historic property or cultural resource. The APE encompasses areas proposed for disturbance and areas with the potential for noise and/or visual effects, including the view shed (the area which the project may visually impact) (Appendix A).

3. EFFORTS TO IDENTIFY HISTORIC PROPERTIES

Certus Environmental Solutions, LLC completed a Cultural Resource Inventory, including a Class III pedestrian survey, in May 2019 (A Cultural Resource Assessment for the Wayne Wonderland Airport (38U) Improvements Project, Wayne County, Utah). Certus identified a single historical resource during the survey, the Wayne Wonderland Airport runway (42WN3576). The site was determined not to be eligible for listing on the National Register of Historic Places (NRHP). The site retains integrity of location, design, materials, and association but generally lacks integrity of workmanship, setting, and feeling.

4. BASIS FOR FINDING

The review did not identify any resources listed on or eligible-for-listing on the NRHP within the APE. If construction results in the inadvertent discovery of a cultural resource, construction will halt until the Utah State Historic Preservation Officer (SHPO) and the Federal Aviation Administration (FAA) are notified.

The FAA has therefore determined that a finding of *No Historic Properties Affected* is appropriate for this project. The FAA respectfully requests that the SHPO provide written concurrence with this Section 106 finding.

APPENDIX

Appendix A: Area of Potential Effect

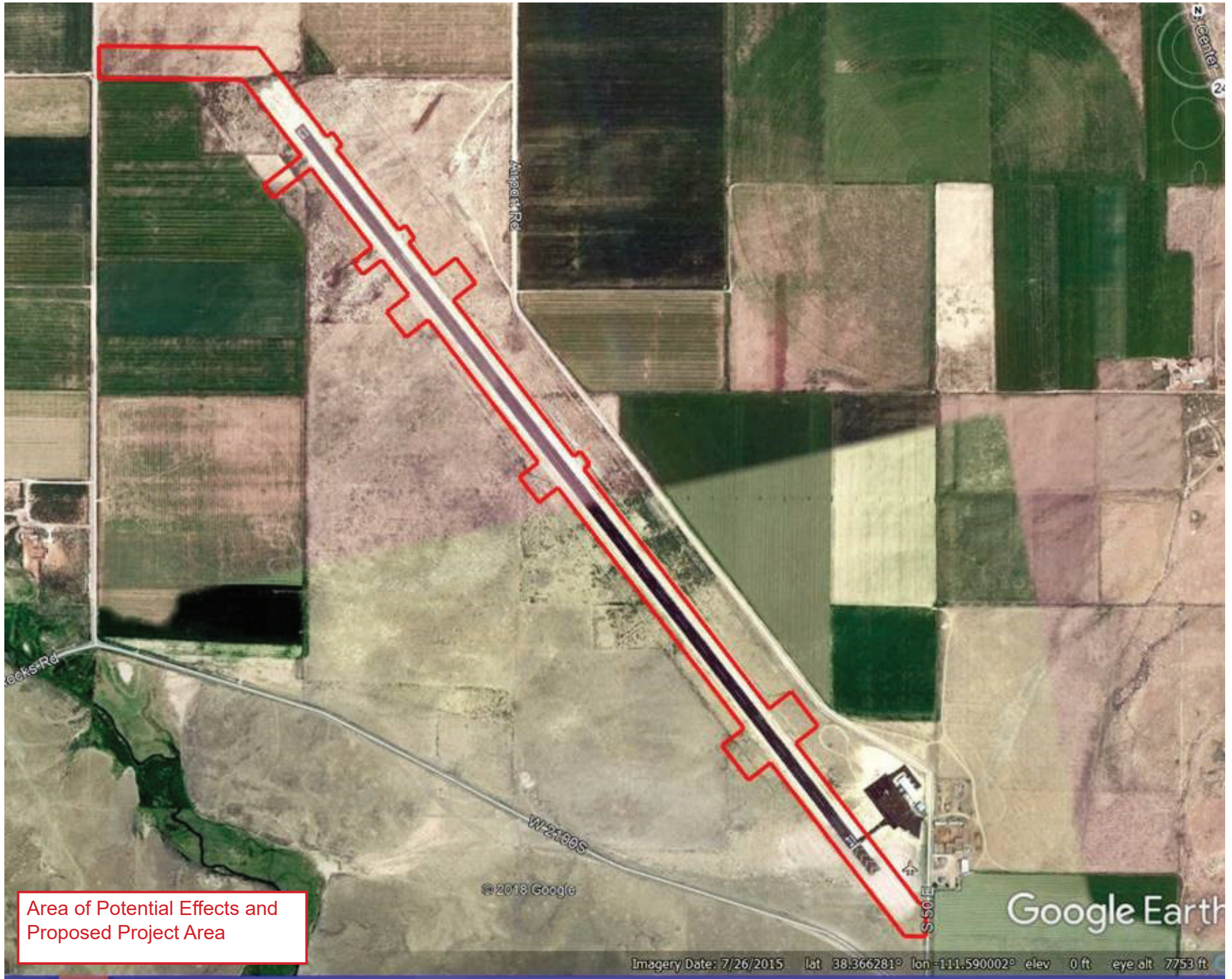
Attached: Cultural Resource Assessment for the Wayne Wonderland Airport (38U) Improvements Project, Wayne County, Utah

Approved By:

 6/6/19

Kandice Krull
Environmental Protection Specialist
Federal Aviation Administration (FAA)
Denver Airports District Office

Appendix A



Area of Potential Effects and Proposed Project Area



GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

Jill Remington Love
Executive Director
Department of
Heritage & Arts



Don Hartley
Director
State Historic Preservation Officer

June 7, 2019

Kandice Krull
Environmental Protection Specialist
Federal Aviation Administration
Washington, D.C.

RE: Wayne Wonderland Airport Improvement Projects

For future correspondence, please reference Case No. 19-1322

Dear Ms Krull,

The Utah State Historic Preservation Office received your request for our comment on the above-referenced undertaking on June 06, 2019.

We concur with your determinations of eligibility and effect for this undertaking.

This letter serves as our comment on the determinations you have made within the consultation process specified in §36CFR800.4. If you have questions, please contact me at 801-245-7263 or by email at cmerritt@utah.gov.

Sincerely,

Christopher W. Merritt, Ph.D.
Deputy State Historic Preservation Officer



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