CHAPTER 1: AIRPORT, COMMUNITY & AVIATION ACTIVITY

Purpose and Scope

The information presented in this report represents the study findings for the 2025 Airport Master Plan study prepared for the Sidney-Richland Regional Airport Authority, the airport owner. Airport Master Plans are prepared in accordance with Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5070-6B, *Airport Master Plans*. This project was funded in part by the FAA under grant number AIP 3-30-0070-041-2025.

This study for the Sidney-Richland Regional Airport will serve as an updated guide identifying future development necessary to accommodate existing and future aviation demands. The airport's current and forecasted safety, capacity and compatibility needs are addressed in this study. Many projects have been completed and new planning considerations have surfaced since the last Master Plan study was conducted in 2015.

The airport sponsor and Kadrmas, Lee & Jackson (KLJ) developed the scope for the project in cooperation with FAA Airports District Office and Montana Department of Transportation (DOT) Aeronautics Division officials to identify the specific needs and objectives of the airport owner. Both the federal and state agencies provide oversight throughout the process to ensure the plan is compliant and reflects the long-term goals of the aviation system within the state of Montana and the greater airport network throughout the U.S. This study is jointly funded by the FAA and Montana State DOT and both parties have a vested interest to ensure airport development is strategic, safe and financially justified.

The scope includes work tasks with the purpose of documenting existing conditions, forecasting future aviation activity levels, identifying future facility requirements, formulating, and evaluating development alternatives, preparing implementation plans and engaging the public and other government agencies. Recommendations will be made for improvements that are triggered by safety requirements or demand thresholds.

The project received funding from an FAA grant in January 2025 for the airport sponsor. The baseline project data is from inventory efforts completed in June 2025. The latest full year of data from the year 2024 was used to establish a baseline of existing airport information.

Planning Objectives

Planning considerations for an airport master plan are features, elements or events that should be evaluated because they have the potential to affect the airport facility over the long term.

Previous Planning Studies

Since the completion of the previous Airport Master Plan (AMP) and Airport Layout Plan (ALP) in 2015, several as-built projects have been completed. The Sidney-Richland Regional Airport Authority is completing this master plan study to re-evaluate the short and long-term development goals of the airport.

The objective of this planning study is to develop the framework for the owner to meet the needs of the airport in a manner that is safe, efficient and cost-effective. The specific project objectives are identified as follows:

- Examine runway capabilities and needs for both the primary and crosswind runway
- Analyze options for obstruction mitigation, including land acquisition if necessary
- Identify areas for future hangar development
- Evaluate routes for vehicle access to the south hangar development area
- Update the ALP with as-built projects and current design standards

FAA AERONAUTICAL SURVEY

The FAA has implemented Aeronautical Survey requirements per FAA AC 150/5300-18B: *General Guidance and Specifications for Submission of Aeronautical Data to NGS: Field Data Collection and Geographic Information System (GIS) Standards*. FAA airport survey requirements require obstruction data to be collected using assembled aerial imagery for the airport. This data is used in aeronautical publications and to develop instrument approach procedures.

An aeronautical survey is currently in progress with this planning effort as required by FAA. Imagery was acquired in October of 2024 and the project submitted to the ADIP Portal in July 2025. When safety-critical data is needed to update runway end data or enhance an instrument approach then a new aeronautical survey is required. All projects at primary FAR Part 139 certificated airports must comply with Airports GIS standards for all development projects.

Master Plan Process

Guidelines for completing a Master Plan are set forth in FAA AC 150/5070-6B. Each master plan study scope and level of effort is customized to fit each individual airport's needs and address critical issues.

The required and recommended contents of Airport Master Plans are detailed per FAA standards. Effective airport master plans are based on the analysis of significant amounts of data, and many airport master plans typically present not only the planning conclusions, but all data and accompanying analysis in considerable detail.

This Master Plan study presents data in a sequential manner following the typical FAA planning process. Appendices are included to provide more detailed information on a subject. In addition, internet hyperlinks are included to reference documents that are current as of the time of this report.

The Airport Master Planning process involves several coordinated steps. The master plan study for SDY consists of the following elements:

- **Pre-Planning** – Airport development concerns are identified and planning objectives prepared to address these issues. An overall vision for the study is formulated that will guide the process.
- **Facility & Environmental Inventory** – Overview of airport setting and environment; infrastructure and assets which includes airside, landside, and support facilities; airspace, navigational aids, and airport access utilizing data from an FAA Aeronautical Survey. Provide an overview of anticipated environmental impacts as part of the development of alternatives.

- **Forecast of Aviation Demand** – Using established forecasting methods, estimate current and project future airport activity for general aviation, air cargo, and passenger enplanements.
- **Demand Analysis and Facility Requirements** – Compare the existing capacity with the future demand and identify the facility requirements to satisfy the aviation safety, capacity, and compatibility needs.
- **Alternatives Development and Evaluation** – Identify and evaluate options considering both on-airport and off-airport impacts consistent with the study goals and objectives. A preferred alternative is selected.
- **Implementation Plan** – Provide a comprehensive plan for implementation of the preferred alternative including project triggers, sequencing, and cost estimates.
- **Airport Layout Plan (ALP)** – Document the existing and planned airport facilities through a set of drawings approved by the airport sponsor, state, and FAA.
- **Stakeholder and Public Involvement** – Prepare and execute a plan to engage important airport stakeholder and the public throughout the study to gather their input and address their concerns.

Alternatives Analysis

The alternatives evaluation process is the most collaborative portion of the master plan study. The alternatives are reviewed and refined through meetings with federal/state agency representatives and the study's advisory group. Evaluation criteria is used to compare the alternatives. The alternative evaluation criteria for this study includes the following:

Operational Performance - How does each alternative allow the airport, and specifically the runway/taxiway system, to operate as a functional system, meet design standards, and meet the needs of the community.

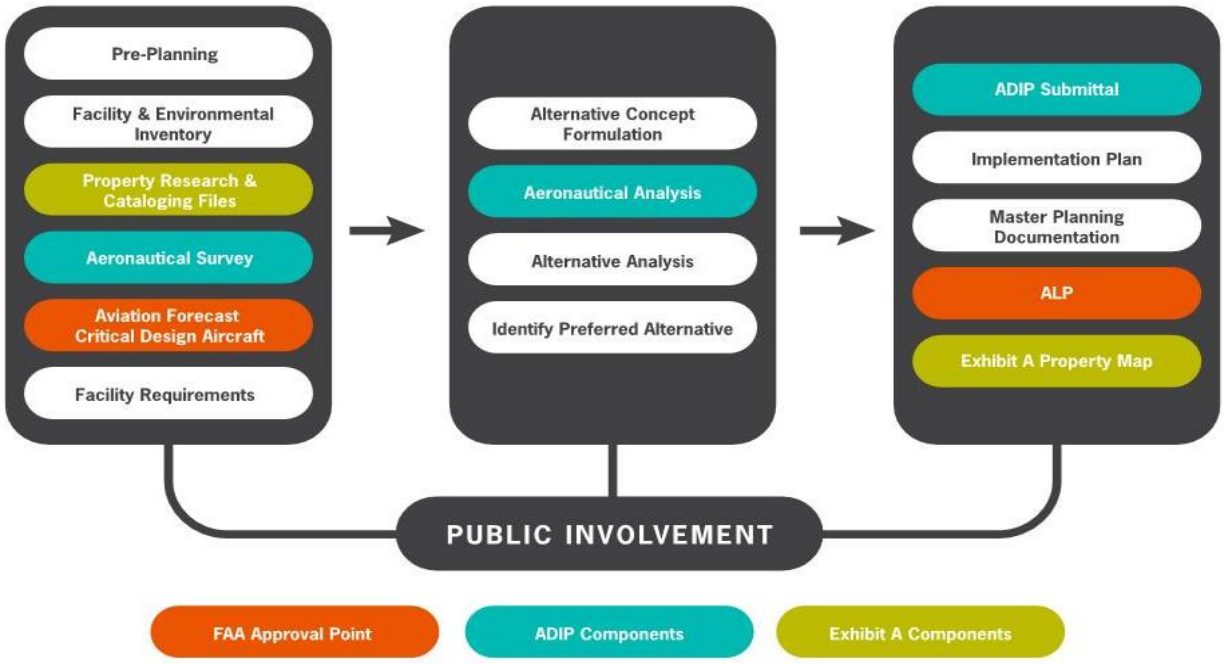
Best Planning Tenets – What are the strengths and weaknesses of the alternatives as it relates to:

1. Flexibility to meet demand and react to unforeseen changes;
2. Highest and best on- and off-airport land use;
3. Feasibility to implement politically and within practical phases; and
4. Ability to satisfy airport user needs.

Environmental Factors – What are the potential effects of the alternatives upon the natural and built environment.

Fiscal Factors – How much will the options cost as compared to each other, while making the most use of federal, state and local resources.

Figure 1-1 – Airport Master Planning Process



Source: KLJ

Study Documentation & Approvals

The Master Plan Update was divided into chapters of information to document airport planning data, analysis, findings, and recommendation of the study. The following sections included in the narrative report:

- Chapter 1 – Airport, Community & Aviation Activity
- Chapter 2 – Runways & Taxiways
- Chapter 3 – Terminal Area & Support Facilities
- Chapter 4 – Implementation & Compatibility
- Chapter 5 – Airport Layout Plan

- Appendix A – Glossary of Terms
- Appendix B – Commercial Aviation Airports 101
- Appendix C – Meetings and Public Involvement
- Appendix D – Runway Length Analysis
- Appendix E – Obstruction Analysis and Action Plan
- Appendix F – Recycling and Solid Waste Plan

Each chapter was prepared separately and distributed to the airport owner for review and comment. After the airport owner's review, each draft chapter findings are made available to key airport stakeholders including the State and FAA for input prior to a final review and approval by the airport owner. Each approved final draft chapter is then published on the airport's website (https://inputcentral.com/sdy-airportplan) for public viewing.

The Master Plan Update was adopted by the Sidney-Richland Regional Airport Authority on [FUTURE DATE]. The ALP was submitted to the State and FAA for review and approval on [FUTURE DATE].

Public Involvement

Public involvement is a key component to the successful development of an Airport Master Plan study. The purpose is to encourage information sharing and feedback from airport stakeholders including the airport owner, airport users/tenants, local government officials, resource agencies, elected and appointed officials and the public. Public involvement provides valuable input to assist the airport owner in decision making and develop consensus on study conclusions.

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A Planning Advisory Committee (PAC) was established to provide recommendations to the airport owner. Members represented the following stakeholders:

- Airport Board Meetings
- Montana Department of Transportation, Aeronautics
- Federal Aviation Administration, Helena Airport District Office
- Sidney Medical Center
- Richland County Public Works
- Richland Aviation Fixed Based Operator
- Richland County Economic Development

See **Appendix C: Meetings and Public Involvement** for other information including copies of public involvement meeting agendas, attendees, presentations, and summaries.

Airport & Community Overview

General

The Sidney-Richland Regional Airport, local identifier SDY, is a non-primary commercial service airport located in northeastern Montana. The airport is part of the Essential Air Service (EAS) program, which subsidizes air service to eligible communities, following the Airline Deregulation Act (ADA) in 1978. See **Appendix B: Commercial Service Airports 101** for more information regarding the EAS program. Cape Air, which operates five daily flights from SDY to Billings Logan International Airport (BIL) provides commercial airline service to the airport. In addition to this, the airport handles traffic from a variety of operators including charter flights, fixed-wing air ambulance, and general aviation users.

Location and Area Setting

The airport is situated approximately two miles outside of the City of Sidney, Montana which is within Richland County. The airport is accessible via MT-16 N and 22nd Ave SW. The north end of the airfield is bordered by the Sidney Country Club and other infrastructure, while the south, east and west are open space or have agricultural use. Geographically, the City of Sidney is five miles west from the North

Dakota border, and 465 miles east from Helena, the state capital of Montana. As the county seat for Richland County since its inception in 1914, the City of Sidney serves as a regional hub for agriculture and energy.

With a population of just over 6,000, the area is primarily classified as a rural community. However, the landscape and recreational opportunities draw interest from locals and visitors alike. Situated along the scenic Yellowstone River of eastern Montana and western North Dakota, the landscape is marked by open plains and rolling topography. The landscape is not only visually pleasing but has also shaped the economics of the area. The Lower Yellowstone Irrigation Project of 1904 made a system of canals available, thereby transforming the prairie land into productive agricultural space, primary crops include alfalfa and sugar beets. Until recently, the sugar beet industry was a vibrant part of the economics of the area contributing substantially to jobs through a multi-generational processing plan, Sidney-Sugars. The plant was sold in 2023 and has ceased to operate since then. Many farmers in the area have since forgone beet farming operations and diversified with soybeans and grain corn, as well as livestock ranching. Despite its agricultural roots, today the area is more widely known for its ties to oil production. Specifically, Sidney profited from what is referred to as the Bakken Era, a period of rapid oil and gas development in western North Dakota and eastern Montana, related to new drilling technology which allowed access into the Bakken Formation, one of the largest oil reserves discovered in recent history. The boom period primarily took place through 2010-2014, and the impacts this had on the region can be traced to historical highs in employment, population and per capita income, followed by years of decline after the boom. These trends are explored in later portions of this chapter. While production has since decreased, the investment into the community through housing, businesses and utility/infrastructure are still noticeable in the community today.

Airport Ownership & Management

Ownership and decision-making authority of the airport belongs to the Sidney-Richland Regional Airport Authority. The airport does have a full-time airport manager on-site and several support staff to manage the day-to-day operations. The Airport Authority also owns and manages the Fairview Airport in Fairview MT, approximately 10 NM north of Sidney. Because of commercial service operations, Transportation Security Administration (TSA) officials do handle all passenger/baggage screening operations.

Airport History

The Sidney Richland Regional Airport was established in 1951. By 1954, the airport had scheduled passenger service, initially by Frontier Airlines with a Douglas DC-3. In later years, Frontier operated via a contract with Combs Aviation, following the decommissioning of DC-3 flights. However shortly thereafter, Frontier ultimately returned as the sole air service provider until 1980, utilizing the Canada DHC-6 Twin Otter turboprop, with routes to Billings, MT, Glendive, MT and Williston, ND. After this point, Big Sky Airlines took over as the sole air service provider and eventually served the airport under the Essential Air Service (EAS) program until their closure around 2010. While SDY always had passenger air service, the carrier changed hands a few more times until Cape Air began their service to Billings, MT in 2013. Today, Cape Air still serves the airport, with five round trips per day. A complete list of major airport development projects that received funding from FAA and the State over the last ten years can be found in **Table 1-1 Past Airport Projects.**

Land Area

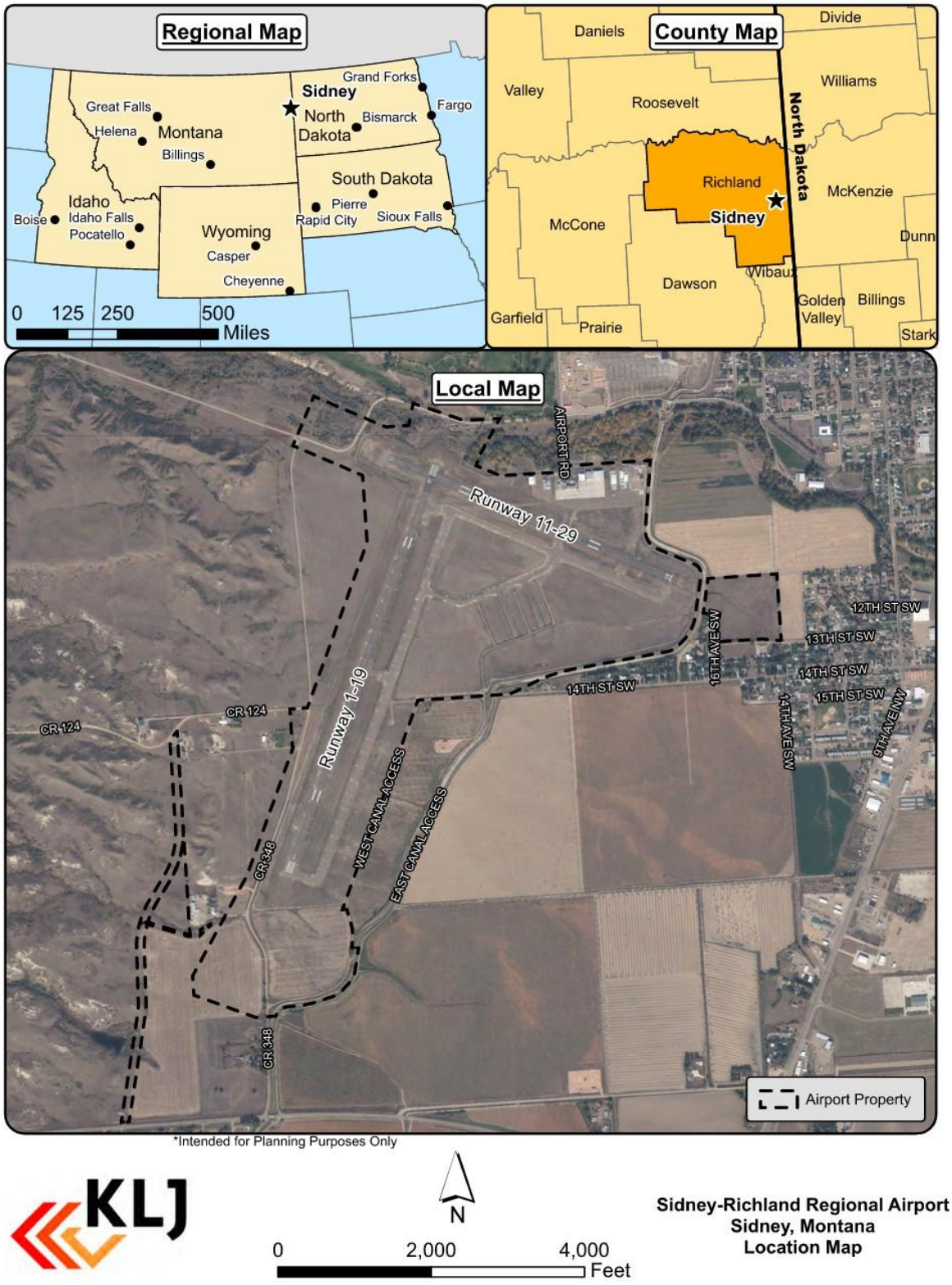
The airport owns 527 acres in fee simple and 42 acres in easements. As part of the Airport Master Plan, the Exhibit A Airport Property Map will be updated to depict ownership of property by the airport and any aviation easements, in accordance with the FAA Standard Operating Procedure (SOP) 3.00 requirements. The Exhibit "A" also acts as a tool to communicate the type of ownership, control and conveyance of land parcels, both existing and future from proposed acquisitions.

Table 1-1 – Past Airport Projects

Year	Projects	Federal Grant
2024	Rehabilitate Runway	$3,134,500
2023	Rehabilitate Runway	$1,470,426
2023	Reconfigure Taxiway	$742,500
2023	Terminal Building Expansion	$711,000
2023	Rehabilitate Runway Lighting	$220,500
2022	Rehabilitate Runway	$3,692,345
2022	Terminal Building Expansion	$441,423
2022	Reconstruct Taxiway	$540,963
2022	Parking Lot Improvements	$238,834
2022	Rehabilitate Runway Lighting	$151,582
2022	Install Runway Vertical Guidance System	$21,600
2022	Install Airfield Signage	$7,290
2021	Install Airfield Signage	$13,739
2021	Rehabilitate Runway	$121,526
2021	Rehabilitate Runway Lighting	$77,480
2020	Install Taxiway Lighting	$557,193
2020	Extend Taxiway	$1,902,071
2020	Rehabilitate Taxiway Lighting	$37,793
2019	Install Perimeter Fencing	$62,020
2019	Install Runway Vertical Guidance System	$67,194
2019	Rehabilitate Apron	$87,793
2019	Rehabilitate Runway	$271,884
2019	Rehabilitate Taxiway	$165,263
2019	Obstruction Removal	$8,190
2018	Install Runway Vertical Guidance System	$9,000
2018	Rehabilitate Apron	$10,000
2018	Rehabilitate Runway	$24,460
2018	Rehabilitate Taxiway	$10,000
2018	Obstruction Removal	$43,583
2017	Acquire Snow Removal Equipment	$471,937
2015	Construct Access Road	$15,000
2015	Construct Taxiway	$2,213,433
2015	Install Airfield Guidance Signs	$23,138
2015	Install Taxiway Lighting	$332,718
2014	Install NAVAIDS	$26,308
2014	Install Runway Vertical Guidance System	$23,038
2014	Rehabilitate Apron	$55,018
2014	Rehabilitate Runway	$192.741
2014	Rehabilitate Runway Lighting	$36,038
2014	Rehabilitate Taxiway	$37,080
2014	Airport Master Plan	$327,556

Source: Federal Aviation Administration

Figure 1-2 – Airport Location Map



Airport Role & Design

SDY is a commercial service airport, meaning it provides scheduled passenger service through certified air carriers. This service is provided by Cape Air, under the Essential Air Service program. As was previously discussed, EAS is a federal initiative that subsidizes flights to more rural airports, which would otherwise lack commercial service. Through this service, the airport provides residents of northeastern Montana regional connectivity and affordable air access to critical services in more urban communities. The airport is part of the FAA's National Plan of Integrated Airports System (NPIAS) and is classified as a non-primary commercial service. Non-primary indicates the airport has between 2,500 and 9,999 enplanements annually, or passenger boardings. To be considered a primary airport, enplanements would need to surpass 10,000 on an annual basis.

In addition to the scheduled passenger flights, the airport supports a vibrant General Aviation community, comprised of those flying for recreation, business, flight students and aerial applicators. Public use airports in the United States within the area are listed in **Table 1-2** to provide background into the other area airports.

Table 1-2 – Surrounding Public Airports

ID	Airport	Town /City	Distance from SDY (Nautical Miles)	Based Aircraft	Instrument Approaches (Lowest Min)	Longest Runway	Fuel
SDY	**Sidney-Richland Regional**	**Sidney**	**---**	**28**	**RNAV 300' – 7/8 Mile**	**5,705' x 100'**	**100LL**
5U6	Fairview	Fairview	10 N	-	Visual	3,000' x 95' (Turf)	-
S85	Big Sky Field	Culbertson	29 N	8	Visual	3,800' x 60'	100LL
XWA	Williston Basin Intl.	Williston ND	38 NE	32	ILS, RNAV, VOR 200' – ½ Mile	7,503'x 150'	100LL Jet A
S25	Watford City Municipal	Watford ND	38 E	35	RNAV 300' – ¾ Mile	6,550' x 75'	100LL Jet A
GDV	Dawson Community	Glendive	42 SW	17	RNAV 300' – 1 Mile	5,704' x 100'	100LL Jet A
PO1	Poplar Municipal	Poplar	47 NW	9	RNAV 200' – 1 Mile	4,403' x 75'	100LL Jet A
20U	Beach	Beach ND	48 S	11	RNAV 300' – 1 Mile	4,200' x 60'	100LL Jet A
4U6	Circle Town County	Circle	58 SW	2	RNAV 300' – 1 Mile	4,100' x 75'	100LL
OLF	LM Clayton	Wolf Point	60 W	3	RNAV 200' – ¾ Mile	5,091' x 100'	100LL
D60	Tioga Municipal	Tioga ND	65 NE	42	RNAV 300' – 1 Mile	5,102' x 75'	100 LL Jet A
PWD	Sher-Wood	Plentywood	66 N	15	RNAV 300' – ¾ Mile	3,900' x 75'	100LL
9S2	Scobey	Scobey	82 NW	14	RNAV 400' – 1 Mile	4,020' x 75'	100LL Jet A

Source: FAA ADIP. 2025 NPIAS Report

Within the 2015 Montana State Aviation System Plan (SASP) the airport is classified as a Primary Commercial Service airport. To arrive at this designation, the SASP considers a variety of attributes and services the airport offers, including population, runway length, weather reporting equipment, instrument capabilities, availability of fuel, and type of aircraft activity. Each criteria is assigned a score, which is tallied at the end for the airport as whole. The airport role is determined based upon the score range the airport falls withing.

For Sidney Richland Regional Airport, the total role analysis score at the time of the SASP was 46. Table 4-13, pulled directly from the SASP, depicts the Role Analysis Score Ranges and corresponding Airport Role.

Table 4-13: Role Analysis Score Ranges for Role Categories

Total Score		Airport Role
Low	High	
--	--	Commercial Service
25	and up	GA Level 1
15	24	GA Level 2
10	14	GA Level 3
0	9	GA Level 4

Source: CDM Smith

The FAA's Airport Reference Code (ARC) identifies a design category based on aircraft wingspan, tail height and approach speed for aircraft types that regularly use the airport. At Sidney-Richland Regional Airport, the existing ARC is B-II.

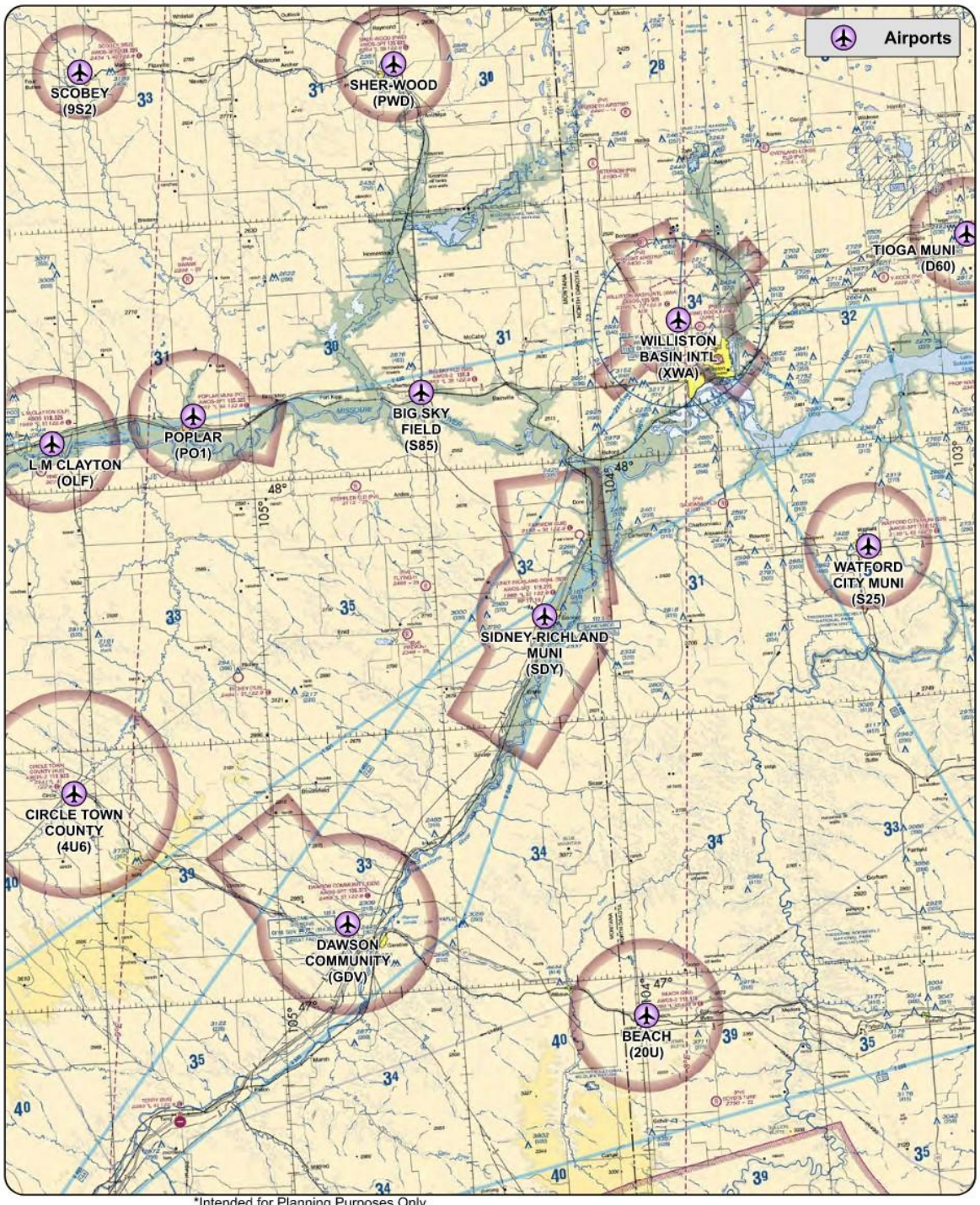
Table 1-3 summarizes the airport's role and design specifications. See **Appendix B: Commercial Service Airports 101** for more details on FAA design classifications and State classifications.

Table 1-3 – Airport Role & Design

Airport	State Classification	NPIAS Service Level	GA Role	ARC
SDY	**Primary Commercial Service**	**Commercial Service**	**Local**	**A/B-II**
5U6	GA Level 4	-	-	A/B-I
S85	GA Level 3	GA	Basic	A/B-I
XWA	Commercial Service	Primary	NA	D-III
S25	Local	GA	Local	A/B-II
GDV	GA Level 1	GA	Local	A/B II
PO1	GA Level 1	GA	Basic	A/B-II
20U	Basic	GA	Basic	A/B-I
4U6	GA Level 2	GA	Basic	A/B-II
OLF	GA Level 1	Commercial Service	Local	A/B-II
D60	Local	GA	Local	A/B-II
PWD	GA Level 2	GA	Local	A/B-II
9S2	GA Level 4	GA	Basic	A/B-II

Source: FAA NPIAS, MT Department of Transportation, ARC = Airport Reference Code

Figure 1-3 – Surrounding Airports

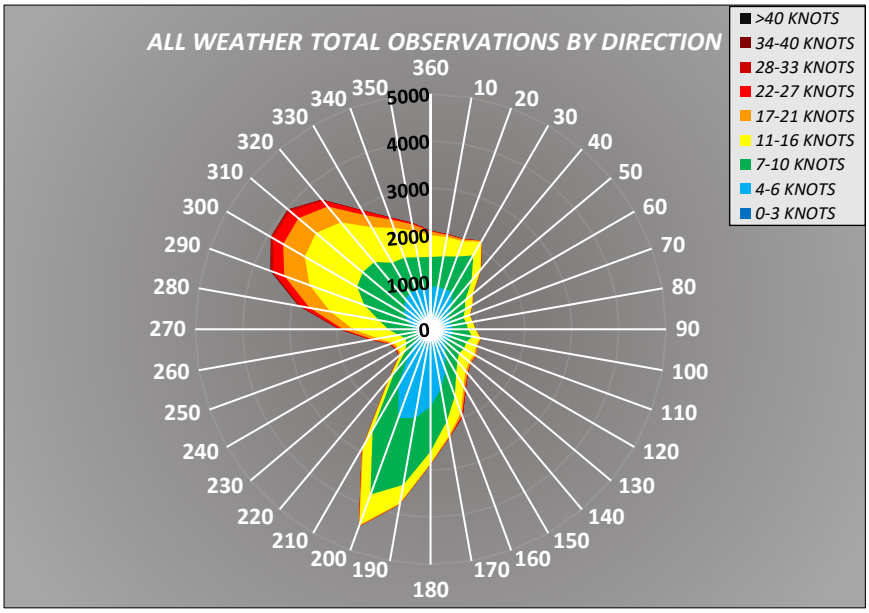


Climate

Sidney-Richland Regional Airport is located in a semi-arid climate, and experiences cold winters with moderate snowfall, averaging approximately 30-35 inches per year and temperatures in the 20s °F. Conversely, the summer season brings sunshine and warmer temperatures, up to 90 °F. Spring and summer are generally 'wetter', with July typically experiencing the highest rate of precipitation throughout the year. **Table 1-4– Average Weather** provides the normal conditions that are experienced throughout the year at Sidney, based on annual data collections from 1991-2020 by the National Weather Service. Sidney reports an average annual temperature of 45.2 °F and 15.5 inches of precipitation.

The airport has an Automated Weather Operating System (AWOS) located on the airfield. The AWOS is available on the frequency, 119.275 MHz. Data from the station shows prevailing winds are from the northwest and southwest and are generally aligned with the airport's runway orientation.

Figure 1-4 – Sidney Airport Wind Chart



Source: SDY AWOS (03/2015-03/2019, Hourly) from National Climatic Data Center

Table 1-4– Average Weather

Month	Precipitation (in.)	Snow (in.)	Average Low Temperature (°F)	Average High Temperature (°F)
January	0.45	7.0	**6.5**	27.2
February	0.37	5.6	10.6	32.0
March	0.58	3.0	21.0	45.8
April	1.17	1.7	31.8	60.5
May	2.40	0.7	42.7	71.3
June	**2.78**	-	52.3	79.1
July	2.65	-	57.3	**86.6**
August	1.30	-	55.1	86.4
September	1.62	-	45.5	75.8
October	1.08	1.5	33.6	59.4
November	0.59	3.0	21.2	41.9
December	0.51	**7.9**	10.7	30.6

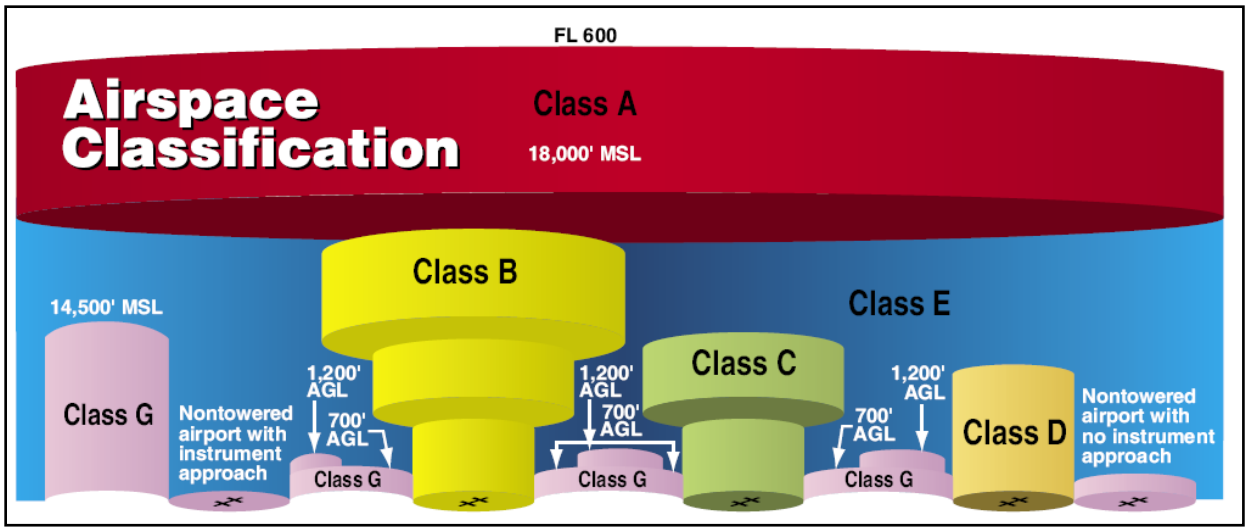
Source: National Weather Service Climate 1991-2020 – Sidney, MT

Airspace & Area Navigation Systems

The National Airspace System (NAS) consists of various classifications of airspace regulated by the FAA. Airspace classification ensures the safe separation of VFR and IFR aircraft. Airspace is separated into controlled, uncontrolled, special use, or other airspace. Controlled airspace is classified as A, B, C, D, or E. Uncontrolled airspace is classified as G. These classes specify appropriate minimum cloud clearances, visibility requirements, and other operating requirements for aircraft. The major difference between controlled and uncontrolled airspace is that the FAA does not exercise air traffic control over aircraft operating within uncontrolled airspace. Airspace is segregated into controlled, uncontrolled, special use or other airspace. Each airspace class has different operating rules.

The airspace surrounding SDY is classified as Class D controlled airspace. The existing Class E airspace begins at 700 feet AGL and extends to 1,200 feet AGL. This is considered sufficient to support any enhancement to instrument approach procedures.

Figure 1-5 – FAA Airspace Classifications



Source: Federal Aviation Administration (FAA) Pilot's Handbook of Aeronautical Knowledge (2007)

Automatic Dependent Surveillance-Broadcast (ADS-B)

ADS-B is a satellite-based surveillance technology in which aircraft transmit GPS position information to other aircraft and to ATC facilities. ADS-B will supplement primary ground-based radar. FAA has required all aircraft operating within airspace requiring a transponder to have ADS-B transmitting equipment installed by the year 2020 as part of the Next Generation Air Transportation System (NextGen) initiative. Various ground stations have been located nationwide to provide ADS-B coverage.

Communications & ATC

The ability for pilots to communicate with other pilots and air traffic control (ATC) is critical for the safety and efficiency of the overall air transportation system. SDY will continue to be an uncontrolled airport. Communications with ATC are made possible through an on-site transmitter allowing communications at lower altitudes. Radar coverage is available starting at approximately 500 AGL. Coverage with ATC is expected to be enhanced at lower altitudes with the establishment of satellite-based ADS-B infrastructure over time. No airport action is necessary now.

Airspace Protection

Airspace is an important resource around airports that is essential for safe flight operations. The airspace is protected through several layers of protection which include property ownership, avigation easements and land use/height restriction zoning.

LAND ACQUISITION

Land acquisition allows the airport to protect airspace and land use areas from possible intrusions. FAA encourages the airport sponsor to own the following land for existing and planned airport facility:

- Airport Infrastructure
- Runway and Taxiway Object Free Areas
- Runway Protection Zones
- Building Restriction Line
- Navigational Aid Critical Areas
- Airspace Protection

AVIGATION EASEMENTS

Avigation easements can control height and/or land use. They have often been used to control the area inside the Runway Protection Zone however the FAA has more recently recommended full acquisition of these properties. The easements can still be a very useful tool to protect the airport depending on the circumstances of particular properties and the type of protection that is needed.

LAND USE AND HEIGHT RESTRICTION ZONING

FAA recommends airport sponsors protect airport land use and airspace through local zoning. Owners of public airports are encouraged to enact airport overlay zoning to protect airspace and surrounding land use for public safety. The intent of zoning is to:

- Protect the airport from incompatible land uses that could interfere with the safety operation of the airport,
- Protect public safety by reducing the potential for fatalities, property damage or noise complaints within the vicinity of the airport, and
- Protect the public investment made by taxpayers in the airport and the economic benefits it provides to the region restrict land uses.

Federal - Part 77 Civil Airport Imaginary Surfaces

Title 14 CFR (Code of Federal Regulations) Part 77 *Safe, Efficient Use, and Preservation of the Navigable Airspace* is used to determine whether man-made or natural objects penetrate "imaginary" three-dimensional airspace surfaces and are obstructions. See **Appendix B – General Aviation Airports 101** for a detailed explanation of Part 77 surfaces. **Table 1-5** depicts the existing, future, and ultimate approach airspace surfaces for SDY. Any existing, future, or ultimate Part 77 obstructions located around SDY will be identified on the ALP for further action.

Table 1-5 – Part 77 Approach Airspace Requirements

Runway End	Approach Standards	Part 77 Code	Inner Width*	Outer Width	Length	Slope
Existing						
01, 19	Non-Precision Other-Than-Utility As low as 1 mile	C	1,000'	3,500'	10,000'	34:1
11, 29	Visual Other-Than-Utility As low as ½ Mile	B	500'	1,500	5,000'	20:1

*Source: Title 14 CFR Part 77, KLJ Analysis *Inner width is also the Primary Surface width driven by the most demanding approach to a runway. **Bold** indicates change from existing standard.*

State Airspace Protections

In addition to the Part 77 height surfaces, states often have tools or requirements that help airports protect their operational capabilities by controlling land use and height restrictions. However, for the state of Montana there are no specific codes in place to protect airports and the state relies on the surfaces defined by the FAA in Part 77 guidance.

Local Airspace Protections

There is an existing Airport Influence District established by zoning (Article 11.16.0) with the City of Sidney to protect the airport with heigh limitations. **Any changes that may be needed as a result of this planning process will be addressed in Chapter 4 – Implementation & Compatibility.**

Environmental Inventory

Introduction

This section provides an overview of environmental conditions and issues at the airport and the immediate vicinity. This environmental review section is not intended to fulfill the requirement of an environmental review required by National Environmental Policy Act (NEPA) or provide a definitive class of action determination for the proposed improvements. The purpose of considering environmental factors in airport master planning is to help thoroughly evaluate airport development alternatives and to provide information that will help expedite subsequent environmental processing. Appropriate environmental documentation in accordance with FAA Order 1050.1*, FAA National Environmental Policy Implementing Procedures* and US DOT Order 5610.1*, Procedures for Considering Environmental Impacts* required to be completed prior to commencing with project actions.

Key environmental resources are described for the existing airport area. **Figure 1-6: Environmental Overview Map** provides a graphical depiction of the existing environmental conditions described in this section.

Relevant Environmental Features

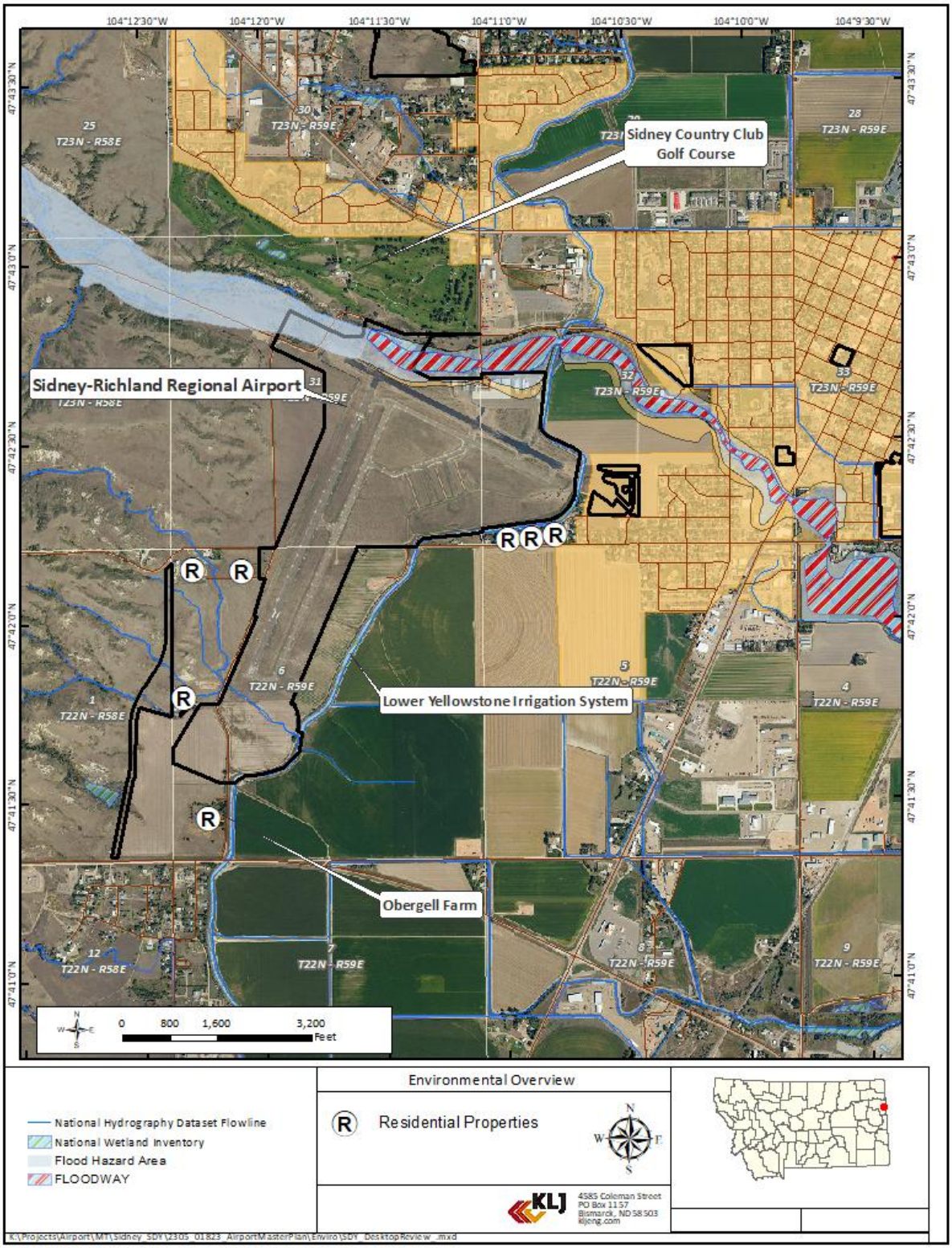
BIOLOGICAL RESOURCES

Biological resources include flora and fauna that are present in an area. SDY is in the Northwestern Great Plains Ecoregion according to US Geological Survey. Vegetation in this area consists of mostly mixed grass prairie, which is an intermediate ecosystem between a short grass and a tall grass prairie. The primary plants that make up a mixed grass prairie include western wheatgrass, green needle grass, blue grama, buffalograss, sideoats grama, and little bluestem. Common forbs and shrubs found in the area are purple coneflower, American vetch, Missouri greenrod, silver leaf scurfpea, and silver sagebrush. The surrounding area is used mostly as pasture to raise cattle and other livestock.

The following is not a complete list of fauna that could be present in the area; it represents the species most likely to be encountered. Bison historically roamed through the area. Wildlife species likely to be encountered in the area surrounding the airport include mule and white-tail deer, antelope, jackrabbit, cottontail-rabbit, coyote, badgers, raccoons, skunks, prairie dogs, turkey, pheasant, and grouse.

According to the U.S. Fish and Wildlife Services website Information for Planning and Consultation (IPaC), federally listed endangered, threatened, proposed or candidate species in Richland County include the Piping plover, Monarch butterfly, Suckley's Cuckoo Bumble Bee, Whooping crane, Northern long-eared bat, and Pallid Sturgeon. There are no Federal designated critical habits near the Airport. In accordance with Section 7 of the Endangered Species Act, if the FAA determines that an action *may affect* a threatened or endangered species, the FAA must initiate consultation with USFWS to review the effects of the action, and may be required to prepare a biological assessment. Additionally, according to IPaC, there are likely Bald Eagles present in the area surrounding the Airport. There are no documented nesting sites, however the Airport is in a poorly surveyed area within IPaC. Prior to project implementation, further analysis is required to identify the potential for fish, wildlife and plant impacts because of any proposed projects.

Figure 1-6 - Environmental Overview Map



DEPARTMENT OF TRANSPORATION, SECTION 4(F) AND SECTION 6 (F)

Section 4(f) is applicable to projects which require the use of publicly-owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance. **Figure 1-6: Environmental Overview Map** provides a graphical depiction of the areas surrounding the Airport property.

There is a privately-owned golf course (Sidney County Club) located to the north of the airport across Lone Tree Creek. There are no public parks or recreation properties in the immediate vicinity of the airport. Peterson, Lyndale Acres, and Moose Park are the nearest parks and are located approximately 0.5 miles to the east of the airport. Further review of the potential to impact Section 4(f) resources specifically regarding potential cultural sites or historic properties would be required at the environmental documentation phase of any projects that would require ground disturbance.

Section 6(f) from the Land & Water Conservation Fund Act provides that the Secretary of the Interior shall not approve any program or project which requires the use of state and local parks, lakes, trails, beaches, and conservation lands, unless: (1) if the request complies with Section 4(f), (2) information is provided that is needed to make findings required under Section 6(f), and (3) coordination is carried out with the NPS and the state agency responsible for the Section 6(f) property.

A review of Land Water Conservation Fund grants for Richland County indicates that twenty-six grants have been issues for properties within the county. These properties are not located near the Airport. Proposed improvements are not anticipated to impact existing Section 6(f) properties; therefore, no further analysis is required.

HAZARDOUS MATERIALS

There are no reported spills or hazardous material leaks in or around SDY. This is based on a review of the MT Department of Environment Quality and Environmental Protection Agency databases regarding underground storage tanks, abandoned mines, listings for superfund sites, and sites covered under the Resource Conservation and Recovery Act. Prior to acquisition of new land to be owned in fee title by an airport sponsor, the FAA recommends that an Environmental Due Diligence Audit (EDDA) be performed. An EDDA includes a more detailed review of an area, relative to NEPA-level review, for the possible presence of environmental contamination.

SOLID WASTE

The airport has not produced significant amounts of solid waste including garbage, refuse or sludge as compared to the broader community. FAA requires a Solid Waste Management Plan to be developed as part of this Airport Master Plan study. A Solid Waste study is in **Appendix E: Recycling & Solid Waste Plan**.

HISTORICAL, ARCHITECTUAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

A file search was conducted of the records at the Montana State Historical Preservation Office (SHPO) as part of a 2014 Class III Cultural Resource Inventory. This review revealed that there were six recorded sites on or within one-half mile of the Airport. One previous record site, 24RL0312 (an aircraft hangar) is located on the Airport. Five previously recorded sites are outside of the Airport but within one-half mile; 24RL01448 (bridge), 24RL0122 (bridge), 24RL0148 (coal mine), 24RL0173/0196 (bridge), 24RL0204 (Lower Yellowstone irrigation system), and 24RL0395 (National Guard armory building). The inventory

identified three historic sites within the inventory area that included 680 acres of airport and surrounding property. These sites are 24RL0312 (aircraft hangar), 24RL0471 (Obergfell farm) and 24RL0472 (Sidney-Richland Regional Airport). 24RL0312 (aircraft hangar) was previously eligible for listing on the NRHP but is now recommended not eligible for listing due to the loss of integrity. The loss of integrity occurred in 2005 when the hangar was moved for the second time and converted into a garage/shop. The other two sites were recommended not eligible for NRHP listing.

Coordination with the SHPO is necessary for projects involving new land disturbance. Additionally, any project affecting buildings that have the potential to be listed in the National Register of Historic places would require coordination with SHPO. Structures that are more than 50 years old may be eligible for inclusion on the NRHP. Further review regarding potential cultural sites historic properties may be required at the environmental documentation phase.

FARMLAND

Impacts to farmlands considered to be prime, unique or statewide or locally important need to be considered under NEPA. The Farmland Protection Policy Act (FPPA) of 1981 provides protection to prime and unique farmlands. The Act defines prime farmland as land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. Unique farmland is farmland that is used for production of specific high value food, feed, and fiber crops. Statewide farmland is of statewide importance to produce food, feed, fiber, forage, and oil seed crops, and is determined by state agencies. Locally important farmland is where the production of food, feed, fiber, forage, and oilseed crops, are not identified as having national or statewide importance but identified by local agencies as important.

A search of the USDA Natural Resources Conservation Service (NRCS) web soil survey identified land located on and around the Airport is mostly not Prime Farmland. There are segments of land classified as Prime farmland if irrigated located on airport property near the south end of Runway 1/19. Existing airport property is not subject to the Farmland Protection Policy Act. If land outside the existing airport property were to be acquired and converted to airport property, further consultation with NRCS would be required during a project environmental review stage to calculate the Farmland Conversion Impact Rating. No further review is needed for projects occurring on existing airport property.

LAND USE

Compatible land uses are those that typically are not influenced by normal airport operations. The compatibility of existing land uses in the vicinity of an airport is usually associated with the extent of noise impacts occurring from airport property and safety concerns. Incompatible land uses are typically items such as fuel storage facilities, areas of public assembly, tree rows, high density residential areas, and areas that have the potential to attract hazardous wildlife. SDY is bordered by pastureland, cropland and open spaces on the east and west sides. There are residential homes located approximately one-half mile off both ends of the primary runway of the Airport. There are also homes located approximately one-quarter mile of the east end of the crosswind runway. Other land use considerations including surrounding physical land uses, airport zoning regulations and FAA airport design land use compatibility standards have been previously identified in this Chapter.

Wildlife Hazards

FAA has implemented procedures and guidelines to mitigate wildlife damages to aircraft and aviation operations. Wildlife collisions have increased over the past two decades and reporting has increased awareness of hazards to human health, safety and financial losses.

Property surrounding SDY is private pastureland to the west with cropland to the east and south. A golf course is located directly north of the Airport and the town of Sidney is located north and east of that. The Yellowstone River is located approximately 4 miles to the east of the Airport.

SDY is surrounded by perimeter fence that has shown to provide adequate protection from large mammals such as deer, antelope and coyotes from crossing over the Airport property including operations areas such as the runway. The Airport should monitor wildlife concerns and if an issue is identified a site visit from a qualified wildlife biologist could help to provide recommendations to reduce wildlife concerns at the airport.

WATER RESOURCES

Floodplains

Floodplains constitute lands situated along rivers and their tributaries that are subject to periodic flooding on the average interval of 100 years or less. The northern end of the Airport is located within a 100-year floodplain; therefore, projects affecting the northern portion of the Airport would require approval from local floodplain administers for Richland County.

Wetlands

Wetlands are defined in Executive Order 11990, Protection of Wetlands, as those areas that are inundated by surface or groundwater with a frequency to support, and under normal circumstances does or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Three parameters that define a wetland as outlined in the US Army Corps of Engineers Wetland Delineation Manual are hydric soils, hydrophytic vegetation, and hydrology. In addition to maintaining water quality in rivers and recharging groundwater among other positive benefits, wetlands may have the potential to attract wildlife that can be hazardous to aircraft using the Airport.

There are wetlands in the National Wetland Inventory (NWI) located on and near Airport property along the north end of the property. These are forested/shrub wetlands located along Lone Tree Creek, off the north edge of Airport property. Projects located off existing airport property and/or that would impact the identified drainages would require a delineation and coordination with USACE early in the project development phase. Please refer to **Figure 1-6**.

Surface and Ground Waters

The Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977, provides the authority to establish water quality standards, control discharges into surface and subsurface waters, develop waste treatment management plans and practices, issue permits for discharges (Section 402) and for dredged or fill material (Section 404).

Airport activities can affect water quality. This is mainly due to stormwater runoff from paved areas. Providing treatment for stormwater runoff from runway, taxiway and apron areas using best management practices and grassed swale areas helps to minimize potential impacts to water quality.

Drainage at SDY generally sheet flows across vegetated areas into the off-airport drainages that are also vegetated. Drainage from the Airport enters Lone Tree Creek north of the property and the Lower Yellowstone Irrigation Ditch on the east side of the Airport. Both drainages ultimately flow into the Yellowstone River located about 4 miles east of the Airport.

Environmental Features Not Relevant

AIR QUALITY CLASSIFICATION

The FAA Orders 1050.1 and US DOT 5610.1 outline procedures for determining when airport-related projects require an air quality analysis, and if so, what level of analysis may be necessary. The Airport is located within an area of attainment for all National Ambient Air Quality Standards (NAAQS); due to the small size of the airport and limited number of operations that would occur at the airport detailed analysis is very unlikely to be required.

COASTAL RESOURCES

Coastal Resources include Coastal Barriers and Coastal Zone Management. Coastal Barriers include islands that protect the mainland from storm or hurricane-driven winds or waves by providing a buffer to the shoreline. Coastal Barriers protect fish, wildlife, human life, and property along coasts and shorelines. Facilities are not recommended to be built within the Coastal Barrier Resource System (CBRS). Coastal Zone Management includes development provisions actions to protect major shorelines and associated recreational, historical, cultural, and aesthetic values. The area is not located near a coastal zone as defined in the Coastal Zone Management Act of 1972. No further analysis is required.

NATURAL RESOURCES AND ENERGY

Impacts on energy supplies and natural resources are related to changes of stationary facilities, such as airfield lighting or terminal building heating and expansion, as well as any increase of fuel consumption by aircraft or ground vehicles. Proposed improvements at SDY would require additional energy but is not anticipated to cause significant impacts to energy supplies or natural resources. No further analysis is required.

NOISE AND NOISE COMPATIBLE LAND USE

Noise emitted from aircraft can significantly affect the well-being of people living or working near an airport. The FAA requires noise studies for certain projects. If a project involves Airplane Design Groups I and II and has forecasted operations of less than 90,000 annual propeller operations or 700 annual adjusted jet operations such as the case at SDY then no further noise analysis is required.

VISUAL IMPACTS

Minor development projects at Sidney-Richland Regional Airport are not expected to significantly impact the visual aesthetics of the area. The landscape and surrounding views, along with viewers' responses to scenic resources or man-made features, are unlikely to be noticeably affected. From the perspective of those viewing the airport from outside, any potential visual contrast or compatibility issues with nearby landforms and land uses are expected to be minimal.

WATER RESORCES

Wild and Scenic Rivers

No designated Wild and Scenic Rivers are located near SDY. No direct or indirect impacts to wild scenic rivers would occur due improvement. No further analysis is required.

Aviation Activity

The Aviation Activity Forecasts section of the Airport Master Plan analyzes current and future airport activity at the Sidney-Richland Regional Airport (SDY). Forecasting provides an airport with a general idea of the magnitude of growth, as well as fluctuations in activity anticipated over the forecast period. They assist the Airport in determining existing and planned future facility needs based on airport activity level estimates and projections. Forecasts attempt to develop a realistic estimate of future changes.

Prior to 2024, the FAA required forecasting of annual airport operations and based aircraft as well as the critical design aircraft. This was a key approval point for the FAA where they would approve the forecast operations, based aircraft, critical design aircraft and airport layout plan.

Recently this has changed for airports like SDY where only the critical design aircraft and airport layout plan require FAA approval. On August 12, 2024, the FAA provided guidance regarding the requirement for forecasts developed for airport master plans. According to the guidance, GA airports with less than 90,000 annual operations and not expected to exceed 90,000 operations in the foreseeable future, a detailed forecast is not warranted. SDY will remain below the 90,000 annual operations level. The forecasting for this Airport Master Plan will therefore be focused on practical elements that are still needed and listed as follows:

- Critical Design Aircraft (requires FAA approval);
- Based Aircraft (to determine the amount and type of hangar space needed);
- Annual Airport Operations (needed when pavement designs are completed in the future); and,
- Peak Aircraft Operations (to determine the amount of apron space and hangar space needed for itinerant aircraft)

The forecasting will use simple socioeconomic/demographic projections, quantifiable airport activity, and industry metrics used to determine activity. The forecasts developed for the airport will be important to adequately plan, size, and sequence development of future facilities to meet future projected growth.

It is important to point out that forecasts in this context are to demonstrate how much activity could likely occur at an airport through the planning period. In most all cases, development at airports is based on actual demand rather than forecasts.

The forecast portrays the level of activity that is likely to occur through the planning period, but airport improvements will occur based on actual activity.

Forecast Rationale

Forecasting the demand for airport use is a critical step in airport development. It allows an airport to examine its ability to satisfy the needs of the aircraft and people it serves, and to determine the approximate timing of necessary improvements by projecting airport user activity levels. FAA provides general guidance in evaluating factors that affect aviation activity. FAA AC 150-5070-6B states:

> *"Planners preparing forecasts of demand or updating existing forecasts should consider socioeconomic data, demographics, disposable income, geographic attributes, and external factors such as fuel costs and local attitudes towards aviation."*

For the purpose of this forecast, the following defining factors have been used to develop the forecast:

1. Based on availability of data when the project began (June 2024), the last full year of data, 2023 has been used as the baseline year;
2. The forecast period is 20 years encompassing years 2024 through 2044; and,
3. The core airport service area is considered the City of Fairmont and Martin County.

The forecasts prepared for the airport assume an unconstrained scenario where facilities are available for use to meet demand. Time periods will be in 5-year increments, including:

- Short-Term (5-year);
- Mid-Term (10-year); and,
- Long-Term (20-year) resulting in forecasts for years 2029, 2034, 2039, and 2044.

Forecasting Methods

Various methodologies are used to develop aviation forecasts. Forecasts should not be considered predictions of the future but rather an educated projection of future activity. Some of the following forecasting methods were applied for this analysis, including trend extensions, socioeconomic methodologies, and professional judgment.

Trend Extensions - A trend extension forecast identifies historical growth patterns and projects those patterns into the future. Often, a trend line can be drawn through a graph of the historical data to reveal an overall trend, which can then be extended into the immediate future to develop a forecast.

Socioeconomic Methodologies - Socioeconomic information within the airport service area can provide insight into factors that affect aviation activity at an airport. Commonly evaluated metrics include population, employment, income, gross regional product, and retail sales. Historic trends, current data and forecast estimates are also evaluated in this section to identify socioeconomic trends that may affect aviation activity forecasts at the airport. Growth rates are used as a method to compare the airport service area to other regional, statewide, and national trends.

Professional Judgement - Judgmental methods are educated estimations of future events based on the industry knowledge, experience, and intuition of the forecaster. This method permits the inclusion of a broad range of relevant information into the forecasting process and is usually used to refine the results of the other methods.

Socioeconomic Data

Socioeconomic information within the airport service area can provide insight into factors that affect aviation activity at an airport. Commonly evaluated metrics include population, employment, income, gross regional product, and retail sales. Historic trends, current data and forecast estimates are evaluated in this section to identify socioeconomic trends that may affect aviation activity forecasts at SDY. Growth rates are used as a method to compare the airport service area to other regional, statewide, and national trends. For purposes of this study analysis, Richland County has been determined to represent the core local airport service area.

Population

Population is a basic indicator of the number of people who may utilize the airport. The City of Sidney is within Richland County. Based on data from the United States Census Bureau, the population of Sidney was reported as 11,375 in 2024, which is the baseline year for this study. The City of Sidney makes up approximately 55% of the total population in Richland County according to 2020 Census data. As is evident from **Table 1-6** below, the historical growth rate for Richland County from 2000 to 2020 is just slightly below that of the State of Montana, at 0.897% and 0.924%, respectively. These are both above the rate for the United States, at 0.809%. However, the forecasted growth rate for Richland County is not as closely related to that of the State of Montana and the United States over the next twenty years. It can be assumed that this slower growth after years of steady incline in the early 2000's is a residual effect of the Bakken era boom on the community, which was discussed earlier in the Airport and Community Overview section of the narrative.

Table 1-6– Population

Year	Richland County	Montana	United States
2000	9,619	903,773	282,162,375
2005	9,207	940,102	295,516,551
2010	9,760	990,730	309,327,089
2020	11,501	1,086,193	331,501,080
Historical Annual Growth Rate	*0.897%*	*0.924%*	*0.809%*
2024 (Baseline)	*11,375*	*1,127,334*	*338,712,837*
2029	*11,503*	*1,164,979*	*349,876,672*
2034	*11,593*	*1,201,259*	*360,685,310*
2044	*11,656*	*1,268,651*	*380,956,763*
Forecast Annual Growth Rate	*0.122%*	*0.592%*	*0.589%*

Source: Woods & Poole Economics, U.S. Census Bureau

Income

Per Capital Personal Income (PCPI) was also considered as a factor affecting aviation activity. Those who have more disposable income may have a higher propensity to utilize the time savings of aviation, or simply more disposable income for leisure. Richland County historically has shown growth in PCPI at a rate of 3.51% but is forecasted to decrease over the course of the planning period, at a rate of 1.558%. This growth is slightly higher than both the state of Montana and the U.S growth rates.

Table 1-7 – Per Capita Personal Income

Year	Richland County	Montana	United States
2000	$28,090	$28,427	$41,384
2005	$38,452	$33,088	$43,432
2010	$51,624	$35,493	$44,807
2015	$62,122	$43,859	$49,393
2020	$56,009	$50,280	$56,492
Historical Annual Growth Rate	*3.511%*	*2.892%*	*1.568%*
2024 (Baseline)	*$61,294*	*$50,287*	*$58,379*
2029	*$66,860*	*$54,323*	*$63,255*
2034	*$72,166*	*$58,387*	*$68,111*
2039	*$77,685*	*$62,631*	*$73,155*
2044	*$83,514*	*$67,097*	*$78,409*
Forecast Annual Growth Rate	*1.558%*	*1.452%*	*1.458%*

Source: Woods & Poole Economics 2017 Constant Dollars

Employment

Total employment is the measure of the active workforce. Richland County has a strong mining, transportation, and healthcare-based economy. The total of these three industries make up approximately 35 percent of the workforce. Mining is the largest source of employment in the area, accounting for 13 percent of the workforce. Historically, employment in Richland County has steadily increased, with a twenty year historical rate of 1.152%, greater than that of both the State of Montana and the U.S. growth rate. Forecasted growth rates, however, are not as vigorous, with the forecasted rate for Richland County being 0.864%, less than that of both Montana and the U.S.

Table 1-8– Airport Service Area Employment (2024)

Industry	Employment	Earnings
Mining	803	$57110,000
Health Care and Social Assistance	807	$47,007,000
Transportation and Warehouse	519	$44,651,000
State and Local Government	672	$36,496,000
Construction	611	$33,745,000
Wholesale Trade	299	$25,265,000
Farming	584	$25,024,000
Retail	738	$24,060,000
Real Estate & Rental Leasing	513	$23,423,000
Manufacturing	398	$17,702,000
Other Services (Except Public Administration)	411	$13,487,000
Accommodation and Food Services	574	$12,297,000
Professional and Technical Services	234	$12,231,000
Finance & Insurance	349	$11,046,000
Administrative and Waste Services	176	$8,915,000
Forestry, Fishing, Related Activities	173	$8,280,000
Federal Civilian Government	80	$6,818,000
Utilities	56	$6,755,000
Arts, Entertainment and Recreation	162	$3,774,000
Information	44	$2,349,000
Management of Companies	17	$1,958,000
Federal Military	43	$1,569,000
Educational Services	59	$532,000
All Industries	**8,322**	**$421,615,000**

Source: Woods & Poole Economics (2017 Dollars)

Table 1-9 – Total Employment (in thousands)

Year	Richland County	Montana	United States
2000	6,131	552,696	165,370,755
2005	6,680	600,585	172,338,384
2010	7,654	616,342	172,901,669
2020	7,709	668,310	190,776,766
Historical Annual Growth Rate	*1.152%*	*0.954%*	*0.717%*
2024 (Baseline)	*8,468*	*727,635*	*215,251,577*
2029	*8,885*	*769,675*	*229,231,082*
2034	*9,287*	*810,522*	*242,816,472*
2044	*10,045*	*891,158*	*269,430,819*
Annual Growth Rate	*0.864%*	*1.019%*	*1.129%*

Source: Woods & Poole Economics, U.S. Census Bureau

National Aviation Activity

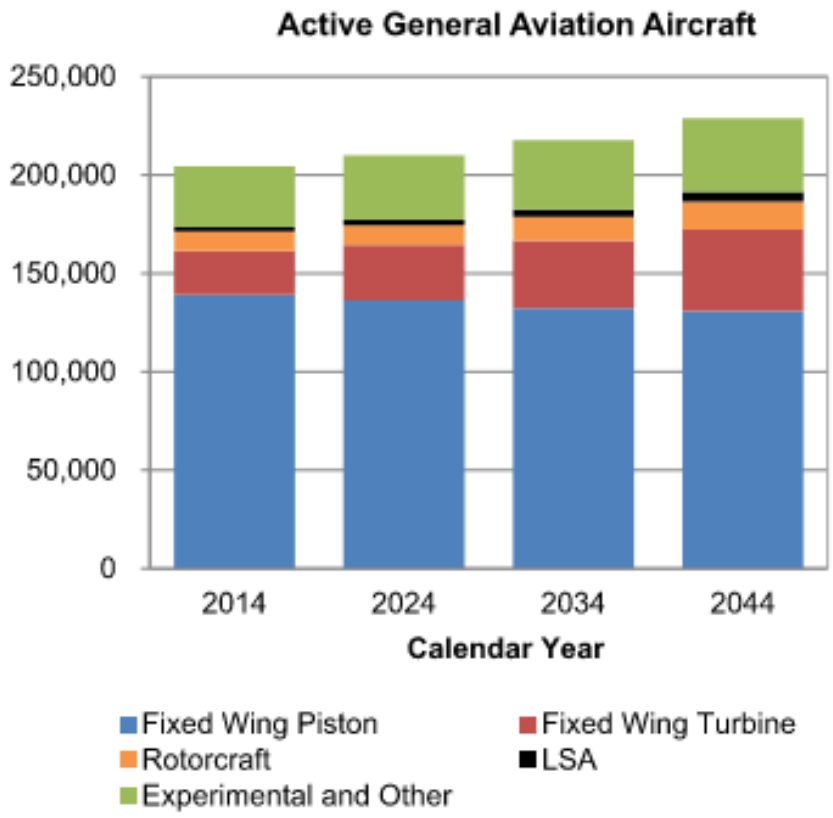
At a national level, the FAA annually reviews a range of historic aviation activity and generates a 20-year forecast. At the time of this report, the latest forecast issued was for the period of 2024-2044 based on federal fiscal year. Relevant elements of this forecast for the airport have been summarized in the following tables and graphs.

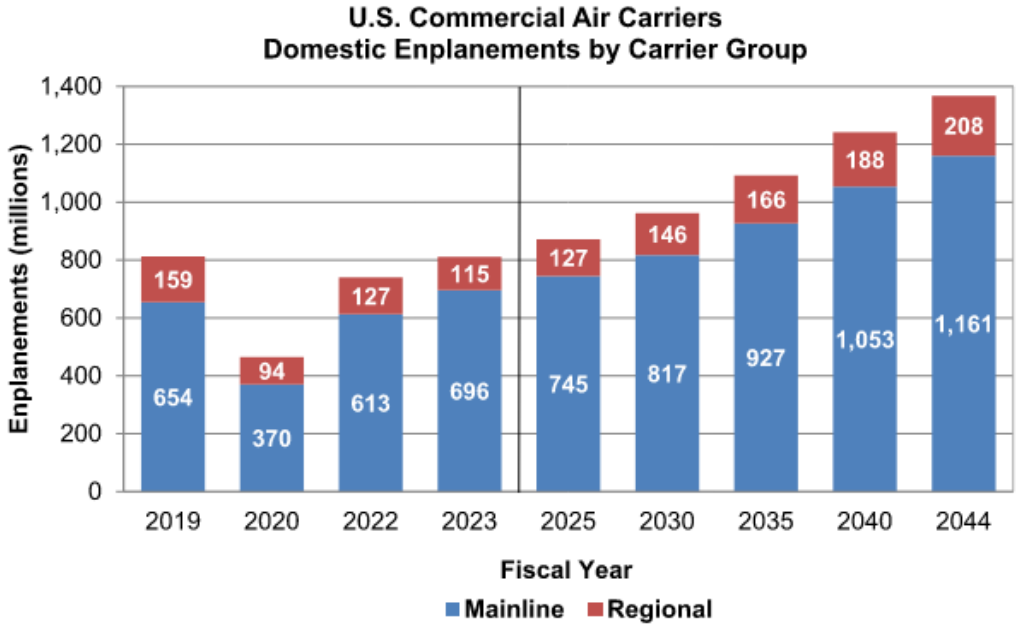
Table 1-10 – Active General Aviation Aircraft

Year	Single Piston	Exprmt	Light Sport	Multi Piston	Turbo Prop	Turbo Jet	Rotor
2013	124,398	24,918	2,056	13,257	9,619	11,637	9,765
2018	130,179	27,531	2,554	12,861	9,925	14,596	9,989
2023	125,490	28,160	2,730	11,580	10,785	16,570	9,925
CAGR	*0.05%*	*0.82%*	*1.91%*	*-0.89%*	*0.76%*	*2.38%*	*0.11%*
	0.21%						
2024	*124,965*	*28,265*	*2,835*	*11,520*	*10,860*	*17,045*	*10,090*
2029	*122,920*	*29,325*	*3,335*	*11,265*	*11,190*	*19,680*	*11,020*
2034	*121,350*	*30,440*	*3,900*	*11,065*	*11,680*	*22,525*	*12,030*
2044	*119,930*	*32,705*	*5,105*	*10,860*	*13,255*	*28,325*	*14,025*
CAGR	*-0.21%*	*0.73%*	*2.98%*	*-0.29%*	*1.00%*	*2.57%*	*1.66%*
	0.05%						

Total Aircraft Growth Rates			
Period	Total Pistons	Total Turbines	Total GA
2013-2023	*-0.06%*	*1.96%*	*0.44%*
2024-2034	*-0.28%*	*2.07%*	*0.36%*
2024-2044	*-0.19%*	*2.00%*	*0.26%*

Source: FAA Forecast 2024-2044 Table 28


Active General Aviation Aircraft
250,000
200,000
150,000
100,000
50,000
0
2014
2024
2034
2044
Calendar Year
Fixed Wing Piston
Fixed Wing Turbine
Rotorcraft
LSA
Experimental and Other


U.S. Commercial Air Carriers
Domestic Enplanements by Carrier Group
Enplanements (millions)
1,400
1,200
1,000
800
600
400
200
0
159
654
94
370
127
613
115
696
127
745
146
817
166
927
188
1,053
208
1,161
2019
2020
2022
2023
2025
2030
2035
2040
2044
Fiscal Year
Mainline
Regional

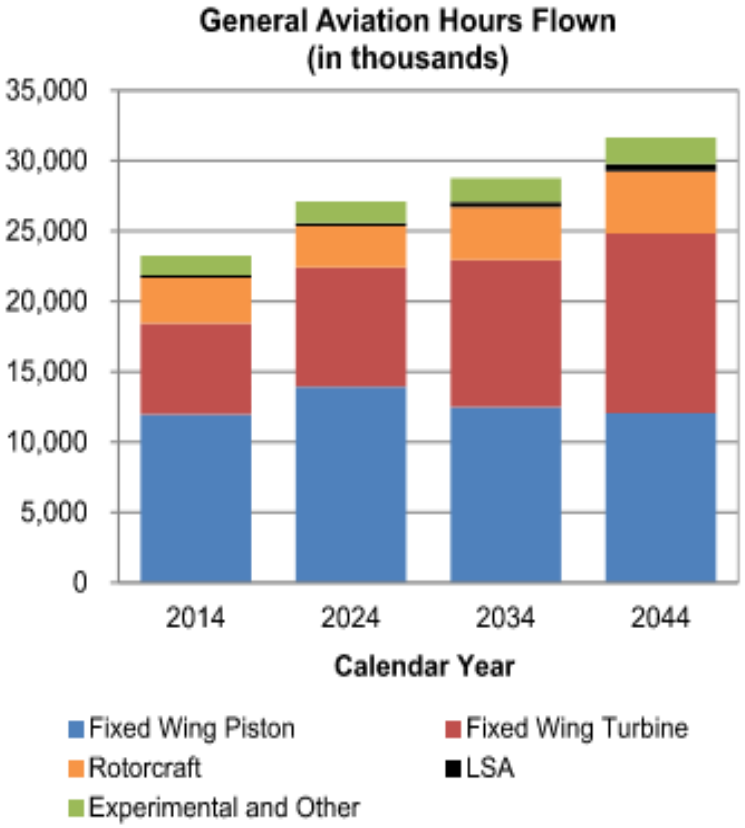


Table 1-11 – General Aviation Hours Flown (Thousands)

Year	Single Piston	Exprmt	Light Sport	Multi Piston	Turbo Prop	Turbo Jet	Rotor
2013	10,706	1,191	173	1,646	2,587	3,488	2,949
2018	12,092	1,153	187	1,694	2,736	4,592	2,922
2023	12,702	1,311	240	1,458	2,932	5,355	2,857
CAGR	*1.15%*	*0.64%*	*2.21%*	*-0.81%*	*0.84%*	*2.90%*	*-0.21%*
	1.11%						
2024	*12,449*	*1,339*	*251*	*1,478*	*2,994*	*5,479*	*2,940*
2029	*11,413*	*1,458*	*306*	*1,491*	*3,141*	*6,280*	*3,336*
2034	*11,013*	*1,545*	*368*	*1,491*	*3,279*	*7,188*	*3,715*
2044	*10,517*	*1,698*	*500*	*1,528*	*3,718*	*9,061*	*4,445*
CAGR	*-0.84%*	*1.20%*	*3.50%*	*0.17%*	*1.09%*	*2.55%*	*2.09%*
	-0.49%						

Total Hours Flown Growth Rates			
Period	Total Piston	Total Turbine	Total GA
2013-2023	*1.14%*	*2.14%*	*1.52%*
2024-2034	*-0.94%*	*2.21%*	*0.60%*
2024-2044	*-0.62%*	*2.11%*	*0.78%*

Source: FAA Forecast 2024-2044 Table 29

Table 1-12 – Gallons of Fuel for General Aviation (Thousands)

Year	Single Piston	Exprmt	Light Sport	Multi Piston	Turbo Prop	Turbo Jet	Rotor*
2013	117,197	16,484	883	53,853	188,607	945,010	134,667
2018	152,396	20,340	1,028	49,611	233,663	1,454,658	140,231
2023	154,429	21,446	1,321	45,735	248,285	1,702,270	133,127
CAGR	*1.85%*	*1.77%*	*2.72%*	*-1.08%*	*1.85%*	*4.00%*	*-0.07%*
	1.85%						
2024	*151,057*	*21,914*	*1,382*	*46,142*	*252,520*	*1,725,076*	*136,939*
2029	*137,105*	*23,686*	*1,635*	*45,484*	*259,786*	*1,879,920*	*152,860*
2034	*130,986*	*24,907*	*1,903*	*44,485*	*265,865*	*2,085,869*	*166,184*
2044	*121,628*	*27,047*	*2,509*	*43,537*	*288,882*	*2,471,085*	*183,684*
CAGR	*-1.08%*	*1.06%*	*3.03%*	*-0.29%*	*0.67%*	*1.81%*	*1.48%*
	-0.71%						

*Source: FAA Forecast 2024-2044 Table 31; * Jet and Aviation Gasoline combined*

Table 1-13 U.S Regional Carriers Passenger Aircraft Fleet

Year	Less Than 9 Pax Seats	10-19 Pax Seats	20-30 Pax Seats	31-40 Pax Seats *	Over 40 Pax Seats*	Total Fleet
2013	337	94	52	37	1,693	2,213
2018	360	77	20	14	1,849	2,320
2023	245	57	7	4	1,459	1,772
CAGR	-3.14%	-4.88%	-18.17%	-19.95%	-1.48%	-2.20%
2024	240	56	7	1	1,490	1,794
2029	215	50	6	-	1,460	1,731
2034	191	45	5	-	1,532	1,773
2044	130	30	4	-	1,836	2,000
CAGR	-3.02%	-3.04%	-3.12%	-100.00%	1.05%	0.54%

*Source: FAA Forecast 2024-2044 Table 27; *Prop and Jet combined*

Table 1-14 U.S Regional Carrier Passenger Metrics

Year	Revenue Pax (Millions	% Load Factor	Avg Seats/Aircraft Mile
2013	155	78.4	56.1
2018	154	79.7	63.8
2023	115	80.7	66.9
CAGR	-2.94%	0.29%	1.78%
2024	124	81.0	67.4
2029	143	81.2	69.9
2034	162	82.0	72.5
2044	208	82.4	78.0
CAGR	2.62%	0.09%	0.73%

Source: FAA Forecast 2024-2044 Table 24, 25 and 26

Table 1-15 – Compound Annual Growth Trends Summary

Category	Area	Historic (10 year)	Forecast (20 year)
Population	Montana	0.92%	0.59%
	Richland Co.	0.90%	0.12%
Per Capita Personal Income	Montana	2.89%	1.45%
	Richland Co.	3.51%	1.56%
Employment	Montana	0.95%	1.02%
	Richland Co.	1.15%	0.86%
Active Aircraft	Single/Exp/Sport	0.21%	0.05%
	Multi Piston	-0.89%	-0.29%
	Turbo Prop	0.76%	1.00%
	Turbo Jet	2.38%	2.57%
	Rotor	0.11%	1.66%
Hours Flown	Single/Exp/Sport	1.11%	-0.49%
	Multi Piston	-0.81%	0.17%
	Turbo Prop	0.84%	1.09%
	Turbo Jet	2.90%	2.55%
	Rotor	-0.21%	2.09%
Gallons of Fuel	Single/Exp/Sport	1.85%	-0.71%
	Multi Piston	-1.08%	-0.29%
	Turbo Prop	1.85%	0.67%
	Turbo Jet	4.00%	1.81%
	Rotor	-0.07%	1.48%
U.S Regional Carriers Fleet	Less than 9 Passenger Seats	-3.14%	-3.02%
	10-19 Passenger Seats	-4.88%	-3.04%
	20-30 Passenger Seats	-18.17%	-3.12%
	31-40 Passenger Seats	-19.95%	-100.00%
	Over 40 Seats	-1.48%	1.05%
	Total Fleet	-2.20%	0.54%
Air Cargo Revenue Ton Miles	Domestic	4.08%	2.04%
U.S Regional Carrier Metrics	Average Seats/Aircraft Mile	1.78%	0.73%
	Revenue Passengers	-2.94%	2.62%
	% Load Factor	0.29%	0.09%
Shading Notes	*1.50% or greater*		
	-0.01% or less		

Source: Woods & Poole Economics, U.S. Census Bureau, FAA Forecast 2024-2044

Verified Aircraft Operations

The key element to examine existing and forecast activity at the airport is to look at all operations at the airport that can be verified. Verified operations consist of those measured through the FAA Traffic Flow Management System (TFMS) which is a measurement of the operations conducted with instrument flight plans. Outside of instrument operations, the visual flight plan operations are measured by some operators such as aerial applicators or flight training.

The historic TFMS operations and other measured operations are portrayed in **Table 1-16 Verified Aircraft Operations Annually**. The remainder of the visual operations, which are the majority of general aviation operations, are derived from estimates which will be covered later.

Table 1-16 – Verified Aircraft Operations by Year (TFMS)

Category	2020	2021	2022	2023	2024
A/B-I	2,762	2,957	2,074	3,506	3,824
A/B-II	883	1,354	1,531	1,752	1,670
C/D-I	0	12	3	3	8
C/D-II	65	82	144	74	52
ADG-III	4	0	2	0	0
Total	3,714	4,405	3,754	5,335	5,554

Source: KLJ Analysis, FAA Traffic Flow Management System

Table 1-17 Total Verified Annual Operations (TFMS)

ID	Make	Model	Type	AAC	ADG	TDG	MTOW (lbs.)	2024 Ops
C240	Cessna	Corvalis TTx	Piston	A	I	1-A	3,600	34
BE36	Beechcraft	Bonanza 36	Piston	A	I	1-A	3,650	30
C182	Cessna	182	Piston	A	I	1-A	3,100	14
SR22	Cirrus	SR-22	Piston	A	I	1-A	2,358	10
P212	Tecnam	P-2012	Piston	B	I	1-A	8,113	2,584
C402	Cessna	402 Utiliner	Piston	B	I	2-A	6,300	930
C340	Cessna	340	Piston	B	I	1-A	5,990	100
BE99	Beechcraft	AIRLINER 99	Turboprop	B	I	1-A	11,300	20
BE10	Beechcraft	King Air 100	Turboprop	B	I	1-A	11,800	14
C510	Cessna	Citation Mustang	Jet	B	I	1-A	8,645	14
C414	Cessna	414A	Piston	B	I	2-A	6,750	10
C525	Cessna	Citation CJ1	Jet	B	I	1-A	10,700	8
SBR1	North American	CT-39 Sabreliner	Jet	B	I	1-A	20,172	8
PC12	Pilatus	PC-12	Turboprop	A	II	2-A	10,450	1,212
C208	Cessna	208 Caravan	Turboprop	A	II	1-A	9,062	4
BE20	Beechcraft	King Air 200	Turboprop	B	II	2-A	12,500	224
BE9L	Beechcraft	King Air C90	Turboprop	B	II	1-A	10,485	118
B350	Beechcraft	Super King Air 350	Turboprop	B	II	2-A	15,000	28
C25B	Cessna	Citation CJ3	Jet	B	II	2-A	13,870	24
E55P	Embraer	Phenom 300	Jet	B	II	1-A	17,968	20
C441	Cessna	Conquest II	Turboprop	B	II	1-A	9,850	14
AC95	Gulfstream Aerospace	Commander 1000	Turboprop	B	II	2-A	10,325	6
C25C	Cessna	Citation CJ4	Jet	B	II	1-A	17,110	6
CL35	Bombardier	Challenger 350	Jet	C	II	1-B	40,600	6
H25B	British Aerospace	Hawker 800	Jet	C	II	1-B	28,000	3
C560	Cessna	Citation Ultra	Jet	D	II	2-A	16,300	36
Other Verified Operations				A/B	I	-	-	48
				A/B	II	-	-	15
				C/D	I	-	-	8
				C/D	II	-	-	6
Total Verified Annual Operations								5,554

Source: KLJ Analysis

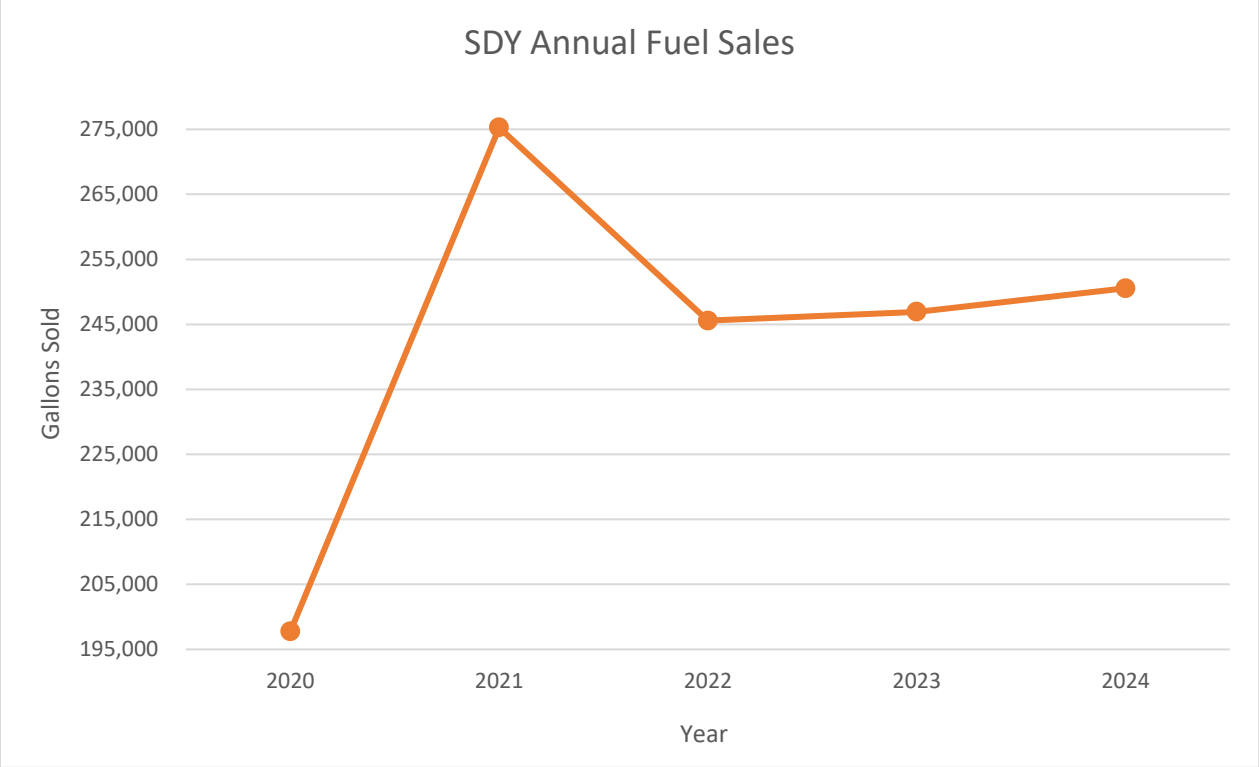
In an effort to determine peak activity periods, fuel sales were also examined. The gallons of fuel sold, and the number of sales transactions, were gathered over the past five-year period. The fuel sales were compared with TFMS operations by aircraft fuel type. See **Table 1-18 Annual Fuel Sales and TFMS Operations by Fuel Type**. There was found to be little correlation between fuel sales and TFMS operations and it was surmised that this is due to two things. First not all operations require refueling at Fairmont and second is that there are an unknown number of non-TFMS operations that occur at general aviation airports each year. Sales were at their lowest in 2020, assumingly due to the Coronavirus 19 Pandemic, which halted passenger service operations provided by Cape Air. However, a steep increase was noted in 2021, as air carrier operations resumed, raising sales by 33% from the previous year. The momentum slowed in the following years, but generally follows an upward trend with sales gradually increasing over the last three years. **Figure 1-6** visually depicts the total fuel sales at SDY on an annual basis over the last five years.

Table 1-18 –Annual Fuel Sales and TFMS Operations by Fuel Type

	2020	2021	2022	2023	2024
Total Gallons Sold	197,743	275,267	245,559	246,932	250,551
No. Of Transactions	2,608	3,224	2,846	2,892	2,921
TFMS Operations by Fuel Type					
Jet A	1,234	1,758	1,791	1,880	1,794
100LL	2,480	2,648	1,963	3,456	3,735

Source: Richland Aviation, KLJ Analysis

Figure 1-6 –SDY Annual Fuel Sales 2020-2024



Source: Richland Aviation, KLJ Analysis

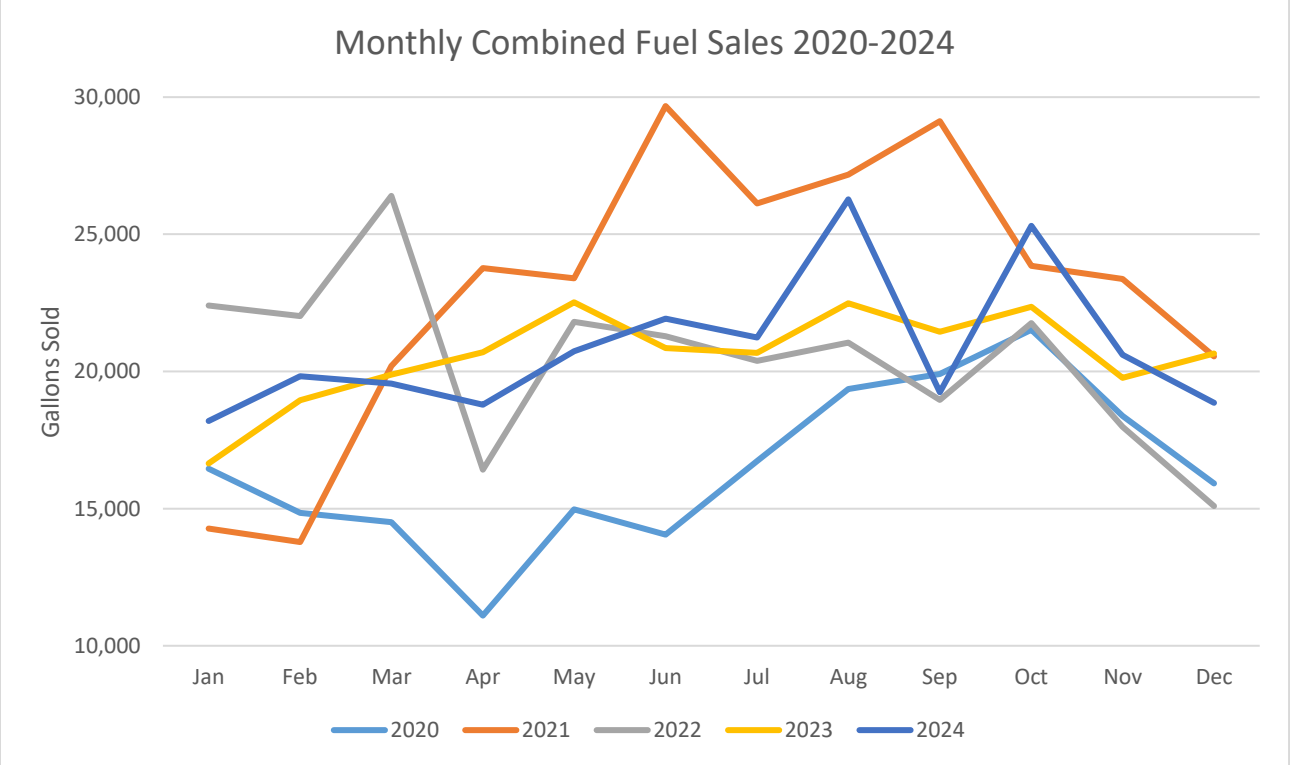
Five years' worth of annual fuel sales were also compared across a twelve-month period to determine if peak activity conditions could be gleaned. Overall, sales appeared to be evenly distributed, with anywhere from five to ten percent of annual sales taking place each month. Generally, sales begin to trend higher in the early summer and peak in the fall, with the majority of sales occurring in August, September and October, accounting for a combined total of 28% of sales in these three months. See **Table 1-19 and Figure 1-7** below for a detailed breakdown of monthly fuel sales over a five-year period, depicted in percent of total gallons sold.

Table 1-19 Annual and Monthly Fuel Sales 2020-2024

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2020	8.3%	7.5%	7.3%	5.6%	7.6%	7.1%	8.5%	9.8%	10.1%	**10.9%**	9.3%	8.1%
2021	5.2%	5.0%	7.3%	8.6%	8.5%	**10.8%**	9.5%	9.9%	10.6%	8.7%	8.5%	7.5%
2022	9.1%	9.0%	**10.8%**	6.7%	8.9%	8.7%	8.3%	8.6%	7.7%	8.9%	7.3%	6.1%
2023	6.7%	7.7%	8.1%	8.4%	**9.1%**	8.4%	8.4%	9.1%	8.7%	9.1%	8.0%	8.4%
2024	7.3%	7.9%	7.8%	7.5%	8.3%	8.7%	8.5%	**10.5%**	7.7%	10.1%	8.2%	7.5%

Source: Richland Aviation, KLJ Analysis

Figure 1-7 –SDY Monthly Fuel Sales 2020-2024



Source: Richland Aviation, KLJ Analysis

Critical Design Aircraft

The critical design aircraft is identified as the most demanding aircraft or family of aircraft to regularly use the airport. According to FAA AC 150/5000-17, *Critical Aircraft and Regular Use Determination* a critical design aircraft type or family must operate at least 500 annual operations at the airport to be considered 'regular use' by FAA for improvements to be justified for FAA funding.

Existing

Table 1-20 depicts a summary of the existing annual operations by the various aircraft design characteristics for the twelve-month period that comprised 2024. The shaded/outlined areas show where there are 500 annual operations to meet the 'regular use' threshold. The table includes all verified operations from 2024, derived from **Table 1-17** covered earlier in the chapter.

The existing critical design aircraft at SDY is the **A/B-II** category with a **TDG 2-A**. As is evident from the table below, the majority of operations that took place in 2024 fell within the AAC, 'B' category and ADG, 'I' category. As such the existing critical design aircraft classification is adequate. Additionally, the dimensions of the existing airfield pavements and safety areas meet and exceed the design criteria required by these categories, and as such no changes are necessary at this time.

Table 1-20 Existing Annual Operations by Critical Design Aircraft Characteristics

AAC		ADG		TDG		MTOW	
A/B	5,494	I	3,832	1-A	3,044	< 12,500 lbs	5,164
				1-B	24		
C/D	60	II	1,722	2-A	2,486	≥ 12,500 lbs	390
				2-B	0		

Figure 1-8 – Existing and Future Critical Design Aircraft Family

ARC A-I Small		ARC A-II Small	
Piper PA-46		Air Tractor 502	
ARC B-II Small		**ARC B-II Small**	
King Air 200		Citation CJ2	
ARC B-II		**ARC B-II**	
Air Tractor 802		Falcon 900	

Photography Source: Airliners.net

Future

Aircraft operators were contacted as part of this forecasting effort to determine future needs. The findings of this outreach effort implied that no significant changes to the fleet are anticipated. However, it is possible that total aircraft operations may increase in the future should instrument approach minimums be lowered on Runway 1/19 or an instrument approach is added to Runway 11/29. While impossible to accurately predict the future aircraft operations or operators certain patterns can be identified to make educated guesses.

National trends indicate that operators will begin to phase out piston engine aircraft for larger turboprop and turbojet aircraft which means aircraft will stay in this larger range of A/B-II as currently exists. As such, the future critical design aircraft family at SDY will remain the **A/B-II** with a **TDG 2-A**.

Essential Air Service (EAS) Enplanements

The airport has been part of the Essential Air Service (EAS) program since 2006, and has received service from Big Sky Airlines, Great Lakes Airlines, Silver Airways and is currently serviced by Cape Airlines. The airline currently operates five daily flights departing to Billings-Logan International Airport (BIL) as well as five arrivals from BIL to SDY. Cape Air operates the Tecnam P-2012 Traveler. More information on EAS is in **Appendix B – Commercial Airports 101**.

Historical Data

Using historical passenger enplanement data from the FAA, there have been an average of 7,441 enplanements at Sidney over the last five years. An enplanement is a revenue passenger who originates in Sidney, meaning that arriving passengers are not recorded however it is reasonable to assume that a passenger that originates in Sidney will likely return. Using this estimation, Sidney-Richland Regional Airport handles an average of 14,883 passengers annually or an average of 40 passengers per day. According to the 2014 Montana State Aviation System Plan (SASP), historically, passenger enplanements at SDY have demonstrated an upward growth with a ten-year Average Annual Growth Rate (AAGR) of 17.015% from 2003-2013. As a whole, enplanements within the state of Montana have increased, with a statewide AAGR of 1.98% at the time of the study. For reference, enplanements for neighboring commercial service airports to SDY, including Dickinson Theodore Roosevelt Regional Airport and Williston Basin International Airport, have been included in **Table 1-20** below.

At the present, there are no near-term plans to increase the size of aircraft or frequency of flights at Sidney. However, outreach findings indicate that passengers have expressed interest in additional commercial service operating from Sidney to other locations in the region, outside of Billings.

Table 1-20 – SDY Historical Passenger Data

Year	SDY Enplanements	SDY Total Passengers	Dik Enplanements	XWA Enplanements
2020	6,965	13,930	11,407	31,412
2021	8,356	16,712	17,506	46,577
2022	6,535	13,070	21,606	66,287
2023	8,020	16,040	24,123	82,258
2024	7,331	14,662	26,146	99,735
Average	*7,441*	*14,883*	*20,158*	*65,254*

Source: FAA Enplanements

Enplanement Forecast

It is estimated that enplanements will grow at SDY using a compound annual growth rate (CAGR) formula modeled from the 2013 MT SASP. In the SASP, a growth rate derived from the 2010-2013 Montana State population was calculated and applied to passenger enplanements. This method was deemed the "Top Down" and resulted in a CAGR of 2.6%. The same principle was applied using 2014-2024 MT population data, resulting in a new CAGR of 0.09%. When applied to the base year data at SDY, this results in a future 7,457 enplanements and 14,928 passengers by 2044, as is shown in **Table 1-21** below. Given that population growth in the State of Montana is generally in line with that of the United States, in addition to the fact that the resulting enplanements mimic that of the FAA Enplanement projections by the end of the twenty-year, as demonstrated in **Table 1-20**, this was deemed an effective, realistic growth rate. In an effort to analyze regional trends, the same formula was applied to data derived from 2014-2024 Richland County population rates, resulting in a negative CAGR of -0.31%. Since a large proportion of passengers utilizing the EAS program at SDY are not necessarily local residents, and a variety of users from the greater MT region travel to SDY to travel via Cape Air, the State Population CAGR was considered to be the more appropriate forecasting method.

Table 1-21 – SDY Forecast Passenger Data

Year	Enplanements	Total Passengers
2024	7,331	14,662
2029	7,364	14,728
2034	7,397	14,794
2039	7,431	14,861
2044	7,457	14,928
CAGR	***0.09%***	***0.09%***

Based Aircraft Forecast

A based aircraft is an operational and airworthy aircraft claiming an airport as its home for most of the year, correlating to six months or more out of the calendar year. Knowing the number and types of based aircraft helps the airport assess the existing aircraft storage needs. Developing a forecast of future based aircraft helps determine future storage needs, so that adequate hangar space can be appropriately determined and incorporated into the final plan.

Historical Data

According to the National Based Aircraft Inventory[1], there are 28 validated aircraft based at the Sidney-Richland Regional Airport, of which 24 are single-engine and 4 multi-engine aircraft. For the planning study, 28 aircraft will be used as the baseline for future based aircraft growth. **Table 1-22** below depicts the composition of based aircraft at SDY by type as well as illustrates the market share of based aircraft at SDY within the State of Montana as well as the National fleet.

Table 1-22 –Existing SDY Based Aircraft Fleet Mix

Aircraft Type	Based Aircraft	Percent of Total	State of MT Market Share	National Fleet Market Share
Piston (Single)	24	86%	+/- 0.94%	+/-0.017%
Piston (Multi)	4	14%	+/-0.15%	+/-0.003%
Turboprop	0	0%	0%	0%
Jet	0	0%	0%	0%
Helicopter	0	0%	0%	0%
Ultralight/Other	0	0%	0%	0%
Total Based Aircraft	28	100%	1.09%	0.02%

Source: National Based Aircraft Inventory Program, FAA Terminal Area Forecast, KLJ Analysis

[1] In the National Based Aircraft Database only one airport can claim an aircraft as 'based'. If there is a dispute on the location, the aircraft is not counted at either airport then the respective airport managers must work together to resolve which airport will be able to claim the aircraft as based.

Based Aircraft Forecast

Regional trends were evaluated when preparing the based aircraft forecast, with consideration of local/national population trends, income level, and industry trends gleaned from the state aviation system plan (SASP), FAA Aerospace Report and the FAA Terminal Area Forecast (TAF). The following points summarize the general trends and methodologies that were applied in the preparation of the based aircraft forecast.

- According to the FAA TAF, based aircraft at SDY have decreased over the last ten years and are forecast to remain stagnant throughout the planning period. The result of the last ten years of data is a negative Compound Annual Growth Rate (CAGR) of -3.974%.
- The population within Richland County steadily increased through the 1970's, until 1984, when a sudden drop occurred and continued to descend through 2010. After this, population rates began to slowly trend upward again and are forecast to continue to do so, but current rates still do not surpass the peak population in 1982. The peak in the 1980's can likely be tied to the Bakken era of the oil and gas industry, which was described in the Airport History section of this report.
- Despite fluctuating growth in population, employment has steadily grown, with a 0.90% CAGR for Richland County. Per Capita Personal Income also experiences growth though at a much steeper rate of 3.51% for the county, which is just slightly below state and national averages.
- National Aviation activity shows flat to no growth for piston aircraft per **Table 1-20** but shows steady growth for turbine powered aircraft. Data from the FAA National Aerospace Forecast report was utilized to determine the CAGR for the total General Aviation fleet from 2013-2023, resulting in a rate of 0.44%.

Varying growth rates from the factors described above were applied to the existing based aircraft at SDY to determine a range of outcomes showcasing stagnant, mild and more aggressive forecasting scenarios over the twenty-year period. These included forecast derived from rates determined by the historical TAF based aircraft, state market share, data found in the FAA Aerospace Forecasts for the general aviation fleet, and socioeconomic data related to the State of Montana and Richland County, respectively. It was determined that rather than applying a single growth metric to create a projection of based aircraft, a more accurate representation would be a *composite* annual growth rate, which represents a rate of growth based on a variety of portfolio of factors and demonstrates how that would collectively grow over a period of time, assuming a steady compounding rate. The composite annual growth rate of the different forecasting methods represented in **Table 1-23** below is 0.82%. It is important to note that this rate omits the Historical TAF Growth rate of -3.974%. This rate was an outlier in the overall data set and given the fact it is based on historical data rather than the current state of affairs, in addition to SDY's strong recreational flying community and vibrant FBO culture, the historical TAF, while informational in its own right, was not an accurate means of future projections. The resulting composite CAGR is deemed as the preferred based aircraft forecasting method. It combines a variety of industry trends and regional factors to create a well-rounded rate of growth. Utilizing this growth rate, at the end of the planning period, there will be a total of 33 aircraft based at SDY.

Table 1-23 – Based Aircraft Forecast

Forecast Method	2024	2029	2034	2039	2044	CAGR
Historical TAF Growth Rate	28	23	19	15	12	*-3.97%*
MT Market Share	28	30	31	33	35	*1.09%*
FAA GA Fleet	28	29	29	30	31	*0.44%*
Per Capita Income	28	30	33	35	38	*1.56%*
Richland County Pop	28	28	28	28	29	*0.12%*
Composite CAGR	**28**	**29**	**30**	**32**	**33**	***0.82%***
Preferred Forecast-Composite CAGR						
Aircraft Type	**2024**	**2029**	**2034**	**2039**	**2044**	**Composite CAGR**
Piston (Single)	24	25	26	28	28	*0.82%*
Piston (Multi)	4	4	4	4	5	*0.82%*
Turboprop	0	0	0	0	0	0%
Jet	0	0	0	0	0	*0%*
Helicopter	0	0	0	0	0	*0%*
Other	0	0	0	0	0	*0%*
TOTAL	**28**	29	30	32	33	***0.82%***

Source: KLJ Analysis, FAA TAF, FAA Aerospace Forecast. CAGR = Compounded Annual Growth Rate

Annual Operations Forecast

An aircraft operation is an aircraft landing or takeoff. Aircraft operations are split into two categories: Local and Itinerant. Local operations are performed by aircraft that remain in the local traffic pattern and stay within a 20−mile radius. These operations typically include practice landings, touch-and-go operations, practice approaches and maneuvering within the local area. Itinerant operations are performed by a landing aircraft arriving from outside the airport area or a departing aircraft that leaves the airport area.

Baseline Data

In the past, the activity reported by the airport staff in Airport Master Record established the historical record of operations. This is no longer the case and therefore a new means of determining a baseline of operations was needed. With the Verified Annual Operations in **Table 1-17** 5,554 TFMS operations were recorded and will be applied as the baseline of annual operations used to conduct the forecast.

This data does not capture all operations at SDY as many aircraft operate under VFR flight plans and as such, do not have a filed IFR flight plan on record, and therefore go unaccounted for in this data. Observations and records from the FBO regarding fuel sales provided additional insights as to the types of aircraft that are utilizing the airport.

Operations Forecast

The FAA Aerospace Forecasts provides forecasted growth rates of GA Hours flown, broken down by aircraft type. It was decided that a composite growth rate of all aircraft types would be used to forecast annual operations at Sidney-Richland Regional Airport, as the facility experiences traffic from piston (single and multi-engine), turboprop and jet aircraft. The resulting growth rate of the total GA Fleet Hours Flown was a CAGR of 1.52%. At this projection, it is expected that SDY will handle approximately 7,510 operations annually by 2044. Over half of operations at SDY are classified as itinerant, meaning

they arrive or depart from outside of a 20-mile radius of the airport. However, local operations, or those that take off from SDY and remain in the traffic pattern, still comprise a large portion of total ops.

Forecast Summary

Table 1-24 – Aviation Activity Forecast Summary

Metric	2024	2029	2034	2039	2044	CAGR
Essential Air Service						
Enplanements	7,331	7,364	7,397	7,431	7,457	0.09%
Total Passengers	14,662	14,728	14,794	14,861	14,928	
Operations						
Itinerant						
Air Taxi	2,222	2,396	2,583	2.786	3,004	1.52%
Civil	666	719	775	836	901	
Military	56	59	65	70	75	
Total Itinerant Operations	2,944	3,174	3,423	3,692	3,980	
Local						
General Aviation	2,610	2,815	3,035	3,273	3,530	1.52%
Total Local Operations	2,610	2,815	3,035	3,273	3,530	
Total Operations	**5,554**	**5,989**	**6,485**	**6965**	**7,510**	
Based Aircraft						
Piston (Single)	24	25	26	28	28	0.820.%
Piston (Multi)	4	4	4	4	5	
Turboprop	-	-	-	-	-	
Turbojet	-	-	-	-	-	
Helicopter	-	-	-	-	-	
Other	-	-	-	-	-	
Total Based Aircraft	**28**	**29**	**30**	**32**	**33**	

Source: KLJ & Consultant Analysis.
** Note: Some figures are rounded*

Forecast Approval

The FAA approved the aviation forecasts prepared in this chapter on *Future Date* for use in this master planning effort.