CHAPTER 1: AIRPORT, COMMUNITY & AVIATION ACTIVITY

Purpose and Scope

The information presented in this report represents the study findings for the Dawson Community Airport (GDV) Airport Master Plan study prepared for Dawson County, 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 3-30-0015-020-2024.

This study for the Dawson Community 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 Airport Layout Plan (ALP) Narrative Report was completed in 2004.

The airport sponsor and Kadrmas, Lee & Jackson (KLJ) developed the scope for the project in cooperation with FAA Airports District Office and the Montana Department of Transportation Aeronautics Division officials to identify the specific needs and objectives of the airport owner. 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 notice to proceed in August 2024 from the airport sponsor. The baseline project data is from inventory efforts completed in December 2024. The latest full year of data from year 2023 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

The last ALP was revised in 2008 and approved by Dawson County. An airport master plan update is needed now for GDV to identify future development necessary to accommodate existing and future aviation demand.

Based on the background and planning considerations, the planning objectives for this study identify the methods used to meet the airport development goals outlined by the airport owner. The key project objectives are identified as follows:

- Examine runway capabilities and needs for both the primary and crosswind runways.

- Determine areas for future aircraft storage and hangar development.
- Examine the land use controls to protect the airport.
- Update the ALP to 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 was completed with this planning effort as required by FAA. Imagery was acquired in October 2024. When safety-critical data is needed to update runway end data or enhance an instrument approach then a new aeronautical survey is required.

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 GDV 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.

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.

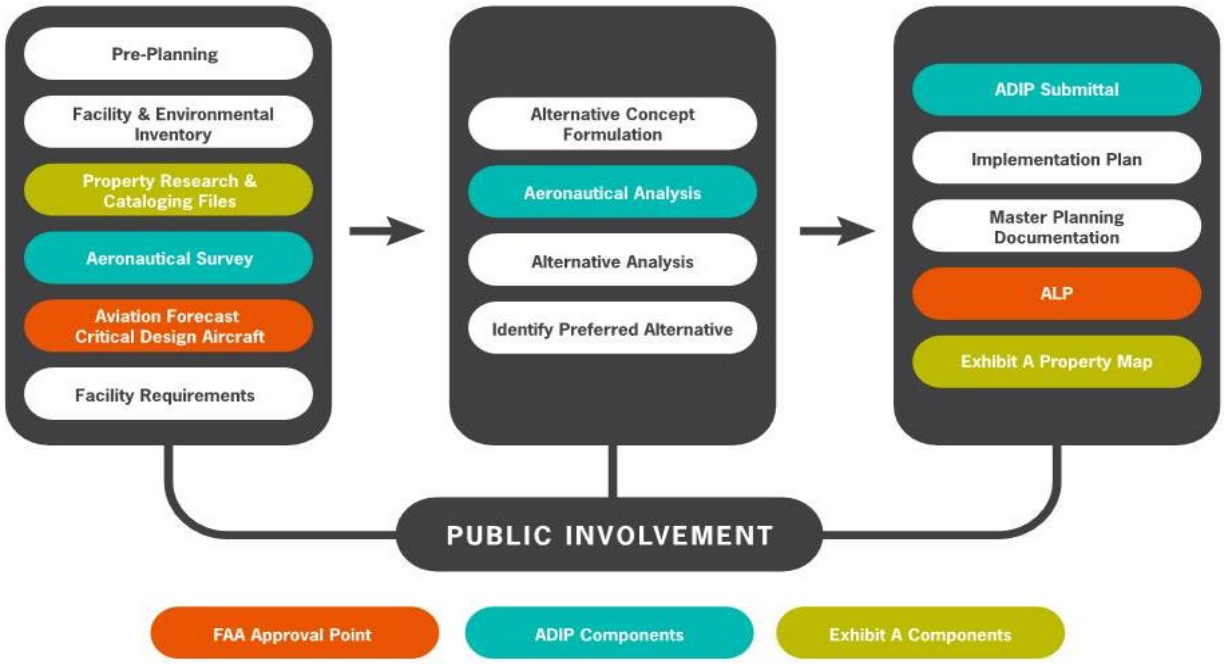
Best Planning Tenets – What are the strengths and weaknesses of the alternatives as it relates to 1) flexibility to meet demand and react to unforeseen changes; 2) highest and best on- and off-airport land use; 3) feasibility to implement politically and within practical phases; and 4) ability to satisfy 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.

- **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.

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 – Overview
- 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 Service Airports 101
- Appendix C – Meetings & Public Involvement

- Appendix D – Runway Length Analysis
- Appendix E – Solid Waste and Recycling 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 were 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 was then published on the airport's website (https://inputcentral.com/gdv-airportplan) for public viewing.

The Master Plan Update was adopted by Dawson County 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.

A Planning Advisory Committee (PAC) was established to provide input throughout the study. The purpose of the PAC was to facilitate group discussion and feedback from different stakeholder groups, provide recommendations to the airport owner. Members represented the following stakeholders:

- Airport Board Members
- Montana Department of Transportation Aeronautics
- Federal Aviation Administration: Helena Airports District Office

A public Open House was held on [FUTURE DATE], to solicit input on the project's findings. See **Appendix C: Meetings & Public Involvement** for other information including copies of public involvement meeting agendas, attendees, presentations, and summaries.

Airport & Community Overview

General

The Dawson Community Airport (GDV) is a general aviation airport serving the City of Glendive and the surrounding area of Dawson County in east central Montana. The airport is part of the FAA's National Plan of Integrated Airports System (NPIAS) and is classified as a non-primary Local General Aviation (GA). See **Appendix B: Commercial Service Airports 101** for additional details about airport classifications.

GDV has two runways. The primary runway is lighted, 100-foot by 5,704 foot-long asphalt runway. The crosswind runway is also lighted, 60-foot by 3,002 foot-long and made of asphalt. Airport facilities consist of a variety of hangars, eight asphalt aircraft tiedown spots, self-service fueling and a terminal building. The apron can be accessed by an asphalt road and provides vehicle parking at the terminal building.

Location and Area Setting

Dawson County is located in west central Montana. The largest city within the county is Glendive, which is located approximately 5 miles southwest of the Dawson Community Airport and accessible via State Highway 200S West and Interstate 94 Business Loop by Airport Road.

The airport elevation is 2,458 feet above mean sea level (AMSL). The terrain around the airport is hilly. There is currently no zoning ordinance in place that dictates land use surrounding the airport.

Dawson County was established in 1869. The county contains part of the Montana badlands and is known for it's unusual rock formations. There have also been some well known dinosaur excavations throughout the county including a Triceratops skull that was the most expensive skull to ever trade privately.

Airport Ownership & Management

The airport is owned and operated by Dawson County. There are two employees, an airport manager and assistant airport manager who run the day-to-day operations at the airport. GDV is governed by a board of appointed members including a county commissioner who serves as a liaison.

Airport History

GDV was originally located on the east side of the Yellowstone River and north of Interstate 94 and was relocated on the west side of the river around 1970. Before the move, the airport was served by Northwest Airlines and then Frontier Airlines. Great Lakes Airlines was approved to provide Essential Air Service (EAS). Cape Air is the current EAS contract.

A complete list of major airport development projects that received funding from FAA and the State can be found in **Table 1-1 Past Airport Projects.**

Table 1-1 – Past Airport Projects

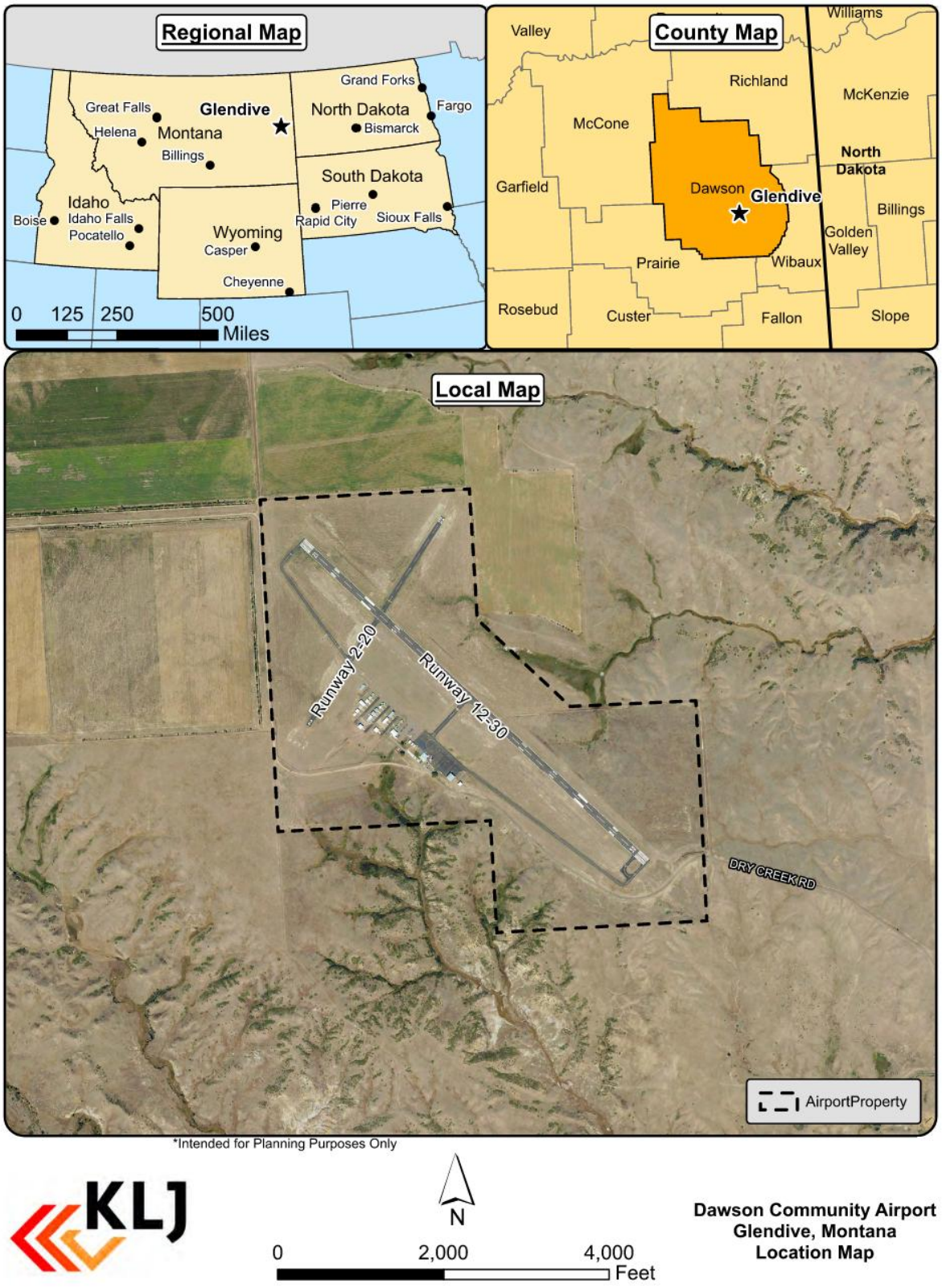
Year	Projects	Federal Grant
2005	Install Perimeter Fencing	$253,689
2005	Improve Fuel Fam	$122,526
2005	Update Airport Master Plan/Study	$20,615
2006	Rehabilitate Runway	$151,064
2006	Acquire Snow Removal Equipment	$130,986
2006	Improve Aircraft Rescue & Fire Fighting Building	$6,000
2006	Acquire Aircraft Rescue & Fire Fighting Equipment	$4,000
2007	Rehabilitate Runway	$1,100,000
2007	Construct Taxiway	$595,704
2007	Install Airfield Guidance Signs	$120,200
2007	Rehabilitate Taxiway	$32,200
2007	Install Perimeter Fencing	$13,300
2007	Acquire Safety and/or Security Equipment	$2,100
2008	Acquire Aircraft Rescue & Fire Fighting Vehicle	$201,878
2008	Acquire Snow Removal Equipment	$76,039
2008	Runway Incursion Markings	$28,523
2008	Acquire Friction Measuring Equipment	$3,588
2011	Construct Taxiway	$438,945
2011	Improve/Modify Access Road	$21,850
2011	Conduct Environmental Study	$19,000
2012	Construct Taxiway	$520,271
2013	Rehabilitate Runway	$163,843
2013	Airport Wildlife Hazard Assessment/Management Plan	$51,339
2013	Rehabilitate Apron	$48,762
2013	Rehabilitate Taxiway	$45,118
2014	Rehabilitate Runway Lighting	$363,530
2014	Rehabilitate Taxiway Lighting	$124,411
2014	Install Miscellaneous NAVAIDS	$1,000
2015	Install Runway Vertical/Visual Guidance System	$73,222
2017	Construct Terminal Building	$117,000
2017	Install Miscellaneous NAVAIDS	$5,040
2019	Rehabilitate Runway	$324,059
2019	Rehabilitate Taxiway	$132,014
2019	Rehabilitate Apron	$90,410
2021	Construct Terminal Building	$1,665,000
2021	Construct/Improve Parking Lot	$571,100

Source: FAA Records, KLJ Analysis

Land Area

The airport was established in 1970 and additional land has been acquired since then in conjunction with airport development projects. The airport currently owns 410 acres of land in fee simple and 38.3 acres in easement. The airport's Exhibit A Property Map will be updated as a part of this study in accordance with the FAA's SOP 3.00 requirements.

Figure 1-2 – Airport Location Map



Airport Role & Design

GDV is a general aviation (GA) airport, meaning it primarily accommodates aeronautical activity other than commercial air service, however the airport does receive daily service from Cape Air under the Essential Air Service program. GA airports provide vital services for the public including emergency response, community access, personal and business aviation. Additionally, general aviation airports serve a key role in the facilitation of pilot training. Dawson County provides services at the airport. Public use airports surrounding GDV are listed in **Table 1-1** to provide background into other airports in the area.

Table 1-2 – Surrounding Public Airports

Airport Name / City	FAA ID	Location from Airport	Based Aircraft	Instrument Approach	Longest Runway
Dawson Community Airport/ Glendive	**GDV**	**-**	**17**	**300' 1mi**	**5,704'**
Terry/ Terry	8U6	30 SW	0	Visual	4,300'
Circle Town County/ Circle	4U6	35 NW	2	300' 1mi	4,100'
Beach/ Beach	20U	36 E	12	300' 1mi	4,200'
Sidney-Richland Regional/ Sidney	SDY	42 NE	28	300' 7/8 mi	5,705'
Baker Municipal/ Baker	BHK	53 SSE	29	300' 1mi	5,704'
Poplar Municipal/ Poplar	PO1	61 NNW	10	200' 1mi	4,403'
Frank Wiley Field/ Miles City	MLS	62 SW	20	300' 1mi	5,764'
Big Sky Field/ Culbertson	S85	62 NNE	8	Visual	3,800'
L M Clayton/ Wolf Point	OLF	65 NNW	3	200' 3/4 mi	5,091'
Watford City Municipal / Watford City	S25	74 NE	34	300' ¾ mi	6,550'

Source: Airnav.com, Basedaircraft.com

As mentioned above, the FAA classifies NPIAS airports and also has a classification system for general aviation airports called the ASSET classification. The Montana Department of Transportation developed a State Aviation System Plan (SASP) in 2015 and airports were placed into seven different roles: Commercial Service, Essential Air Service, Level 1, Level 2, Level 3, Level 4 and Level 4 (Remote). GDV is classified as Essential Air Service in the SASP which states the airport, "*airports which provide a level of scheduled air service to communities that otherwise would have limited access to the nation's air transportation system*".

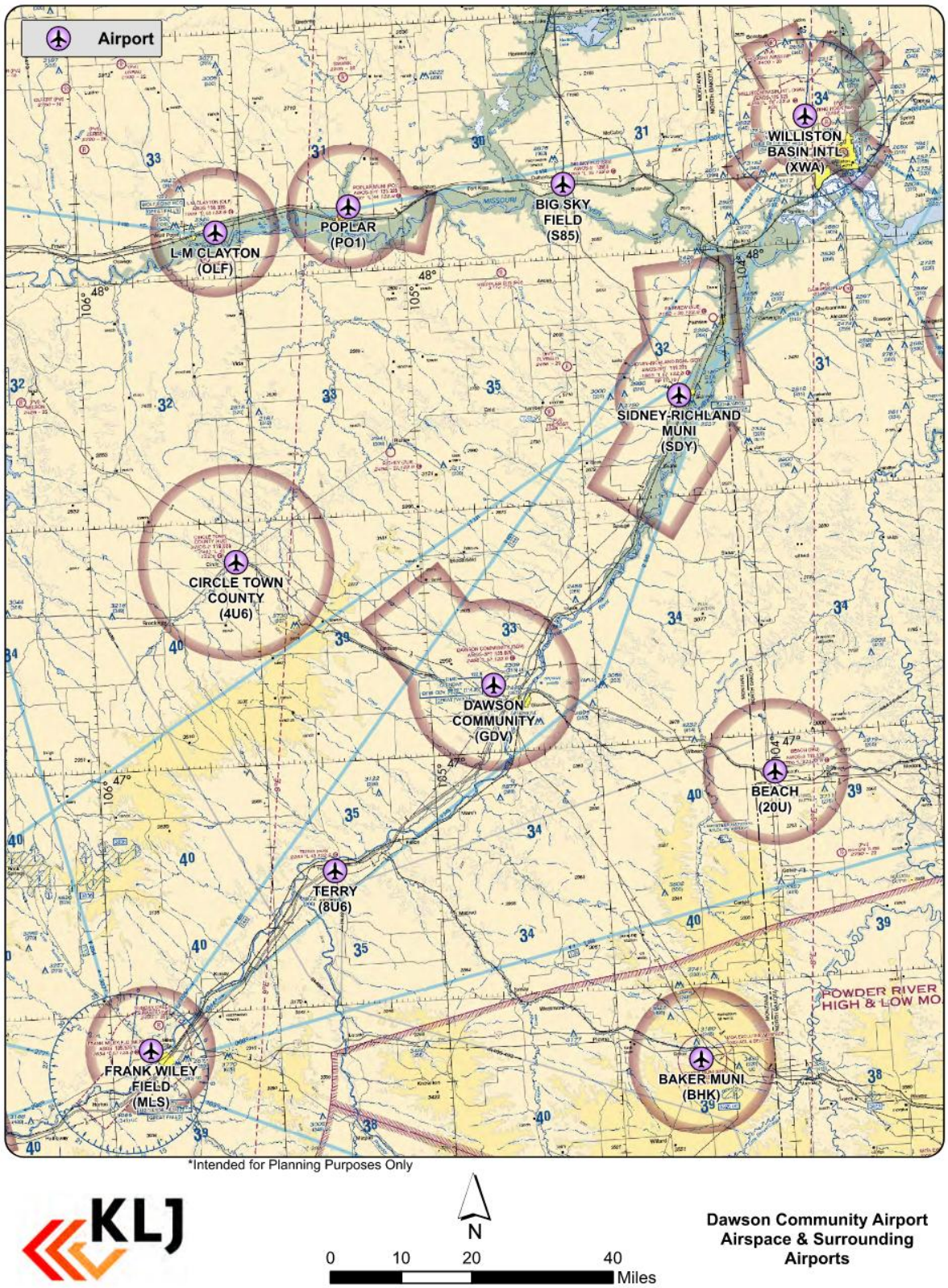
The FAA's Airport Reference Code (ARC) identifies a design category based on aircraft wingspan, tail height and approach speed for aircraft types that regularly use the airport. For GDV, the existing ARC is A/B-II. This means the airport is designed for aircraft approach speeds of up to 121 knots and wing spans of up to 118 feet and tail heights of up to 45 feet. **Table 1-3** summarizes the airport's role and design. See **Appendix B: Commercial Service Airports 101** for more details on FAA design classifications and State classifications.

Table 1-3 – Airport Role & Design

Airport ID	State Classification	FAA Classification	FAA GA Group	ARC
GDV	EAS Commercial Service	Non-Primary GA	Local	A/B-II
8U6	General Aviation	Non-Primary GA	Basic	A/B-II
4U6	General Aviation	Non-Primary GA	Basic	A/B-II
20U	Basic	Non-Primary GA	Basic	A/B-I
SDY	Primary/EAS Commercial Service	Non-Primary Commercial Service	Local	A/B-III
BHK	General Aviation	Non-Primary GA	Local	A/B-II
PO1	General Aviation	Non-Primary GA	Basic	A/B-II
MLS	General Aviation	Non-Primary GA	Local	A/B-II
S85	General Aviation	Non-Primary GA	Basic	A/B-I
OLF	EAS Commercial Service	Non-Primary Commercial Service	Local	A/B-III
XWA	Primary Commercial Service	Primary Commercial Service	-	D-III

Source: NPIAS, 2014 ND State Aviation System Plan, 2018 Montana State Aviation System Plan, ADIP, ARC = Airport Reference Code

Figure 1-3 – Surrounding Airports



Climate

Dawson Community Airport is located in a cold semi-arid climate zone. Winters are cold and relatively wet, while summers are hot with little precipitation. In Glendive, the average annual temperature is reported to be 46.6°F from 1991-2020 with an annual precipitation of 14.89 inches and an annual snowfall of 22.6 inches. **Table 1-4** below provides the normal conditions that are experienced throughout the year at Glendive.

The airport has an AWOS-3PT located on the airfield, which is an automated weather observation system. The system is owned and maintained by the FAA. Data from the station shows prevailing winds are from the southeast and are generally aligned with the airport's runway orientation.

Figure 1-4 – Dawson Community Airport Wind Chart

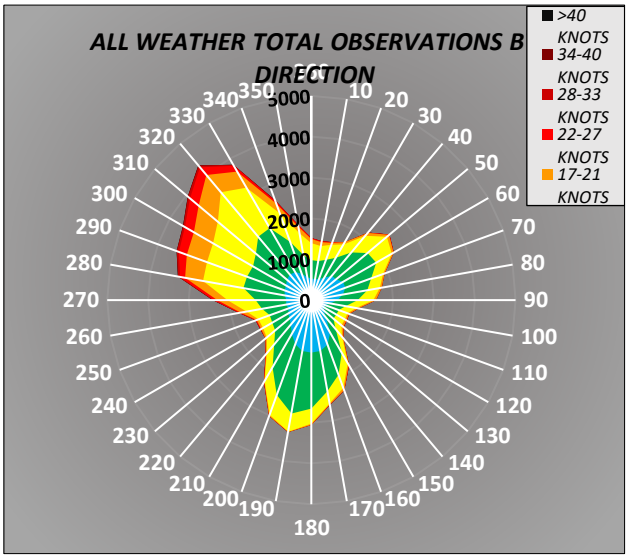


Table 1-4 – Average Weather

Month	Precipitation (in.)	Average Low Temperature (°F)	Average High Temperature (°F)
January	4.42	9.2	29.0
February	5.66	12.5	33.8
March	3.62	23.0	46.2
April	3.50	34.2	58.9
May	3.07	54.3	69.1
June	2.40	54.3	78.5
July	2.20	60.3	87.7
August	1.53	57.8	87.2
September	1.43	47.9	76.3
October	2.50	35.9	59.5
November	2.46	23.7	43.5
December	4.74	13.3	32.0

Source: National Weather Service Climate 1991-2020 – Glendive, MT- Precipitation includes rain and snow

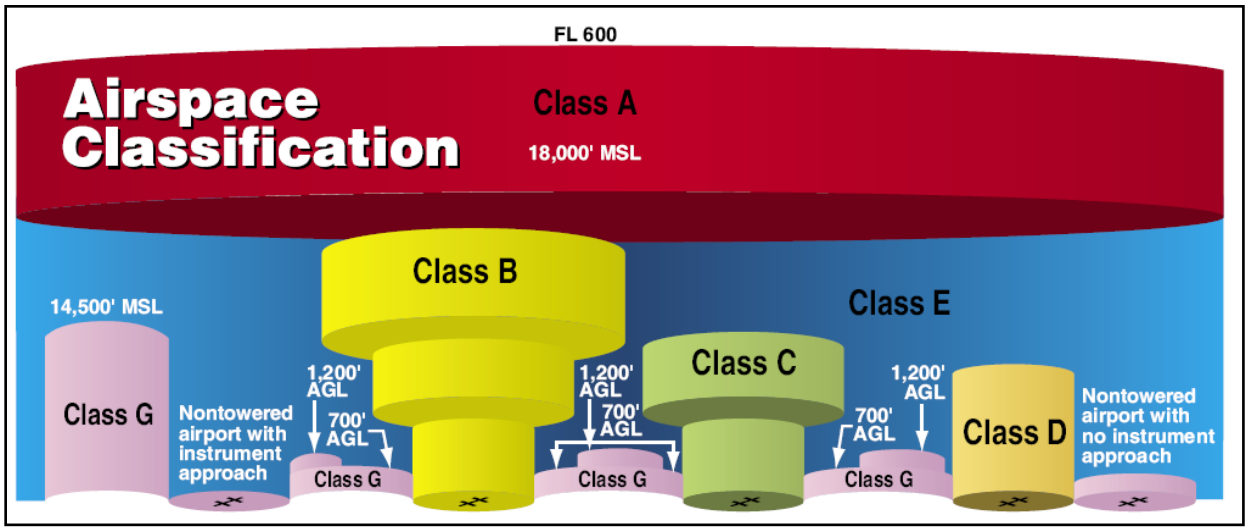
Airspace & Area Navigation Systems

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.

GDV is in uncontrolled Class E airspace. Flights departing the Airport under instrument flight rules (IFR) must receive an IFR clearance from Salt Lake Center before reaching an altitude of 3,158 feet above mean sea level.

Figure 1-4 – 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. For GDV ADS-B coverage is available at least 1,500 feet above ground level.

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. GDV will continue to be an uncontrolled airport. The airport has a Common Traffic Advisory Frequency (CTAF) at 122.8 MHz that can be used for pilots to communicate with one another while operating on or around the airfield. In addition, an FAA Remote Communications Air to Ground (RCAG) is available from Watford City at 126.85 MHz to Salt Lake City ARTCC (ZLC).

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 – Commercial Service Airports 101** for a detailed explanation of Part 77 surfaces. **Table 1-4** depicts the existing, future, and ultimate approach airspace surfaces for GDV. Any existing, future, or ultimate Part 77 obstructions located around GDV 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						
12-30	Non-Precision Other-Than-Utility As low as 1 mile	C	500’	3,500’	10,000’	34:1
2-20	Visual Utility	A(V)	250’	1,250’	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 and Local Airspace Protections

The State relies upon the surfaces defined by the FAA in the Part 77 and RPZ areas. Most of Dawson County does not have zoning ordinances in place and there are no codes in place to protect airspace surrounding the airport.

Any recommended airspace protection measures including land acquisition, easements or zoning will be addressed in Chapter 4 – Implementation & Compatibility based on the Preferred Alternatives selected in Chapters 2 and 3.

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 this environmental review is to provide community, airport sponsor, and regulatory awareness of the importance of minimizing the environmental impacts within this airport improvement area, and to provide a general indication of the likely need for further investigation. Appropriate environmental documentation in accordance with FAA Order 5050.4B, *NEPA Instructions for Airport Actions* and FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures* is 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 Wetland Inventory** provides a graphical depiction of the existing environmental conditions described in this section.

Relevant Environmental Features

BIOLOGICAL RESOURCES

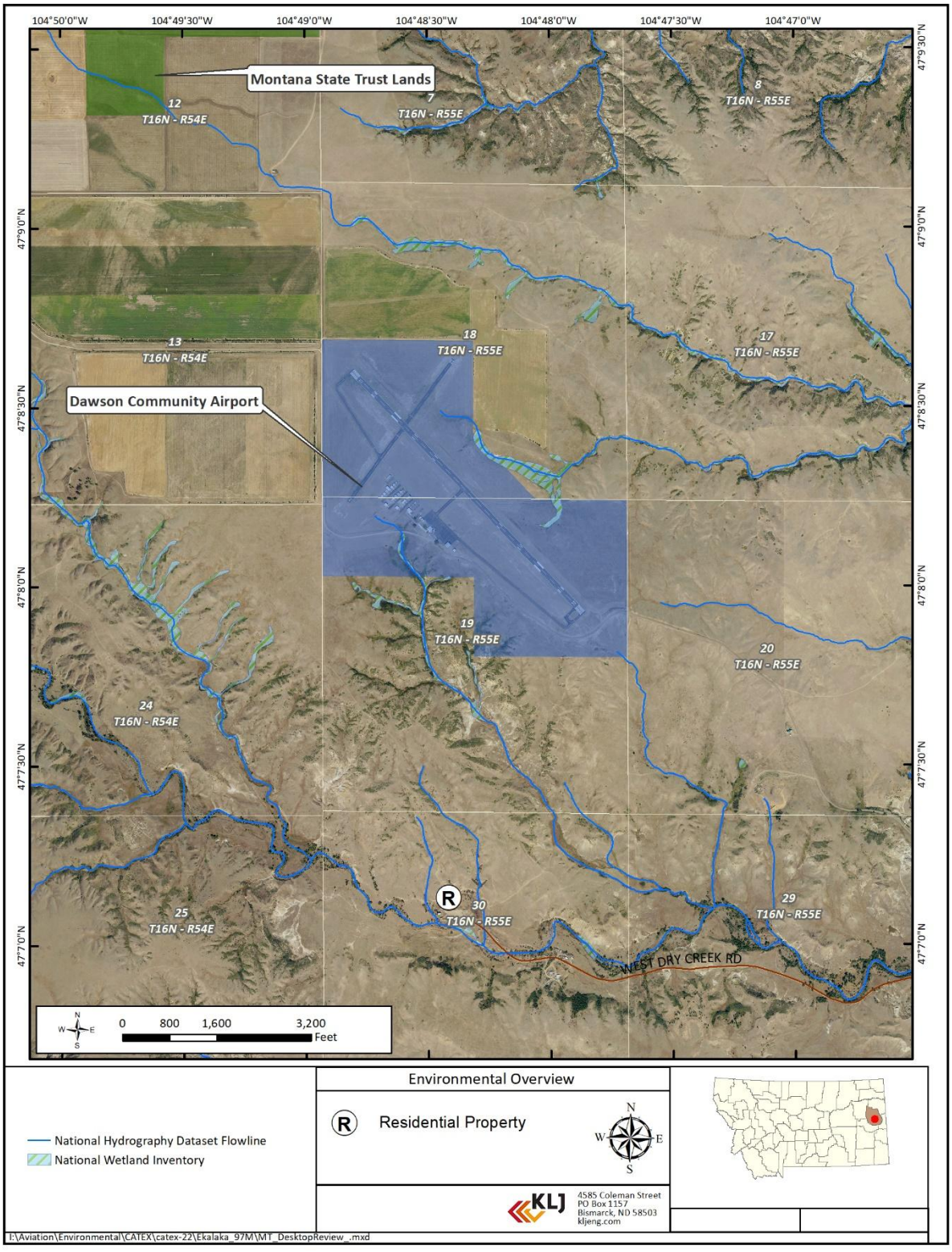
Biological resources include flora and fauna that are present in an area. GDV is in the Northwestern Great Plains Ecoregion according to US Geological Survey. Vegetation in this area consists of mostly mixed grass prairie, which is an intermediate ecosystem between a short grass and a tall grass prairie. 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 Dawson County include the Piping plover, Monarch butterfly, Whooping crane, Northern long-eared bat, and Red Knot Rufa. There are no Federal designated critical habits near the Airport. In accordance with Section 7 of the Endangered Species Act, consultation with USFWS to determine the potential for occurrences of federally-listed threatened and endangered species in the project area would be necessary. Additionally, according to IPaC, there are likely Bald Eagles present in the area surrounding the Airport. There are no documented nesting sites, however they may be foraging in the area. Prior to project implementation, further analysis is required to identify the potential for fish, wildlife and plant impacts because of any proposed projects.

Figure 1-5 - Environmental Overview Wetland Inventory



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 Topo Map Inventory** provides a graphical depiction of the areas surrounding the Airport property.

There are no known publicly owned lands from parks, recreation areas, or refuge areas within the immediate vicinity 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 Dawson County indicates that nineteen 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 GDV. 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 requested from the Montana State Historical Preservation Office (SHPO). The review revealed that there was one recorded cultural resource, 24DW0665 the airport terminal was evaluated and determined to be Not Eligible for the NRHP in 2020 prior to it being turndown and replaced with a new terminal building. No other resources or inventories were on file. Additional research, including an updated field survey, may be necessary to adequately assess the area's potential to contain historic properties.

Before a project that involves land, disturbance is implemented, an inventory to identify the potential for cultural resources would need to be conducted for the project area. Coordination with the SHPO is necessary for projects involving 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.

Projects that involve ground surface disturbance in areas not previously disturbed by the construction of the Airport will also need to be surveyed by a qualified Archeologist and a determination of affect, to historic properties, would need to be obtained from the SHPO. Resolutions of any adverse effects would need to be coordinated with the SHPO. 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 not Prime Farmland. There is a small segment of land classified as Prime farmland if irrigated. 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. In general, GDV is surrounded by prairie pastureland and open spaces. The closest residential home is located approximately one mile south of the Airport. 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 GDV is private pastureland with cropland to the northwest. The nearest body of water to the Airport is Crisafulli Lake. It is a manmade reservoir located approximately 2.3 miles east of the Airport. It does not appear to be attract many waterfowl into the flight path of the Airport but should be monitored to ensure that it does not become an attractant. The Yellowstone River is located approximately 4 miles to the southeast of the Airport.

GDV is surrounded by a 10-foot-high 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

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 near Airport property. These are ephemeral drainages located on the east and west sides of the primary runway, off Airport property. The airport property consists entirely of upland areas and projects impacting only existing airport property would not require a field delineation to identify boundaries. Projects located off existing airport property and that would impacting 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 GDV generally sheet flows across vegetated areas into the off-airport drainages that are also vegetated. Drainage from the Airport enters ephemeral drainages located outside the property and east of primary Runway 12-30. They flow into Crow Creek and it flows towards Crisafulli Lake. The property on the west side of the runway flows into Dry Creek. Both drainages ultimately flow into the Yellowstone River located about 4 miles from the Airport.

Environmental Features Not Relevant

AIR QUALITY CLASSIFICATION

The FAA Orders 1050.1F and 5050.4B 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.

CLIMATE

Although there are no federal standards for aviation-related Green House Gas (GHG) emissions, it is well-established that GHG emissions can affect climate. The Council on Environmental Quality (CEQ) has indicated that climate should be considered in NEPA analyses. As noted by CEQ, however, "it is not currently useful for the NEPA analysis to attempt to link specific climatological changes, or the environmental impacts thereof, to the particular project or emissions; as such direct linkage is difficult to isolate and to understand".

With respect to GHG emissions, aviation activity at Dawson Community Airport represents a small percentage of U.S. and global emissions; therefore, no further review is 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 GDV 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 GDV then no further noise analysis is required.

SOCIOECONOMIC IMPACTS

Social impacts from a project depend on how that project affects the character, habits, and economic conditions of the people living within the affected area of the project. The project's effects on business, employment, transportation, utilities, etc. are factors that affect the social climate of a community. There are no schools, hospitals, or places of worship within a one-mile radius of the Airport. No further analysis is required.

VISUAL IMPACTS

Minor development projects at Dawson Community 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

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. GDV is not located within a 100-year floodplain; therefore, no further analysis is required.

Wild and Scenic Rivers

No designated Wild and Scenic Rivers are located near GDV. 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 Dawson Community Airport (GDV). 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 GDV 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. GDV will remain below the 90,000 annual operations level. As such GDV will be seeking approval of the Critical Design Aircraft. 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)
- Passenger Enplanements
- Based Aircraft
- Annual Airport Operations

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 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 Glendive and Dawson 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 GDV. 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, Dawson 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 Glendive is in Dawson County. Based on data from the United States Census Bureau, the population of Glendive was reported as 8,922 in 2020. The City of Glendive makes up approximately 69% of the total population in Dawson County.

Table 1-6 – Population

Year	Dawson County	Montana	United States
2000	9,050	903,773	282,162,375
2005	8,800	940,102	295,516,551
2010	8,952	990,730	309,327,089
2020	8,922	1,086,193	331,501,080
Historical Annual Growth Rate	*-0.071%*	*0.924%*	*0.809%*
2024 (Baseline)	*8,869*	*1,127,334*	*338,712,837*
2029	*8,811*	*1,164,979*	*349,876,672*
2034	*8,753*	*1,201,259*	*360,685,310*
2044	*8,639*	*1,268,651*	*380,956,763*
Forecast Annual Growth Rate	*-0.131%*	*0.592%*	*0.589%*

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

Income

Per Capita 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. Dawson County historically has shown growth in PCPI at a rate of 2.65% and continues to grow through the end of the planning period at a rate of 1.62%. This growth is slightly higher than the state of Montana and the U.S growth rates.

Table 1-7 – Per Capita Personal Income

Year	Dawson County	Montana	United States
2000	$26,024	$29,557	$39,278
2005	$30,068	$34,617	$41,286
2010	$35,994	$38,015	$42,497
2020	$43,942	$47,727	$53,178
Historical Annual Growth Rate	*2.65%*	*2.43%*	*1.53%*
2024 (Baseline)	*$45,220*	*$48,548*	*$55,473*
2029	*$49,284*	*$52,354*	*$60,178*
2034	*$53,495*	*$56,291*	*$65,060*
2044	*$62,337*	*$64,570*	*$75,419*
Forecast Annual Growth Rate	*1.62%*	*1.44%*	*1.55%*

Source: Woods & Poole Economics (in 2012 Constant Dollars)

Employment

Total employment is the measure of the active workforce. Dawson County has a strong state and local government, transportation and warehousing, and a retail trade based economy. The sum of these three industries make up approximately 38 percent of the workforce. State and local government is the largest source of employment in the area, totaling 14 percent of the workforce.

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

Industry	Employment	Earnings
State and Local Government	740	$37,690,000
Transportation and Warehousing	736	$63,181,000
Retail Trade	595	$18,515,000
Health Care and Social Assistance	587	$29,588,000
Accommodation and Food Services	459	$9,681,000
Farm	455	$1,979,000
Other Services (Except Public Administration)	290	$8,388,000
Wholesale Trade	194	$8,912,000
Administrative and Waste Services	185	$6,167,000
Real Estate & Rental Lease	168	$5,143,000
Construction	160	$6,012,000
Professional & Technical Services	160	$6,377,000
Mining	135	$13,170,000
Finance & Insurance	133	$4,556,000
Information	85	$5,565,000
Arts, Entertainment & Recreation	81	$1,886,000
Manufacturing	74	$2,495,000
Forestry, Fishing, Related Activities & Other	73	$1,753,000
Federal Military	35	$1,221,000
Federal Civilian Government	33	$2,533,000
Management of Companies & Enterprises	31	$2,757,000
Utilities	21	$3,384,000
Educational Services	9	$94,000
All Industries	**5,439**	**$241,047,000**

Source: Woods & Poole Economics (2012 Dollars)

Table 1-9 – Total Employment (in thousands)

Year	Dawson County	Montana	United States
2000	5,588	552,696	165,370,755
2005	5,280	600,585	172,338,384
2010	5,320	616,342	172,901,669
2020	5,129	668,310	190,776,766
Historical Annual Growth Rate	*-0.43%*	*0.95%*	*0.72%*
2024 (Baseline)	*5,439*	*727,635*	*215,251,577*
2029	*5,560*	*769,675*	*229,231,082*

2034	*5,662*	*810,522*	*242,816,472*
2044	*5,839*	*891,158*	*269,430,819*
Annual Growth Rate	*0.36%*	*1.02%*	*1.13%*

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. The latest forecast has been issued 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%*

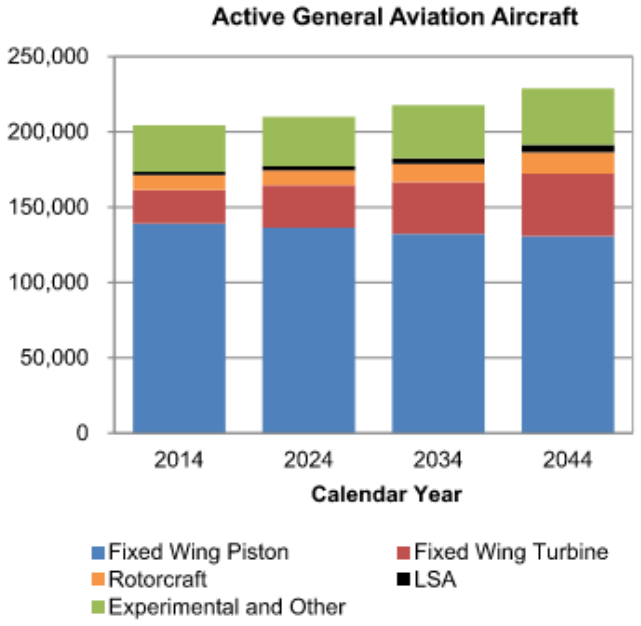
Source: FAA Forecast 2024-2044 Table 28

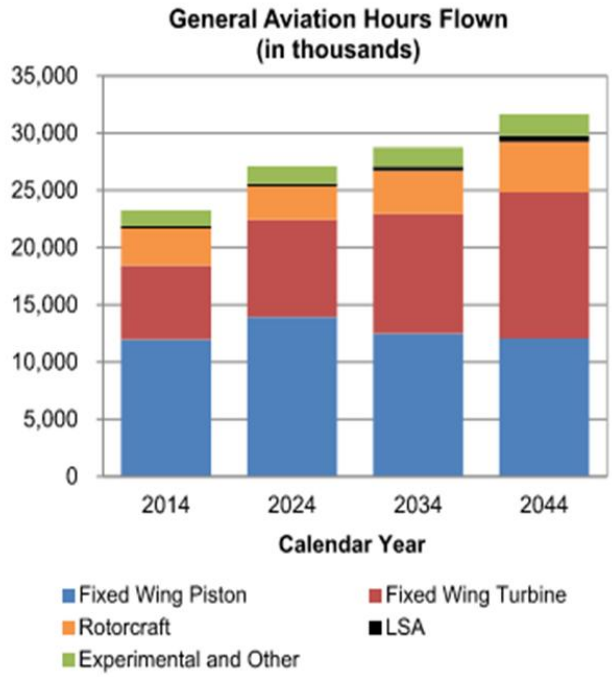
Table 1-11 – General Aviation Hours Flown (Thousands)

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%					

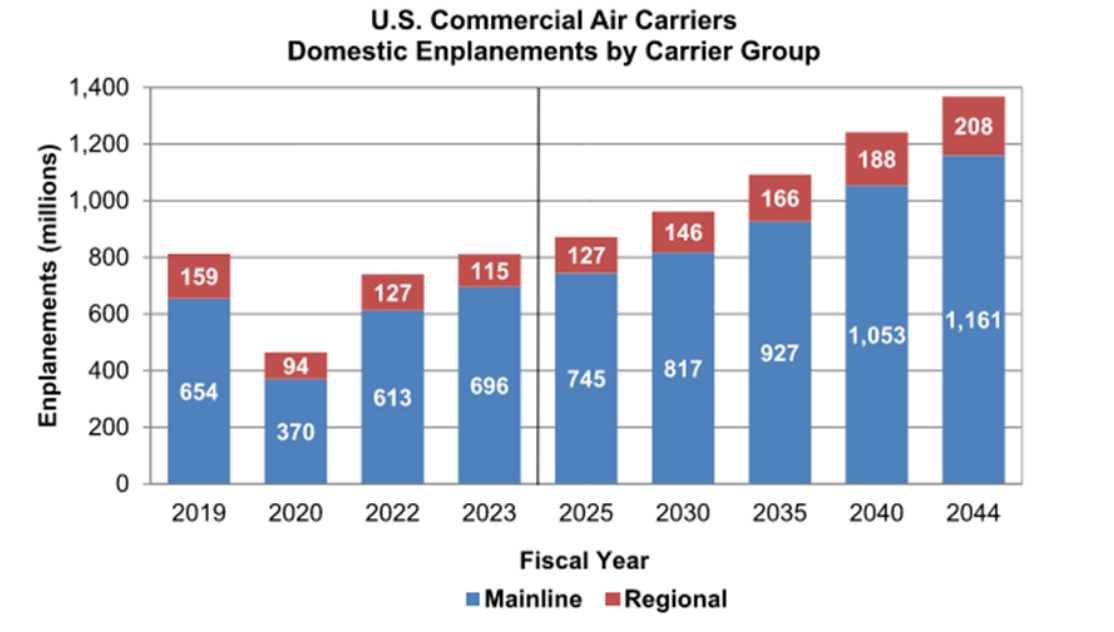
Total Hours Flown Growth Rates			
Period	Total Piston	Total Turbine	Total GA
2013-2023	*1.14%*	*2.14%*	*1.52%*
2024-2034	*-0.94%*	*2.21%*	*0.60%*
2024-2044	*-0.62%*	*2.11%*	*0.78%*

Source: FAA Forecast 2024-2044 Table 29





Source: FAA Forecast 2024-2044



Source: FAA Forecast 2024-2044

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

Air Cargo

Air cargo is a specific element of aviation activity that is measured with both operations and volume of activity. Most small airports do not keep track of air cargo activity so only the known information, mostly from larger airports is provided. This information is provided in **Table 1-15** from the FAA Forecast, **Table 1-16** and **1-24** from FAA TFMS data, and **Table 1-17** from FAA Cargo Data.

Table 1-15 – Air Cargo Revenue (Revenue Ton Miles)

Year	Air Cargo Revenue Ton Miles (Millions)
2013	10,969
2018	14,182
2023	16,358
CAGR	4.08%
2024	16,900
2029	18,952
2034	21,030
2044	25,323
CAGR	2.04%

Source: FAA Forecast 2024-2044 Table 19

The information in **Table 1-16** includes the Norther Plains Mountain region that is made up of Colorado, Iowa, Idaho, Kansas, Minnesota, Montana, North Dakota, South Dakota, and Wyoming and all airports within those states.

Table 1-16 – Air Cargo Operations by Aircraft Type

Design	2018	2019	2020	2021	2022	2023
Turboprop ADG I-II	27,169	28,785	29,205	29,795	29,111	29,568
Turboprop ADG- III	3,513	3,735	3,231	3,966	4,556	4,012
Jet	34,945	37,782	38,163	41,736	39,400	34,397
Total	**65,627**	**70,302**	**70,599**	**75,497**	**73,067**	**67,977**

Source: FAA TFMS Operations Data

Table 1-17 – Air Cargo Operations by State

Airport	City	2018	2019	2020	2021	2022	2023
Colorado							
ALS	Alamosa	319	357	311	401	348	431
COS	Colorado Springs	906	1,144	1,158	1,123	1,104	1,106
DEN	Denver	10,408	11,087	11,537	12,661	11,848	9,770
DRO	Durango	1,543	1,601	1,545	1,750	1,517	605
GJT	Grand Junction	659	590	659	577	521	524
GUC	Gunnison	500	462	448	467	441	453
HDN	Hayden	1,012	1,013	966	913	946	934
ANK	Salida	243	218	182	161	250	354
Iowa							
CID	Cedar Rapids	2,613	2,879	3,145	3,026	2,748	2,385

DSM	Des Moines	1,892	2,076	1,878	1,973	1,895	1,921
Idaho							
BOI	Boise	3,370	3,479	3,439	4,352	4,257	4,079
GIC	Grangeville	-	-	276	412	364	391
SUN	Hailey	567	605	601	558	217	-
IDA	Idaho Falls	992	1,059	1,145	1,125	1,158	1,146
LWS	Lewiston	1,250	1,016	916	989	905	922
PIH	Pocatello	555	551	569	518	468	505
RXE	Rexburg	526	581	570	513	451	473
TWF	Twin Falls	769	784	725	683	323	8
Kansas							
DDC	Dodge City	1	-	-	-	2	275
GCK	Garden City	1	4	6	6	4	262
ICT	Wichita	2,400	2,532	2,308	2,543	2,587	2,387
Minnesota							
DLH	Duluth	517	518	516	518	492	507
MSP	Minneapolis	7,114	7,549	7,206	7,883	6,984	5,673
RST	Rochester	740	1,067	966	1,076	1,712	973
TVF	Thief River Falls	505	502	318	511	510	486
Montana							
BIL	Billings	10,575	11,923	12,914	13,017	13,016	12,839
BZN	Bozeman	1,149	869	1,033	1,234	1,200	1,195
BTM	Butte	1,389	1,470	1,729	1,767	1,935	1,761
CTB	Cut Bank	493	493	510	515	495	510
GDV	Glendive	199	452	520	613	347	416
GTF	Great Falls	4,601	4,418	4,333	4,609	4,418	4,225
HLN	Helena	699	750	897	956	884	776
GPI	Kalispell	1,916	1,934	1,861	1,866	1,806	1,833
LWT	Lewistown	27	113	174	186	161	140
MLS	Miles City	561	676	721	697	556	593
MSO	Missoula	2,535	2,598	2,970	2,793	2,863	2,852
SDY	Sidney	132	274	241	195	55	14
OLF	Wolf Point	678	718	695	738	783	707
North Dakota							
BIS	Bismarck	1,038	847	377	431	420	1,067
DIK	Dickinson	23	11	15	10	26	573
FAR	Fargo	3,390	3,665	3,686	3,798	3,665	4,802
MOT	Minot	234	343	499	522	545	811
XWA	Williston	-	129	148	70	66	521
ISN	Williston	172	163	-	-	-	-
Nebraska							
BIE	Beatrice	8	-	-	114	484	482
BBW	Broken Bow	558	457	498	505	481	418
GRI	Grand Island	651	632	689	655	772	623
HSI	Hastings	677	718	834	689	936	863

EAR	Kearney	29	71	99	209	669	631
OFK	Norfolk	838	843	891	877	840	834
OMA	Omaha	4,305	4,517	4,658	5,292	5,960	5,401
ONL	O'Neill	555	565	585	595	581	567
VTN	Valentine	-	1	-	-	24	464
South Dakota							
ABR	Aberdeen	10	27	120	599	516	528
0D8	Gettysburg	-	238	-	13	2	-
MBG	Mobridge	84	280	515	578	502	499
RAP	Rapid City	1,271	1,970	2,027	2,016	1,935	1,905
FSD	Sioux Falls	5,760	5,362	5,373	5,933	5,705	5,581
SPF	Spearfish	-	29	9	5	22	244
ATY	Watertown	76	477	502	517	507	588
Wyoming							
CPR	Casper	1,291	1,424	1,481	1,405	1,344	1,362
CYS	Cheyenne	592	496	508	482	446	529
GCC	Gillette	541	626	664	622	626	620
JAC	Jackson	1,273	1,350	1,330	1,258	668	606
RWL	Rawlins	497	520	360	341	562	582
RKS	Rock Springs	612	623	154	140	157	575

Source: FAA TFMS Operations Data

Figure 1-18 – Air Cargo Total Landed Weight (lbs)

ID	City	2018	2019	2020	2021	2022	2023
COS	Colorado Springs, CO	43,496	52,902	51,845	51,250	50,791	49,970
DEN	Denver, CO	745,814	822,490	913,736	920,124	903,225	797,572
CID	Cedar Rapids, IA	174,612	188,750	203,218	194,348	163,826	157,722
DSM	Des Moines, IA	133,430	132,876	129,763	131,208	15,520	133,391
BOI	Boise, ID	171,805	181,750	180,391	245,741	234,923	229,976
GCK	Garden City, KS	3,984	4,008	4,054	4,049	3,726	3,298
ICT	Wichita, KS	118,382	124,807	118,068	130,428	123,245	105,924
MSP	Minneapolis, MN	540,441	558,019	551,436	574,965	569,564	362,594
RST	Rochester, MN	-	-	34,506	40,578	51,984	32,634
TVF	Thief River Falls, MN	20,668	19,834	17,966	18,918	18,236	17,883
BIL	Billings, MT	220,511	244,161	258,670	285,031	271,635	263,829
GTF	Great Falls, MT	93,903	92,877	94,017	104,380	109,735	104,320
FAR	Fargo, ND	137,683	195,510	210,135	210,186	204,975	203,045
GFK	Grand Forks, ND	3,472	263	8	-	-	-
OMA	Omaha, NE	218,855	235,328	238,189	272,651	274,457	226,937
RAP	Rapid City, SD	-	-	-	-	-	
FSD	Sioux Falls, SD	182,792	187,610	188,994	201,893	185,795	186,967

Source: FAA Air Cargo Data

Table 1-19 – Compound Annual Growth Trends Summary for Air Cargo

Category	Area	Historic (6 year)
Aircraft Type	Turboprop ADG I-II	-0.263%
	Turboprop ADG-III	2.238%
	Jet	-0.263%
Total Operations	Northern Plains/Mountain Region	1.319%
Total Weight (lbs)	Northern Plain/Mountain Region	0.447%
	Large Montana Cargo Airports	2.664%

Source: FAA TFMS Operations Data, FAA Air Cargo Data

Table 1-20 – Compound Annual Growth Trends Summary

Category	Area	Historic (10 year)	Forecast (20 year)
Population	Montana	0.01%	0.59%
	Dawson Co.	-0.86%	-0.13%
Per Capita Personal Income	Montana	2.43%	1.44%
	Dawson Co.	2.65%	1.62%
Employment	Montana	1.15%	1.02%
	Dawson Co.	-0.72%	0.36%
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%

Source: Woods & Poole Economics, U.S. Census Bureau, FAA Forecast 2024-2044. NOTE: Shading indicates CAGR used for forecasting

TFMS 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 are portrayed in **Table 1-22 Total Verified Annual Operations**. The remainder of the visual operations, which are the majority of general aviation operations, are derived from estimates which will be covered later.

Table 1-21 – Aircraft Operations by Year (TFMS)

Category	2019	2020	2021	2022	2023	2024
A/B-I	1,572	1,475	1,499	1,269	1,674	1,505
A/B-II	641	474	666	520	505	694
C/D-I	2	4	3	13	0	2
C/D-II	46	45	65	32	57	20
ADG-III	0	0	2	4	3	0
Total	2,261	1,998	2,235	1,838	2,239	2,223

Source: KLJ Analysis

Table 1-22 - Total Annual Operations (TFMS)

ID	Make	Model	Type	AAC	ADG	TDG	MTOW (lbs.)	2024 Ops
B190	Beechcraft	1900D	Turboprop	B	II	2-A	17,120	202
BE20	Beechcraft	King Air 200	Turboprop	B	II	2-A	12,500	272
BE99	Beechcraft	Airliner 99	Turboprop	B	I	1-A	10,900	144
BE9L	Beechcraft	King Air C90	Turboprop	B	II	1-A	10,100	94
C402	Cessna	402	Piston	B	I	2-A	6,850	256
C414	Cessna	414A		B	I	2-A	6,750	42
C560	Cessna	Citation Ultra		D	II	2-A	16,630	18
CL35	Bombardier	Challenger 350	Turbojet	C	II	1-B	40,600	2
CL60	Bombardier	Challenger 300	Turbojet	C	II	1-B	43,100	2
P212	Tecnam	P-2012	Piston	B	I	1-A	8,113	1,026
PC12	Pilatus	PC-12	Turboprop	A	II	2-A	10,450	118
LJ45	Learjet	45	Turbojet	C	I	1-B		2
	Various			A/B	I			36
	Various			A/B	II			10
							TOTAL Verified Ops	2,225

Source: KLJ Analysis. NOTE: Numbers rounded to account for 1 takeoff and landing for each aircraft

Considering the range of existing and forecast data examined in the previous pages, the next step in the forecasting process is to determine what this means for the airport for:

Critical Design Aircraft
Annual Airport Operations

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. Approval of the Critical Design Aircraft will be the only forecasting element approved by the FAA as a part of this Master Plan. Additional forecasting shown below will be used for additional planning elements with the understanding that further justification will be needed as projects arise.

Existing and Future

In **Table 1-23** there is a summary of the existing annual operations by the various aircraft design characteristics. The shaded/outlined areas show where there are 500 annual operations to meet the 'regular use' threshold. The table includes all verified operations from **Table 1-22** covered earlier in the chapter.

The existing critical design aircraft at GDV is the **A/B-II Small** with a **TDG 2-A**. The airport would like to plan to accommodate Large aircraft (greater than 12,500 pounds) as the future critical design aircraft as Alpine Air has begun increasing the use of Beechcraft 1900 aircraft as a replacement for the Beechcraft 99. The future critical design aircraft at GDV will be **A/B-II Large** with a **TDG-2A.**

Table 1-23 - Existing Annual Operations by Critical Design Aircraft Characteristics

AAC		ADG		TDG		MTOW	
A	137	I	1,509	1-A	1,301	< 12,500 lbs	1,994
B	2,062	II	716	1-B	8		
C	6	III	0	2-A	912	≥ 12,500 lbs	231
D	18	IV	0	2-B	0		

Figure 1-6 – Existing and Future Critical Design Aircraft Family

ARC A/B-I Small		ARC A-II Small	
Tecnam P-2012 Traveler		Pilatus PC-12	

ARC B-II Small		ARC B-II Small	
King Air 200		Cessna 414	
ARC B-II		**ARC B-II**	
Beech 1900D		Cessna Citation Sovereign	

Photography Source: Airliners.net

Essential Air Service (EAS) Enplanements

Cape Air has been serving GDV under the Essential Air Service (EAS) since 2014. Their current contract is set to expire December 31, 2027. The airline currently operates two flights a day to Billings-Logan International Airport (BIL) using nine-seater piston aircraft such as the Tecnam P-2012 Traveler or Cessna 402.

Historical Data

Using historical passenger enplanement data from the FAA, there have been an average of 2,657 enplanements at Glendive. An enplanement is a ticked passenger who originates in Glendive, meaning that arriving passengers are not recorded however it is reasonable to assume that a passenger that originates in Glendive will likely return. Using this estimation, Glendive receives an average of 5,295 passengers annually or an average of 15 passengers per day.

There are no near-term plans to increase the size of aircraft or frequency of flights at Glendive, and outreach findings indicated that passengers often travel to Sidney to reach destinations such as BIL due to more frequent flights.

Table 1-24 – GDV Historical Passenger Data

Year	Enplanements	Total Passengers
2019	3,060	6,120
2020	1,561	3,122
2021	2,126	4,252
2022	4,313	8,626
2023	2,177	4,354
Average	*2,647*	*5,295*

Source: FAA Enplanements

Forecast

It is estimated that enplanements will grow at GDV using a composite growth rate of Per Capita Personal Income, Population, Employment at 0.62% annually. This growth factors a slight decline in population in Dawson County, stagnant growth in employment, and above average growth in PCPI using the logic that with sustained employment and growth of income, there will be continued demand for passenger airline service.

Table 1-25 – GDV Forecast Passenger Data

Year	Enplanements	Total Passengers
2024	2,117	4,234
2029	2,183	4,367
2034	2,252	4,504
2039	2,323	4,645
2044	2,396	4,791
CAGR	***0.62%***	***0.62%***

NOTE: CAGR is composite growth rate of PCPI, Total Population and Total Employment for Dawson County

Based Aircraft Forecast

A based aircraft is an operational and airworthy aircraft claiming an airport as its home for most of the year. Knowing the number and types of based aircraft helps the airport assess the existing aircraft storage needs and the forecast of based aircraft helps determine future storage needs.

Historical Data

According to the National Based Aircraft Inventory[1], there are 20 aircraft based at the airport, however only 17 are validated. This includes 17 single engine piston aircraft. For this planning study, 17 based aircraft will be used as the baseline for future based aircraft growth.

Table 1-26 – Based Aircraft Fleet Mix

Aircraft Type	Based Aircraft	Percent of Total
Piston (Single)	17	100%
Piston (Multi)	0	0%
Turboprop	0	0%
Jet	0	0%
Helicopter	0	0%
Ultralight/Other	0	0%
Total Based Aircraft	17	100%

Source: National Based Aircraft Inventory Program, 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.

Forecast

Local industry trends were evaluated when preparing this forecast of based aircraft at GDV. It is estimated that based aircraft will grow at GDV for several reasons:

- Despite stagnant or declining growth in population and employment in Dawson County, per capita personal income is growing at 1.52% which is higher than state and national trends.
- National Aviation activity shows flat to no growth for piston aircraft per **Table 1-20** but shows steady growth for turbine powered aircraft.
- There are those who want hangar space when something becomes available.

FAA Aerospace Forecasts determined different growth rates for active aircraft in the general aviation fleet based on a range of stagnant and steady growth depending on aircraft type. As a result, the composite growth rate was determined to be 0.80% as a compound annual rate. This conservatively based on the average growth rate of active GA aircraft. This is lower than the national growth rate of 0.99%, however it considers that there may be demand for hangars as they are being constructed. Trends show a decline in the number of single and multi-engine piston aircraft, while steady growth in turbine engine aircraft. Utilizing this growth rate, at the end of the planning period, there will be a total of 20 aircraft based at GDV.

Table 1-27 – Based Aircraft Forecast

Aircraft Type	2024	2029	2034	2039	2044	CAGR
Piston (Single)	17	17	17	17	18	*0.29%*
Piston (Multi)	0	0	0	0	0	
Turboprop	0	1	1	2	2	-
Jet	0	0	0	0	0	
Helicopter	0	0	0	0	0	
Other	0	0	0	0	0	
TOTAL	**17**	**18**	**18**	**19**	**20**	***0.80%***

Source: KLJ Analysis. CAGR = Compounded Annual Growth Rate

Annual Operations Forecast

An Air Traffic 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 1-22** all 2,225 TFMS operations are classified as itinerant.

This data does not capture all operations as GDV as many aircraft do not operate under IFR flight plans, and as such would not be included in this data. Observations from the airport manager indicate that the airport is occasionally used by aerial firefighting operations, search and rescue as well as flight training. It is estimated that there are approximately 500 annual operations that would not be recorded by the TFMS as these aircraft do not fly under IFR flight plans. Additionally, all 17 based aircraft at the Dawson Community Airport are single-engine piston aircraft which typically fly VFR. Using airport manager observations, on average, these aircraft owners fly approximately 10 times annually which equates to 20 operations per based aircraft annually, or 340 operations total.

Forecast

Using all available data, this equates to 3,090 operations annually. The baseline annual operations at GDV will be 3,100 operations. FAA Aerospace Forecasts provide forecasted growth rates of GA Hours flown broken down by aircraft type. It was decided that a composite growth rate would be used to forecast annual operations as Dawson Community Airport receives traffic from piston (single and multi-engine), turboprop and jet aircraft. The growth rate was chosen as 1.39%. It is expected that GDV will receive approximately 4,100 operations annually by 2044. The majority of operations at GDV are classified as itinerant, meaning they arrive or depart from outside of a 20-mile radius of the airport.

Table 1-28 – Total Operations Forecast Summary

Metric	2024	2029	2034	2039	2044	*CAGR*
Local Operations	310	332	356	381	409	*1.39%*
Itinerant Operations	2,790	2,657	2,847	3,051	3,269	*1.39%*
Total Operations	**3,100**	**3,322**	**3,559**	**3,813**	**4,086**	***1.39%***

Source: KLJ Analysis, NOTE: Local operations make up 10% of total operations while Itinerant operations make up 90% of total operations. Composite growth rate used from FAA Aerospace Forecasts

Forecast Summary

A complete summary of the proposed airport activity forecasts is in **Table 1-29**.

Table 1-29 – Aviation Activity Forecast Summary

Metric	2024	2029	2034	2039	2044	CAGR
Essential Air Service						
Enplanements	2,117	2,183	2,252	2,323	2,396	0.62%
Total Passengers	4,234	4,367	4,504	4,645	4,791	0.62%
Operations						
Itinerant						
Civil	2,790	2,657	2,847	3,051	3,269	1.39%
Military	-	-	-	-	-	-
Total Itinerant Operations	2,790	2,657	2,847	3,051	3,269	1.39%
Local						
Civil	310	332	356	381	409	1.39%
Total Local Operations	310	332	356	381	409	1.39%
Total Operations	3,100	3,322	3,559	3,813	4,086	1.39%
Based Aircraft						
Piston (Single)	17	17	17	17	18	0.29%
Piston (Multi)	0	0	0	0	0	-
Turboprop	0	1	1	2	2	-
Turbojet	0	0	0	0	0	-
Helicopter	0	0	0	0	0	-
Other	0	0	0	0	0	-
Total Based Aircraft	17	18	18	19	20	0.82%

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

FAA Approval

The FAA approved the critical design aircraft prepared in this chapter on May 13, 2025, for use in this master planning effort.

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

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

Helena Airports District Office
2725 Skyway Dr., Suite 2
Helena, MT 59602

May 13, 2025

Mr. Joe Sharbono, Commissioner
Dawson County Board of Commissioners
207 W. Bell St.
Glendive, MT 59330

Dawson Community Airport (GDV)
Glendive, MT
Critical Aircraft Approval Letter

Dear Commissioner Sharbono:

The Federal Aviation Administration (FAA) approves the critical aircraft in the Dawson Community Airport Layout Plan (ALP) Update with Narrative Report, submitted for review on April 18, 2025.

The FAA approves protection for AB-II aircraft as the existing and ultimate critical aircraft in the Dawson Community Airport Layout Plan (ALP) and Narrative Report. While this approval and subsequent ALP protects airport design standards, all future development will need to be justified by current activity levels at the time of proposed implementation of any infrastructure, reconstruction, or construction. This letter serves as the FAA approval of critical aircraft determination summarized in Section *Airport Role and Design* of the Dawson Community Airport Narrative Report page 1-9.

The approval of the critical aircraft does not automatically constitute a commitment on the part of the United States to participate in any development recommended in this airport planning study or shown on the ALP.

If you have questions, please call me at 406-441-5246.

Sincerely,

Jennifer Schildgen
Digitally signed by JENNIFER L FAVORS SCHILDGEN
Date: 2025.05.15 11:26:03 -06'00'

Jennifer Schildgen
Community Planner
Helena ADO

Cc: Craig Hostettler, Airport Manager
Amber Channel, KLJ
Karen Hallenbeck, MT Aeronautics