CHAPTER 4: IMPLEMENTATION & COMPATIBILITY

Introduction

The implementation and compatibility plan provides guidance on how to carry out the preferred development recommendations identified in **Chapter 2: Runways and Taxiways** and **Chapter 3: Terminal Area and Support Facilities**. Based on the preferred development plan, the improvement projects needed at the Dawson Community Airport (GDV) over the planning period can be formulated. This chapter includes the following sections:

- Project Sequence
- Financial
- Environmental Review
- Compatibility

Background

Each project is sequenced to balance demand, schedule, other projects, environmental/agency approval, funding, and financial constraints. The project plan may change over time to react to changing conditions but is flexible so that the airport can react to change and re-prioritize projects based on actual demand.

A more detailed facility implementation and financial feasibility plan is identified for the near-term (i.e. 1-10 years), because needs are more realistically anticipated based on available funding and actual demand. There is more uncertainty in project funding, demand, and local project importance in the long-term. When reaching that point, airport planning documents should be updated.

Implementing a Project

The airport must go through an established process to receive the federal funds to complete an airport development project. FAA requires long lead times to complete all project steps and incorporate projects into federal funding plans. Additional coordination is required to prepare National Environmental Policy Act (NEPA) environmental documentation. Common steps in the project implementation process for a complex project include (steps may be shorter or longer based on complexity):

Professional Services: Select a qualified consultant for the project planning, environmental reviews, survey, engineering design, and construction administration for the project. The FAA recommends a distinct selection process for both planning and engineering services.

Five (5) Years Prior to Construction: Identify the project on the Airport Layout Plan, complete necessary airport planning studies and collect supporting documentation to demonstrate the project is justified for AIP funding, and is compatible with the Airport Layout Plan.

Four (4) Years Prior to Construction: Update the Capital Improvement Plan (CIP) to identify the project scope, eligibility, justification, and funding. Close coordination with FAA is required.

Three (3) Years Prior to Construction: Initiate any aeronautical surveys, navigational aid agreements (reimbursable agreements) or special FAA coordination for flight procedures which may be necessary prior to construction. Solidify project funding plan and final justification with FAA.

Two (2) Years Prior to Construction: Complete required NEPA environmental documentation and analysis for the proposed action. Prepare 30 percent project design, refine cost estimates, and prepare benefit/cost analysis as necessary. Acquire land for project and initiate airspace studies.

One (1) Year Prior to Construction: Obtain environmental clearance and permits for the proposed action. Prepare funding pre-application, detailed project plans and specifications including design report, airspace studies, Safety Management Systems (SMS) and construction safety/phasing plan. Finalize project schedule.

Year of Construction: Complete final design. Solicit bid proposals from companies engaged in the project construction. Prepare grant application and accept Federal grant. Issue notice to proceed and monitor construction. Maintain FAA grant compliance and payments.

After Construction: Submit final report and close out the AIP grant.

For complex projects requiring federal discretionary funding such as runway extensions, these steps may take up to five years prior to the issuance of an AIP grant for construction. Less complex projects using entitlements such as pavement rehabilitation will require less lead times, typically no less than three years prior to grant issuance.

All planning-level project costs developed are in 2026 dollars. Final project costs are subject to change based on actual construction and project formulation needs.

Many of the projects identified are demand-driven based on the Planning Activity Levels (PALs) established in the approved aviation forecasts. The timing of implementation is estimated from the FAA-

approved activity forecasts. Any change from the forecasted airport activity may affect the timing of capacity-driven improvements.

Based on the PALs and other regular pavement and safety needs, some airport development capacity projects may not able to be sequenced to meet PALs within a realistic funding plan. These projects are initiated within a few years of their PAL demand trigger to account for anticipated available funding.

Project Sequence

Significant individual projects are described in this section along with information about the project purpose, scope, and triggering events. The recommended project phasing at GDV is based on anticipated needs and available funding. This information provides guidance to the airport sponsor and funding agencies on future implementation steps. The projects in **Table 4-1** require the largest amount of design work, construction and cost through the planning period.

Table 4-1 – Major Projects

Project	Scope		Estimated Cost		
Full Parallel Taxiway	Prelim	None	$13 m	Trigger	To remove direct access from the apron to the runway
	Details	Construct a full parallel taxiway for Runway 12-30, 5,704' x 35' with two additional connectors; remove the current connector attached to the Runway 12-30, taxiway leading to Runway End 12 from Runway 2-20 and taxiway leading from the apron to Runway End 30.		Justification	To provide safe access to/from the runway and remove direct access connector
South Apron Expansion and SRE Building	Prelim	None	$2.4 m	Trigger	To store all airfield equipment
	Details	Expand the apron to the south by 1,900 SY and construct an 80' x 80' SRE building.		Justification	To protect all airfield equipment by storing them inside in a single location

Source: KLJ Analysis

Capital Improvement Plan (CIP)

The CIP is a key element in the implementation plan. The CIP identifies the project title, year, estimated costs, and anticipated funding for airport improvements. Larger projects are often divided into smaller elements that reflect how projects are approved, designed, and constructed. Each project is requested through the CIP project programming and grant application process. The CIP is updated and submitted to the FAA annually to program Federal and State grant funding. The proposed GDV CIP identifies over $21 million in airport improvements over the next 10 years see **Table 4-2 Capital Improvement Plan**.

Table 4-2 – Capital Improvement Plan

Project	Scope	Estimated Cost	FAA Funds	State Funds	Local Funds	Other
Near-Term (2026-2031)						
Parallel Taxiway Design	Design new parallel taxiway for Runway 12-30	$318,000	$286,200	$30,200	$1,600	-
Parallel Taxiway (12 End)	Construct 1,450'x 35' of taxiway from the 12 end to Runway 2-20	$2,870,000	$2,583,000	$272,700	$14,400	-
12 End Taxiway Removal	Remove the current taxiway from the 12 end to Runway 2-20	$51,000	$45,900	$4,100	$1,000	-
Connector Taxiway Removal	Remove the current taxiway from the new parallel taxiway to Runway 12-30	$12,300	$11,000	$1,000	$200	-
Apron Expansion Design	Design for apron expansion to the south and tiedown reconfiguration	$81,100	$73,000	$7,700	$400	-
Apron Expansion Construction	Construct 1,900 SY of pavement to the south and reconfigure for 11 tiedown spots	$895,400	$791,000	$99,200	$5,200	-
	Sub-Total	$ 4,227,800	$ 3,790,100	$ 414,900	$ 22,800	$ 0
Mid-Term (2032-2036)						
SRE Building	Construct new 80'x 80' SRE building on new south apron	$1,400,000	$1,260,000	$112,000	$28,000	-
Remove Buildings	Remove the ARFF and two maintenance buildings	$25,000	$22,500	$2,000	$500	-
Parallel Taxiway (Middle Area)	Construct 1,350'x 35' of taxiway and connectors from the current connector to Runway 2-20	$2,970,000	$2,673,000	$267,300	$26,700	-
Tenant Taxiway Reconfiguration	Remove the current taxiway from the north apron to Runway 2-20 and construct new taxiway closer to current hangars	$1,500,000	$1,350,000	$135,000	$15,000	-
	Sub-Total	$5,895,000	$5,305,500	$516,300	$70,200	$0
Long-Term (2037-2046)						
Parallel Taxiway (30 End)	Construct 2,900'x 35' of taxiway and connector from the 30 end to the current connector taxiway	$6,376,000	$5,738,400	$573,800	$57,400	-
30 End Taxiway Removal	Remove the current taxiway from the 30 end to the south apron	$95,000	$85,500	$7,600	$1,900	-
SASO Hangar	Construct new SASO Hangar	$856,000	$770,400	$69,300	$7,700	-
South Taxilane	Construct 200'x 35' taxilane south of the apron extension	$439,700	$395,800	$39,600	$4,400	-
T-Hangar (6 unit)	New 6-unit T-Hangar on the northern most apron taxilane	$2,400,000				-
South Hangars	4 individual 50'x50' hangars on new south taxilane	$1,860,000				-
	Sub-Total	$ 7,766,700	$ 6,999,100	$ 690,100	$ 71,400	$ 0
	TOTAL	$ 17,889,500	$ 16,094,700	$ 1,621,300	$ 164,400	$ 0

Source: KLJ Analysis; values rounded to nearest 100. Blue highlight – Demand based hangars. Totals do not include storage hangars, only the SASO Hangar.

Financial

The implementation plan considers the airport's ability to fund the projects identified in this planning study. Projects in the short-term and mid-term are discussed in more detail for realistic project sequencing based on identified needs, airport priorities and available funding. Financial feasibility is a major consideration in developing the implementation plan and Capital Improvement Plan (CIP).

Airport funding for projects is derived from many sources. Funding sources can be categorized into three main categories:

- Federal funding
- State funding
- Local or Private funding

Detailed information about these funding programs can be found in **Appendix B – Commercial Service Airports 101 (Airport Funding)**. A realistic project implementation plan must consider financial resources. The financing strategy for Dawson Community Airport provides sufficient federal, state, and local funding for future airport improvements. Projected funding sources are based on existing legislation.

Federal Funding

Federal Airport Improvement Program (AIP) funding provides financing for most of the improvements proposed at GDV. While maximizing the projected entitlement funding available to Dawson Community Airport ($150,000/year), these entitlements will only finance a portion of the proposed improvements through the 20-year period. Entitlements will be used to fund AIP-eligible projects, particularly critical maintenance, safety, and capacity enhancements. Discretionary funding is anticipated to be needed to fund a large portion of airport improvement projects through the next 10 years. A summary of Federal funding needs is outlined in **Table 4-3**.

Table 4-3 – Total Funding

Phase	Cost	FAA Entitlement	FAA Discretionary	State	Local	Other
Near-Term (2026-2031)	$ 4,227,800	$ 900,000	$ 2,890,100	$ 414,900	$ 22,800	
Mid-Term (2032-2036)	$ 5,895,000	$ 750,000	$ 4,555,500	$ 516,300	$ 70,200	
Long-Term (2037+)	$ 7,766,700	$ 1,500,000	$ 5,499,100	$ 690,100	$ 71,400	
TOTAL	**$17,889,500**	**$3,150,000**	**$12,944,700**	**$1,621,300**	**$164,400**	**$0**

Source: KLJ Analysis (note does not include storage hangars)

Federal discretionary funding will be needed to fund the highest priority projects at the airport. These projects cannot be completed with entitlement funds alone. Discretionary funding will be needed to complete these projects. These funds will be from either Discretionary or State Apportionment funds. FAA's preference is to combine entitlement and discretionary funds on high priority projects.

COVID-19 Relief

During the Coronavirus Disease 2019 Pandemic (COVID-19), the United States government signed three laws for economic assistance to eligible U.S. airports through 2020 and 2021. These funds were to be used to prevent, prepare for, and respond to COVID-19.

The first law, the Coronavirus Aid, Relief, and Economic Security (CARES) Act was signed on March 27, 2020, for $2.3 trillion dedicated towards combatting the effects of COVID-19. Of this, $10 billion were to keep airports in operation to serve the industry, traveling public and to support the economy, along with keeping airports credited ratings stable, and to keep airport and aviation workers employed. These funds could be used for any purpose for which airport revenues may be lawfully used.

Then on December 27, 2020, the Coronavirus Response and Relief Supplemental Appropriation Act (CRRSAA) was the second law signed including $900 billion in supplemental appropriation for COVID-19 relief. The FAA established the Airport Coronavirus Response Grant Program (ACRGP) which included $2 billion of the act.

Finally, the American Rescue Plan Act of 2021 was signed into law on March 11, 2021, which included $1.9 trillion to address the ongoing health crisis and spur a strong economic recovery. The FAA established the Airport Rescue Grants which is how $8 billion of those funds.

Dawson Community Airport was granted $30,000 under the CARES Act as a general aviation airport. $13,000 was granted from the ACRGP as a non-primary allocation for a local commercial service airport. Then, $32,000 was granted from the Airport Rescue Grants as a non-primary allocation. In total $75,000 has been awarded to combat the effects of COVID-19.

Infrastructure Investment and Jobs Act (IIJA) Bipartisan Infrastructure Law

On November 6, 2021, the IIJA was passed. This included $ 1 trillion for improvements to highways, bridges, roads, passenger and freight rail, airports, water and wastewater treatment, internet access and modernizing the electric grid. The FAA awarded the $25 billion received from the law to 3,075 airports and divided it into three grant groups:

1. $5 billion for airport terminals to replace aging terminals, increase energy efficiency and accessibility.
2. $5 billion for air traffic facilities to update and upgrade equipment to improve safety, security and environmental standards and replace necessary facilities.
3. $15 billion for airport infrastructure for projects as defined under the existing Airport Improvement Grant and Passenger Facility Charge criteria including runways, taxiways, safety and sustainability projects, terminal, airport-transit, and roadway.

$159,000 was allocated from the IIJA to Dawson Community Airport for future improvements.

State Funding

State funding will primarily be used to provide a match for Federal AIP funding. This is expected to be as much as 10% in the planning period. GDV should stay apprised of the State's funding programs and funding programs and funding levels to determine the impact of that funding on the projects planned

for Dawson Community Airport. The state of Montana offers various project funding for an airport that is publicly owned and is public-use.

- Grants: Up to 80% to 99% of the airport's share of federal NPIAS project costs.
- Loans: Up to 100% of the airport's shares of any airport project. These loans are low-interest and can be repaid in equal annual installments with a division loan over a ten-year period or paid in full at any time without incurring additional interest or penalty charges.
- Non-Federal Aid Projects: NPIAS and Non-NPIAS airports are eligible for grants or loans up to 100% of the project cost for non-FAA eligible projects.

Local Funding

A local match will be needed for the AIP funded projects. This requirement will vary depending on project eligibility and the structure of the State and Federal funding programs. The Dawson Community Airport has a slate of projects planned and should assure that it has adequate funding sources for operating expenses as well as project funding. See **Appendix B – Commercial Service Airports 101 (Airport Funding)** for further details on airport funding options.

Environmental Review

Introduction

FAA AC 150/5070-6B, *Airport Master Plans* identifies a planning-level environmental review as one of the elements of effective planning. The purpose behind this element of the airport master planning process is to help the airport sponsor thoroughly evaluate environmental impacts of airport development alternatives, and to provide information for subsequent environmental processing. Key environmental considerations for future development at GDV were identified and based on the existing conditions described in **Chapter 1: Airport, Community & Aviation Activity.**

This environmental review section is not intended to fulfill the requirement of 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 to 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 1050.1, *FAA National Environmental Policy Implementing Procedures* and US DOT Order 5610.1, *Procedures for Considering Environmental Impacts* is required to be completed prior to commencing with project actions.

NEPA Environmental Review Process

Every Federal action requires an environmental review per NEPA. Actions shall be thoroughly evaluated and coordinated with resource agencies during the environmental review phase. Impacts should be avoided whenever possible, minimized, or mitigated as a final option. Federal actions fall into one of three types of class of actions:

- **Categorical Exclusion (CATEX):** This environmental documentation is used for actions that do not normally require an Environmental Assessment (EA) or Environmental Impact Statement (EIS), because they do not individually or cumulatively have a significant effect on the human

and/or natural environment. Documentation required includes either simple documentation or the completion of a checklist with supporting documentation certifying that the action will not exceed any environmental impact thresholds.

- **Environmental Assessment (EA):** Typical actions that require an EA are those that are not categorically excluded or actions that may result in extraordinary circumstances such as impacts to wetlands, historical properties, or floodplains. EA documentation required here includes a condensed or comprehensive environmental analysis of the proposed action and alternatives, and the anticipated impacts from the proposed action. Agency review and coordination of the proposed action and impacts is required. The decision document proceeded after this analysis if no significant impacts are determined is a Finding of No Significant Impact (FONSI) issued by FAA, which is typically valid for three years.
- **Environmental Impact Statement (EIS):** Actions that require an EIS include those that will have a significant impact to the quality of the human and/or natural environment. An EIS may also be triggered if an EA concludes that the project will have a significant impact. This document provides in-depth impact and cumulative analyses of all proposed alternatives. The document published once a decision has been made on the alternative (typically the alternative that achieves the actions goals but has the least impacts) to move forward with is a Record of Decision (ROD). The EIS is valid for a period of three years.

Environmental Categories

Descriptions of potential impacts associated with the proposed Master Plan improvements are discussed by the impact categories identified in FAA Order 1050.1, *FAA National Environmental Policy Implementing Procedures*. Additional consultation regarding the improvement area would be warranted in the future during the environmental review phase of the project action.

Impact categories that will remain potentially unaffected by the proposed airport improvements identified in this study include:

- **Aviation Emissions and Air Quality** – The improvements identified are not anticipated to effect air quality.
- **Coastal Resources –** The airport is not located in a coastal environment.
- **Natural Resources and Energy Supply** – The proposed airport improvements would not affect any natural resources and energy supply.
- **Visual Effects** – Visual effects to adjacent properties from proposed airport activities are not expected.
- **Wetlands** – No wetlands occur on existing Airport property and no projects off airport are anticipated to occur during the planning period.
- **Floodplains** – GDV is not located within a 100-year floodplain
- **Wild and Scenic Rivers** – There are no wild and scenic river designations near the Airport.

The categories identified below have the potential to be affected by the airport improvements identified in this study.

BIOLOGICAL RESOURCES

As identified in **Chapter 1: Airport, Community & Aviation Activity**, five threatened or endangered species and no critical habitat have been identified for Dawson Community Airport. Due to the potential for some of these threatened or endangered species to be located on or near the Airport, biological resources will be reviewed for each proposed activity. An example of an activity that biological resources could be affected by is the proposed building removal project. It's anticipated that impacts to biological resources would not be significant.

DEPARTMENT OF TRANSPORTATION-SECTION 4(F) & SECTION 6(F) PROPERTIES

Section 4(f) applies only to those portions of a multiple-use public property that is designated by statute or identified in an official management plan as being primarily for public park, recreation, or wildlife and waterfowl refuge purposes, and are determined to be significant for such use. GDV is on land owned by the County and is designed for airport use. 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 new ground disturbance.

No grants have been used to fund projects near GDV; therefore no further analysis of Section 6(f) is required. See **Chapter 1: Airport, Community & Aviation Activity** for more details.

FARMLANDS

The Farmland Protection Policy Ace (FPPA) defines prime farmland as land that has the best combination of physical and chemical characteristic 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. A search of the USDA Natural Resources Conservation Service (NRCS) web soil survey shows that land surrounding the airport for approximately one mile is classified as not prime farmland therefore, no further review is required. No further review is needed for projects occurring on existing airport property.

HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

There are no proposed activities that would require hazardous materials, solid waste, and pollution prevention to be addressed, provided that all construction activities would meet stormwater pollution prevention plan and MT DEQ requirements. Although there are no known contaminated sites within one mile of the airport, prior to acquisition of new land to be owned in fee title by an airport sponsor, 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.

HISTORIC AND CULTURAL FEATURES

Before a project that involves new land disturbance is implemented, an analysis to identify the potential for cultural resources would need to be conducted for the project area. Coordination with the State Historical Preservation Offices (SHPO) and tribal members is necessary for projects involving new land disturbance.

Any buildings affected that have potential to be listed in the National Register of Historic Places (NRHP) would require coordination with SHPO. Projects involving new ground surface disturbance would require a determination of affect to historic properties to be obtained from the SHPO. Structures more

than 50 years old are eligible for inclusion on the NRHP and further review is required to determine if these structures have significant historical, cultural, or architectural characteristics.

LAND USE

GDV is surrounded by prairie pastureland and open spaces. The closest residential home is located approximately one mile south of the Airport. 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. See **Chapter 1: Airport, Community & Aviation Activity** on wildlife hazards.

NOISE

Effects from noise during construction and use of the airport is another resource that may need to be addressed as needed depending on the proposed action. FAA does not require a noise analysis 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 . These operations normally result in a cumulative noise exposure to be less than a 65 decibel Day-Night Level (DNL) identified as a critical threshold by FAA to take actions to mitigate sound exposure. Current airport operations at GDV are below this threshold.

SOCIOECONOMICS & CHILDREN'S HEALTH AND SAFETY RISK

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 effect on business, employment, transportation, utilities, etc., are factors that affect the social climate of a community. Any action that would either adversely or beneficially affect the factors stated above would be considered as having some type of social impact on the residents of a particular community. Off-airport actions including acquisition of land use and airspace avigation easements and potential future obstruction mitigation are more likely to have these types of effects.

There are no schools, hospitals, or places of worship within a one-mile radius of the Airport. No further analysis is required.

WATER RESOURCES – SURFACE AND GROUND WATERS

Airport activities can affect water quality 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 would minimize potential impacts to water quality. Drainage at the Airport 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.

A General Permit for Storm Water Discharges Associated with Construction Activities may be required from the MT DEQ for the proposed improvements if the area of disturbance exceeds one acre. Permit requirements would need to be reviewed during the environmental documentation phase. Further coordination with the DEQ may be needed for airport development projects.

NEPA Documentation

Based on the preliminary environmental evaluation completed in this section and the anticipated 10-year projects in the implementation plan, **Table 4-4** has been prepared to document the potential anticipated environmental documentation necessary to proceed with the proposed actions. The ultimate decision on what documentation may be required for each proposed action will be determined by the FAA. All environmental reviews must be completed prior to initiating project design beyond 25 percent.

Table 4-4 – Environmental Documentation

Proposed Action(s)	Anticipated Environmental Documentation
Parallel Taxiway	CATEX
Apron Expansion	CATEX
SRE Building	CATEX
Buildings Removal	CATEX*
T Hangar	CATEX

*Source: KLJ Analysis; * Historic Architectural Inventory of buildings would be needed.*

Environmental Impact Summary

The Environmental Review Summary identified in **Table 4-5** summarizes the potential environmental impacts identified in the prior sections of this Chapter. This table is intended to give a general indication of the likely need for further environmental analysis. Additional environmental investigation is necessary to determine possible impacts associated with the improvement area. At the appropriate time, the FAA would decide whether, and to what extent, any additional investigation would be performed. Based on findings of this environmental review, it is estimated that further environmental analysis is required for the proposed improvements.

Table 4-5 – Environmental Review Summary

NEPA Impact Category	Further Analysis Required
Aviation Emissions and Air Quality	No
Biological Resources	Yes
Coastal Resources	No
Department of Transportation Act Section 4(f) and Section 6(f)	Yes
Farmlands	No
Hazardous Materials, Pollution Prevention, and Solid Waste	No
Historical and Cultural Resources	Yes
Land Use	Yes
Natural Resources and Energy Supply	No
Noise	No
Socioeconomic and Children's Heath and Safety Risk	No
Visual Effects	No
Surface and Ground Water	No
Floodplains	No
Wetlands	No
Wild and Scenic Rivers	No

Source: KLJ Analysis, FAA Order 1050.1,G FAA National Environmental Policy Implementing Procedures

Compatibility

Overview

Airports are community assets providing significant benefits. They facilitate the movement of people, goods, and services, promote tourism and trade, stimulate business development, and support a variety of jobs.

The objective of land use planning is to guide on-airport and off-airport land use development to be compatible with airport operations. The airport directly controls on-airport compatible land uses to primarily serve aeronautical activities. The airport does not directly control off-airport land uses. Surrounding land uses compatible with airports typically include those uses that can co-exist with a nearby airport without either constraining the safe and efficient operation of the airport or exposing people working or living nearby to unacceptable levels of noise or safety hazards. Compatible land use also considers minimizing potential hazards to aircraft and the flying public. The impact of airport planning decisions extending well beyond the airport property line must be considered.

Land use planning around airports is important to airports and communities for several reasons:

- **Safety** - Compatibility is needed to maintain safety of the general and flying public. Risk should be reduced to an acceptable level. The airport must also maintain operational utility within identified safety and risk criteria.
- **Airport Utility** - Land uses around airport should provide the airport so that there are not undue restrictions placed on the airport's existing or planned future arrival and departure procedures. Opportunities for future development identified in the Airport Master Plan and shown on the Federally (FAA) approved Airport Layout Plan should be considered.
- **Human Environment** - Balancing the human environment with airport operations is important to maintain an acceptable level of airport impacts (i.e. noise and visual exposure) with the surrounding community.
- **Economic Development** – Operational restrictions placed on the airport because of land use compatibilities have the potential to have a trickle-down effect on the community. This reduces the community's ability to accommodate the aviation needs of the public and local businesses, thus limiting economic development opportunities.

Incompatible land uses are one of the largest issues facing airports today, often resulting in conflicts between airports and their communities. They also may result in airport operational and grant project funding implications in certain situations. Building consistency between the recommendations in this study with airport land use compatibility standards and area-wide planning is vital for maintaining compatible land use.

The objective of this section is to assist Dawson Community Airport in identifying land use standards compatible with the development plan and provide recommendations so that the airport can continue to meet safety and compatibility criteria. This chapter should become the framework to future land use planning efforts between Airport and Dawson County.

Roles and Responsibilities

AIRPORT SPONSOR

As the airport sponsor, the County of Dawson applies and receives federal grants. These federal grants require the city to develop and maintain the airport compatible with FAA rules and regulations through FAA Grant Assurances (obligations). There are currently 39 grant assurances which an airport sponsor assumes as a contractual obligation with the Federal Government when the sponsor accepts federal funds for airport development. FAA has published Order 5190.6B *Airport Compliance Manual* to assist FAA personnel and airport sponsors to maintain compliance with grant and land obligations. These grant assurances describe how the sponsor must operate the airport and serve the needs of the flying public. Grant assurances 20 and 21 pertain to compatible land use around airports.

> **20. Hazard Removal and Mitigation.** It will take appropriate action to assure that such terminal airspace as is required to protect instrument and visual operations to the airport (including established minimum flight altitudes) will be adequately cleared and protected by removing, lowering, relocating, marking, or lighting or otherwise mitigating existing airport hazards and by preventing the establishment or creation of future airport hazards.
>
> **21. Compatible Land Use.** It will take appropriate action, to the extent reasonable, including the adoption of zoning laws, to restrict the use of land adjacent to or in the immediate vicinity of the airport to activities and purposes compatible with normal airport operations, including landing and takeoff of aircraft. In addition, if the project is for noise compatibility program implementation, it will not cause or permit any change in land use, within its jurisdiction, that will reduce its compatibility, with respect to the airport, of the noise compatibility program measures upon which Federal funds have been expended.

FAA grant assurances require airports take appropriate action to protect airspace and restrict land uses in the immediate vicinity to those compatible with airport operations. Compatible land use control for GDV is the responsibility of the airport sponsor.

FEDERAL AVIATION ADMINISTRATION

The FAA can provide guidance and funding to promote compatible land development around airports; however, it has no regulatory authority for controlling land uses. State and local governments are responsible for land use planning, zoning, and regulations. The FAA develops grant assurances to protect federal investments in airports but are the responsibility of the airport sponsor to maintain.

The FAA monitors all obligated airports to ensure they comply with the requirements of the grant assurances through its Compliance Program. If the sponsor fails to take the necessary corrective action, the FAA can legally impose penalties on the sponsor, including the loss of federal funding.

As defined by law, the FAA's authority to enforce most regulations and grant assurances is limited to within the airport boundaries. The FAA's only authority on compatible land use planning is through the grant assurances airport sponsors must adhere to in order to obtain federal funding for airport improvements. In most cases, the most practical and cost-effective method for a sponsor to affect compatible land use outside of the airport's property is through zoning or easements rather than through land acquisition.

STATE OF MONTANA

Montana Code Annotated Title 67, Chapter 7, allows counties and cities of the state to designate Airport Affected Areas to control height and land use around airports.

SURROUNDING JURISDICTIONS

Local jurisdictions are responsible for developing and enforcing land use planning, zoning, and regulations. Development proposals are reviewed and approved at this local level through an established process. The local authority enforces multi-jurisdictional airport zoning regulations for proposed development. For Dawson Community Airport, surrounding jurisdictions affected by the airport includes the City of Glendive and Dawson County.

Land Use Compatibility Elements

Four key elements should be considered to achieve land use compatibility at any airport.

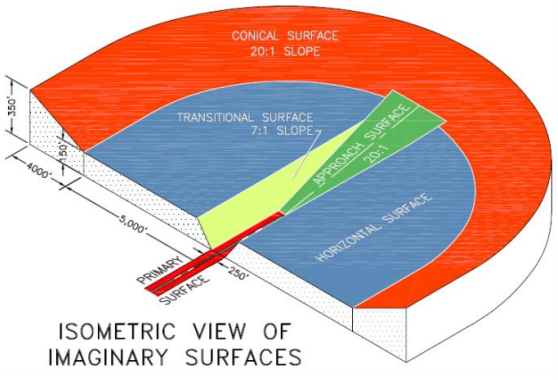
- Airspace
- Safety
- Noise
- Compliance

A general description of each element is provided based on criteria developed by the FAA and the State of Montana, if applicable.

AIRSPACE

Guidelines & Evaluation

Airspace compatibility includes avoiding vertical development that reduces the level of safety, increases risks of aircraft accidents, or measurably reduces the operational utility of airports. 14 CFR Part 77, *Objects Affecting Navigable Airspace* defines obstructions to air navigation. Other airspace requirements are defined in FAA Advisory Circulars and Orders. All Part 77 obstructions are a hazard to air navigation unless an aeronautical study concludes otherwise.



ISOMETRIC VIEW OF IMAGINARY SURFACES

It is important to acknowledge that the FAA's role is limited to evaluating the aeronautical effects of proposed structures; the FAA has no legal authority to stop the construction of any proposed structure. However, FAA grant assurance obligations require sponsors to take reasonable action to prevent and remove hazards to air navigation. Montana state law requiring airport zoning and other regulations be consistent with the Airport Layout Plan.



Recommendations

Recommendations to maintain airspace compatibility at 97M include:

- Consider provisions in building codes to require FAA Form 7460-1 *Notice of Proposed Construction or Alterations* to be submitted and reviewed by the Airport as part of the local building permit approval process.
- Follow through with clearing of obstructions identified in the Airport Layout Plan.

SAFETY

FAA design standards and regulations prescribe several zones and imaginary surfaces intended to protect aircraft and their occupants while landing or taking off. However, the safety element primarily associated with compatible land use is focused on minimizing risks to persons and property on the ground.

FAA Runway Protection Zones



To reduce the public safety risk associated with aircraft operations, communities typically use FAA airport design standards and safety compatibility guidelines developed by state aeronautical agencies to formulate safety policies. The safety element primarily associated with compatible land use is focused on minimizing risks to the flying public, as well as persons and property on the ground. FAA has defined minimum land use standards in the form of a Runway Protection Zone (RPZ) in FAA AC 150/5300-13A *Airport Design*. See **Appendix A – Glossary of Terms** for definitions. Existing RPZs are either owned in fee or by avigation easement. There are no incompatible land uses inside the existing RPZs at GDV. For future RPZs it is recommended that the County acquire necessary property interest to insure no incompatible land uses.

Wildlife Hazards



FAA is also focused on minimizing safety risks associated with wildlife near an airport. Hazardous wildlife use natural or artificial habitats on or near an airport for food, water, or cover. Wildlife near airport operations may result in an aircraft-wildlife strike. The FAA recommends that airport sponsors implement the standards and practices contained in FAA AC 150/5200-33*, Hazardous Wildlife Attractants On or Near Airports* to mitigate wildlife risks. The airport has an existing deer-proof perimeter fence and it is recommended to maintain that fence and extend it to encompass any new airfield improvements.

Recommendations

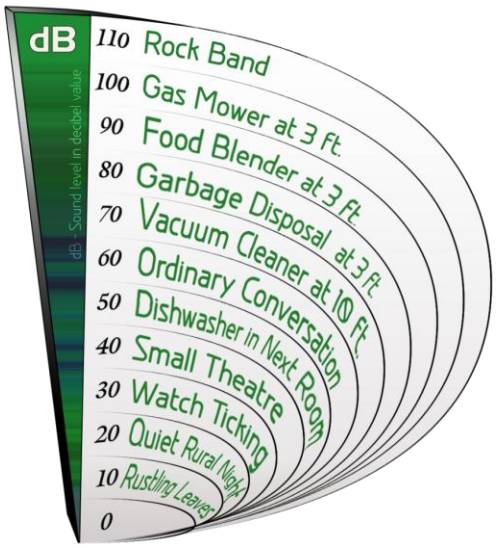
Recommendations to maintain safety compatibility at GDV include:

- Maintain the existing wildlife fence.

NOISE

The noise element is focused on minimizing the number of people exposed to high frequency and event levels of aircraft noise. Noise emitted from aircraft can affect the well-being of persons living or working near an airport. While there are several effects of aircraft noise upon people, the most common is annoyance. Annoyance can be defined as the overall adverse reaction of people to noise. Other effects of aircraft noise include sleep disturbance and speech interference. Noise affects everyone differently.

Noise analysis for airports is conducted using FAA's Aviation Environmental Design Tool (AEDT). FAA has determined that a cumulative noise exposure of individuals to noise resulting from aviation activities must be established in terms of Yearly Day Night Average Sound Level (DNL).



COMMON SOUNDS AND THEIR ASSOCIATED DECIBEL LEVELS

No noise analysis is needed for Airplane Design Group I or II airplanes if operations do not exceed 90,000 annual propeller-driven or 700 annual jet aircraft. The FAA has established significant noise impact thresholds for DNL 60 or 65 dB over a noise sensitive area (e.g. residences, schools, hospitals, parks, recreation areas) for airport projects.

No significant noise impacts are anticipated at GDV because the operations do no exceed FAA thresholds, and there are no close-in sensitive properties near the existing, future, or ultimate primary runway ends. If proposed annual jet aircraft operations exceed 700 operations annually in Design Group II aircraft, then noise impacts should be evaluated in future environmental review documents.

COMPLIANCE

As noted before, airports that do not abide by grant assurances are subject to withholding of FAA grant funding. Common airport compliance issues include non-aeronautical use of airport property, land releases, and through-the-fence operations.

Non-Aeronautical Use of Airport Property

Airport property is to be used for aeronautical purposes. For an airport to develop land for non-aeronautical use, the FAA must first approve of the change in airport property use from aeronautical to non-aeronautical. All airport property is identified in the Exhibit "A"/Airport Property Map.

Land Releases

When requested, the FAA will consider a release, modification, reform, or amendment of any airport agreement to the extent that such action has the potential to protect, advance, or benefit the public interest in civil aviation. Such action may involve only relief from specific limitations or covenants of an agreement, or it may involve a complete and total release that authorizes subsequent disposal of federally obligated airport property. Common types of release requests include concurrent use, request for change in use or the sale/disposal of airport property. No land has been released from federal obligations or sold at GDV.

Through-the-fence Operations

Agreements that permit access to the airfield by aircraft based on land adjacent to, but not a part of, the airport property are commonly referred to as a “through-the-fence'' operation (even though a perimeter fence may not be visible). “Through-the-fence” arrangements can encumber the airport property and reduce an airport’s ability to meet its federal obligations. There are no documented through-the-fence operations at GDV.

Action Plan & Recommendations

Recommendations to address airport compliance at GDV include:

- Identify encumbrances and non-aeronautical land uses in the Airport Layout Plan and Exhibit “A”/Airport Property Map to ensure sufficient control by the airport.
- Continue to control development that occurs on airport and consult with FAA as needed to verify compliance with FAA rules and regulations.