2.0 INVENTORY OF EXISTING CONDITIONS

2.1 INTRODUCTION AND PLANNING CONTEXT

2.1.1 GENERAL

The purpose of the inventory is to summarize existing conditions of all the facilities at the Priest River Municipal Airport (1S6) as well as summarize other pertinent information relating to the community and the airport background, airport role, surrounding environment and various operational and other significant characteristics.

The information in this chapter describes the current status of the Priest River Municipal Airport and provides the baseline for determining future facility needs. Information was obtained through various justifiable mediums including: consultant research, review of existing documents, interviews and conversations with airport stakeholders including the airport sponsor (Bonner County), City of Priest River, airport tenants, Idaho Transportation Department - Division of Aeronautics (ITD) and other knowledgeable sources.

2.1.2 FAA NATIONAL PLAN OF INTEGRATED AIRPORT SYSTEMS (NPIAS) AND ASSET STUDY

The United States has developed a national airport system. Known as the National Plan of Integrated Airport Systems (NPIAS), this system identifies public-use airports considered by the Federal Aviation Administration (FAA), state aviation agencies, and local planning organizations to be in the national interest and essential for the U.S air transportation system. Per the 2013-2017 NPIAS Report to Congress, guiding principles of the NPIAS include:

- The NPIAS will provide a safe, efficient and integrated system of airports;
- The NPIAS will ensure an airport system that is in a state of good repair, remains safe and is extensive, providing as many people as possible with convenient access to air transportation
- The NPIAS will support a variety of critical national objectives such as defense, emergency readiness, law enforcement, and postal delivery.

In addition, this system plan helps promoting airport permanence, to ensure the airports will remain open for aeronautical use over the long term; as well as compatible development with the surrounding communities, to maintain a balance between the needs of aviation, the environment and the requirements of the residents.

Only airports in the NPIAS are eligible for financial assistance and Federal Grants under the Airport Improvement Program (AIP). The NPIAS is updated and published biennially by the FAA. The updated NPIAS report is submitted to Congress and both identifies and reaffirms airports in the system and the amounts and types of airport development eligible for AIP funds over the next 5 year period.

Currently there are 5,171 public-use airports included in the NPIAS. The airports included in the NPIAS are classified into different categories: Primary Commercial Service Airports (further divided into large-, medium-, small- and non-hub), Non Primary Commercial Service Airports and General Aviation Airports. General Aviation airports are usually classified as Basic Utility, designed to handle single-engine and small twin-engine propeller aircraft and General Utility, designed to accommodate larger aircraft. Small aircraft are aircraft of 12,500 lbs. or less maximum certificated take-off weight, while large aircraft are those of more than 12,500 lbs. maximum certificated take-off weight. All primary and commercial service airports and selected general aviation airports are included in the NPIAS.

The FAA also released a study providing a deeper classification of the General Aviation airports included in the NPIAS. In this study, known as General Aviation Airports: A National Asset (Asset Study), the FAA further classifies the General Aviation airports into the following categories: National Airports, Regional Airports, Local Airports and Basic Airports.

Priest River Municipal Airport is part of the FAA's NPIAS and is recognized as a General Aviation airport. In addition, in the FAA study General Aviation Airports: A National Asset, Priest River Municipal Airport is classified as a Basic Airport, which are the airports often serving critical aeronautical functions within local and regional markets.

2.1.3 IDAHO AIRPORT SYSTEM PLAN (IASP)

The Idaho Airport System Plan (IASP) was initiated by the Idaho Transportation Department (ITD) Division of Aeronautics, to ensure that the state's airport system is developed to meet all of the transportation safety and economic needs. During this comprehensive study each airport in the system was evaluated to gauge its role, activity and needs for infrastructures. The IASP analyzed 75 of the 119 public use airports in Idaho.

The airports included in the IASP are divided according to their role in the state system. Five different functional roles are identified: Commercial Service, Regional Business, Community Business, Local Recreational and Basic Service.

The ITD State Aviation System Plan identifies the role for Priest River Municipal Airport to be Local Recreational because this airport serves as a recreational, personal flying and limited

local business activity role for the County and City of Priest River. (Idaho Airport System Plan, 2010).

2.2 AIRPORT AND COMMUNITY BACKGROUND

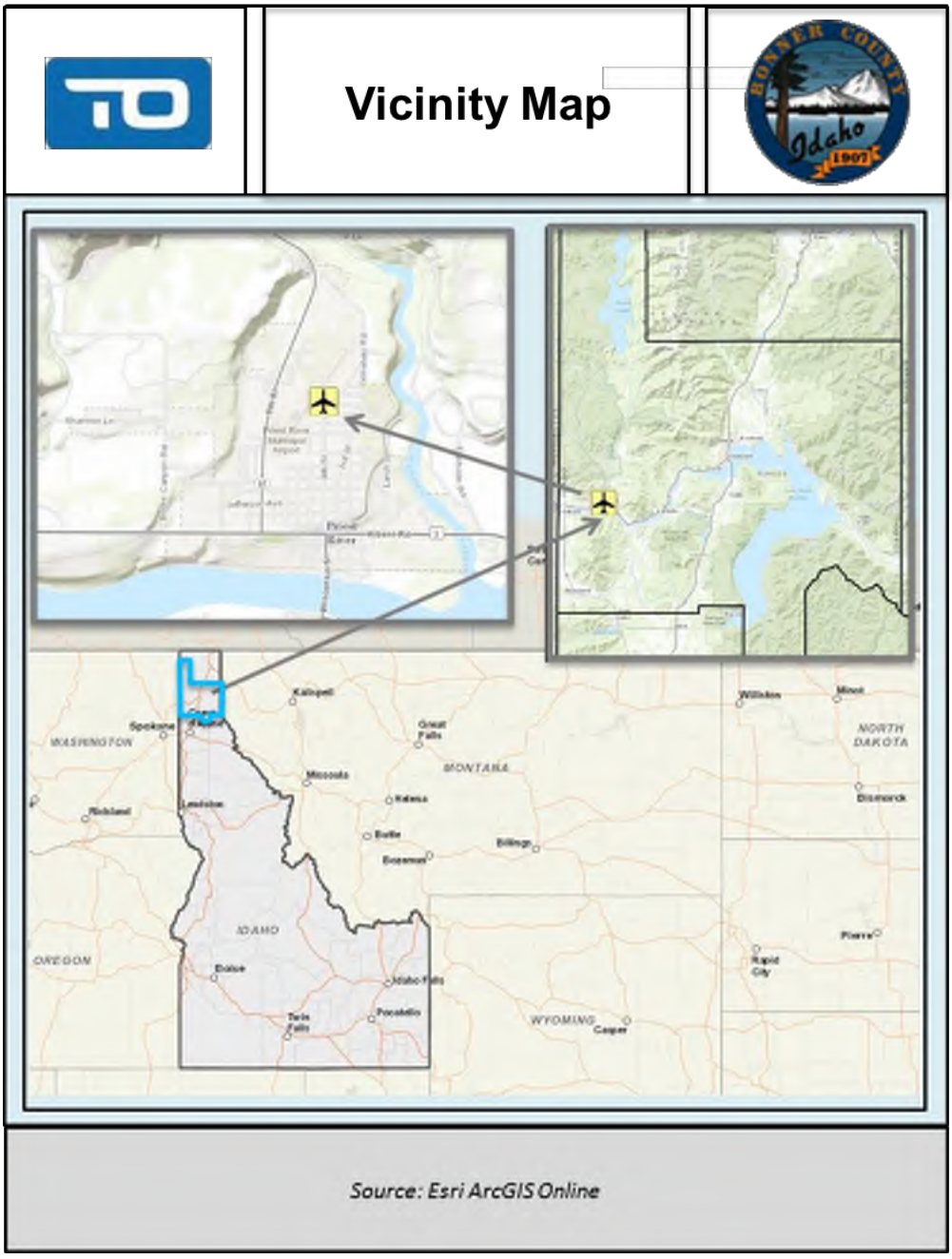
2.2.1 GENERAL

Priest River Municipal Airport is located on approximately 71 acres 0.8 miles north of the intersection of US-2 and SH-57 in the City of Priest River. It serves the western Bonner County region, Priest Lake and Newport, Washington.

2.2.2 AIRPORT LOCATION

The airport is located in North Idaho at 48° 11' 26.5" north latitude and 116° 54' 35.2" west longitude. The runway is oriented on heading(s) 10/190 degrees respectively (Runway 1/19), at an elevation of 2,193 feet. The airport is bounded by mountainous terrain to the north with the urbanized area of Priest River surrounding the remainder. **Figure 2-1** depicts a vicinity map for reference. The airport is situated near the confluence of Priest River and Pend Oreille River with State Highway 57 on the west side.

FIGURE 2-1 – VICINITY MAP



2.2.3 AIRPORT OWNERSHIP AND MANAGEMENT

The airport is currently owned, operated, and managed by Bonner County. The current Airport Director and Airport Manager are James Kaiser and Dave Schuck, respectively. A Volunteer Airport Advisory Board consisting of five appointed members oversee day-to-day operations at the airport. The Airport Board transmits recommended actions and policies to the Bonner

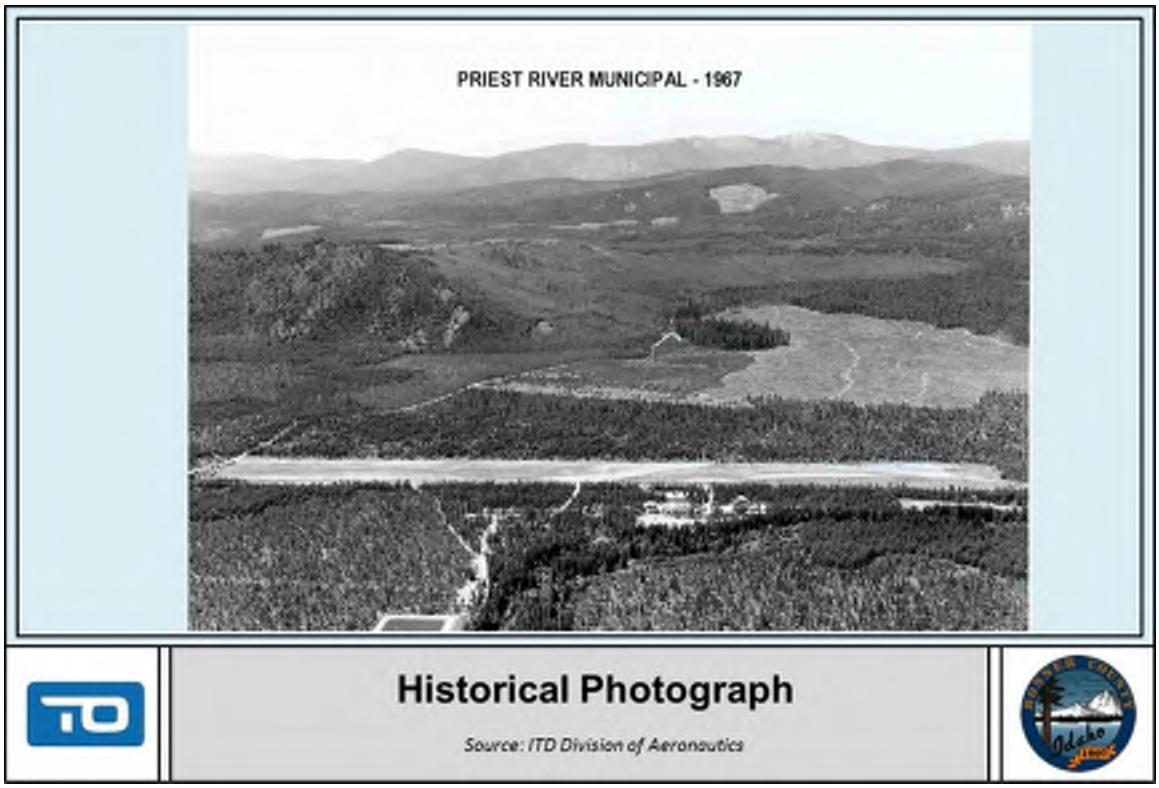
Although the airport is registered as Priest River Municipal Airport, the airport is a county-owned airport and not a city-owned airport anymore. As the airport was owned by the City of Priest River before 1979, the designation "Priest River Municipal Airport" is likely to be a remnant of this era.

2.2.4 AIRPORT HISTORY, PROJECTS AND MILESTONES

According to the Priest River Times, the Town of Priest River is the first in the county to secure an aircraft landing field. The airport property was originally acquired by the Village of Priest River in 1929. Over the next few years, the airfield was cleared of trees and stumps with the official airport dedication in May 1931. The runway consisted of a gravel or dirt strip that was about 2,000-feet long by 60-feet wide. This runway was described in an east west direction near the current pilot's lounge. A field investigation and airport engineering study in 1947 recommended abandoning the east-west runway and constructing a new SE/NW runway at about 4000-feet in length. The Village of Priest River changed the runway direction to the current alignment in the years before 1955. This runway was listed as 50-feet wide and 3,000-feet long with a sod surface. In 1969, Bonner County and the State of Idaho jointly paid to pave the runway for a total of $11,035. **Figure 2-2** shows the runway prior to being paved.

The local pilots and Wayne Merritt joined forces to construct the north shed style condo hangar in the late 1960's. Bonner County applied to be a part of the National Airports Systems Plan in 1975 making the airport eligible for Federal funding on future projects and lights were installed on the runway during the same year. In 1979, the City of Priest River transferred ownership of the airport to Bonner County for liability and maintenance reasons. In the early 1990's, the northern shed style hangar collapsed under snow weight and the insurance money funded the construction of the south shed style condo hangar with in-kind labor from local pilots and community. Wayne Merritt was a major benefactor for the airport; the Priest River Municipal Airport was co-named Wayne Merritt Field in 1997 to honor his support of aviation and this airport. During the 1990's, three enclosed box style hangars were constructed north of the existing shed hangars. Taxiways and apron were constructed in 2013 to provide additional hangar space and to relocate tie-downs out of the Runway Object Free Area (ROFA).

FIGURE 2-2: HISTORICAL PHOTOGRAPH



2.2.5 SOCIOECONOMIC CONDITIONS

According to sources including the U.S. Census, and the Idaho Department of Labor, total county population in 2010 was approximately 40,877 with 24,669 households. Median household income is reported to be approximately $41,379. The City of Priest River contains approximately 1,715 people (4.2% total County population) in 798 households with a reported median household income of $29,583. Bonner County currently ranks 8th among Idaho counties in population and 19th in land. The federal government owns about 44 percent of the county.

Forest products, manufacturing, health care and education, trade, and government provide the foundation for the Bonner County local economy. Additional economic contributors include leisure and hospitality. Major employers in the region include the Bonner General Hospital, Litehouse, Thorne Research, Schweitzer Mountain Resort, Idaho Forest Group, Life Care Center, and Walmart.

2.3 AVIATION ACTIVITY

2.3.1 EXISTING AIRPORT ACTIVITIES AND USERS

The Priest River Municipal Airport provides for a variety of aviation uses and activities. The airport predominantly serves single-engine aircraft with occasional use by small multi-engine aircraft as well. Principal aviation activities occurring at this airport include recreational flights, flight instruction, medical evacuation and shipments, and occasional police or military use.

2.3.2 EXISTING ACTIVITY LEVELS

Airport activity levels include the number of aircraft operations and based aircraft. The FAA's 5010-1 Airport Master Record is the official record kept by the FAA for public-use airport activities and facility conditions. The 5010 data are populated by the reporting actions taken by the airport management and ITD. A single aircraft operation is defined as either an aircraft take-off or landing; therefore, a "touch-and-go" counts as two operations.

The airport's most recent FAA 5010 identifies 16 total aircraft (14 single-engine, 2 ultra-light) based at the Priest River Municipal Airport. The FAA's National Based Aircraft Inventory Program was also reviewed and it too reports 16 based aircraft. It should be noted that the Based Aircraft Inventory has not been updated since August, 2012. The sixteen based aircraft are all single-engine and include one Cessna 120, two Cessna 150, five Cessna 182, one Cessna 172, one Piper PA-18, one Beech G35, one Bellanca, one Aeronca 11AC, one registered ultralight Chehock Clyde and two other ultra-light aircraft.

An estimated 8,000 operations occur annually at the airport: approximately 20% of all operations are local and 80% are itinerant. According to the FAA, local operations are performed by aircraft which:

- Operate in the local traffic pattern or within sight of the airport, or
- Are known to be departing for, or arriving from, flight in local practice areas located within a 20-mile radius of the airport, or
- Execute simulated instrument approaches or low passes at the airport.

Itinerant operations are all aircraft operations, other than local operations. Priest River Municipal Airport is not used by air taxi or air carrier. Per the FAA Terminal Area Forecast (TAF) there are no military operations at the airport. However, airport management and users of the airport report minimal amount of military helicopter traffic throughout the year.

With the absence of a Traffic Control Tower, or other regular means of counting operations, it is important to recognize that current usage is an estimate. More detailed analysis of airport activity is included in Chapter 3, Aviation Activity Forecasts.

2.4 EXISTING AIRSIDE FACILITES

2.4.1 RUNWAY

The airport has been developed and improved over time to the present single asphalt concrete runway configuration designated respectively. The physical dimensions of the pavement based on available survey data are 2,983 feet in length and 48 feet in width. The airport's 5010 currently lists a published runway length of 2,950 feet and the existing Airport Layout Plan (ALP) also shows the runway length as 2,950 feet. The airport's 5010 should be updated to match the most recent survey data, which indicates an usable pavement length of Runway 01/19 of 2,983. There are no displaced thresholds listed or published for this airport.

Runway 01/19 is a visual only runway with basic runway markings. The markings are considered to be in fair condition. The asphalt pavement strength is designed for small aircraft weighing 12,500 lbs. or less, single wheel loading. Runway 19 is the primary runway end accommodating approximately 90% of departures, and approaches are about 50% for each runway end. Night operations recommended in the 5010 show approach on Runway 1 and depart from Runway 19. Additional details on the airport's design standards will be provided in section 2.5, Airport Design Standards.

2.4.2 TAXIWAY SYSTEM

The airport has a ramp edge partial parallel taxiway that is 25 feet wide and paved. The taxiway and associated taxiway connectors are not lit but are equipped with reflective markers. Both are marked with basic taxiway markings. This ramp edge partial parallel taxiway and associated taxiway connectors were reconstructed in 2013.

Figure 2-3 below provides an aerial view of existing airport facilities.

FIGURE 2-3 – AERIAL OF AIRPORT FACILITIES

2.4.3 AIRPORT PAVEMENT CONDITION

The Pavement Condition Index (PCI) and Pavement Condition Rating (PCR) are based on a visual inspection of pavement condition only. ITD completes a full PCI inspection of airport pavements on a statewide basis every three years. The last PCI inspection conducted at Priest River Municipal Airport by ITD was in 2012.

Per the 2012 ITD Report, the runway had an average PCI of 91.5, which is a good PCR rating. The ramp edge partial parallel taxiway and connector were reconstructed in 2013, and consequently has a good PCI value.

2.4.4 AIRFIELD LIGHTING, VISUAL AIDS AND NAVAIDS

A NAVAID is defined by the FAA as any facility used in the aid of air navigation, including landing areas, lights, any apparatus or equipment for disseminating weather information, for signaling, for radio direction-finding, or for radio or other electronic communication, and any other structure or mechanism having similar purpose and controlling flight in the air or the landing or takeoff of aircraft.

Runway 01/19 is equipped with a Non Standard Low Intensity Runway Lighting (LIRL) system with Pilot Controlled Lighting (PCL). PCL is activated via Common Traffic Advisory Frequency (CTAF) – 122.9. A lighted wind cone exists on the east side of the airport within the Runway Object Free Area (OFA).

Table 2-1 summarizes the existing visual aids and NAVAIDs available at Priest River Municipal Airport.

TABLE 2-1 – PRIEST RIVER MUNICIPAL AIRPORT VISUAL AND NAVIGATION AIDS (NAVAIDS)

GENERAL
UNICOM - 122.9
Lighted Wind Cone
RUNWAY 01/19
Low Intensity Runway Lighting (LIRL)

Source: ES Engineering, 5010

Nearby Navigation Aids are summarized in **Table 2-2**.

TABLE 2-2: NEARBY NAVIGATION AIDS

ID	Type	Name	Frequency	Range	Radial/Bearing
COE	VOR/DME	Coeur d'Alene	108.8	25.3 nm	332°
SKA	VORTAC	Fairchild	111.4	46.2 nm	024°
GEG	VORTAC	Spokane	115.5	47.4 nm	016°
MLP	VOR/DME	Mullan Pass	117.8	67.5 nm	296°
SZT	NDB	Sandpoint	264	15.5 nm	047°
DPY	NDB	Deer Park	365	24.7 nm	218°
LEN	NDB	Post Falls	347	27.0 nm	165°
ION	NDB	Ione	379	37.1 nm	308°

Source: SkyVector.com, T-O Engineers

2.4.5 INSTRUMENT APPROACH CAPABILITIES

The Priest River Municipal Airport is currently a VFR only airport with no instrument approach capabilities. **Table 2-3** lists the nearby airports equipped with instrument approaches.

TABLE 2-3: NEARBY AIRPORTS EQUIPPED WITH INSTRUMENT APPROACHES

ID	Name (State)	Distance	Direction	Type of Approach	Height Above Touchdown (HAT)	Visibility AAC A (AAC B)*
KSZT	Sandpoint Airport (ID)	15 nm	northeast	RNAV (GPS)-B	1589	1¼ (1½)
				LOC/DME-A	989	1¼ (1½)
KDEW	Deer Park Airport (WA)	36 nm	southwest	RNAV (GPS) RWY 34	265	1
				NDB-A	789	1 (1¼)
KCOE	Coeur d'Alene – Pappy Boyington Field (ID)	25 nm	south	ILS RWY 6	200	½
				RNAV (GPS) RWY 6	200	½
				VOR/DME RWY 2	435	1
				VOR RWY 6	410	½
				NDB RWY 6	490 (610)	¾
KSFF	Felts Field Airport (WA)	35 nm	southwest	ILS RWY 22R	270	¾
				RNAV (GPS) RWY 4L	250	1
				RNAV (GPS)-A	923	1¼
				VOR RWY 4L	991	1¼ (1½)
65S	Boundary County Airport (ID)	40 nm	northeast	GPS RWY 2	930	1¼

* Visibility in Statute Miles. Aircraft Approach Category A (Aircraft Approach Category B if different)

Source: Airnav.com, T-O Engineers

2.4.6 HELICOPTER LANDING AREA/PARKING

Although Priest River Municipal Airport accommodates helicopter operations, including Life Flight helicopter operations, the airport is currently not equipped with a dedicated helipad and helicopter parking area. The helicopters currently park on the apron in front of the open shed style hangars, which cause Foreign Object Damage (FOD) issues. A designated helicopter landing and parking area will be considered in the subsequent chapters of this plan.

2.4.7 AIR TRAFFIC CONTROL

Priest River Municipal Airport is not equipped with an Air Traffic Control Tower (ATCT). The airport is located in the service area of Boise Flight Service Station (FSS) and in the jurisdiction of the Seattle's Air Route Traffic Control Center (ARTCC).

2.4.8 OBSTRUCTIONS TO AIR NAVIGATION

Table 2-4 lists the obstructions to Air Navigation in the vicinity of the runways of Priest River Municipal Airport. Additional information regarding airspace and Part 77 is included in Section 2.9, Airspace.

TABLE 2-4: PART 77 OBSTRUCTION DATA FOR RUNWAY 1-19

Runway End	Obstructions	Obstruction Height Above RW end	Obstruction Distance from RW end	Clearance Slope	Recommended Slope	Close In Obstruction
1	Trees	80'	1,000' from runway	10:1	20:1	No
19	Trees	75'	650' from runway 150' left of centerline	6:1	20:1	No

Source: FAA Form 5010, T-O Engineers

2.4.9 SUMMARY OF AIRSIDE FACILITIES

Table 2-5 summarizes the existing airside facilities at the Priest River Municipal Airport.

TABLE 2-5 – SUMMARY OF EXISTING AIRSIDE FACILITIES

ITEM		CURRENT DATA
Airport Role		GA/Basic (FAA)/Local Recreational (ITD)
Airport Elevation		2,193' MSL
Airport Property (acres)		75.54
Highest Average of Monthly Maximum Temperature		82.3° F
Airport Reference Point Coordinates (NAD 83)	Latitude	48° 11' 26.4" N
	Longitude	116° 54' 35.5" W
Magnetic Declination (Year 2014)		14° 52' 30" East
Annual Magnetic Variation (Year 2014)		0° 11' West per year
Instrument Approaches		None
Runway (1/19)		
Runway Length		2,983'
Runway Width		48'
Runway Pavement Type		Asphalt
Runway Pavement Strength - SW		12,500 lbs.
Runway Pavement Strength - DW		---
% Effective Runway Gradient		0.7%
Runway Lighting Type		Non Standard. LIRL
Runway Marking Type		Visual
Ramp edge Partial Parallel Taxiway		
Taxiway Pavement Type		Asphalt
Taxiway Pavement Strength - SW		12,500 lbs.
Taxiway Width		25'
Taxiway Lighting Type		Reflector

Source: Existing ALP and Narrative, NOAA ES Engineering, T-O Engineers, Inc.

2.5 AIRPORT DESIGN STANDARDS

Most public use airports are developed based on certain design standards. FAA NPIAS airports, including Priest River Municipal Airport, are required to be designed and built in accordance with the FAA defined classification system referred to as the Runway Design Code (RDC). The RDC is a code signifying the design standards to which the runway is to be built. Runway design standards are related not only to operational and physical characteristics of the critical aircraft intended to operate at the airport, such as aircraft approach speed, wingspan and tail height, but also to the approach visibility minimum associated with the runway. Typically, the FAA determination of a critical aircraft is based on a substantial use threshold of 500 operations per year, or more, of the most demanding aircraft.

Design standards associated with the RDC provide for the runway width and proper ground based "set-backs" or safety related areas around the runway environment. The RDC has three components related to the airport design aircraft; (a) approach speed, (b) wingspan and tail height, and (c) designated or planned approach visibility minimums.

The first component of the RDC is depicted by a letter and is based on the aircraft approach speed. The second component, depicted by a Roman numeral, is the airplane "Design Group" and is based on either the aircraft wingspan or the tail height. The third component, depicted by a numeric value or “VIS” (visual approach only), is the visibility minimums expressed by Runway Visual Range (RVR) values in feet. A summary of the FAA approach categories, design groups, and visibility minimums that result in the RDC is included below:

Aircraft approach category: Grouping of aircraft is based on 1.3 times their stall speed in their landing configuration at their maximum certificated landing weight. The categories are as follows:

- Category A: Speed less than 91 knots.
- Category B: Speed 91 knots or more but less than 121 knots.
- Category C: Speed 121 knots or more but less than 141 knots.
- Category D: Speed 141 knots or more but less than 166 knots.
- Category E: Speed 166 knots or more.

Airplane Design Group (ADG): A classification of airplanes based on their wingspan or tail height. The groups are depicted in **Table 2-6** below:

TABLE 2-6: AIRPLANE DESIGN GROUP (ADG)

Group	Tail Height	Wingspan
I	< 20’	< 49’
II	20’ - < 30’	49’ - < 79’
III	30’ - < 45’	79’ - < 118’
IV	45’ - < 60’	118’ - < 171’
V	60’ - < 66’	171’ - < 214’
VI	66’ - < 80’	214’ - < 262’

Source: FAA AC 150/5300-13A Change 1

Visibility Minimums: A grouping of RVR values based on flight visibility category (statute mile). The RVR’s are as follows:

- 4000: Lower than 1 mile but not lower than ¾ mile (Approach Procedure with Vertical Guidance (APV) ≥ ¾ but < 1 mile).
- 2400: Lower than ¾ mile but not lower than ½ mile (CAT-I PA).
- 1600: Lower than ½ mile but not lower than ¼ mile (CAT-II PA).
- 1200: Lower than ¼ mile (CAT-III PA).
- VIS: Visual approach only

An analysis of the FAA Runway Design Standards Matrices, included in the FAA AC 150/5300-13A Change 1, shows that A-I Small and B-I Small standards are identical; similarly A-I and B-I standards are identical. Based on these matrices there is no difference between the design standards for A-I Small and B-I Small aircraft.

The existing Airport Layout Plan (ALP), designed in 2010, classifies Priest River Municipal Airport as an ARC A-I airport and plans for B-I Small standards in the future. Priest River Municipal Airport currently does not meet most A-I standards, but does meet most A/B-I Small standards. In addition, Priest River Municipal Airport primarily serves small single-engine aircraft weighing 12,500 pounds or less, with approach speeds of 91 knots or more but less than 121 knots, wingspans less than 49 feet and tail height less than 20 feet. As previously mentioned, the airport is currently visual only with no instrument approach capabilities. Therefore, because the airport meets most A-I Small design standards, and because A-I Small and B-I Small standards are identical, the airport will be classified as a B-I Small airport in the subsequent sections of this Airport Master Plan.

Further, the Airport Reference Code (ARC) is an airport designation that signifies the airport's highest RDC, minus the third (visibility) component of the RDC. The ARC is used for planning and design only and does not limit the aircraft that may be able to operate safely on the airport. The ARC and RDC are used during the airport planning process to design and determine the dimensions of most airfield pavements. As Priest River is equipped with one runway only, the ARC is currently B-I Small. This designation is a reflection of the types of aircraft that predominately use the airport.

2.5.1 RUNWAY WIDTH

The required runway width for ADG I is 60 feet. The width of Runway 1/19 is 48 feet and Runway 1/19 width does not meet design standards for RDC A/B-I Small aircraft.

2.5.2 RUNWAY PROTECTION STANDARDS

FAA design standards help promote an acceptable level of safety at the airport. Runway protection standards include the Runway Safety Area (RSA), the Runway Object Free Area (ROFA), the Runway Obstacle Free Zone (OFZ), and the Runway Protection Zone (RPZ).

Runway Safety Area (RSA)
The RSA is a defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway. The RSA should be cleared and graded and not have potentially hazardous ruts, humps, depressions, or other surface variations.

The design standard for B-I Small-VIS is 120 feet wide and 240 feet beyond each runway end. The RSA for Runway 1/19 at Priest River Municipal Airport meets design standards.

Runway Object Free Area (ROFA)
A defined surface surrounding the runway that is required in order to keep above ground objects from protruding about the RSA edge area. Objects can be located in the ROFA for air navigation or aircraft ground maneuvering purposes including taxiing or holding aircraft. Parked aircraft are not allowed in the ROFA.

The design standards for a B-I Small-VIS ROFA is 250 feet wide and 240 feet beyond each runway end. The ROFA for Runway 1/19 at Priest River Municipal Airport does not meet design standards and is impacted by the wind cone and an air relief valve.

Runway Obstacle Free Zone (OFZ)
The Runway Obstacle Free Zone (OFZ) is a three-dimensional volume of airspace reserved for the exclusive use of one aircraft landing or taking off from the runway. It is centered above the runway centerline, extends 200 feet beyond each end of the runway and is 250 feet wide for operations by small aircraft for runways with approach visibility minimums not lower than ¾ statute miles or 400 feet wide for use by large airplanes. When an aircraft is taking-off or landing nothing can protrude into the OFZ such as signs or other tail, or wingtips of aircraft.

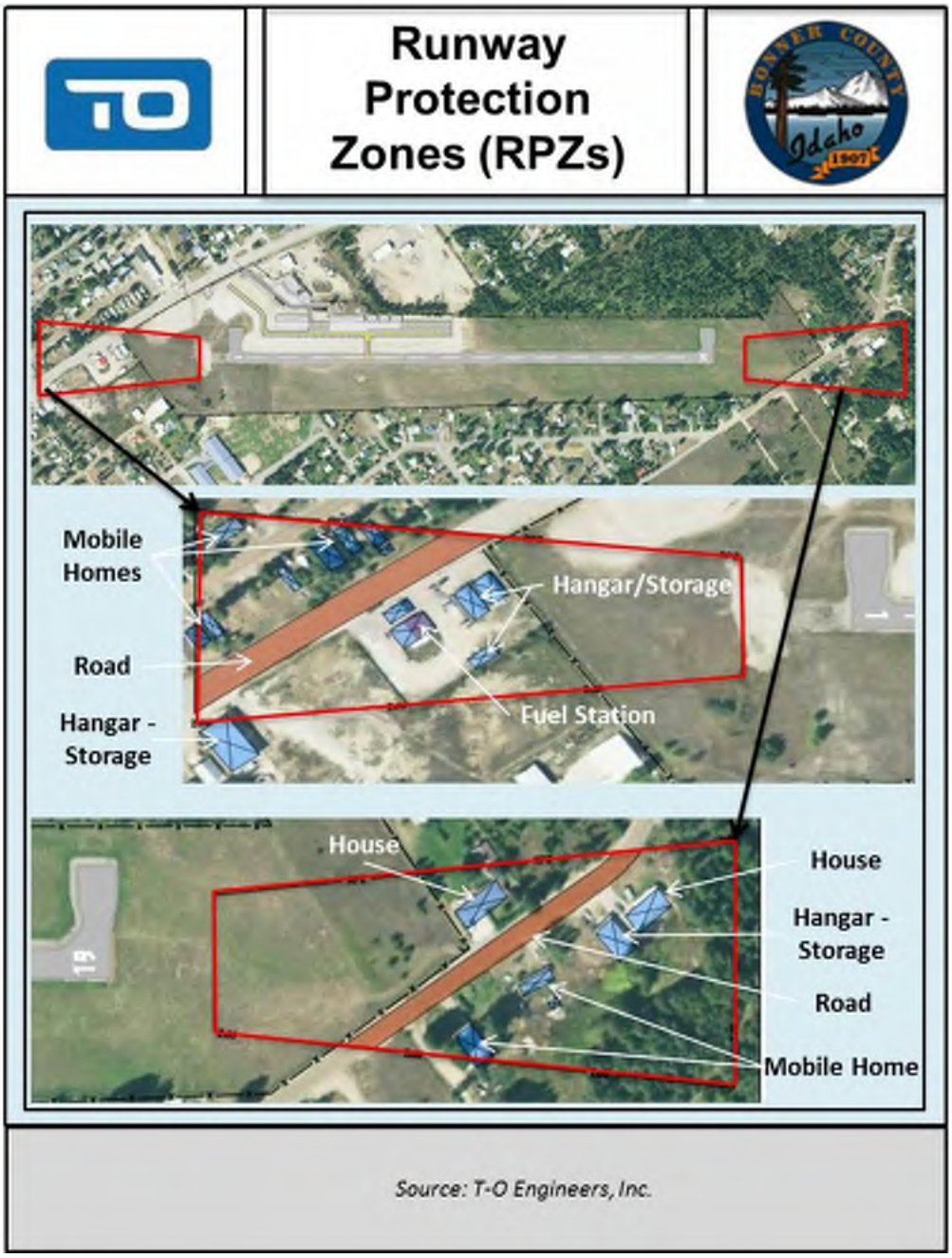
Runway Protection Zones (RPZ)
RPZ's are defined areas on the ground beyond the end of the runway that are maintained clear of incompatible objects and activity in order to enhance the safety and protection of people and property on the ground. The FAA recommends airport sponsors control the RPZs, preferably exercised through the acquisition of sufficient property interest in the RPZ and clearing RPZ areas (and maintaining them clear) of incompatible uses or objects.

The RPZ is trapezoidal in shape and usually begins 200 feet from the end of each runway. The RPZs associated with Runway 1/19 are sized to accommodate FAA design standards for "visual and not lower than 1 mile approach visibility minimums". The existing RPZ inner dimension is 250 feet centered on the runway, the length is 1000 feet, and the width at the outer end of the trapezoid is 450 feet.

The RPZ on both runway ends are impacted by physical features that are by definition not acceptable in RPZ's; namely, Runway 19 by State Highway 57 and Runway 1 by Cemetery Road. Other obstructions in the RPZ's on each end include trees and power lines that need removed or relocated as well as buildings, including mobile homes, houses, storage buildings and a fuel station. **Figure 2-4** depicts the existing RPZs at Priest River Municipal Airport.

Further analysis of existing and future RPZs will be conducted in the subsequent chapters of this plan to determine potential mitigation measures and the feasibility of removing obstacles to provide the highest level of safety for airport users as well as people and property on the ground.

FIGURE 2-4 – RPZS



2.5.3 RUNWAY SEPARATION STANDARDS

Runway separation standards ensure operational safety at the airport. They are based on the Aircraft Approach Category (AAC), the Airplane Design Group (ADG) and Visibility minimum. The runway separation standards include the runway centerline to parallel taxiway centerline

separation, the runway centerline to holdline separation and the runway centerline to edge of parking distance.

Runway/Taxiway Separation
The required separation distance between runway and parallel taxiway centerlines is 150 feet for Airplane Design Group I airports, small airplanes exclusively, for visual runways and runways with approaches with not lower than ¾ mile approach visibility minimums.

The current runway/taxiway centerline separation at the Priest River Municipal Airport meets design standards.

2.5.4 TAXIWAY DESIGN STANDARDS

The required distance between a taxiway/taxilane centerline and other objects is based on the required wingtip clearance, which is a function of the wingspan, and thus determined by the Airplane Design Group (ADG) the second component of the Airport Reference Code (ARC). The design of pavement fillet must consider aircraft undercarriage dimensions and is based on the Taxiway Design Group (TDG), a coding system according to the Main Gear Width (MGW) and the Cockpit to Main Gear Distance (CMG). The existing taxiway fillets at the airport are designed based on TDG-I.

Taxiway Safety Area (TSA)
A defined surface centered on the taxiway centerline. The surface should be cleared and graded, free of objects, capable under dry conditions of supporting aircraft, snow removal equipment and aircraft rescue and firefighting equipment to reduce the risk of damage to an airplane unintentionally departing the taxiway.

The TSA for the ramp edge partial parallel taxiway at Priest River Municipal Airport meets design standards.

Taxiway Object Free Area (TOFA)
A defined surface centered on the taxiway centerline. This area prohibits roads, parked aircrafts and above ground objects except for objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes.

The TOFA for the ramp edge partial parallel taxiway at Priest River Municipal Airport meets design standards.

2.5.5 DESIGN STANDARDS SUMMARY

Table 2-7 presents the dimensional standards for a FAA ARC B-I Small airport. A description of various design standards is included below. Currently, the Priest River Municipal Airport meets most FAA B-I Small design standards. Dimensions of specific FAA designs standards are depicted on the Airport Layout Plan drawing set.

TABLE 2-7: AIRPORT DIMENSIONAL CRITERIA (FEET)

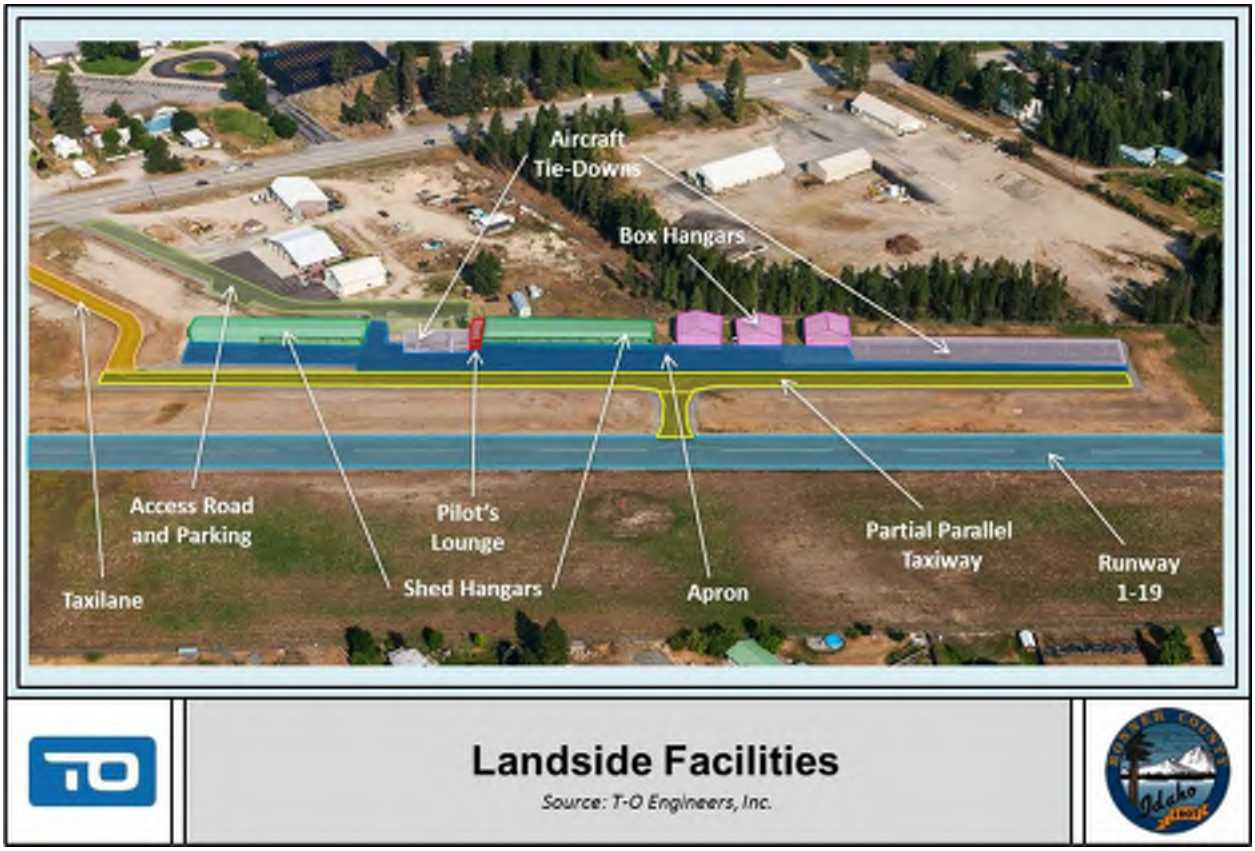
FAA DESIGN STANDARD	FAA STANDARD (A/B-I)	FAA STANDARD (A/B-I Small)	EXISTING
Runway Design Code (RDC)	-	-	B-I Small-VIS
Approach and Departure Reference Codes	-	-	Approach: B-I Small-VIS Departure: B-I Small
Runway Width	60	60	48
Runway Protection Standards			
Runway Safety Area Length beyond each runway end (RSA)	240	240	240
Runway Safety Area Width (RSA)	120	120	120
Runway Object Free Area (ROFA) Length beyond each runway end	240	240	240*
Runway Object Free Area (ROFA) Width	400	250	250**
Runway Protection Zone (RPZ) Length	1000	1000	1000***
Runway Protection Zone (RPZ) Inner and Outer Width	500 / 700	250 / 450	250 / 450***
Runway Obstacle Free Zone (OFZ)	400 (Large aircraft)	250 (Small aircraft)	250
Runway Separation Standards			
Runway Centerline to Ramp Edge Partial Parallel Taxiway Centerline	225	150	150
Runway Centerline to Holding position	200	125	125
Runway Centerline to Edge of Aircraft Parking	200	125	224
Taxiway Design Standards			
Taxiway Width	25	25	25
Taxiway Safety Area (TSA)	49	49	49
Taxiway Object Free Area (TOFA)	89	89	89

* An air relief valve is in the ROFA beyond Runway 1 end
** The wind cone is in the ROFA
*** The RPZ are encroached by State Highway 57 and Cemetery Road as well as trees and power lines
Source: Existing ALP and Narrative, ES Engineering, T-O Engineers, Inc.

2.6 EXISTING LANDSIDE FACILITES

Figure 2-5 hereafter provides an aerial view of existing airport landside facilities.

FIGURE 2-5 – AIRPORT LANDSIDE FACILITIES



2.6.1 GENERAL AVIATION TERMINAL

The general aviation terminal consists of a 400 square foot pilot's lounge and 156 square feet of public restrooms and storage areas. The airport is open 24 hours a day but is not attended. **Figure 2-6** depicts the general aviation pilot's lounge and hangars at Priest River Municipal Airport.

FIGURE 2-6 – GENERAL AVIATION TERMINAL AND HANGARS

2.6.2 AIRCRAFT APRON AND TIE-DOWNS

The parking apron consists of asphalt pavement designed for small aircraft. During the 2013, the apron was reconstructed and relocated out of the runway object free area. Pavement on the apron has a good PCR rating. There are currently 9 fully improved tie-down positions on the apron.

2.6.3 HANGARS

There are 5 hangars located on the airport property, two county owned condo hangars and three box style hangars. The condo hangars are mainly shed style with no door (except two on the south end). Currently there is a 100% utilization rate for hangar capacity. Historically, demand exists for additional hangars at the airport. As of spring 2012, ten interested parties were on a waiting list. Despite a taxilane being built in 2013 to accommodate this demand, the airport has not received any applications for the construction of new hangars. Most of the aircraft owners on the waiting list are interested in leasing hangars already built, rather than building their own hangars.

2.6.4 AIRPORT ROADSIDE ACCESS

There is one defined access point providing ingress/egress onto the airport property from State Highway 57, commonly known as Airfield Way. The access road was paved with the 2013 construction project at the airport.

2.6.5 PERIMETER FENCING

The airport perimeter is completely enclosed with 7 foot chain link fence. Parcel G (12.49 acres) is not enclosed in the fence due to its recent acquisition. The fence limits access from the road at the public access point with an automatic access gate at the main airport entrance.

FIGURE 2-7 – GATE ACCESS

2.6.6 AUTOMOBILE PARKING AND GROUND TRANSPORTATION

A paved automobile parking area is next to the pilot's lounge which can accommodate approximately 5 vehicles. Another parking area adjacent to the Taxilane B development

accommodates 5 additional vehicles. There are no on-airport rental cars. A courtesy vehicle is stored at the airport inside the fence and is available for public use with a nominal use fee.

FIGURE 2-8 – COURTESY CAR

2.7 WEATHER AND CLIMATE

2.7.1 TEMPERATURE AND PRECIPITATION

According to the National Weather Service (NWS), the airport resides in a temperate climate characterized by a variety of weather. On the National Climatic Data Center, from the National Oceanographic and Atmospheric Administration (NOAA), data was available from a weather station, known as the Priest River Experiment Station, located approximately 11 miles north of the airport. Between 1981 and 2010, the average temperature was 44.2° F with the highest average monthly temperature of 82.3° F occurring in July and the lowest average monthly temperature of 30.0° F occurring in December. The airport typically receives majority of the yearly precipitation during the winter months (specifically, November – March), but still receives moderate precipitation throughout the year. The average annual precipitation for the City of Priest River is 31.46 inches. The month of November typically accumulates the most

precipitation with an average of 4.32 inches and the month of August typically accumulates the least with an average of 1.07 inches. Snowfall is most likely to occur between November and March, with the heaviest snows usually recorded in December, however, accumulated snow or snow depth is highest in January.

2.7.2 AUTOMATED WEATHER

Priest River Municipal Airport is currently not equipped with an automated weather reporting system. Weather data in the general vicinity is available 24 hours a day from an automated system at the Sandpoint Airport located 15 nautical miles (NM) east and also from Coeur d'Alene Airport located 25 NM south of Priest River.

2.7.3 RUNWAY WIND COVERAGE

Priest River Municipal Airport does not have an on-site certified weather station. Available data from the National Climatic Data Center (NCDC) was reviewed; however no NCDC site was in reasonable proximity to the airport. The MesoWest weather station summary website, made available from the University of Utah, was reviewed to determine if any other weather stations were located in a reasonable proximity to the airport. MesoWest is an ongoing cooperative project between University of Utah and different educational institutions, public agencies and commercial firms. The project started in 1996 and its goal is to provide access to current and archived weather observations across the United States.

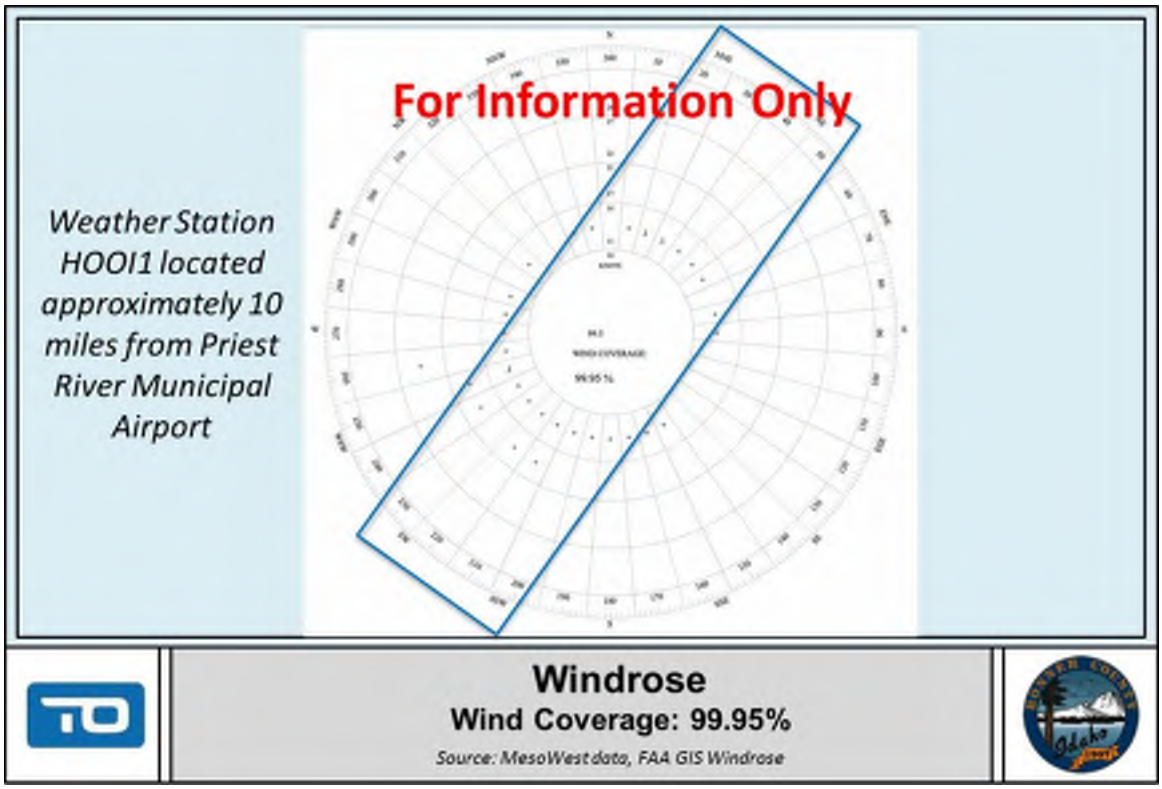
The MesoWest website showed that two stations were located within 10 miles of the airport. Data available from these stations was reviewed for use in evaluating weather conditions at the airport.

The first station ID is ITDA8. It is located near Newport, approximately 6 miles from the airport, but it has only 6 months of data (from December 2013 to July 2014). The second station ID is HOOI1, it is located approximately 10 miles from the airport in the Hoodoo Valley and has data available for more than 10 years.

The annual percent of wind coverage for Runway 1/19 from the Newport station is 99.84% for all weather. From the Hoodoo Valley data, the annual percent of wind coverage for Runway 1/19 is 99.95% for all weather. Both wind results are above the minimum threshold of 95% for this airport.

The windrose for Runway 1/19, using data from weather station HOOI1, is depicted in **Figure 2-9**. However, due to the location of the station, approximately 10 miles from the airport, this is for information purposes only.

FIGURE 2-9 – RUNWAY 1/19 WINDROSE



2.8 SUPPORT FACILITIES

The airport sponsor, Bonner County, and the volunteer airport advisory board provides most maintenance activities for the airport, including snow removal, weed abatement, landscape maintenance, and mowing. All pavement maintenance is completed on a contract basis. Additional details about maintenance and support activities are provided in subsequent sections.

2.8.1 FUEL FACILITIES

The airport currently does not provide any sort of fuel.

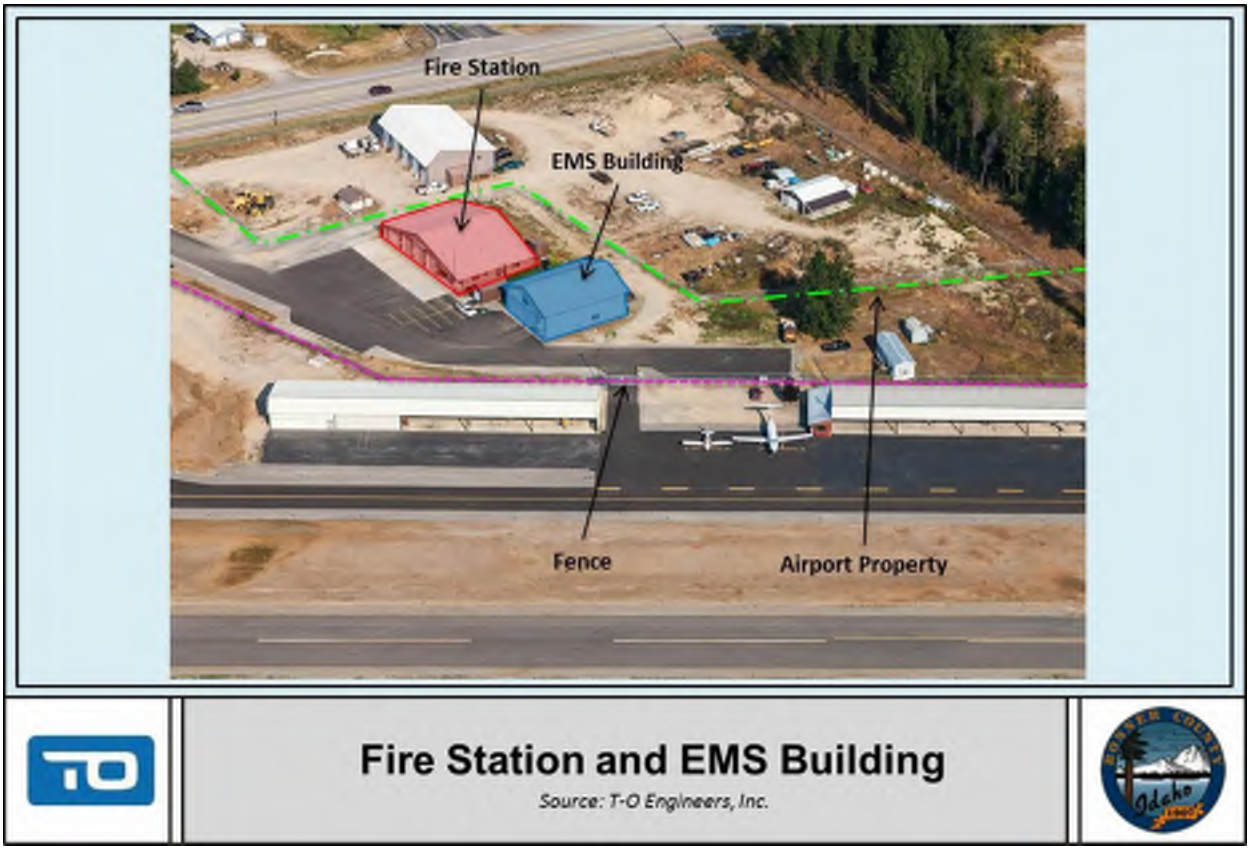
2.8.2 AIRPORT RESCUE AND FIRE FIGHTING (ARFF)

Currently emergency response and security efforts are conducted by the West Bonner Fire District, the Bonner County Sheriff Department, and the Priest River Police Department. Priest River Municipal Airport does not have any dedicated ARFF equipment at the airport and general aviation airports are not required to provide this service onsite.

2.8.3 FIRE STATION AND EMERGENCY MEDICAL SERVICES BUILDINGS

Two buildings housing the West Pend Oreille Fire District Station #1 and Emergency Medical Services (EMS) facilities are located on airport property, but outside the fence, along Airfield Way, as depicted in **Figure 2-10**. The EMS building is 2,880 square feet and houses personnel and ambulances. The Fire station is 5,400 square feet. The EMS operator and the Fire Department both have a lease agreement with Bonner County.

FIGURE 2-10 – FIRE STATION AND EMS BUILDING



2.8.4 SNOW REMOVAL

The County provides all maintenance and emergency response activities, including snow removal.

The airport has a surplus 1980 Mack Truck with snow plow mounted to the front and sand bin on the rear. This equipment is used for both snow removal operations and general airport maintenance activities. It is dedicated for airport use only and remains on airport. The truck is stored outside and is considered in fair condition though the county reports frequent break

downs during winter months while plowing due to broken parts. The equipment is at the end of its useful life. **Figure 2-11** depicts the SRE at Priest River Municipal Airport.

FIGURE 2-11 – SNOW REMOVAL EQUIPMENT

2.8.5 AIRPORT MAINTENANCE

The airport sponsor, Bonner County, and the volunteer airport advisory board provides most maintenance activities for the airport, such as limited mowing, weeds spraying and landscape maintenance using equipment from the County. All pavement maintenance, including pavement crack sealing and seal coats, is completed on a contract basis.

2.8.6 UTILITIES

Table 2-8 depicts the current utilities and service providers at Priest River Municipal Airport.

Table 2-8 – Airport Utilities and Service Providers

Utility	Source	Provider
Water	Yes	City of Priest River
Sewer	Yes	City of Priest River
Electric	Yes	Avista Utilities
Natural Gas	No	Not Available
Refuse	Yes	Waste Management
Phone	Yes	Frontier Communications
Internet	No	Not Available
Fire Protection	Emergency Response	West Bonner Fire Department

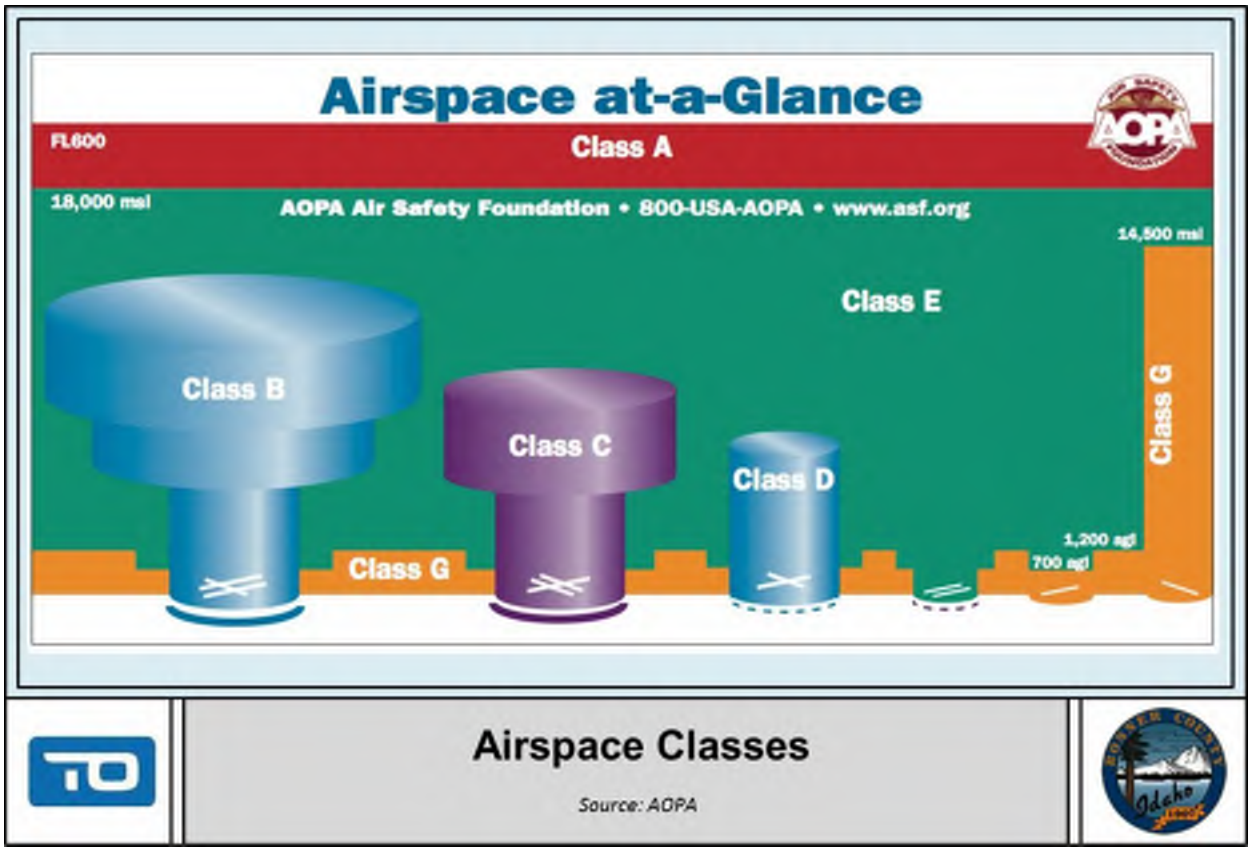
Source: ES Engineering

2.9 AIRSPACE

2.9.1 SURROUNDING AIRSPACE

The National Airspace System (NAS) is configured based on areas of controlled and uncontrolled airspace. There are established operating procedures and requirements in both controlled and uncontrolled airspace. Controlled airspace includes more stringent requirements in terms of Air Traffic Control (ATC) procedures, aircraft equipment and pilot certification. Typically, the busier the airport and airspace, the more restrictive the airspace and more stringent the operating requirements. **Figure 2-12** below depicts the current U.S. airspace classifications.

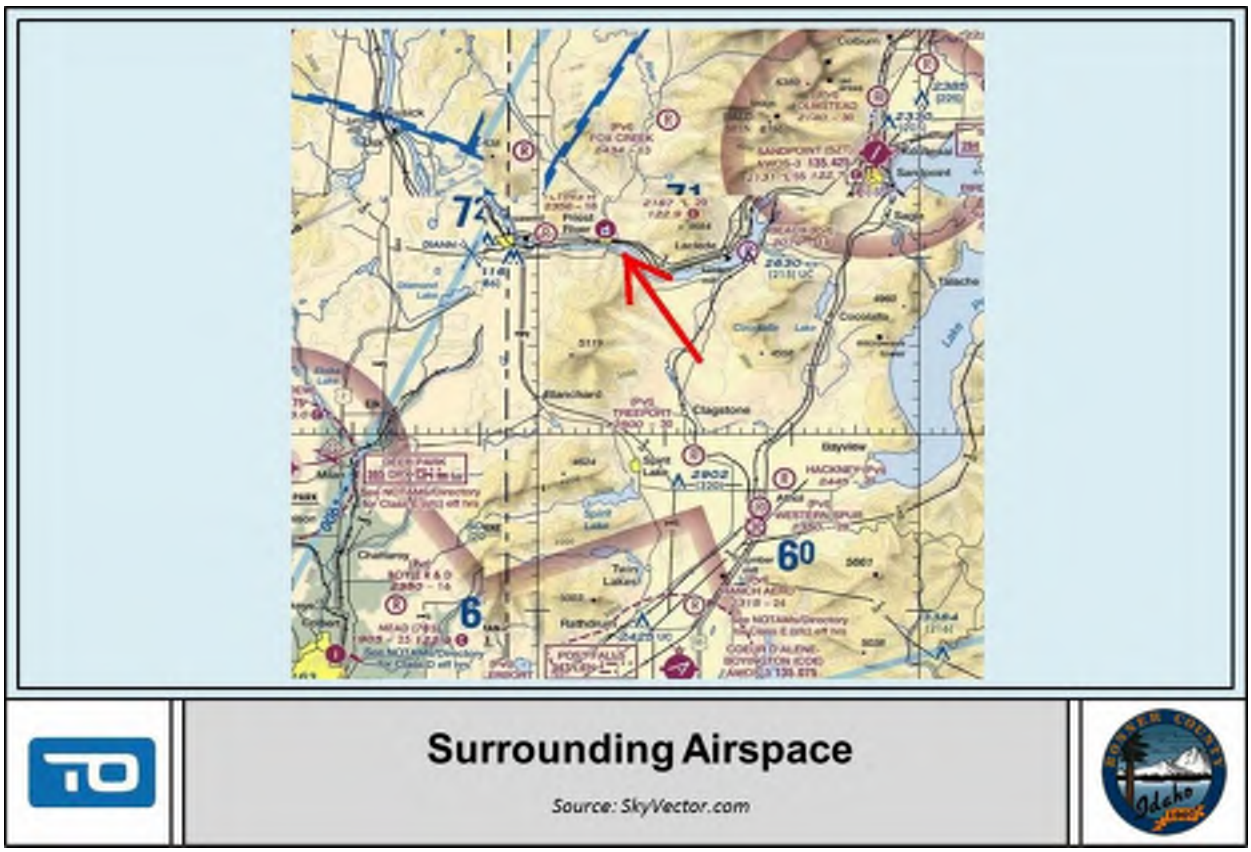
FIGURE 2-12 – AIRSPACE CLASSES



Priest River Municipal Airport is currently in Class G uncontrolled airspace. VFR minimums for Class G airspace are 1 mile flight visibility and clear of clouds. Class E airspace as a result of various Victor Airways resides in close proximity to the airport. Pilots using Priest River should be diligent and understand the airspace environment before operating in the vicinity of the airport.

Figure 2-13 depicts the airspace sectional in the immediate vicinity of the airport.

FIGURE 2-13 – PRIEST RIVER MUNICIPAL AIRPORT SURROUNDING AIRSPACE



2.9.2 CODE OF FEDERAL REGULATIONS PART 77 IMAGINARY SURFACES

Title 14 Code of Federal Regulations (CFR) Part 77, Safe, Efficient Use, and Preservation of the Navigable Airspace (Part 77), provides airspace protection requirements at public-use airports. Airspace requirements are determined by the weight of the aircraft that predominantly operate at an airport and the type of instrument approach, if any, that exists or is planned.

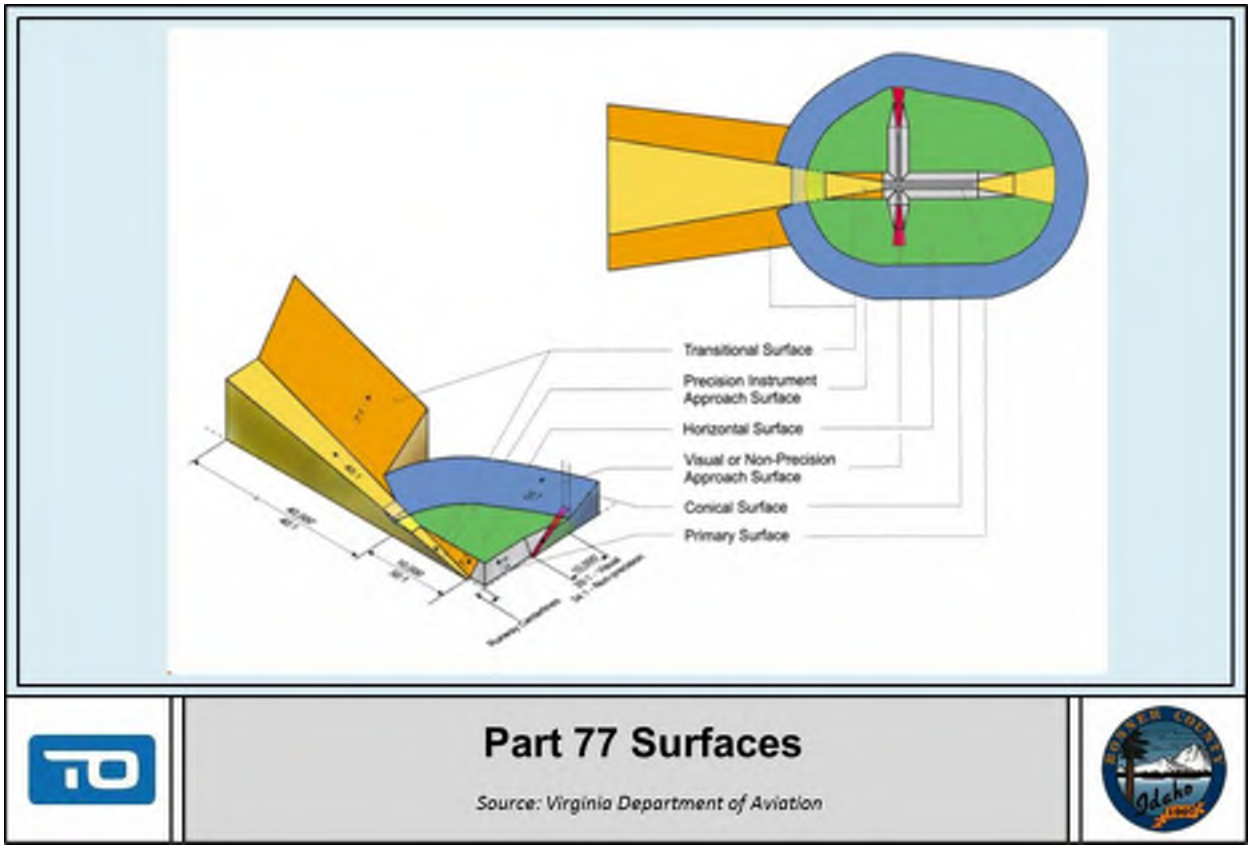
Airport runways which predominantly accommodate aircraft of less than or equal to 12,500 pounds maximum gross takeoff weight (MGTOW) are known as “Utility” runways. Runways accommodating aircraft of greater than 12,500 pounds MGTOW are known as “Other Than Utility Runways”. Either “Utility” or “Other Than Utility” FAR Part 77 runway designations can include visual only runways or runways with a precision instrument approach or runways with a non-precision instrument approach. Once a runway has been designated as either ‘Utility or “Other Than Utility” and the type of approach identified, specific airspace dimensions can be determined.

For public-use civilian airports, FAR Part 77 identifies the following "imaginary" airport airspace surfaces.

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

For purposes of FAR Part 77, Runway 1/19 at Priest River Municipal Airport is considered a "Utility" runway. Runway 1/19 has a visual approach only. A description of each FAR Part 77 airspace surface and specific dimensions for Priest River Municipal Airport are included below. **Figure 2-14** depicts the FAR Part 77 Surfaces.

FIGURE 2-14 – FAR PART 77 IMAGINARY SURFACES



Primary Surface

A rectangular surface longitudinally centered on the runway. For hard surfaced runways, the surface extends a distance of 200 feet beyond each runway end. Its elevation is the same as that of the runway at any given point perpendicular to the runway at that point. The width of the Primary Surface is set by the most demanding type of approach existing or planned for either end of the runway. Widths can be 250 feet, 500 feet or 1,000 feet if the existing or planned

approach has approach visibility minimums as low as ¾ statute mile or a precision instrument approach.

The current width of the Primary Surface at the Airport is 250 feet, or 125 feet either side of centerline and extending 200 feet beyond each runway end.

The existing Primary Surface is impacted by the wind cone. Dispositions to address this obstruction will be discussed in the following chapters of this plan.

Approach Surface

The Approach Surface begins at the ends of the Primary Surface and slopes upward and outward. An Approach Surface is applied to each runway end and is based upon the type of approach planned for that runway end. For visual and utility runways, the Approach Surface slope extends for a distance of 5,000 feet at a slope of 20:1. For all non-precision instrument runways "Other Than Utility" the distance is 10,000 feet at a slope of 34:1. For all precision instrument runways the slope is 50:1 for 10,000 feet then 40:1 for additional 40,000 feet. The ultimate width of the Approach Surface is dependent upon the specific approach minimum to that runway end.

As a "Utility" runway, the current Approach Surfaces for both Runway 1 and 19 are 5,000 feet in length with a slope of 20:1. The ultimate width of the Approach Slope for Runway 1/19 is 1,250 feet.

Obstructions in the Approach Surface include several trees, roads, power poles and buildings. These obstructions will be addressed in the following chapters of this plan.

Transitional Surface

A sloping area that begins at the edge of the primary surface and slopes upward at a ratio of 7:1 until it intersects the Horizontal Surface.

Obstructions in the Transitional Surface include several aircraft storage hangars and trees. Dispositions to address these obstructions will be discussed in the following chapters of this plan.

Horizontal Surface

The Horizontal Surface is an oval-shaped, level area situated 150 feet above the airport elevation, the perimeter of which is established by swinging arcs of specified radii from the center of each end of the Primary Surface of each runway and connecting the adjacent arcs by lines tangent to those arcs. The arcs at either end will have the same value.

The radius of each arc is:

- 5,000 feet for all runways designated as 'Utility" or "Visual"
- 10,000 feet for all other runways.

The elevation of the Horizontal Surface at Priest River Municipal Airport is 2,343 feet MSL.

Conical Surface
A sloping area whose inner perimeter conforms to the shape of the horizontal surface. It extends outward for a distance of 4,000 feet measured horizontally, while sloping upward at a 20:1 ratio resulting in an additional 200 feet of height around the Horizontal Surface.

The elevation at the outer edge of the conical surface at Priest River Municipal Airport is 2,543 feet MSL.

2.10 LAND USE COMPATIBILITY

Effective compatible land use planning serves to protect the public health of both aircraft operators and the surrounding community from safety related concerns as a result of airport operations. Such planning also serves to preserve the quality of life of surrounding neighborhoods from the by products of airport/aircraft operations which include such things as aircraft noise, dust and fumes. Effective land use planning via mechanisms such as Zoning protects airspace, defines use of land and considers aircraft noise impacts. Currently the FAA and the State of Idaho consider airport compatible land use planning, including Through-the-Fence access, to be a top priority for airport sponsors to be aware of, concerned with, and prepared to address through local planning and the airport planning process.

Following is a summary of existing land use planning measures in place related to Priest River Municipal Airport.

2.10.1 BONNER COUNTY COMPREHENSIVE PLAN AND ZONING ORDINANCE

Priest River Municipal Airport is located in Bonner County and is owned and operated by the County. The County's current Comprehensive Plan was adopted in August, 2002. Airports are part of the Transportation Component of the Plan included in Chapter 9. Chapter 9 summarizes various aspects of the four public-use airports located in Bonner County including the Sandpoint and Priest River Municipal Airports. Information such as facilities, activity levels, economics, and future are analyzed in this section.

Under the Implementation Component of the comprehensive plan, there is no mention of specific objectives or goals related to land use planning around airports. It is stated that "Bonner County intends to provide a transportation system that is safe, uncongested, and well maintained". In addition, "future development shall not adversely impact the existing transportation system by reducing the quality or level of service or creating hazards or congestion."

Zoning Ordinances

Title 12, Chapter 5 – Overlay Districts, Subchapter 5.2 of the current Bonner County Revised Code includes an Airport Overlay District (AOD). As written, the current AOD is only applicable to the Sandpoint Airport with no zoning restrictions in place for the Priest River Municipal Airport. Title 12, Chapter 4 – Development Standards, includes a requirement that, "the location, building height and lighting of residential and commercial development shall be restricted within airport approach areas as required by the State Department of Transportation, Division of Aeronautics and Public Transportation and Federal Aviation Administration."

2.10.2 SURROUNDING JURISDICTIONS

Priest River Municipal Airport is located within the City limits of Priest River. Bonner County does not have jurisdiction to regulate the land use within the City of Priest River. As a critical community within Bonner County, understanding the City's development goals that relate to Priest River Municipal Airport is important.

A review of the Priest River comprehensive plan was conducted. The current plan was adopted in 2013 and does not mention the Priest River Municipal Airport. The City of Priest River Planning and Zoning Administrator did advise that efforts are underway to update the comprehensive plan and include Priest River Municipal Airport.

Zoning Ordinance

In the city's current zoning ordinance, Ordinance 279, Zoning Ordinance, the airport is mentioned in Section IV, General Provisions, and Section V, Supplemental Regulations. Subsection 4.1.5 states that, "…development close to the airport shall be restricted with airport approach areas as required by the State Department of Transportation, Division of Aeronautics and Public Transportation and Federal Aviation Administration." Subsection 5.7.6 establishes height limitations on various structures that, "…will constitute and hazard to the safe landing and take-off of aircraft at an established airport."

2.10.3 FUTURE LAND USE PLANNING

Per Idaho Statewide Land use Legislation, effective July 1, 2014, all local jurisdictions with a public-use airport in or near its jurisdiction are required to include a separate Airport section in its Comprehensive Plans. This section must consider current and future needs of the airport, as well as impacts on the communities in the vicinity of the airport. In addition, the local planning and zoning commissions must adopt standards and zoning mechanisms to protect lands around airports from incompatible land use or incompatible development.

As part of this Airport Master Plan effort, coordination with Bonner County and City of Priest River Planning and Zoning officials was conducted. Recommendations related to airspace and land use protections were also made.

Additional information and recommendations regarding land use and airport zoning around the airport can be found in **Chapter X.**

2.10.4 THROUGH-THE-FENCE (TTF)

Through-the-fence activities are those which reside on property outside of the airport property boundary that have an access directly on to airport property. Currently no TTF activities exist at the airport.

2.11 ENVIRONMENTAL OVERVIEW

An environmental overview will be completed as part of the project. This section will be revised upon completion of the overview.

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