

## Chapter 2

# Existing Conditions Analysis



Photo Credit: Andy McKee

The Existing Conditions Analysis documents existing airfield facilities and conditions that affect the operation and development of the Joseph State Airport (JSY) within the context of the regional setting, landside, airside, and administrative functions. The existing conditions analysis utilized the 1993 Airport Master Plan<sup>1</sup> and other subsequent work products in addition to numerous meetings with tenants, stakeholders, and ODA staff to support the effort. The findings documented in the Existing Conditions Analysis chapter will be used to support subsequent studies and recommendations throughout the development of the master plan.

## Regional Setting

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

### LOCATION & VICINITY

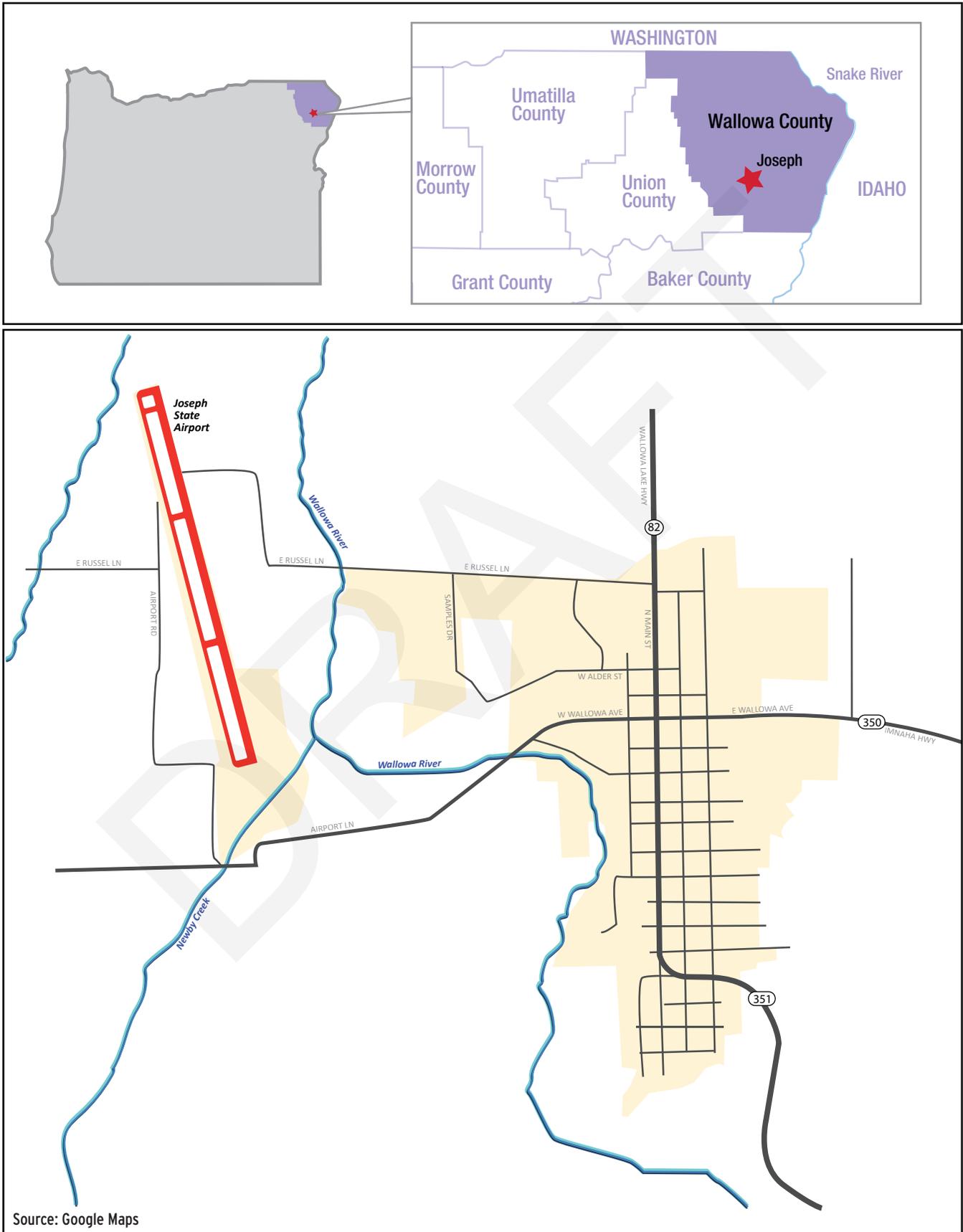
Joseph State Airport is located about 1 mile west of Joseph, Oregon and is solely owned and operated by the Oregon Department of Aviation (ODA). The Airport is located outside the Joseph city limits and urban growth boundary (UGB) in unincorporated Wallowa County. Airport elevation is 4,121 feet above mean sea level (MSL), with nearby terrain rising to more than 9,800 feet MSL within 7 nautical miles (south).

Wallowa County is located in the Northeastern corner of Oregon, bordering the States of Washington and Idaho on its north and east boundaries, and three adjacent Oregon counties (Union, Umatilla, and Baker) to the south and west. Enterprise is the county seat, located 6 miles north of Joseph.

State Highway 82 connects Joseph and Enterprise with several smaller communities along the Wallowa River, before heading west and south to La Grande. State Highway 3 extends north from Joseph and Enterprise into southeast Washington, where it becomes Washington Highway 129. Highway 129 connects to U.S. Highway 12 near Asotin and Clarkston, and Lewiston, Idaho. U.S. Highway 12 is major east-west route that extends from Washington to Michigan.

<sup>1</sup> Joseph State Airport Master Plan (Robert O. Brown Airport Consultant, August 1993)

FIGURE 2-1: LOCATION AND VICINITY MAP



## Community Socio-Economic Data

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

### Population

Recent historic population trends in Wallowa County have been mixed. The county has experienced several minor upward and downward movements within small net increase since the previous airport master plan was completed in 1993. Since 1990, county population has increased by approximately 3.5 percent (+239), or about 0.12 percent annually. The 2019 population estimate for Wallowa County is above the 2010 Census (+142, +2.00%), but below the 2000 Census (-76, -1.1%). The trends within the incorporated and unincorporated areas of the county are similar. Over the last 30 years, Joseph and Enterprise combined have consistently accounted for about 44 percent of county population, while unincorporated Wallowa County accounts for 42 percent.

**TABLE 2-1: HISTORIC POPULATION**

	1990	2000	2010	2015	2019
Oregon	2,847,000	3,431,085	3,837,300	4,013,845	4,236,400
Wallowa County	6,911 (100%)	7,226 (100%)	7,008 (100%)	7,100 (100%)	7,150 (100%)
Joseph	1,073 (16%)	1,054 (16%)	1,081 (16%)	1,095 (15%)	1,120 (16%)
Enterprise	1,905 (28%)	1,895 (28%)	1,940 (28%)	1,940 (27%)	1,985 (28%)
Unincorporated	2,954 (42%)	3,145 (42%)	2,966 (42%)	3,040 (43%)	2,990 (42%)

Source: US Decennial Census; Portland State University (PSU) Annual Certified Population Estimates

### Area Tourism

Despite relatively flat population growth, Wallowa County has seen significant growth in visitor activity and part-year residents. Local officials report increases in vacation home/cabin rentals including Airbnb, and other lodging accommodations. A variety of recreational segments contribute to a growing year-round visitor activity: camping, water sports, hunting, winter sports, etc.

### Area Demographics

Wallowa County has a diverse blend of private (75%) and government (25%) employment. The median household income for the county is approximately 27 percent lower than the state. It also has a slightly higher percentage of persons in poverty than the state. The unemployment rate for the county has trended alongside the state, and varies throughout the year, with low months ( $\approx$ 3%) and high months ( $\approx$ 14%).

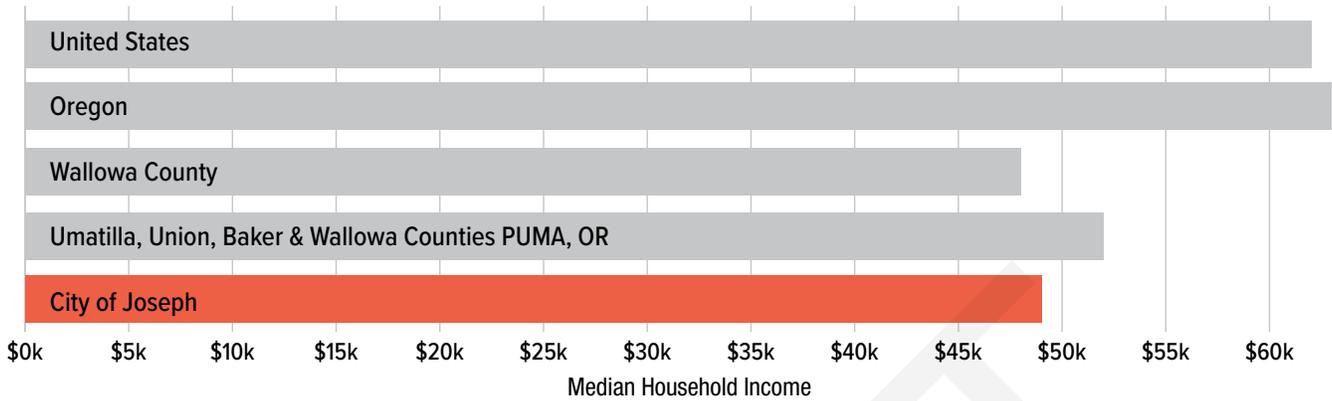
**TABLE 2-2: WALLOWA COUNTY DEMOGRAPHICS<sup>1</sup>**

Demographic	Data
Population (2019)	7,208
Ethnicity (2019)	Caucasian (92.8%); Hispanic or Latino (3.4%); Two or More Races (2.3%); American Indian and Alaska Native (1.0%); Other (<1%) (Wallowa County)
Median Household Income (2018)	\$44,953 (Wallowa County); \$59,393 (Oregon)
Persons in Poverty (%) (2018)	14.5% (Wallowa County); 12.6% (Oregon)
Persons Under 18 (%)	18.6% (Wallowa County); 12.6% (Oregon)
Persons 65 and Over (%)	29.2% (Wallowa County); 12.6% (Oregon)
Total Employment (2017) <sup>2</sup>	2,631 (Wallowa County)
Unemployment Rate (%)	Wallowa County / Oregon 14.1% / 14.2% (April 2020) 6.9% / 3.3% (January 2020) 3.2% / 3.5% (September 2019)

<sup>1</sup> U.S. Census Bureau QuickFacts Wallowa County. Population Estimates July 1, 2019

<sup>2</sup> Oregon QCEW Employment and Wages by Industry

**TABLE 2-3: MEDIAN HOUSEHOLD INCOME**



Source: censusreporter.org

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

**AIRPORT ROLE (NATIONAL, STATE, AND LOCAL)**

The role of an airport may vary slightly within the context of the National, State, or Local perspective. Understanding the existing roles of the Airport is key to establishing the long-term vision and development of the facility.

**National Role**

The FAA maintains an inventory of U.S. aviation facilities through the National Plan of Integrated Airport Systems (NPIAS). The NPIAS lists existing and proposed airports significant to the air transportation of the United States, and thus are eligible for federal funding through the Airport Improvement Program (AIP) which cover 90% of eligible costs of planning and development projects. According to the 2018 National Plan of Integrated Airport Systems (2019-2023), Report to Congress, Joseph State Airport is classified as a Local General Aviation Airport and as such, supports regional economies by connecting communities to statewide and interstate markets.

**State Role**

The Oregon Department of Aviation (ODA) has developed and regularly updates the Oregon Aviation Plan (OAP) to provide guidance on preserving the State’s system of airports. The OAP presents a framework for improving the system for continued support of communities and economic development. The most recent update to the OAP (OAP v6.0) classifies Joseph State Airport as a Category IV- Local General Aviation Airport. Category IV airports support primarily single-engine aircraft with capabilities of accommodating smaller multi-engine aircraft. These airports support local air transportation needs and special-use aviation activities.

**AIRPORT HISTORY**

Local officials indicate that Joseph State Airport began as a small airstrip built in 1945, which is also the year the Chief Joseph Days Rodeo was established. Both are celebrating their 75th anniversary in 2020. The airport activation date listed in the AirNav.com database is October, 1945.

Property records indicate that the original part of the Joseph airport (approximately 73.8 acres) was sold by the City of Joseph to the State of Oregon Board of Aeronautics on April 14, 1964 for one dollar (\$1.00). Joseph State Airport was expanded to its current form by acquiring several smaller parcels using FAA funds (1995, 1996 grant years). Current airport acreage is approximately 106.40 acres.<sup>2</sup> The existing airport site includes an inholding of privately-owned land (Pioneer Cemetery, Silver Lake Lodge #84 IOOF) and an easement for a Wallowa County 60-foot wide road right of way (Woodland Drive and Airport Lane) that travels through the north and south sections of the Airport.

<sup>2</sup> Joseph State Airport – Exhibit A Property Plan (Century West, September 2010)

The following description is based on the historical account contained in the Joseph State Airport Master Plan:

The airports in Joseph and Enterprise have served the Wallowa Valley since the 1940s. Over time, both airports experienced challenges that limited their development. Over a period of several years, a plan was formulated to replace the two existing airports with a larger, more capable facility midway between Joseph and Enterprise.

Two studies were completed in the 1980s to evaluate the feasibility of developing a new airport to serve Joseph and Enterprise, and to close the two existing airports. The second study, completed in 1986, involved an extensive public outreach effort and included an evaluation of approximately twenty potential sites. The study compared the highest ranked new site with Joseph State Airport and recommended that both the existing airport and the new site be retained as future development options, depending on the direction of local economic development activities. At the time, discussions about the development of a new destination resort in the Wallowa Valley were contributing to interest in developing a new expanded airport. However, by the early 1990s economic development interests changed and the local community determined that improving Joseph State Airport was the best path forward for maintaining an FAA-eligible airport to serve the local area.<sup>3</sup>

When the last master plan was written in 1993, airfield facilities at Joseph State Airport included a single 3,800'x50' paved runway with a low-intensity runway lighting system (LIRL), a small aircraft apron and access taxiway connecting to the Runway 33 end, and two existing hangars. A business site was identified in the location of the existing mobile home/pilot lounge with adjacent auto parking. On the basis of the master plan recommendations, the Airport site was transformed into its current form over the next ten years, which required significant property acquisition and relocation/realignment of existing county roads.

Since the mid-1990s, ODA has reconstructed the runway (increased width and length), and subsequently rehabilitated the runway pavement, replaced all airfield lighting, added a full length parallel taxiway, reconstructed the aircraft tiedown apron and access taxiway, accommodated demand for new hangar siting, and added an aircraft fueling facility and automated weather observation system. As indicated in **Table 2-4** below, federal funding over the last 20 years has supported a variety of improvements and upgrades totaling about \$3.3 million.

**TABLE 2-4: 20-YEAR FAA GRANT HISTORY**

	Fiscal Year	State Apportionment	Total Federal
Install Perimeter Fencing	2003	\$5,867	\$24,133
Install Airfield Guidance Signs	2003	\$6,090	\$16,090
Install Runway Vertical/Visual Guidance System	2003	\$7,820	\$32,180
Construct Taxiway	2003	\$282,403	\$1,161,981
Update Airport Master Plan Study	2007	\$0	\$15,000
Install Weather Reporting Equipment	2007	\$0	\$85,000
Install Miscellaneous NAVAIDS	2007	\$0	\$25,621
Rehabilitate Runway	2009	\$0	\$40,000
Install Weather Reporting Equipment	2009	\$0	\$204,612
Install Miscellaneous NAVAIDS	2009	\$0	\$74,000
Rehabilitate Apron	2011	\$0	\$150,000
Rehabilitate Runway	2011	\$0	\$1,217,415
Rehabilitate Taxiway	2011	\$0	\$150,000
Install Perimeter Fencing	2013	\$0	\$30,000
Remove Obstructions	2013	\$0	\$125,000
Install Perimeter Fencing	2014	\$0	\$50,000
Remove Obstructions	2014	\$0	\$262,183
Update Airport Master Plan Study	2019	\$0	\$397,981
<b>Total</b>		<b>\$300,000</b>	<b>\$3,294,004</b>

<sup>3</sup> Summary of 1994 Joseph State Airport Master Plan Prepared by Century West Engineering

## AREA AIRPORTS CONTEXTUAL ANALYSIS

The contextual analysis of the airport service area refers to the geographic area surrounding an airport that is directly affected by the activities at that airport. Normally a 30 or 60-minute surface travel time is used to approximate the boundaries of a service area. Airports located beyond a 30-minute travel time have less impact on local airport activity due largely to the redundancy provided by closer facilities. The Airport is located within the local airport service area are summarized in **Table 2-5** and depicted in **Figure 2-2**.

With numerous airports nearby, service areas often overlap, creating competition between airports. Having several airports located within a relatively short distance affects user demand for items such as hangar space, fuel and aviation services. These items are sensitive to cost, convenience, and the quality of facilities or services.

Wallowa County is relatively remote, consisting of several small communities scattered along a system of state highways and county roads. Joseph and Enterprise are located 65-70 miles from the nearest Interstate (I-84). The two communities, and their respective airports, are located within a few miles of each other. The communities account for nearly half of Wallowa County's population, a large portion of its annual visitors, and the two local airports account for the majority of FAA registered aircraft in Wallowa County.

The lengthy driving distances and travel times between communities in northeastern Oregon contribute to increased dependence on general aviation. This includes business, personal and recreation transportation, but also includes activities such as medical patient transports. The combined service area for Joseph State Airport and Enterprise Municipal Airport is physically isolated to the extent that most demand for basic services (AvGas, hangar space, and aircraft maintenance) is met locally. Other services such as specialized aircraft maintenance or fuel (e.g., Jet Fuel) may be acquired at other airports in the service area, or beyond the local service area (enroute) depending on the direction of travel. Specialized activities and local tourism also draw users from greater distances.

A review of the FAA aircraft registration data (FAA Registry 6/22/20) lists of a total of 47 registered aircraft with Wallowa County addresses: Joseph (15); Enterprise (28); Wallowa (3); and Lostine (1). While the address of an aircraft owner does not always correspond to their home airport location, both the total number of Wallowa County registered aircraft and their geographic distribution closely correlate to the aircraft based at Joseph State Airport and Enterprise Municipal Airport. The aircraft ownership data suggests that the majority of local users of Joseph State Airport will live or work within 30 minutes of the Airport.

It is important to note that the 5,200-foot runway length available at Joseph State Airport allows the Airport to accommodate a larger segment of general aviation activity than nearby Enterprise Municipal Airport. Although all of the aircraft currently based at Joseph State Airport and Enterprise Municipal Airport are small single-engine piston, Joseph's longer runway has the ability to accommodate multi-engine piston and turbine aircraft, including business jets. The potential addition of instrument capabilities at Joseph State Airport also differentiates the two airports.

### Enterprise Municipal Airport (8S4)

Enterprise Municipal Airport is located approximately 6 road miles/3.9 nautical (air) miles north of Joseph State. The Airport has one lighted asphalt runway: 12/30 (2,850'x50'). The Airport supports mostly small single-engine aircraft and has 100LL aviation fuel. Based on recent FAA 5010 data, Enterprise accommodates 4,850 operations annually and has 31 based aircraft. Enterprise is not included in the NPIAS and does not receive FAA funding.

### Memaloose Airport (25U)

Memaloose Airport is located approximately 52 road miles/24 nautical (air) miles east of Joseph State, near Imnaha. The Airport has one unlighted dirt runway: 17/35 (3,330'x120') and several hard-surfaced helicopter pads. Memaloose is owned by the U.S. Government (USDA Forest Service) and supports a Helitack base for aerial fire response. The Airport is open to the public (seasonal, no services) and supports mostly small single-engine aircraft and Type 2 (medium) helicopters. Based on recent FAA 5010 data, Memaloose accommodates 600 operations annually and has 0 based aircraft. Memaloose is not included in the NPIAS and does not receive FAA funding.

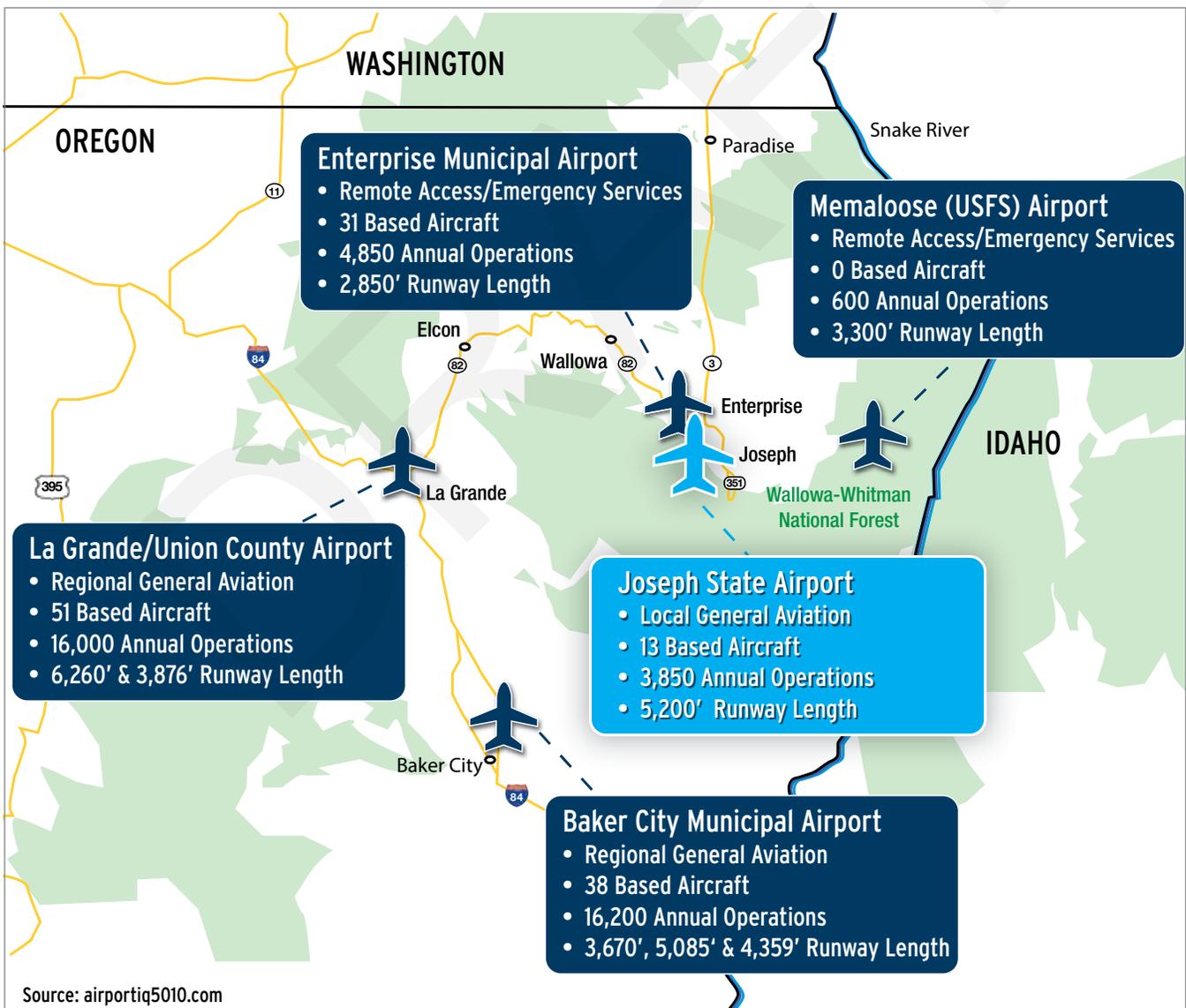
### La Grande/Union County Airport (LGD)

La Grande/Union County Airport is located approximately 70 road miles/32 nautical (air) miles west of Joseph State Airport. The Airport has two asphalt runways: 16/34 (3,876'x60') and 12/30 (6,260'x100') that are capable of accommodating a wide range of general aviation aircraft. The Airport also supports a U.S. Forest Service fire center and aerial retardant base. The Airport has a full-service fixed base operator (FBO) with both 100LL AVGAS and jet fuel available. Based on recent FAA 5010 data, LGD accommodates approximately 16,000 annual operations and 51 based aircraft. LGD is the closest NPIAS airport to Joseph State Airport and it also receives FAA funding.

### Baker City Municipal Airport (BKE)

Baker City Municipal Airport is located approximately 106 road miles/39 nautical (air) miles southwest of Joseph State Airport. The Airport has three paved runways: 08/28 (3,670'x140'), 13/31 (5,085'x100'), and 17/35 (4,359'x75'). Based on recent FAA 5010 data, BKE accommodates approximately 16,200 annual operations and 32 based aircraft. The Airport has a full-service fixed base operator (FBO) with both 100LL AVGAS and jet fuel available. BKE is included in the NPIAS and receives FAA funding.

FIGURE 2-2: AREA AIRPORTS



## SUMMARY OF AIRPORT OPERATIONS DATA

Joseph State Airport accommodates a wide variety of aeronautical activity, including small single- and multi-engine aircraft, as well as some smaller business class turbine aircraft (business jets and turboprops), and helicopters. The Airport accommodates seasonal fire helicopters and fixed wing medical evacuation flights on an as-needed basis.

Joseph State Airport's based aircraft count was updated by airport management in April 2020 and currently includes 13 aircraft. The 1993 Airport Master Plan listed a total of 6 based aircraft at the airport. All of the current and 1993 based aircraft are single engine piston. Joseph State Airport currently has eight hangars (including existing and under construction), up from two in 1993.

The current "validated" count in the FAA's [www.basedaircraft.com](http://www.basedaircraft.com) database and the FAA 5010 Airport Record form for Joseph State Airport are summarized in **Table 2-5**.

**TABLE 2-5: FAA 5010 DATA**

	Joseph State Airport (JSY)	Enterprise Muni. Airport (8S4)	La Grande – Union Cty. Airport (LGD)	Memaloose (USFS) Airport (25U)	Baker City Muni. Airport (BKE)
Air Carrier	0	0	0	0	0
Air Taxi	250	450	2,500	150	3,600
GA Local	600	1,000	4,000	0	3,000
GA Itinerant	3,000	3,400	9,000	450	9,500
Military	0	0	500	0	100
<b>TOTAL OPERATIONS</b>	<b>3,850</b>	<b>4,850</b>	<b>16,000</b>	<b>600</b>	<b>16,200</b>
<b>TOTAL BASED AIRCRAFT</b>	<b>13</b>	<b>31</b>	<b>51</b>	<b>0</b>	<b>38</b>
Single Engine	13	27	44	0	32
Multi Engine	0	0	3	0	3
Jet	0	0	0	0	0
Helicopters	0	0	4	0	3
Glider	0	0	0	0	0
Military	0	0	0	0	0
Ultra-Light	0	4	0	0	0

Source: <https://www.gcr1.com/5010WEB/>

**Table 2-6** summarizes the estimated Airport activity listed on the current FAA 5010 Airport Record form and the 1993 Airport Master Plan. It is important to note that aircraft takeoffs and landings (operations) at non-towered airports, including Joseph State, are not routinely recorded. As such, flight activity is estimated through a variety of methods. A quick comparison of current and 1993 estimated operations and based aircraft yields activity ratios (number of takeoffs and landings per based aircraft) of 298 and 330, respectively, both of which are within the range of activity often found at community general aviation airports.

Based aircraft and operations data will be examined further in Chapter 3: Aviation Activity Forecasts.

**TABLE 2-6: ESTIMATED AIRCRAFT OPERATIONS (JOSEPH STATE)**

	1993 Master Plan	FAA 5010-1 Airport Master Record
General Aviation (Local)	650	600
General Aviation (Itinerant)	1,330	3000
Air Taxi	-	250
Military	-	0
<b>TOTAL OPERATIONS</b>	<b>1,980</b>	<b>3,850</b>

Source: 1993 Airport Master Plan Forecast and FAA 5010-1 (Operations for 12 Months Ending 08/27/2018).

## RELEVANT STUDIES

### 1993 Joseph State Airport Master Plan (AMP)

The 1993 AMP provided a detailed assessment of site-specific airport development needs and recommended facilities that has guided development of Joseph State Airport for the nearly 30 years. Most of the recommended improvements summarized below occurred in the 1996-2003 time period, and produced the Airport site and airfield configuration that currently exists:

- **Property Acquisition:** A total of 11 parcels were recommended for acquisition to allow expansion of the existing airport site, realignment of existing roads, and development of the new runway-taxiway system (completed);
- **Surface Access Roads:** Sections of Russell Lane and Woodland Road that formed the previous north and northwest airport boundary were recommended to be vacated in conjunction with property acquisition noted above (completed);
- **Surface Access Roads:** A new roadway connection to Hurricane Creek Market Road and a realignment of Woodland Drive was recommended to maintain access to land parcels on the west side of the Airport in conjunction with direct access via Russel Lane being eliminated (completed);
- **Runway:** Replacing the existing runway (3,800' x 50') with a newly constructed 5,200' x 60' runway (completed);
- **Parallel Taxiway:** A west parallel taxiway was recommended for long-term development (the northern 300 feet of the west parallel taxiway was constructed as an aircraft turnaround when the 5,200-foot runway was constructed; the remaining section of the parallel taxiway was constructed in a separate project);
- **Runway Lighting:** Upgrade existing low intensity runway lighting (LIRL) with medium-intensity runway lighting (MIRL) (completed);
- **Runway Lighting/Visual Aids** (all completed):
  - » Add runway end identifier lights (REIL) and precision approach path indicator (PAPI) for Runway 15;
  - » Relocate the segmented circle to the west side of the runway;
  - » Install a rotating beacon on the west side of the runway; and
  - » Install a lighted wind cone on the west side of the runway (inside the relocated segmented circle).
- **Weather Observation System:** An Automated Weather Observation System (AWOS) was recommended as a long-term improvement (completed);
- **Instrument Approach:** The addition of non-precision instrument approach was identified as a possible improvement, which supported the recommendation to provide the REILs and AWOS noted earlier (not completed);
- **Terminal Area (Planned):** Future aircraft apron, FBO facilities, and aircraft hangars recommended west of the future parallel taxiway, near the current Taxiway A1 and A2. The majority of the development was located in area of proposed property acquisition (City of Joseph gravel pit site). (The proposed acquisition of the City of Joseph 6.6-acre parcel and the subsequent site redevelopment was not completed); and
- **Terminal Area (Actual):** The apron located near the south end of the runway was retained. A change in the taxiway connection to the south apron was recommended in conjunction with a relocation of the Runway 33 threshold approximately 100 feet north. The south apron and the adjacent hangar development area were identified as "special event areas." A business site, auto parking, and two existing hangars were identified in the area. One future AG aircraft pad was planned in this area.
  - » *(All landside facilities at the airport are located in the south apron/hangar area. ODA opted to maximize use of the existing development area rather than pursuing acquisition and redevelopment of the adjacent City of Joseph parcel in the late 1990s and existing configurations for apron, access taxiway, hangar sites, and aircraft fueling apron were developed.)*

FIGURE 2-3: JOSEPH STATE AIRPORT AIRFIELD DEVELOPMENT SINCE 1993 AIRPORT MASTER PLAN



1994

Runway 15/33  
3,800 x 50'



2016

Runway 15/33  
5,200 x 60'

Source: Google Earth

## OREGON AVIATION PLAN (OAP)

In 2018, ODA updated the Oregon Aviation Plan (OAP) for the State Airport System which includes 95 airports, one heliport and one seaplane base. The study area was statewide and considered both commercial service and general aviation airports.

Each airport designation generally reflects the type of aircraft and customers the Airport serves as well as the characteristics of the Airport's service area. In the OAP update, Joseph State Airport will remain a Category IV - Local General Aviation Airport.

As a Category IV airport, the OAP has identified certain facilities and services that should ideally be in place. These objectives are considered the "minimums" to which the airport should be developed. The existing facilities at Joseph State Airport appear to meet minimum standards, as they pertain to the Airport's Category IV role in the OAP. A review of OAP minimum standards compliance will be summarized in the updated facility requirements assessment (Chapter 4).

As part of the OAP update, annual economic impacts for 97 statewide airports was also estimated. The total annual sales/output for Joseph State Airport was estimated to include \$4.34 million in direct sales/output, and \$3.49 million of indirect or induced output, for a total of \$7.83 million. Total full-time employment related to all tenants and visitors accounted for 49 jobs with an estimated payroll of \$848,628.

## ENVIRONMENTAL DATA

### Physical Geography

The geography is rugged, consisting of the Blue Mountains in Union County, with prominent canyons and valleys carved by rivers and glacial moraines. Joseph and Enterprise are located on a broad glacial outwash plain that gently rises until reaching the base of the Wallowa Mountains and Wallowa Lake. Wallowa Lake was formed by a rising glacial moraine that created a natural dam as part of a geological fault line that uplifted the mountains several thousand feet above the valley floor. The Wallowa River flows from Wallowa Lake north and west, eventually connecting with the Minam River before joining into the Grande Ronde River. The Grande Ronde River runs north from La Grande to the Wallowa River, and the water continues north and joins the Snake River about 5 miles north of the Oregon border. Hells Canyon and the Snake River are located on the eastern edge of Wallowa County, forming the border with Idaho.

### Local Climate Analysis

Joseph has a relatively dry mountainous climate at an elevation of nearly 4,000 feet. The temperature varies between 19-degrees to 83-degrees throughout the year. Summers are warm and short, spanning from mid-June to mid-September with the hottest month in August. While winters are longer with the coldest months being November to February. Joseph receives small amounts of precipitation throughout the year, with the rainiest seasons being spring and fall. The month of May brings the highest amount of rain with an average of 1.8 inches, followed by April and November. The summer season is dry averaging less than a half-inch monthly between July and September.

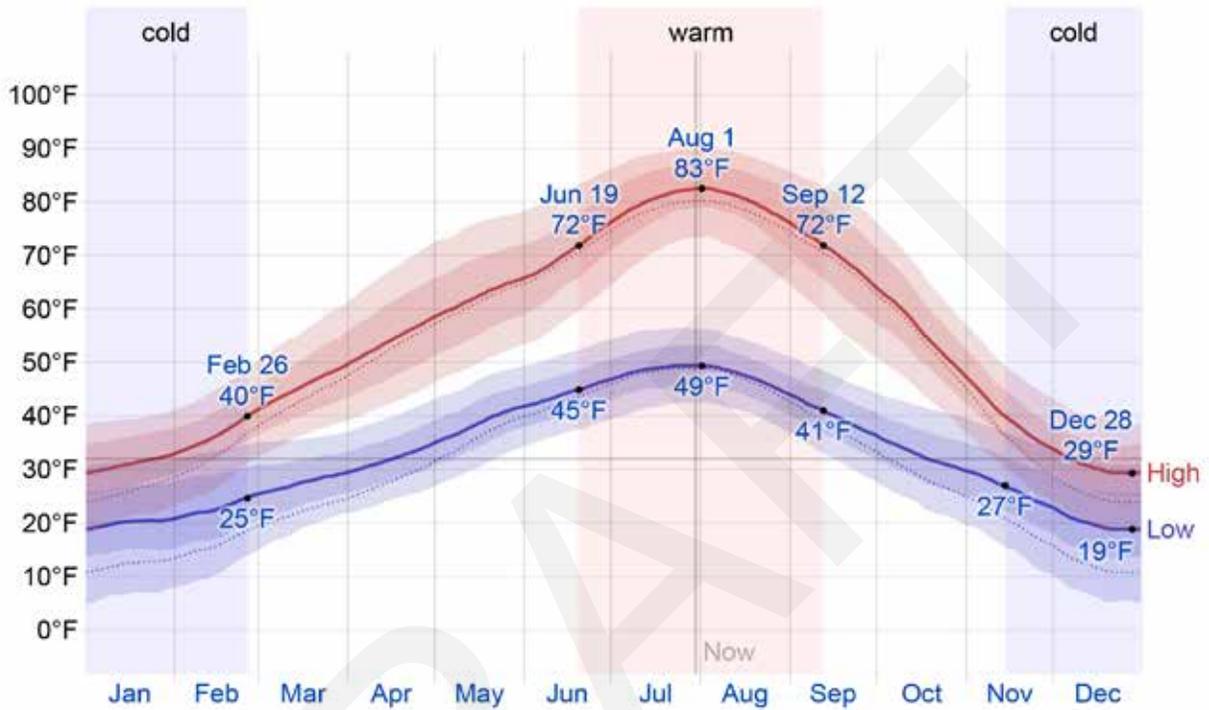
### Wind Analysis

Historical on-site wind data has not been tracked for Joseph State. In 2020, ODA began collecting this data for use in the Master Plan. Once a year's worth of data has been collected, it will be used to create a supplemental wind rose for the Airport Layout Plan. The FAA requires wind roses developed for use on ALP drawing sets to provide a minimum of ten years of data. In cases where on-site observation data is limited, FAA recommends using a wind rose from a nearby airport to approximate wind coverage. The FAA recognizes that these data are approximate and may account for unique terrain or localized weather patterns.

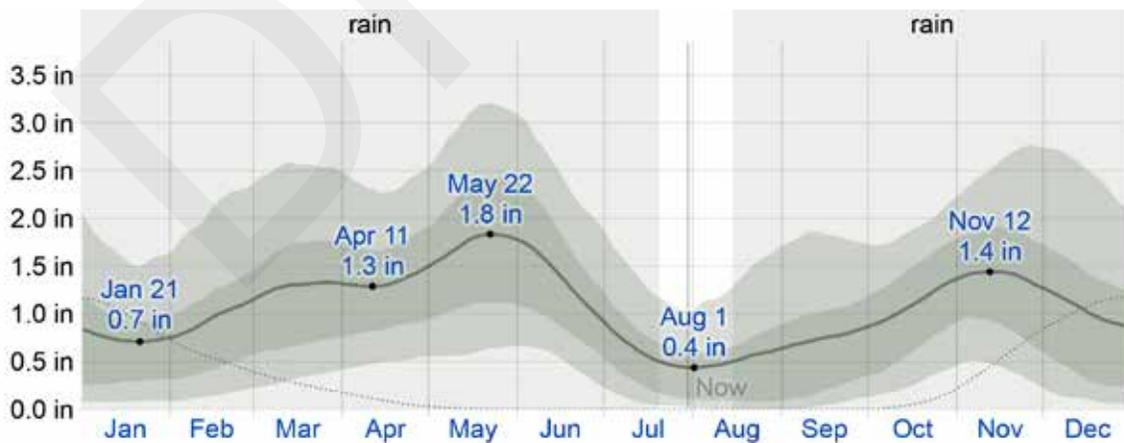
The nearest National Weather Service (NWS) tabulated wind data source acceptable to FAA is located at La Grande/Union County Airport. However, unique geography and distance make use of La Grande wind data ineffective for evaluating wind conditions at Joseph State Airport. In the event that the FAA requires use of La Grande wind data on the ALP, disclaimers will be provided and notations will be added providing estimated wind coverage based on available onsite data.

The following climate data charts were retrieved from weatherspark.com to illustrate the typical temperature and precipitation patterns in Joseph. These are based on an analysis of historical weather reports and model reconstructions.

### Average Annual Temperature, Joseph, OR



### Average Annual Precipitation, Joseph, OR



Source: weatherspark.com

# Airport Solid Waste and Recycling

## INTRODUCTION

This section discusses solid waste generation at the Airport, and the recycling options available. The section follows Federal Aviation Administration (FAA) guidance established in 2014 for preparing airport recycling and solid waste management plans as an element of airport master plan updates. The FAA guidance was in response to Section 133 of the **FAA Modernization and Reform Act of 2012**<sup>4</sup>:

*“SEC. 133. RECYCLING PLANS FOR AIRPORTS. Section 47106(a) is amended— ...(6) if the project is for an airport that has an airport master plan, the master plan addresses issues relating to solid waste recycling at the airport, including—*

- (A) the feasibility of solid waste recycling at the airport;*
- (B) minimizing the generation of solid waste at the airport;*
- (C) operation and maintenance requirements;*
- (D) the review of waste management contracts; and*
- (E) the potential for cost savings or the generation of revenue.”*

This section is organized around the following:

- Waste Audit;
- Local Recycling Management and Programs;
- Recycling Feasibility;
- Plan to Minimize Solid Waste Generation;
- Operational and Maintenance Requirements;
- Waste Management Contracts;
- Potential for Cost Savings or Revenue Generation; and
- Future Development and Recommendations.

## WASTE AUDIT

### Airport Solid Waste And Recycling

This section provides a summary of the solid waste generated at Joseph State Airport and recycling practices in anticipation of identifying any opportunities for reducing waste at the Airport.

No state or federal requirements apply to the waste generated on the Airport. Airport tenants are responsible for disposal of their own waste and any hazardous materials, as stipulated in their leases with ODA. ODA is responsible for collection of waste in common areas; waste cans are provided for public use at the pilot building and the fueling apron.

Tenants and users of the Joseph State Airport create a limited amount of waste on site. Specific sources of on-site waste include aircraft storage hangars, aircraft maintenance hangars, the pilot building, the aircraft fueling area, and the aircraft parking apron. Private hangars and buildings can create a variety of waste, depending on the function of the building. Common items may include household/office types of trash, used oil and aircraft parts.

Recycling collection bins are not currently available at the Airport or at the adjacent transfer station.

### Existing Solid Waste Facilities

Wallowa County has four solid waste sites with Oregon Department of Environmental Quality (DEQ) permits.<sup>5</sup> A separate Wallowa County recycling center is located in Enterprise that does not require a DEQ permit. The facilities are summarized in **Table 2-7**.

<sup>4</sup> 112th Congress, Report 112-381, Conference Report H.R. 658 (February 1, 2012)

<sup>5</sup> Oregon DEQ Website: Active Permitted Facilities in Oregon (<https://www.oregon.gov/deq/mm/swpermits>)

**TABLE 2-7: SOLID WASTE FACILITIES – WALLOWA COUNTY**

DEQ Permit	Facility Name	Location	Type
#261	Ant Flat Landfill	Ant Flat Road, Enterprise	Landfill, Recycling
#266	Joseph Transfer Station	Airway Road, Joseph	Transfer
#296	Lostine Transfer Station	Lostine	Transfer
#288	Wallowa Transfer Station	Wallowa	Transfer
--	Recycle Center	Fish Hatchery Lane, Enterprise	Recycling

## Waste Disposal

No state or federal requirements apply to the waste that is generated on the Airport. Each individual tenant is responsible for disposal of their own waste and any hazardous materials.

Rahn’s Sanitary, a private company, provides contract solid waste collection and disposal services in Wallowa County, including the operation of the county landfill and local transfer stations. The company provides scheduled solid waste collection services at Joseph State Airport through individual service agreements.

Curbside recycling services are not currently available at the Airport, or elsewhere in Wallowa County.

Based on the availability of local resources, individual airport tenants and airport management have three options available for managing their solid waste generation:

1. On-Site Collection - direct contract with Rahn’s Sanitary
  - » Weekly, twice monthly, monthly service.
2. Transfer Station - self-haul
  - » The nearest facility (Joseph Transfer Station) is located less than ½ mile from the Airport terminal area. The facility is open two days (9 hours) per week.
3. County Land Fill (Enterprise) - self-haul
  - » The Ant Flat Landfill is located 10 miles from the Airport. The facility is open four days (22 hours) per week.

The Joseph Transfer Station is the nearest off-site solid waste facility. The transfer station is located adjacent to the Airport and accepts household garbage only. The station is equipped with covered dumpsters (6 yard) and has limited hours of operation (waste collection on Saturdays and Sundays; weekly transfers to landfill on Monday). It is also assumed that some airport tenants may combine their limited airport-generated solid waste with existing commercial or residential collection service, within the limits of their service agreements.

## Construction Waste

Construction waste is the responsibility of the contractor for each specific project on Airport. At Joseph State Airport, several projects included in the 20-year capital improvement program provide potential opportunities for recycling:

- Runway Rehabilitation (grind and overlay);
- Parallel Taxiway Rehabilitation (grind and overlay);
- Parallel Taxiway Exit Connectors Rehabilitation (grind and overlay);
- South Apron and Access Taxilane Rehabilitation (grind and overlay);
- Main Apron Rehabilitation (grind and overlay);
- Fuel Apron/Parallel/Taxiway A1 Reconfiguration (pavement removal); and
- Replacement of existing electrical systems (wiring, components for runway lights, PAPI, REIL, beacon).

## LOCAL RECYCLING MANAGEMENT AND PROGRAMS

Wallowa County offers basic recycling services, through its drop-off Recycle Center and Ant Flat Landfill, both located in Enterprise. These services, and the provisions for collection of hazardous waste, tires, and paint are

described later in the chapter. Curbside recycling services are not currently available at the Airport, or elsewhere in Wallowa County.

The State of Oregon provides regulatory guidance for recycling management and solid waste programs that apply to Wallowa County.

### State of Oregon

In 1983, the **Recycling Opportunity Act** was the first law in the U.S. to require that people statewide be provided with an opportunity to recycle. This statute established solid waste management policies for waste prevention, reuse and recycling. In order to conserve energy and natural resources the statute uses a solid waste management hierarchy:

- Reduce the amount of waste generated;
- Reuse materials for their original intended use;
- Recycle what can't be reused;
- Compost what can be reused or recycled;
- Recover energy from what cannot be reused, recycled, or composted;
- Dispose of residual materials safely.

The **Recycling Opportunity Act** also required that:

- Wastashed counties, except for the City of Milton-Freewater and the greater Portland Tri-County Area known as the Metro Wastashed, to have recycling depots; and
- Cities with populations over 4,000 to provide monthly curbside recycling collection service to all garbage service customers (not applicable to Joseph).

The 1991 **Oregon Recycling Act** (Senate Bill 66) strengthened the states recycling requirements and created a recovery goal of 50 percent by year 2000. This statute also established a household hazardous waste program; required recycled content in glass containers, directories and newsprint publications; established requirements for recycling rigid plastic containers to promote market development; and required the Department of Environmental Quality to calculate annual recovery rates and develop a solid waste management plan. In 2005, House Bill 3744 established a new wastashed goal and extended Oregon's statewide recovery goals of 45 percent in 2005 and 50 percent in 2009.

### RECYCLING FEASIBILITY

Wallowa County operates a Recycle Center, and accepts some recyclable items at the Ant Flat Landfill, both located in Enterprise. Curbside recycling services are not currently available at the Airport, or elsewhere in Wallowa County. **Table 2-8** lists the recyclable materials accepted at these facilities.<sup>6</sup>

**TABLE 2-8: WALLOWA COUNTY RECYCLABLE ITEMS**

Accepted Items (Recycle Center)	
<ul style="list-style-type: none"> <li>- Corrugated Cardboard, Brown Paper Bags</li> <li>- Newspaper and Non-Corrugated Boxes (i.e. cereal &amp; beverage boxes)</li> </ul>	<ul style="list-style-type: none"> <li>- Aluminum and Tin</li> <li>- Glass</li> <li>- Most Plastics (#1, 2)</li> </ul>
Accepted Items (Ant Flat Landfill)	
<ul style="list-style-type: none"> <li>- Scrap Metal</li> <li>- Wood Waste</li> <li>- Yard Debris</li> <li>- Car Batteries</li> </ul>	<ul style="list-style-type: none"> <li>- Televisions</li> <li>- Laptop Computers</li> <li>- Computer Monitors</li> </ul>

<sup>6</sup> <https://co.wallowa.or.us/public-works/solid-waste/recycle-center/>

The Wallowa County Solid Waste website lists two Household Hazardous Waste Collection Days per month at the County Public Works Shop in Enterprise. Accepted items include: LED/fluorescent bulbs, small household batteries, chemicals, cleaners, pesticides and herbicides, and unknowns. Wallowa County follows all applicable solid water disposal restrictions when accepting these items and ensures that they are properly packaged for transport disposal. Items not accepted include tires and paint, however, these items are accepted by local tire and hardware stores.

## PLAN TO MINIMIZE SOLID WASTE GENERATION

ODA utilizes current Wallowa County Solid Waste programs and facilities that encourage recycling. Airport tenants are encouraged to obtain information at the Wallowa County Public Works, Solid Waste Division website.

### Methods To Reduce Solid Waste

There are limited opportunities to reduce solid waste generation at the Airport, since little waste is produced and there are no on-site recycling services available. However, ODA should still establish a goal to reduce the amount of solid waste generated at the Airport.

While ODA is not responsible for waste generated by airport tenants, informational brochures on recycling opportunities could be distributed to all the airport tenants to encourage them to recycle their waste at existing county facilities. Local efforts to expand recycling opportunities by providing common collection bins, or add single point recycling to curbside solid waste service, may eventually increase the percentage of recycled materials and reduce the county's overall waste stream.

### Operational and Maintenance Requirements

Operational and maintenance requirements at the Airport are minimal. ODA is responsible for mowing the airfield and the clippings are left in place.

## WASTE MANAGEMENT CONTRACTS

The standard ODA Non-Commercial Site Lease language requires tenants to maintain their facilities and control waste. Similar conditions apply to commercial site leases. The following lease sections are related to solid waste and hazardous materials.

### 18. MAINTENANCE OF THE PREMISES

*LESSEE shall keep the Premises in a safe and reasonably clean and neat condition at all times, shall maintain the landscaping of the Premises, and shall not permit the growth of noxious weeds or the accumulation of rubbish, junk, aircraft or automobile parts or any other material on the Premises.*

### 19. HAZARDOUS SUBSTANCES

*LESSEE shall not store or allow any hazardous substance as defined in OAR 738-005-0010 (67) or petroleum products to be released on the Premises or on Airport property other than that necessary for the conduct of Lessee's business. LESSEE shall recycle petroleum products and dispose of hazardous substances in accordance with Oregon Department of Environmental Quality's rules and regulations, which are available to LESSEE by contacting the Oregon Department of Environmental Quality. All costs associated with the use of hazardous substances or petroleum products, including costs of cleanup, removal, remediation, and compliance with federal, state and local environmental requirements, are the sole responsibility of LESSEE and LESSEE shall indemnify and hold AVIATION harmless from any costs, fees, penalties or other expense incurred by AVIATION in connection with remediation of hazardous substances on the Premises. All hazardous substances and petroleum products must be used, handled, cleaned up, removed and remediated in accordance with federal, state and local requirements.*

Although tenants are responsible for their own waste from the hangar, the leases do not establish tenant recycling requirements. Proceeds from airfield rents are used for general airport maintenance and cleaning services.

As noted earlier, on-site recycling collection services are not currently available in Wallowa County. In the event that services area expanded in the future, ODA may consider updating its leases to require tenant recycling in conjunction with their solid waste management (self-haul or on-site pick up).

## POTENTIAL FOR COST SAVINGS OR REVENUE GENERATION

The potential for cost savings is limited since individual tenants are responsible for costs associated with solid waste disposal and recycling. Revenue generation is also limited due to the small amount of waste generated. Any potential for additional revenue would accrue to the individual tenants since they contract with the waste disposal and recycling provider.

## FUTURE DEVELOPMENT

Future development projects at the Airport include tenant improvements, landside and airside facility development, and rehabilitation projects. The demolition and waste associated with each of these projects would be the responsibility of the contractor performing the work. ODA requires all demolition waste to be taken to the transfer station or landfill, unless it could be recycled on-site for a future project.

Opportunities to recycle airfield construction waste (old asphalt pavement) through grinding and compaction for use on new or replacement airfield surfaces and service roads may also be considered. Recycling of obsolete electrical components replaced during construction may also exist.

A periodic review of the Airport’s solid waste policies should be considered to address future development needs.

## Recommendations

### IMMEDIATE

Continue the existing practice of leaving airfield mowing clippings in-place for natural composting. This practice preserves the aesthetics of the infield area and provides needed nutrients to the turf. The practice also eliminates the cost and carbon footprint of off-site transport for disposal, and saves money on disposal fees.

The historical practice of recycling asphalt for airfield construction projects should be maintained where feasible. The practice eliminates the cost and carbon footprint of off-site transport for disposal, saves money on disposal fees, and has the potential of reducing new imported materials for construction.

### SHORT-TERM

Consider adding a statement to tenant leases with information about recycling options available in Wallowa County, and encourage tenants to recycle and minimize waste. Informational brochures on recycling opportunities could be distributed to all of the hangar tenants to encourage them to recycle their waste.

### ONGOING

Periodically reevaluate the Airport’s (ODA’s) solid waste program and policies, especially after development has occurred. An increase in hangars or businesses at the Airport may increase the amount of waste generated. Work with local community to expand options for collection of common household recyclables (glass, aluminum, paper, cardboard, etc.), including the addition of collection bins at the Joseph Transfer Site or on-site for curbside collection.

### MODIFICATIONS TO SPECIFICATIONS

Language in construction contract documents could be added that encourages contractors to recycle waste and to minimize waste steams caused by construction activities as much as practical.

# Cultural Resources Analysis

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The complete environmental review completed by David Evans and Associates (DEA) is included as an appendix to the report. DEA evaluated the Area of Potential Effect (APE), which is the area within the Airport property boundary, as outlined on the 2008 Airport Layout Plan.

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## NEPA REVIEW

An environmental screening for the following environmental impact categories were included as part of the Airport Master Plan and are summarized in the following sections:

- Section 4(f) of the U.S. Department of Transportation Act
- Federally-listed Endangered and Threatened Species and Critical Habitats
- Wetlands and Waters of the U.S.
- Floodplains
- Stormwater
- Water Quality
- Air Quality
- Hazardous Materials & Cleanup

### Section 4(f) of the US Department of Transportation Act

There are no Section 4(f) properties within the Airport APE or adjoining lands. Section 4(f) lands include park and recreation lands, wildlife, waterfowl refuges, and historic sites during transportation project development. Federally-listed Endangered and Threatened Species and Critical Habitats

The environmental review found the following endangered and species and critical habitats:

- Fishes - Three federally listed fish species, all Threatened, occur within the vicinity of the APE including: bull trout (*Salvelinus confluentus*), steelhead (*Oncorhynchus mykiss*), Snake River Basin distinct population segment (DPS), and Chinook salmon (*Oncorhynchus tshawytscha*), Snake River Spring/Summer-run evolutionarily significant unit (ESU). There is critical habitat for bull trout and steelhead within Hurricane Creek, which flows to the west of the airport.
- Amphibians – There are no federally listed amphibians or reptiles near the APE.
- Mammals – There is one federally listed mammal with potential to occur within a two-mile radius of the APE, the gray wolf (*Canis lupus*, Endangered). In addition, the North American wolverine (*Gulo gulo luscus*), which is Proposed Threatened, could occur within a two-mile radius of the APE. However, there is no Critical Habitat for either of these species exists within the APE. Plants – There are two federally listed plants that occur in the region; both are listed as Threatened including the Macfarlane's four-o'clock (*Mirabilis macfarlanei*) and Spalding's catchfly (*Silene spaldingii*). There is no designated Critical Habitat for these plant species in the APE.
- Birds – There are no federally listed bird species or designated Critical Habitat occur in the APE.

### Wetlands

There are three streams that surround the Airport's property including: Hurricane Creek, which flows to the west of the Airport and adjoins the northwest corner of the property; the Wallowa River, approximately 0.25 east of the Airport; and Newby Creek, a minor tributary of the Wallowa River, adjacent to the southeastern corner of the Airport property. The NWI map classifies these streams as Riverine Wetlands. There are three small ponds are located on the property adjacent to the Airport on the east and two of these ponds and one small pond is located on the property adjacent to the Airport. The pond indicated to the west appears to be erroneously designated by the NWI and is associated with a quarry-created depression. The ponds mapped to the east of the airport are presumed to be seasonally wet, likely holding water in the spring after snowmelt or heavy rains.

FIGURE 2-4: ENDANGERED SPECIES & CRITICAL HABITAT MAP

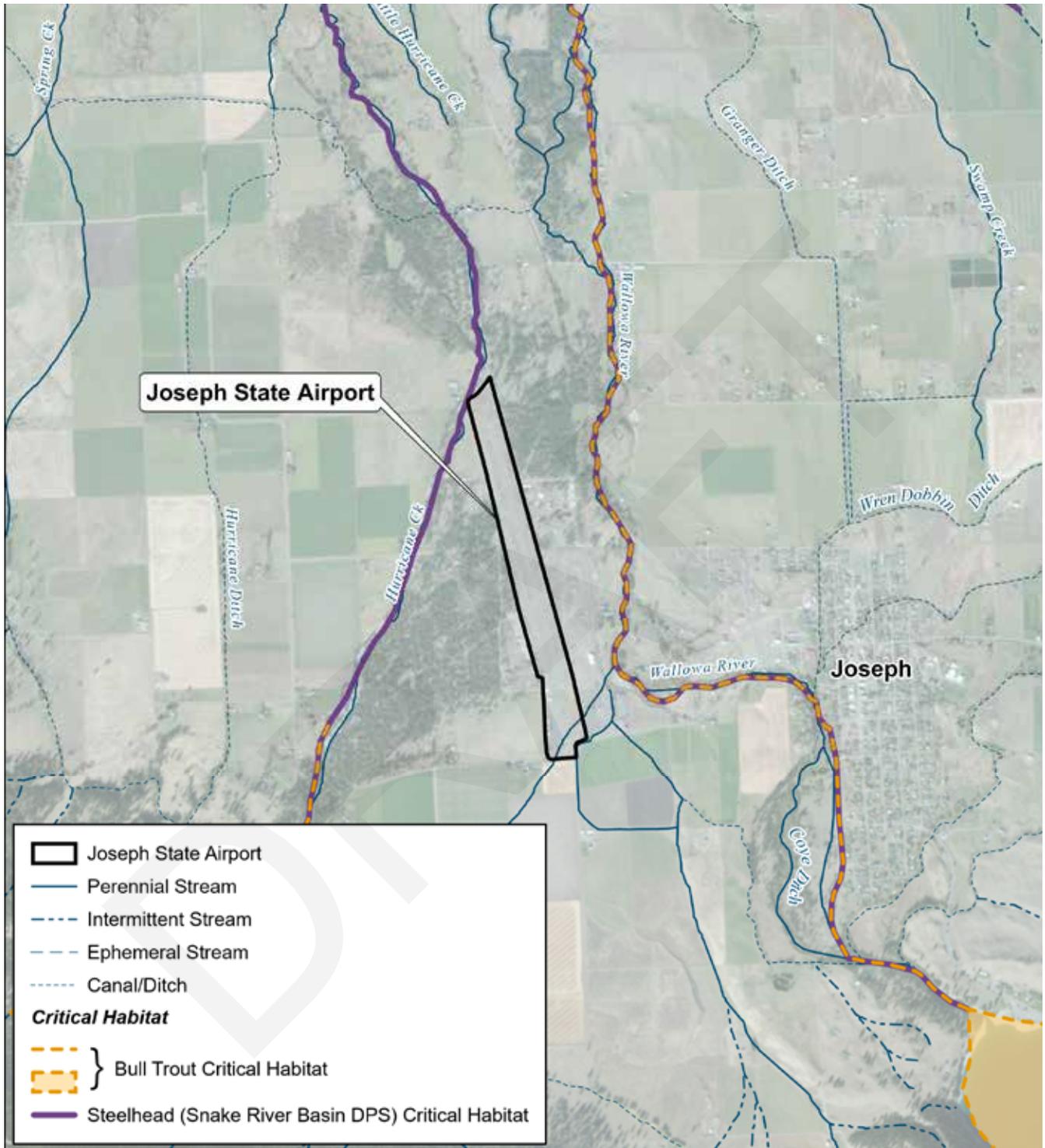
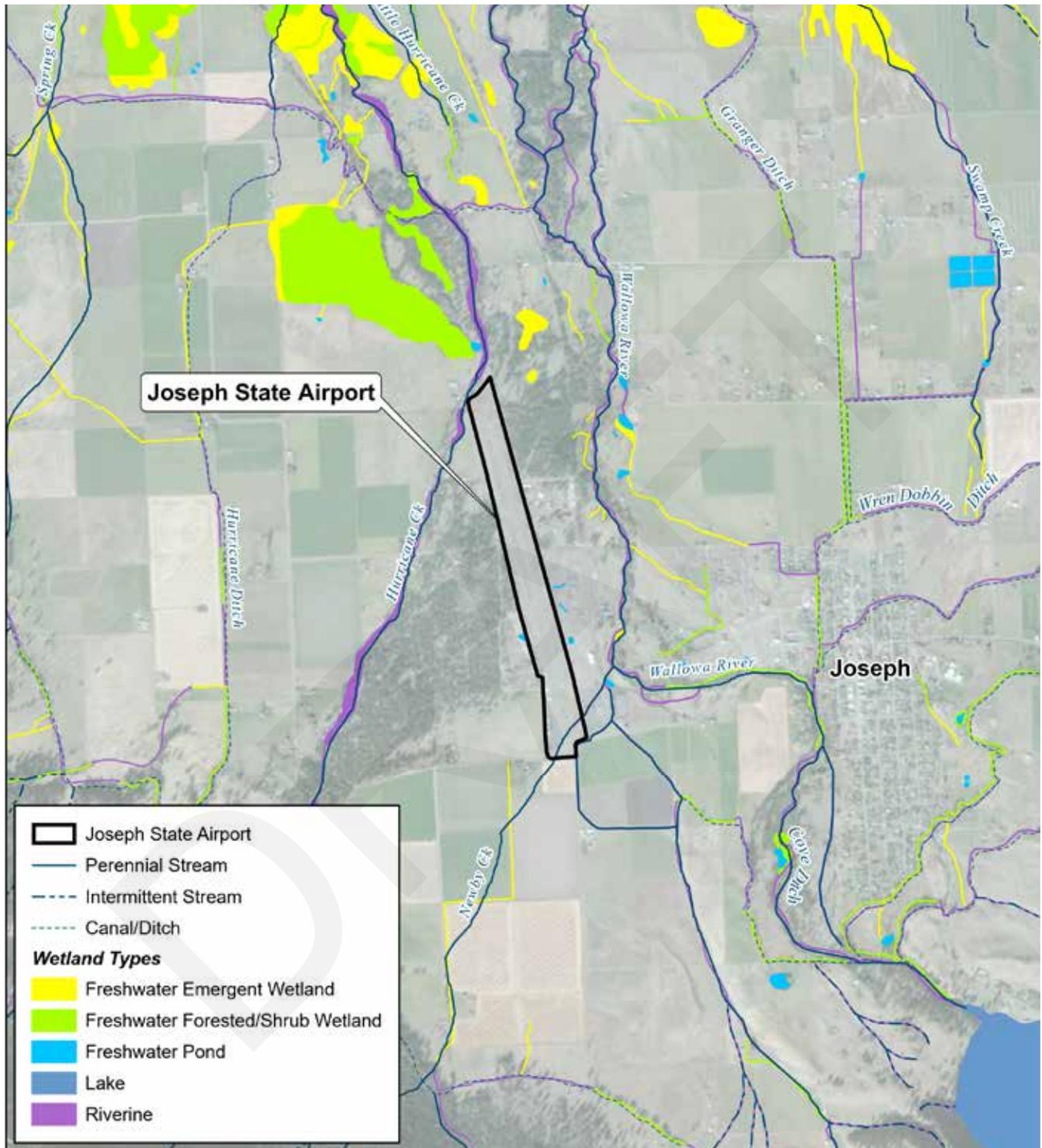


FIGURE 2-5: WATERS & WETLANDS MAP



## Waterways

The Airport APE is located in the Wallowa Lake-Wallowa River Watershed. There are three streams surrounding the Airport including Hurricane Creek, the Wallowa River, and Newby Creek, and all three are classified as perennial. The Wallowa River feeds into Hurricane Creek at river mile (RM) 39.8, west of the Town of Enterprise, and ultimately flows to the Grand Ronde River.

## Floodplains

The Airport APE is located in an upland area on a broad, gently sloping plain and the FEMA NFHL does not identify mapped floodplains, floodways, or other flood hazard areas within the APE. According to FEMA Flood Insurance Rate Map<sup>7</sup>, the airport is located in Flood Hazard Zone X. Zone X denotes areas that are determined to be outside the 500-year floodplain.

## Stormwater

Stormwater treatment and conveyance infrastructure within the APE is limited to sheetflow conveyance to on-airport ditches and grassed infield and runway safety areas. No direct discharge points to nearby waterways or ditches draining to waterways occur or are associated with airport stormwater conveyance.

## Water Quality

Hurricane Creek and the Wallowa River are listed as water quality limited on the DEQ's list. The Wallowa River is listed as water quality limited for sedimentation, fecal coliform, pH, and dissolved oxygen, with TMDLs approved. Hurricane Creek is listed as water quality limited for sedimentation with TMDL needed; however, the Oregon Department of Environmental Quality (DEQ) Integrated Report Assessment Database List recommends no action.

The Airport APE is located within the City of Enterprise watershed. A variety of state and federal laws exist to govern activity within this area to protect water quality. Wallowa County has also created an overlay zone for this area to protect the watershed.

## Air Quality

The Airport is outside of designated air quality maintenance and air quality non-attainment areas as regulated and administered by the DEQ.

## Hazardous Materials & Cleanup Sites

A query of the DEQ Leaking Underground Storage Tank (LUST) Database identified one previous record of a leaking underground storage tank at Joseph State Airport. During a February, 1995 Phase I site investigation in support of airport expansion, an underground storage tank was identified and the previous property owner was required to decommission the tank prior to airport acquisition of the property. A Phase II site assessment following decommissioning identified gasoline or diesel contamination at the former tank location. The site subsequently underwent remediation and on June 13, 2006, DEQ issued a letter determination that No Further Action is required and the incident is now closed.

A query of the Oregon DEQ database for Environmental Cleanup Site Information was conducted on July 7, 2019, which identified no records of environmental cleanup sites within or adjacent to the Airport APE. However, several suspected contamination sites were identified as detailed in **Table 2-9**.

<sup>7</sup> FEMA Flood Insurance Rate Map (FIRM) number 41063C0614B, effective February 17, 1988.

**TABLE 2-9: DEQ ENVIRONMENTAL CLEANUP SITE INFORMATION RECORD WITHIN THE JOSEPH STATE AIRPORT APE**

ECSI Site ID	Site	Address	City	Zip	County	Action Underway or Needed
5191	Grote Aviation	Joseph Airport	Joseph	97846	Wallowa	Site Screening recommended (EV)
3897	Joseph Airfield - DDT Spraying Unit	Airport Ln. & Hurricane Creek Rd.	Joseph	97846	Wallowa	Site Screening recommended (EV)
908	Joseph Disposal Site	Airport Rd.	Joseph	97846	Wallowa	Site Screening recommended (EV)
5490	Joseph Gravel Pit	Airway Rd. & Woodland Dr.	Joseph	97846	Wallowa	Site Screening recommended (EV)
968	Sequoia Forest Industries	83395 Airport Ln	Joseph	97846	Wallowa	Site Screening recommended (EV)

### NOISE CONTOURS

A noise analysis is not included in the scope of work for this master planning effort due to the relatively low levels of flight activity at the Airport, which falls below the FAA threshold for analysis.

### Airspace Classifications

Airspace within the United States is classified by the FAA as “controlled” or “uncontrolled” with altitudes extending from the surface upward to 60,000 feet above mean sea level (MSL). Controlled airspace classifications include Class A, B, C, D, and E. Class G airspace is uncontrolled.

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

### Local Area Airspace Structure

The Seattle Sectional Aeronautical Chart depicts nearby airports, notable obstructions, special airspace designations and instrument airways in the vicinity of Joseph State Airport.

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

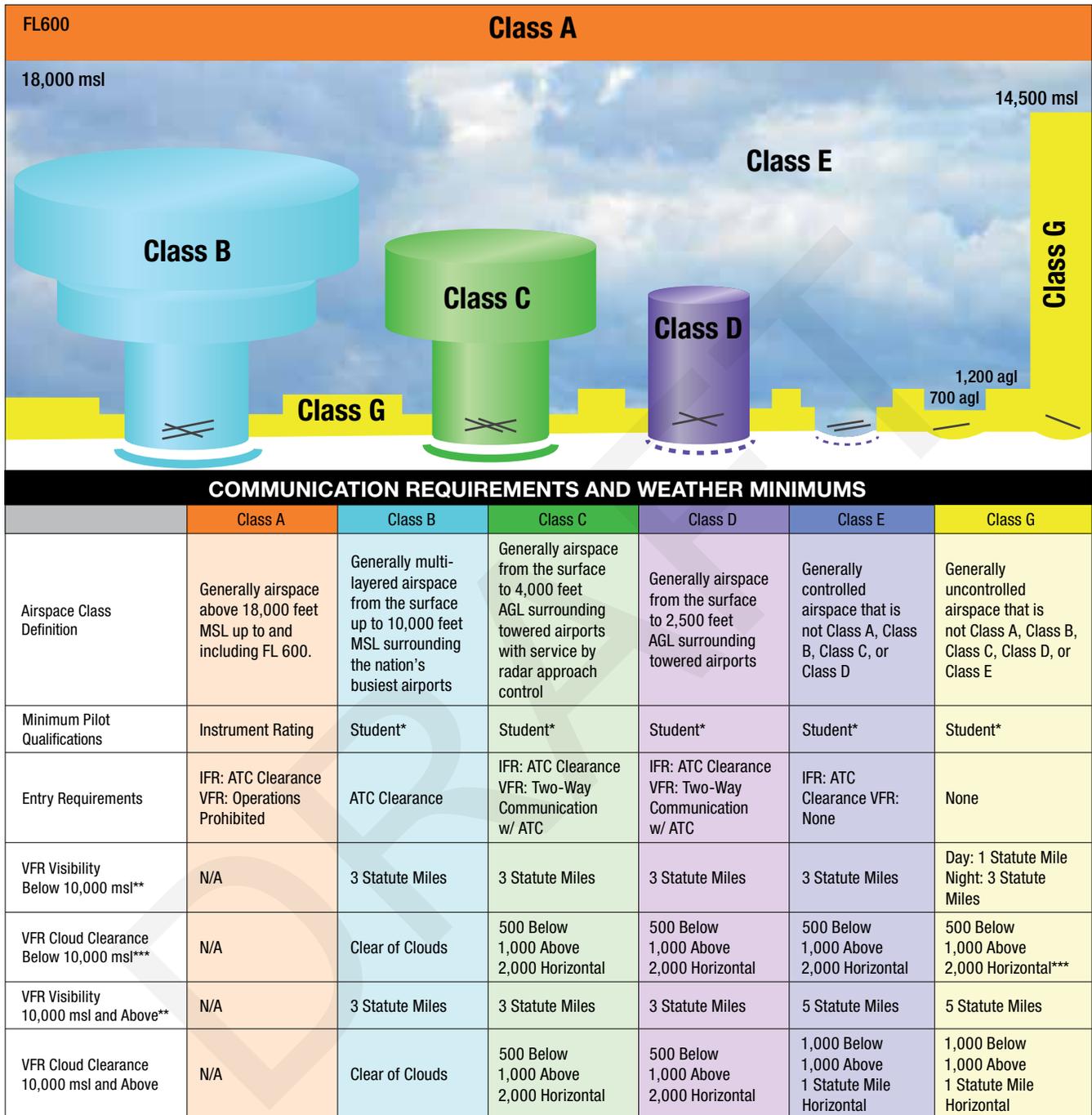
### Special Use Airspace

Two areas of special use airspace (U.S. Forest Service Wilderness Areas) are located in the vicinity of the Joseph State Airport: The Eagle Cap Wilderness Area less than two miles south of the airport, which extends south and to the west. The Hells Canyon Wilderness Area is located 22 miles east at its nearest point, following the Snake River along the Oregon/Idaho border.

Pilots are requested to maintain a minimum of 2,000 feet AGL of wildlife refuges, parks, and forest service areas.

### Controlled & Uncontrolled Airspace

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

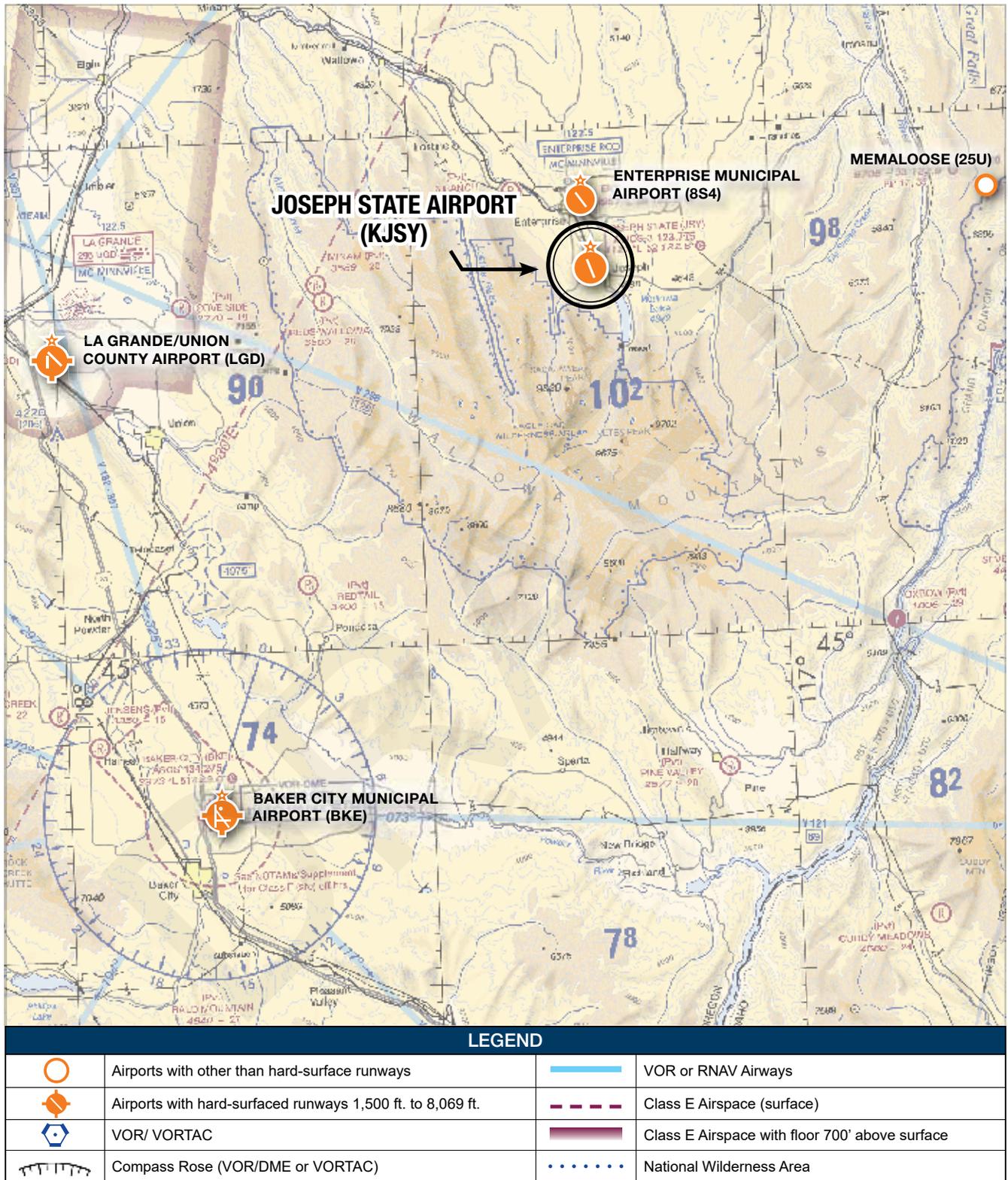
**FIGURE 2-6: AIRSPACE CLASSIFICATIONS**


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

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

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

**FIGURE 2-7: AREA AIRSPACE - SEATTLE SECTIONAL CHART**



The nearest instrument airways are located northwest, southwest, and east of the airport. The airways extend from ground based navigational aids or airway intersections located in Baker City, La Grande, Lewiston and McCall (Idaho). The minimum enroute altitudes for the nearest sections of the airways are 12,000 feet MSL. The nearest electronic navigational aid is the La Grande non-directional beacon (NDB) (LGD 296 kHz), located 30 nautical miles west of Joseph State Airport.

### Airspace - Far Part 77, Terps, And Runway End Siting Surfaces

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

#### FAR Part 77—Objects Affecting Navigable Airspace

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

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

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

The potential development of instrument approach and departure procedures at the Joseph State Airport will reflect obstruction clearance requirements for the applicable TERPS surfaces defined for each end of Runway 15/33.

#### FAA AC 150/5300-13A—Airport Design

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

This AC is periodically updated and has undergone extension revision since the last master plan was completed. A comprehensive review of current FAA design standards will be provided in the facility requirements chapter of the master plan update to identify any existing facilities that do not conform to current FAA standards.

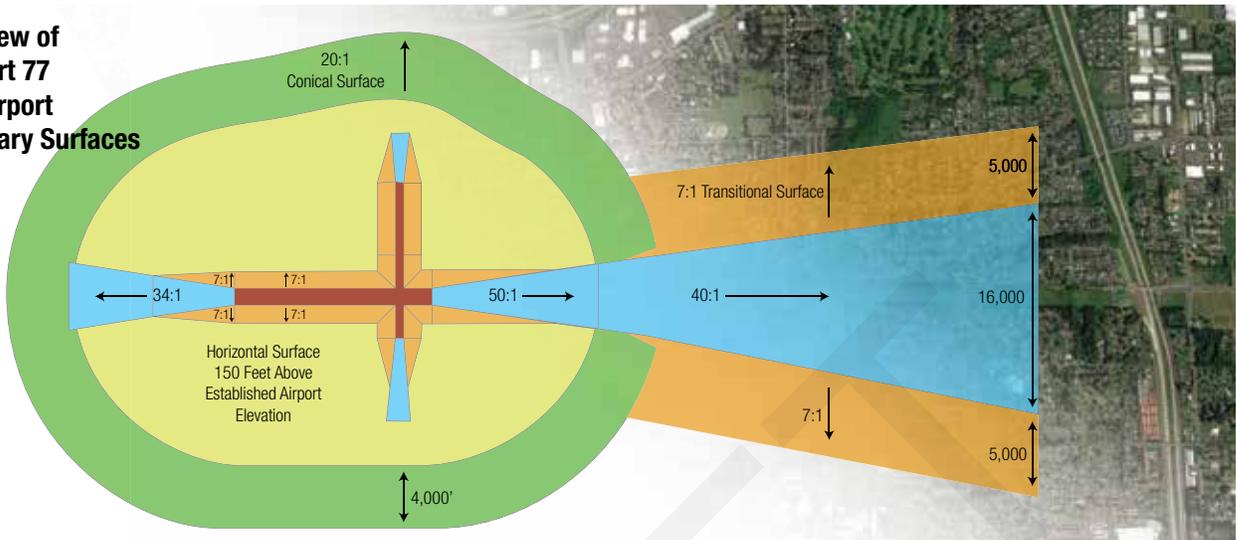
### Instrument Flight Procedures

The Joseph State Airport currently is not equipped with instrument approach procedures. The Airport Master Plan update includes an Airport Geographic Information System (AGIS) survey, which is the first step in evaluating the potential for obtaining an approach in the future. Further detail of the Airport's need and ability to obtain an approach will be included in the Facility Requirements.

Instrument approach and departure procedures are developed by the FAA using electronic navigational aids to guide aircraft through a series of prescribed maneuvers in and out of an airport's terminal airspace. Procedures are designed to enable continued airport operation during instrument meteorological conditions (IMC), but are also used during visual conditions, particularly in conjunction with an instrument flight plan. The capabilities of each instrument approach are defined by the technical performance of the procedure platform (ground based navigational aids or satellite navigational aids) and the presence of nearby obstructions, which may affect the cloud ceiling and visibility minimums for the approach, and the routing for both the approach and missed approach procedure segments. The aircraft approach speed and corresponding descent rate may also affect approach minimums for different types of aircraft.

**FIGURE 2-8: FAR PART 77 AIRSPACE**

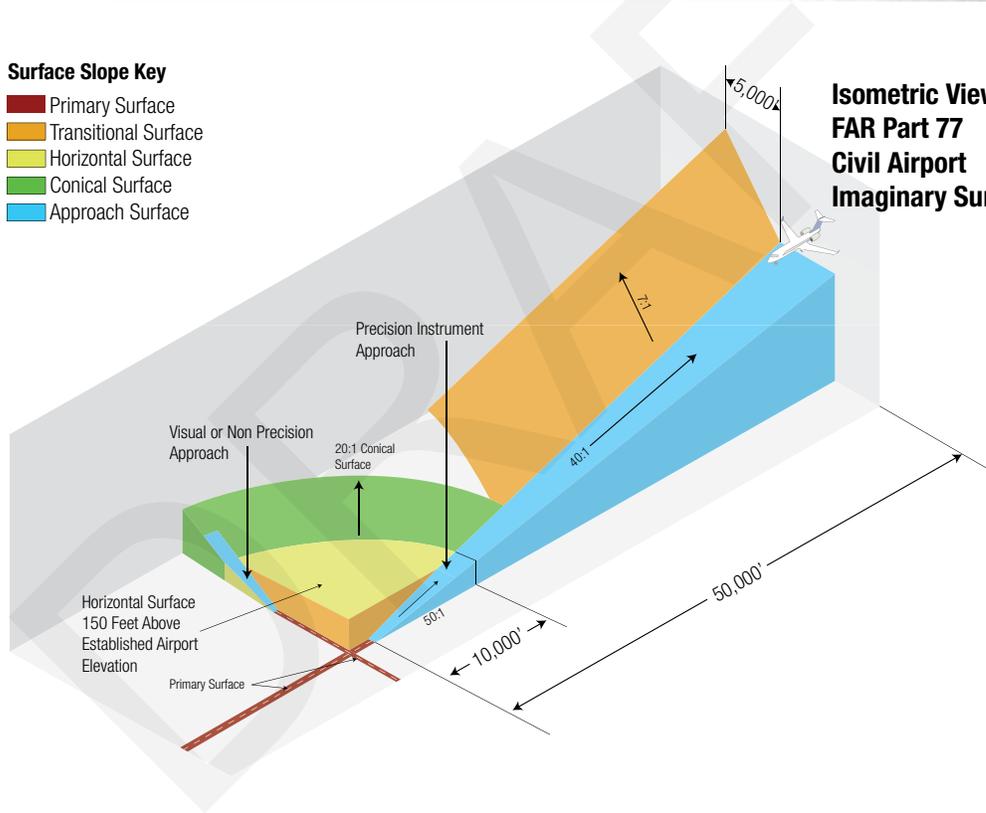
**Plan View of FAR Part 77 Civil Airport Imaginary Surfaces**



**Surface Slope Key**

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

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



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

Source: Joseph State Airport Layout Plan, Airspace Plan; FAR Part 77

## LAND USE & ZONING ANALYSIS

Joseph State Airport is located outside of the City of Joseph city limits and urban growth boundary (UGB), in unincorporated Wallowa County. However, portions of the airport's protected airspace surfaces extend beyond over the Joseph city limits. Although all land use actions related to the Airport and its immediate surroundings fall exclusively under the jurisdiction of Wallowa County, the City of Joseph is responsible for the protection of federally defined airspace and any associated airport protections (overlays) that fall within its jurisdiction.

### City of Joseph

The nearest City of Joseph-zoned lands are approximately ¼ mile east of Joseph State Airport, and are zone Industrial. The city's urban core is located within one mile of the Airport, and includes commercial, residential, industrial, and urban growth area zones.

### Wallowa County

Wallowa County utilizes a consolidated County Comprehensive Land Use Plan to guide both long-range planning and development administrative functions. Within this document, 57 specific articles guide development within individual land use definitions (zones), overlay zones and several place-specific zones. The Plan also provides guidance for specific applications such as parking, signs, subdivisions, and salmon habitat restoration.

Joseph State Airport has three zoning designations: the main section of the airport is zoned **Industrial (M-1)** (Wallowa County Comprehensive Plan - Article 22); the northern section of the airport and small inholding (Pioneer Cemetery) are zoned **Exclusive Farm Use (EFU)** (WCCP Article 15); and a small section on the west side of the airport is zoned **Rural Residential (R-1)** (WCCP Article 17). The zones (articles), their intended purposes, and permitted uses are defined by Wallowa County code and are summarized below.

The purpose of the M-1 zone is to “provide areas for industrial activities, which may require large land areas and to preserve those areas from being developed with such uses as residential that would inhibit or eliminate the future potential for industrial development.” The M-1 zone does not include airports among the listed permitted uses or conditional uses. However, the provisions of the zone allowing “other industrial uses...” appears to adequately capture airport uses such as hangar construction, which requires county building permit approval.

The northern area of EFU and R-1 zoned parcels were included in expansion of the airport site in the mid-1990s. Based on currently Wallowa County zoning maps, these parcels do not appear to have been re-zoned when acquired and developed as part of the airport. The purpose of EFU zoning is “to protect and maintain agricultural lands for farm use, consistent with existing and future needs for agricultural products.” EFU zoning is compatible with airports, and prevents residential encroachment. Additional research will be conducted to identify any land use goal exceptions or other approvals for development of airfield facilities on EFU- or R-1-zoned land. See below for R-1 zone description.

### Airport Vicinity Zoning

Wallowa County zoning in the vicinity of Joseph State Airport is a mixture of EFU, R-1, M-1, and **Recreation Residential (R-2)** (WCCP Article 18).

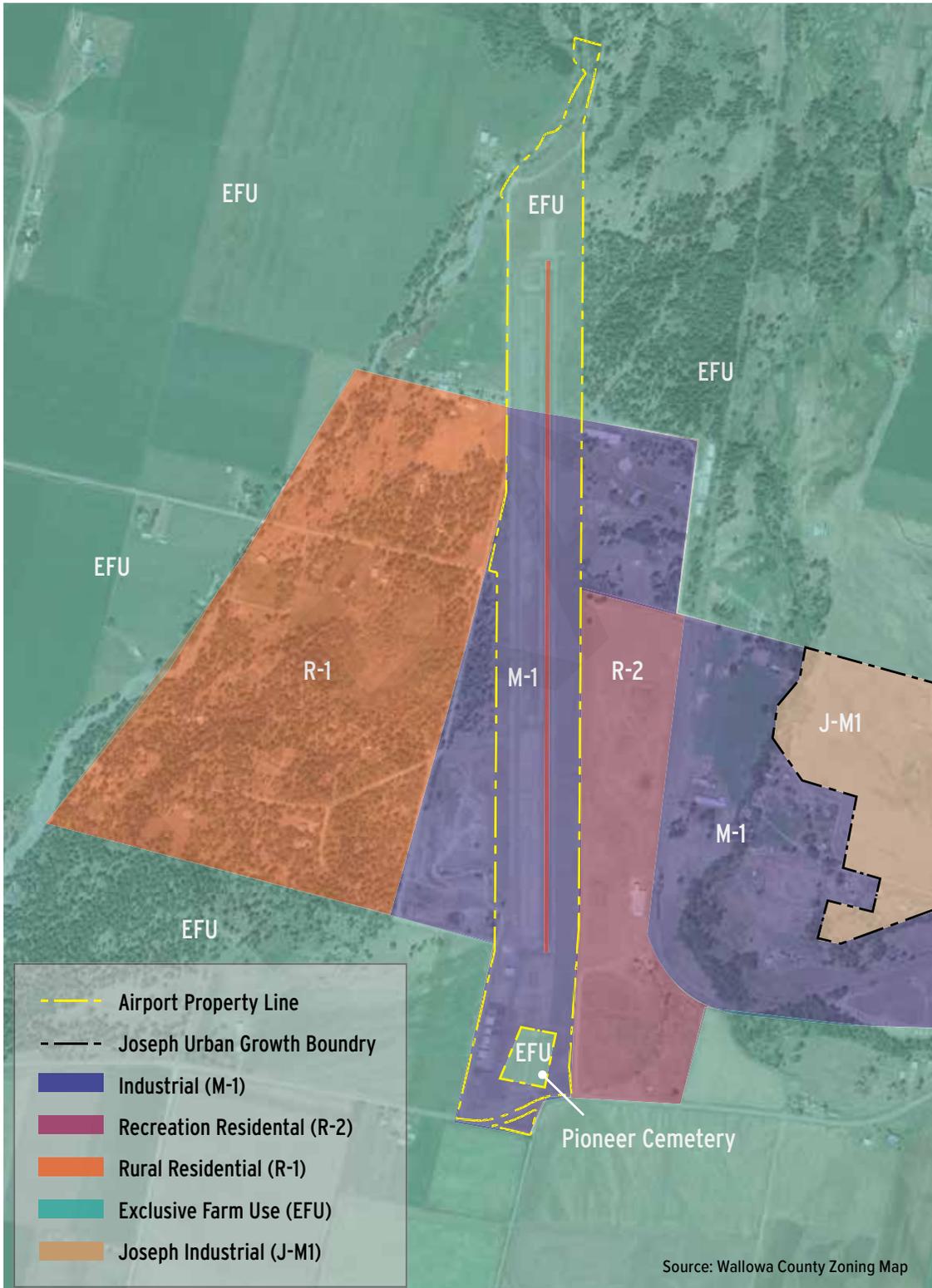
As noted above, EFU zoning “protects and maintains agricultural lands for farm use, consistent with existing and future needs for agricultural products.” EFU zoning is compatible with airports, and prevents residential encroachment.

The purpose of R-1 zoning is “to provides areas suitable for small acreage parcels and to maintain a buffer between urban and farm or forest uses.” The R-1 zone results in low-density rural residential development in the vicinity of the airport. Although large lot rural residential land uses are generally compatible with low levels of airport noise, consistent with a rural setting, the potential for noise conflicts exist and should be effectively managed by airport management on an ongoing basis.

A large area of land abutting the southeast side of the Airport is zoned R-2. This area is part of the former mill site and the current zoning is intended to support future redevelopment consistent with the desired urban-rural interface. The purpose of the R-2 zone is “to provide minimum standards for residential development and recreational uses in areas of Wallowa County that visitors from outside of the county are attracted to for natural

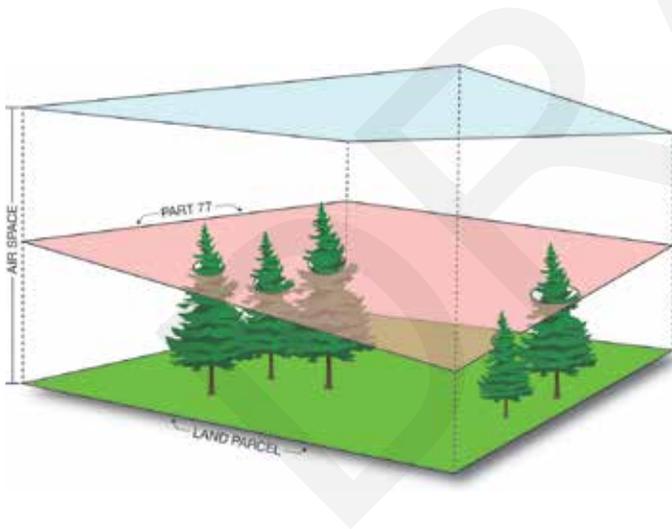
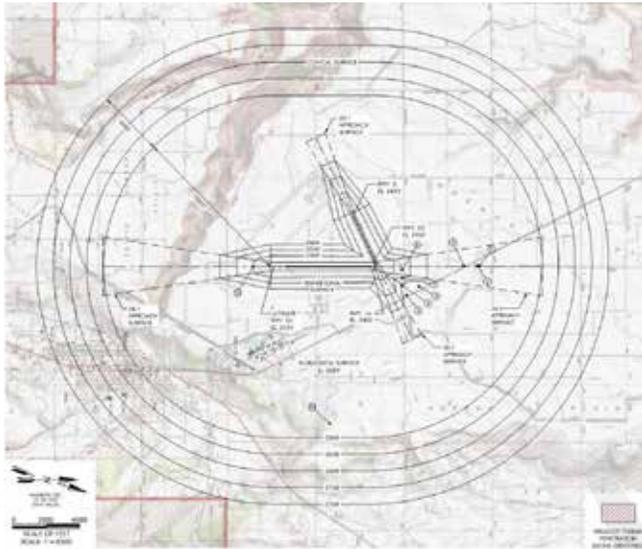
or man-made amenities.” The R-2 zone includes eight listed permitted uses, including single-family dwellings and short term rental of non-commercial residential dwellings. A commercial real estate sign posted on the 60-acre parcel lists several prospective uses: Airpark/Residential; Convention Facility; RV Park; and Survival Property/Ranch. Additional research will be conducted to evaluate the potential of the R-2 zone assigned to the adjacent parcel to support airport-related development.

**FIGURE 2-9: AIRPORT & VICINITY ZONING**



## AIRPORT OVERLAY ZONING

Wallowa County’s Airport Protection Zone (Article 29) applies to Joseph State Airport. This zone includes overlay protections for the runway protection zones (RPZ) and the Federal Aviation Regulation (FAR) Part 77 Airspace (airport imaginary surfaces) defined for the runway. The compatible land use table identifies limitation and restrictions on allowed uses for the RPZ, Approach Surface, Horizontal Surface, and Conical Surface. The zone was updated in 2003 and incorporates significant State of Oregon airport land use protections.



## Compatible Land Use Planning

The table below retrieved from the Oregon Department of Aviation’s Airport Land Use Compatibility Guidebook identifies land uses that are generally compatible or incompatible within airport safety areas and Part 77 surfaces like those depicted for the Joseph State Airport

### Compatible Land Uses per FAR Part 77 Surfaces and FAA Safety Areas

**Legend:**

C Generally compatible land use

NC Incompatible land use

• Not clearly compatible or incompatible, requires specific study

**Criteria for Compatibility:**

- 1: Does not exceed height standards
- 2: Does not attract large concentrations of people
- 3: Does not create a bird attractant
- 4: Does not cause a distracting light/glare
- 5: Does not cause a source of smoke
- 6: Does not cause an electrical interference
- 7: Does meet compatible DNL sound levels

Land Uses	Primary Surface	Transitional Surface	Horizontal Surface	Conical Surface	Approach Surface	Runway Protection Zone
<b>Residential</b>						
Residential, other than those listed below	NC	NC	•	C	•	NC
Mobile home parks	NC	NC	•	C	•	NC
Transient lodgings	NC	NC	•	C	•	NC
<b>Public Use</b>						
Places of public assembly (schools, hospitals, churches, auditoriums)	NC	NC	•	C	NC	NC
Government services	NC	•	C	C	•	NC
Transportation (parking, highways, terminals)	NC	•	C	C	•	•
<b>Commercial Use</b>						
Offices, business and professional	NC	•	C	C	•	NC
Wholesale & retail - building materials, hardware and farm equipment	•	•	C	C	•	NC
Retail trade - general	NC	•	C	C	•	NC
Utilities	NC	•	•	•	•	•
Communication	NC	•	•	•	•	NC
<b>Manufacturing &amp; Production</b>						
Manufacturing - general	NC	•	•	•	•	NC
Agricultural (except livestock) and forestry	•	•	C	C	•	•
Livestock farming and breeding	NC	•	•	C	•	NC
Mining and fishing, resource production and extraction	NC	NC	•	•	•	NC
<b>Recreational</b>						
Outdoor sports arenas and spectator sports	NC	NC	•	C	NC	NC
Nature exhibits and zoos	NC	NC	•	C	NC	NC
Amusement park, resorts and camps	NC	NC	C	C	NC	NC
Golf courses	NC	NC	C	C	NC	NC
Parks	NC	•	•	•	•	•

Source: Airport Land Use Compatibility Guidebook, January, 2003

## Airside Elements

The Airside Elements are comprised of infrastructure that facilitate the movement and operation of aircraft on the ground and in the air at the Joseph State Airport. This section of the existing conditions analysis includes a discussion of the runways, taxiways, airfield pavements condition/strength/markings, support facilities, FAA design standards, area airspace, and instrument approach procedures.

### RUNWAY

The Joseph State Airport has one paved runway (15/33) oriented in a north-south direction (150-330 magnetic degree bearing). Runway 15/33 is 5,200 x 60 feet. Runway 15/33 has a full-length parallel taxiway (Taxiway A) on the west side with five 90-degree exit taxiways (Taxiways A1-A5), including one at each runway end, and three intermediate exit taxiways.

A summary of runway conditions is provided below:

- **Runway Markings:** Both ends of Runway 15/33 have visual markings, consisting of runway designation markings and centerline stripe. The runway markings were observed to be in good condition during the recent site visit (snow conditions limited visibility). All runway markings are consistent with FAA standards for configuration, color (white paint), and approach type.
- **Runway Gradient:** The most recent (2008) Airport Layout Plan (ALP) indicates that Runway 15/33 has a gradient of 1.12 percent with its high point located at the south end (Rwy 33 threshold).
- **MIRL:** Runway 15/33 is equipped with a Medium Intensity Runway Lighting (MIRL) system, which includes white edge lights (with amber lights located near the runway ends to indicate runway remaining) and split lens (green/red) threshold lights. The threshold lights consist of two sets of three fixtures near each corner of the runway ends. The fixtures have split lenses (green/red) indicating the beginning and end of the runway. The MIRL is pilot-activated using the common traffic advisory frequency (CTAF) 122.8 MHz. The current MIRL system was installed when the runway was extended to 5,200 feet (1995 FAA grant).
- **REIL:** Runway 15 is equipped with Runway End Identifier Lights (REIL), which consist of two high-intensity sequenced strobe lights located near the corners of the runway end. REILS assist pilots in establishing visual contact with the runway environment during periods of darkness or reduced visibility. The REIL is pilot-activated using the CTAF 122.8 MHz. The REIL was installed when the runway was extended to 5,200 feet (1995 FAA grant).
- **Visual Guidance Indicator (VGI):** Runway 15 is equipped with a 2-light Precision Approach Path Indicator (PAPI). The PAPI projects light along a glide path to a runway end, with red and white colored lights indicating the aircraft's vertical position (above, below, or on glide path) relative to the glide path. The Runway 15 PAPI glide path is set at 4 degrees, which is slightly steeper than the standard 3-degree PAPI glide path. The PAPI is pilot-activated using the CTAF 122.8 MHz. The PAPI was installed in as part of a larger FAA project (2003 FAA grant).
- **Taxiway Lighting:** Taxiway A and the south apron access taxilane are equipped with retroreflective edge markers (cylinders). The five exit taxiways (A1-A5) are equipped with blue-lens fixtures that are part of the MIRL system. The edge lights are installed on the fillets and at each end of the runway to increase taxiway visibility for pilots during runway operations.
- **Other Lighting:** Limited overhead lighting is available in the terminal area, fueling area, and in various hangar areas. Some hangars also have exterior wall-mounted flood lights.

### TAXIWAYS & TAXILINES

All currently developed areas of Joseph State Airport have paved taxiway or taxilane access. The runway has a full length west parallel taxiway (Taxiway A) with five exit taxiway connections (A1-A5, south to north). Taxiway A is 25 feet wide and has a runway centerline-to-centerline separation of 225 feet. The southern 170 feet of Taxiway A angles toward the runway where it meets the access taxiway/taxilane for the south apron adjacent to the aircraft fueling apron. The south access taxiway/taxilane initially has a 200-foot runway centerline separation at the Runway 33 threshold, before angling away from the runway.

**TABLE 2-10: RUNWAY DATA SUMMARY**

Runway 15/33	
Dimensions	5,200' x 60'
Bearing	N 13° 04' W (True)
Effective Gradient	1.12%
Surface/Condition	Asphalt/Good
Weight Bearing Capacity	12,500 pounds - Single Wheel Gear
Markings	Visual/Basic Runway designation numbers, centerline stripe
Lighting	Medium Intensity Runway Edge Lighting (MIRL)  Runway 15: Precision Approach Slope Indicator (PAPI) 2-Light (4.0 degree glide path)  Runway 15: Runway End Identifier Lights (REIL)
Signage	Mandatory, Location, Directional

Source: Joseph State Airport, FAA Airport Master Record (5010), Effective Date 01/02/2020

All taxiways and taxilanes at the Airport have centerline stripes. All of the exit taxiways are marked with aircraft hold lines 125 feet from runway centerline, which coincides with the edge of the runway obstacle free zone (ROFZ) and the location of mandatory instruction signs. Taxiways A2, A3, and A4 also have lead-in lines that extend from the west edge of the runway centerline (from both directions) to the taxiway centerlines.

The south aircraft apron is accessed from a taxiway/taxilane connection from the south end of the Taxiway A and Taxiway A1. The taxiway/taxilane provides access to the main tiedown apron and the hangar development area.

## PAVEMENT CONDITION

The ODA Pavement Evaluation Program (PEP) systematically identifies maintenance, repair, and rehabilitation projects needed to sustain functional pavements at Oregon airports. The PEP provides a thorough evaluation of current conditions and future projections of condition in terms of pavement condition indices (PCI) for all eligible pavements on all paved airports across the state. For NPIAS airports like Joseph State Airport that receive federal money, this work assists the Airport Sponsor in meeting their FAA grant assurances.

The most recent Pavement Condition Index (PCI) survey for Joseph State Airport was performed in June 2017. The survey was performed using the Pavement Condition Index (PCI) methodology developed by the U.S. Army Corps of Engineers, and outlined in the current edition of ASTM D-5340, Standard Test Method for Airport Condition Index Surveys.

Most of the pavements (96.6 percent) at Joseph State Airport were rated Good or Satisfactory in the 2017 inspection survey. The remaining 3.4 percent of the pavements (asphalt apron located adjacent to concrete fueling apron and Taxiway A3) were rated Fair.

The pavement ratings are consistent with pavement age and use. All of the airfield's pavement was constructed, and/or rehabilitated/reconstructed, since the master plan was completed in 1993. The current 5,200-foot runway was originally constructed in 1996-97 (complete reconstruction of the 3,800 x 50' asphalt runway). The north section of the parallel taxiway (between Taxiways A4 and A5) was also constructed in 1996-97 to provide an aircraft turnaround at the north end of the runway. The south apron and access taxiway were reconstructed/reconfigured in 1998. Taxiway A and Taxiway Connectors A1-A3 were constructed in 2003.

Major pavement reconstruction work was completed in 2011 including the runway, south tiedown apron, apron access taxiway, the northern 280 feet of Taxiway A, and Taxiways A1, A4, and A5. The aircraft fueling apron was constructed in 2002.

### AIRSIDE SUPPORT FACILITIES

Support facilities generally include airside support facilities such as airfield lighting, signage, weather reporting equipment and visual aids.

Joseph State Airport accommodates day and night operations in visual meteorological conditions (VMC) and the corresponding visual flight rules (VFR) for aircraft.

All airside support facilities were inspected during site visits conducted in February 2020.

### Airport Lighting

The Airport has a rotating beacon located on the west side of the airfield, adjacent to Taxiway A, between Taxiways A1 and A2. The beacon is mounted on the support tower for the Airport’s automated weather system. The beacon operates on a dusk-down photocell switch and was observed to function normally.

Rotating beacons are used to indicate the location of an airport to pilots at night or during reduced visibility. The beacon provides sequenced white and green flashing lights (representing a lighted land airport) that rotate 360 degrees to allow pilots to identify the airport from all directions for several miles.

The Airport has one lighted wind cone located in the segmented circle on the west side of Taxiway A, just north of the Taxiway A2. The wind cone pole is equipped with a red obstruction light. The internal wind cone lighting and the obstruction light were observed to operate normally. The wind cone was damaged (torn); airport management indicated that the damage was recent and replacement was in the works.

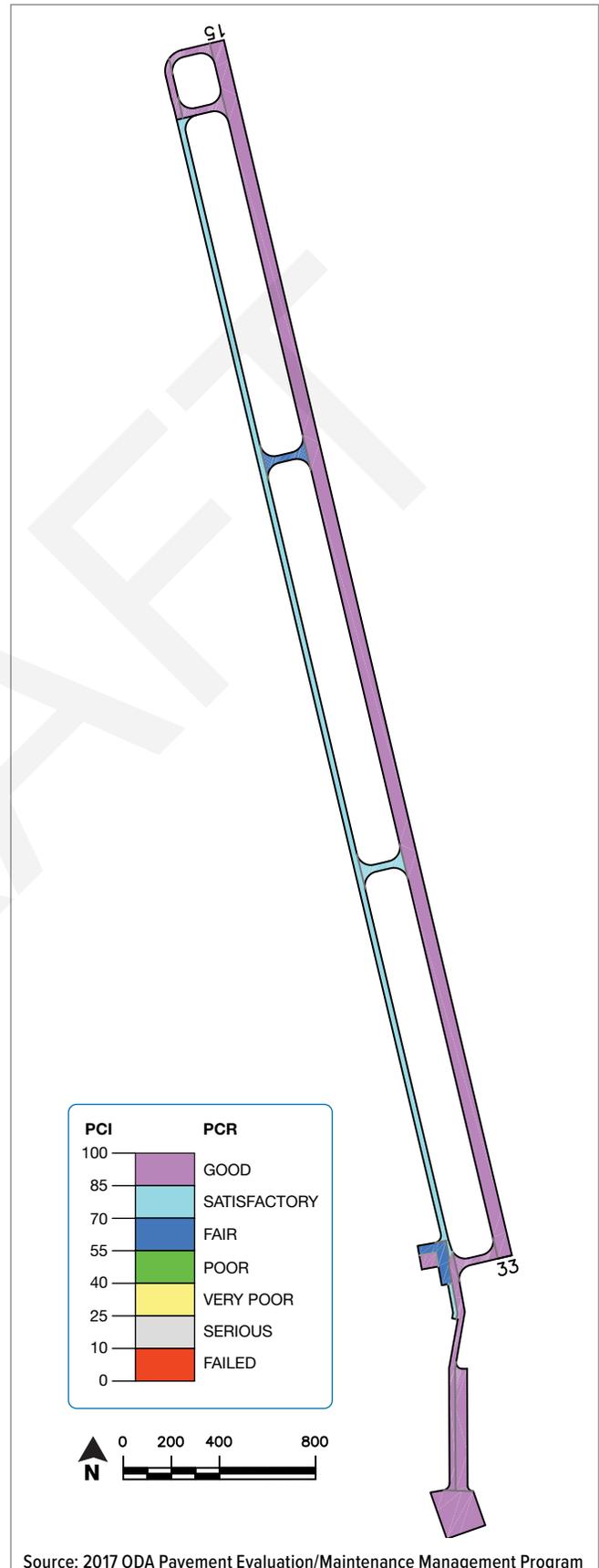
A second, unlighted wind cone, is located approximately 850 feet south of the end of Runway 33, near the southeast corner of the Airport. The unlighted wind cone was observed to be in good condition.

The runway is equipped with lighting systems that are consistent with visual approach requirements and runway use. The taxiways are unlighted and is equipped with retroreflective edge markers. The airfield lighting observed during a recent site visit appeared to be in good condition and fully operational.

### Airfield Signage

The runway-taxiway system has mandatory instruction signs (red background with white letters/numbers) marking the aircraft holding positions at each of the taxiway connections with the runway, the two-panel signs also include taxiway designations with yellow background and black numbers/letters.

FIGURE 2-10: PAVEMENT CONDITIONS



## Weather Reporting

Joseph State Airport has an automated weather observation system (AWOS-3) that provides 24-hour weather information. AWOS-3 provides altimeter setting, wind data, temperature, dewpoint, density altitude, visibility, and cloud/ceiling data.

## Landside Elements

The landside elements section includes the facilities designed to support airport operations. This section of the existing conditions analysis includes a discussion of Aircraft Aprons/ Tiedown Areas, Hangars, Utilities, Fencing, Surface Roads, and Vehicle Parking.

### APRONS & TIEDOWN AREAS

Joseph State Airport has two main apron areas: Aircraft Tiedown Apron and the Aircraft Fueling Apron, both located near the south end of Runway 15/33. The aircraft tiedown apron is located at the southwest corner of the airport and has a single taxiway/taxilane connection to the south end of Taxiway A. The asphalt-surfaced apron was reconstructed in 2011 and has an area of approximately 56,626 square feet. The apron is configured with 19 small airplane tiedowns around its perimeter, with aircraft parked facing the adjacent taxilane.

The fueling apron is located near the intersection of Taxiway A and A1. The fueling apron consists of a 60x70-foot Portland cement concrete (PCC) section (4,200 square feet). A section of asphalt apron borders the PCC apron on its north and east sides to allow aircraft maneuvering from the adjacent parallel taxiway. The fueling apron was constructed in 2002 and has an overall area of approximately 18,120 square feet.

### AIRPORT PERIMETER FENCING

The perimeter of Joseph State Airport is fully fenced. The majority of the fencing is 6-foot wildlife fence, topped with barbed wire strands. The south end of the Airport has 6-foot chain link fence topped with 3 strands of barbed wire. This fence section extends from near the southwest corner of the Airport to the southeast corner. The perimeter of the Pioneer Cemetery, located near the south end of Airport, is fully fenced with 5-foot chain link that ties into the 6-foot chain link fence that runs along the south end of the Airport. Airport management has reported animals occasionally breach the fence.

The Airport has two electric key code vehicle gates located in the terminal area. One gate is located near the southeast corner of the main tiedown apron; the second gate is located on the west side of Airport, near the aircraft fueling apron.

### AIRPORT SURFACE ROAD ACCESS

Vehicle access to the Airport is provided to the south end landside facilities from Airport Lane/Hurricane Creek Road and Airway Road. The south airport entrance is 1.1 miles from the intersection of West Wallowa Avenue and North Main Street (State Hwy 82) in Joseph.

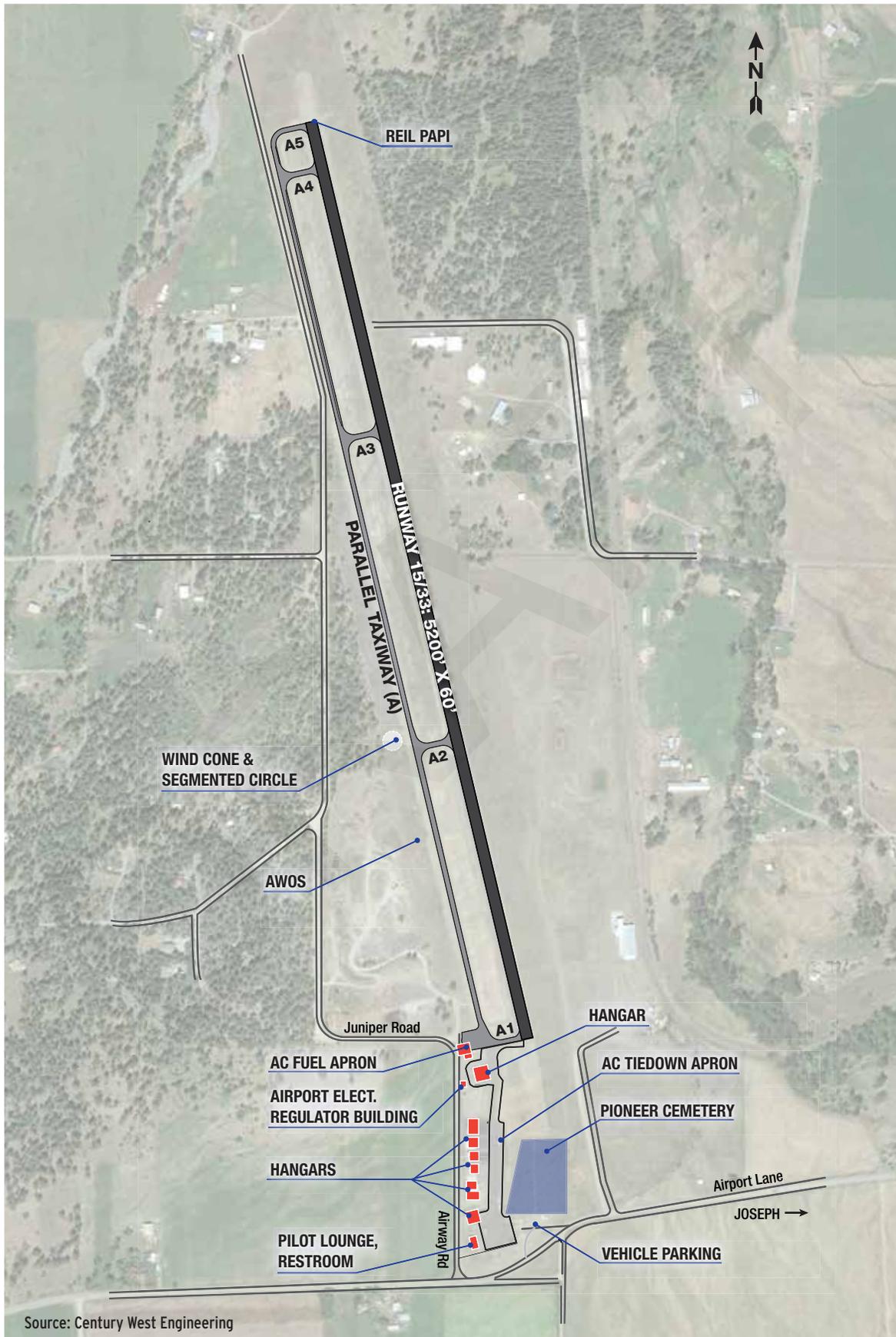
### VEHICLE PARKING

Designated automobile parking areas on the Airport are located at the south end of the airport (outside the fence) and adjacent to the mobile home (Pilot Building) located near the southwest corner of the main apron. Additional vehicle parking area is provided adjacent to individual hangars.

### AIRCRAFT FUEL

Joseph State Airport has 100-octane low lead (100LL) aviation gasoline (AVGAS) available. ODA owns and maintains the fuel storage and dispensing system that includes one above ground double-wall tank (10,000 gallons) and a 24-hour credit card payment system for self-fueling. The fixed-point fueling system is located north of the hangar area and south tiedown apron. The tank has a 50/50 internal partition that allows for storage of two separate grades of fuel. Airport management reports that the split tank has been configured with both AVGAS and jet fuel in the past, but is currently used only for AVGAS storage. The aircraft fueling system includes a containment area for the tank, a Portland cement concrete (PCC) fueling apron, and overhead lighting.

FIGURE 2-11: AIRPORT EXISTING FACILITIES



A Spill, Prevention, Control, and Countermeasure (SPCC) Plan was prepared for Joseph State Airport in 2010. The SPCC Plan describes measures implemented by ODA to prevent oil discharges from occurring, and to prepare ODA to respond in a safe, effective, and timely manner to mitigate the impacts of a discharge.

## HANGARS

Joseph State Airport currently has eight existing hangars, including seven conventional hangars and one multi-unit (4) hangar. The hangars are located along the west side of the south tiedown apron and south taxiway/taxiway.

Airport maintenance equipment and a snow plow are stored outside, adjacent to the hangars and the south tiedown apron.

Other buildings located in the south landside area include the airport electrical regulator building, a double-wide mobile home used as a pilot lounge/FBO (restroom), and two small sheds.

A memorial plaque and flag pole honoring twenty-seven Wallowa County service members who lost their lives in World War II (1941-1945) is located near the south entrance to the airport (erected by the Joseph Oregon Chamber of Commerce).

## UTILITIES

The developed areas of Joseph State Airport have water, electrical, and telephone service. The following text describes and depicts the locations of the major utilities serving the Airport.

### POWER

Pacific Power provides electric power to Joseph and the surrounding area. Above-ground power lines extend along Airport Lane and Airway Road, with overhead drops connecting to each hangar and building. The airport's electrical regulator building is located adjacent to Airport Lane and is also served with an overhead supply connection. Underground electrical supply lines extend from the regulator building to the runway lighting, airport beacon, AWOS, and lighted wind cone.

### WATER

The Airport is located approximately .25 to 1-mile outside of the City of Joseph's service area for water. An existing on-airport well provides water to the mobile home/pilot building and commercial hangars.

### SANITARY SEWER

Joseph State Airport is not served by Sanitary Sewer. The nearest City of Joseph service point is about 1 mile north/east of the airport. The airport has a single septic tank/drain field installed adjacent to the mobile home/pilot lounge located at the south apron. There are currently eight individual hangars located in the area immediately west of the south apron; some of these hangars may have restrooms and individual septic systems.

### STORMWATER

There are no stormwater systems located on-airport. The runway and taxiways are constructed for water to runoff the edges of the pavement into the vegetation areas.

### NATURAL GAS

Natural gas is not available at the Airport and individual users may use propane heat; tanks are filled locally by either Wallowa County Grain Growers or Ed Staub and Sons.

## Airport Administration

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

### AIRPORT OWNERSHIP & MANAGEMENT

Joseph State Airport is owned and operated by the Oregon Department of Aviation (ODA). ODA manages Joseph State Airport among a group of 28 state-owned or operated airports from its office in Salem. The department has a State Airports Manager, who is responsible for the day-to-day management of the airports. The State Airports Manager is supported by other ODA staff located in Salem, in addition to contractors who perform airfield maintenance, snow removal services, as well as mowing as needed. The ODA-owned aviation fuel system, including coordinating purchases and deliveries, is managed by the State Airports Manager with local contractor support. Airport tenants are responsible for managing their facilities and leased areas to meet the requirements defined in their leases.

### AIRPORT FINANCE

The Airport operates as an enterprise fund with all revenue generated through operations remaining in the Airport's budget. This is required by FAA to prevent revenue diversion from airport operations to the sponsor's general services. The primary revenue generating sources for the Airport include ground lease rents and fuel sales. The primary expenditures for the Airport include airport administration, maintenance, and facility improvements. Joseph State's capital improvement projects are typically funded through FAA grants with a local match, or through ODA's grant programs.

Fiscal year 2019 operating revenue and expense budgets for Joseph State Airport are summarized in **Table 2-11**.

### AIRPORT RATES AND CHARGES

ODA's rates and charges for Joseph State Airport includes an improved and unimproved site lease rates, as well as tiedown fees and fuel flowage fees. The state airports also have access fees, which vary by aircraft weight. In addition, ODA receives aircraft registration fees by aircraft type. **Table 2-12** summarizes current ODA rates and charges.

TABLE 2-11: AIRPORT FINANCIALS (FY2019 BUDGET)

AIRPORT EXPENSES	
Fuels & Lubricants / Fuels & Utilities	\$58,247.86
Telecommunications	\$3,176.74
Travel	\$204.22
Agency Program Services & Attorney General	\$539.79
Facility Maintenance	\$1,450.00
Facility Rentals & Taxes	\$235.84
Other Services, Supplies, and Expenses	\$4,957.12
Labor	\$18,659.99
<b>TOTAL AIRPORT OPERATING EXPENSES</b>	<b>\$87,471.56</b>
AIRPORT REVENUES	
Access Fees	\$180.00
5010 Inspections	\$650.00
Land Leases	\$5,539.51
Hangar Fees	\$174.65
Fuel Sales	\$58,344.09
<b>TOTAL AIRPORT OPERATING REVENUES</b>	<b>\$64,888.25</b>
<b>NET OPERATING INCOME (LOSS)</b>	<b>(\$22,583.31)</b>

Source: ODA Budget FY2019 Actuals

TABLE 2-12: AIRPORT RATES AND CHARGES SUMMARY

RATES AND CHARGES	
Tiedown Fees (Monthly)	\$10.00
Fuel Flowage Fee (Per Gallon) (Per Month)	\$0.08
Improved Site Lease Rate (Sq/Ft) (Per Month)	\$0.1416
Unimproved Site Lease Rate (Sq/Ft) (Per Month)	\$0.05

Source: ODA State Airport Rates 2020

## RULES AND REGULATIONS

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

### FAA Compliance Overview

A management program based on the FAA's "Planning for Compliance" guidance and the adoption of additional airport management "Best Practices" is recommended to address FAA compliance requirements and avoid noncompliance, which could have significant consequences.

Airport management "Best Practices" are developed to provide timely information and guidance related to good management practices and safe airport operations for airport managers and sponsors. The practices outlined herein are designed for use by the ODA for evaluating and improving their current and future operation and management program.

Airport sponsors must comply with various federal obligations through agreements and/or property conveyances, outlined in FAA Order 5190.6B, Airport Compliance Manual. The contractual federal obligations a sponsor accepts when receiving federal grant funds or transfer of federal property can be found in a variety of documents including:

- Grant agreements issued under the Federal Airport Act of 1946, the Airport and Airway Development Act of 1970, and Airport Improvement Act of 1982. Included in these agreements are the requirement for airport sponsors to comply with:
  - » Grant Assurances;
  - » Advisory Circulars;
  - » Application commitments;
  - » FAR procedures and submittals; and
  - » Special conditions.
- Surplus airport property instruments of transfer;
- Deeds of conveyance;
- Commitments in environmental documents prepared in accordance with FAA requirements; and
- Separate written requirements between a sponsor and the FAA.

### Airport Compliance with Grant Assurances

As a recipient of both federal and state airport improvement grant funds, the sponsor is contractually bound to various obligations referred to as "Grant Assurances", developed by the FAA and ODA. These obligations, presented in detail in federal and state grants and state statute and administrative codes, document the commitments made by the airport sponsor to fulfill the intent of the grantor (FAA and State of Oregon) required when accepting federal and/or state funding for airport improvements. Failure to comply with the grant assurances may result in a finding of noncompliance and/or forfeiture of future funding. Grant assurances and their associated requirements are intended to protect the significant investment made by the FAA, State, and City to preserve and maintain the nation's airports as a valuable national transportation asset, as mandated by Congress.

### FAA Grant Assurances

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

The Airport Compliance Manual states the FAA Airport Compliance Program is: "...designed to monitor and enforce obligations agreed to by airport sponsors in exchange for valuable benefits and rights granted by the United States

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

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

- Airports should be safe and efficient, located at optimum sites, and be developed and maintained to appropriate standards;
- Airports should be operated efficiently both for aeronautical users and the government, relying primarily on user fees and placing minimal burden on the general revenues of the local, state, and federal governments;
- Airports should be flexible and expandable, able to meet increased demand and accommodate new aircraft types;
- Airports should be permanent, with assurance that they will remain open for aeronautical use over the long-term;
- Airports should be compatible with surrounding communities, maintaining a balance between the needs of aviation and the requirements of residents in neighboring areas;
- Airports should be developed in concert with improvements to the air traffic control system;
- The airport system should support national objectives for defense, emergency readiness, and postal delivery;
- The airport system should be extensive, providing as many people as possible with convenient access to air transportation, typically not more than 20 miles of travel to the nearest NPIAS airport; and
- The airport system should help air transportation contribute to a productive national economy and international competitiveness.

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

### **Project Planning, Design, And Contracting**

#### **Sponsor Fund Availability (Assurance #3)**

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

#### **Consistency with Local Plans (Assurance #6)**

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

#### **Accounting System Audit and Record Keeping (Assurance #13)**

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

## General Airport Assurances

### Good title (Assurance #4)

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

### Preserving Rights and Powers (Assurance #5)

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

### Airport Layout Plan (ALP) (Assurance #29)

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

### Disposal of Land (Assurance #31)

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

## Airport Operations and Land Use

### Pavement Preventative Maintenance (Assurance #11)

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

### Operations and Maintenance (Assurance #19)

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

### Compatible Land Use (Assurance #21)

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

## Day-To-Day Airport Management

### Economic Non-Discrimination (Assurance #22)

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

### Exclusive Rights (Assurance #23)

No exclusive right for the use of the airport by any person providing, or intending to provide, aeronautical services

to the public. However, an exception may be made if the airport sponsor can prove that permitting a similar business would be unreasonably costly, impractical, or result in a safety concern, the sponsor may consider granting an exclusive right.

### Leases and Finances

#### Fee and Rental Structure (Assurance #24)

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

#### Airport Revenue (Assurance #25)

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

For additional information on FAA Grant Assurances, please go to: [https://www.faa.gov/airports/aip/grant\\_assurances/#current-assurances](https://www.faa.gov/airports/aip/grant_assurances/#current-assurances).

## OREGON AVIATION LAWS

The Oregon Department of Aviation (ODA) has created both the Oregon Administrative Rules (OAR) and Oregon Revised Statutes (ORS) to govern airports within the state.

### Oregon Administrative Rules (OAR)

- OAR Chapter 660, Division 13 – Airport Planning
- OAR Chapter 660, Division 13 – Exhibits
- OAR Chapter 738 – ODA
- Non-Commercial Leasing Policy
- Commercial Leasing Policy
- Category II Minimum Standards Policy
- Category IV Minimum Standards Policy
- Category V Minimum Standards Policy
- Insurance Requirements

### Oregon Revised Statutes (ORS)

- ORS 197 – Land Use Planning I
- ORS 197A – Land Use Planning II
- ORS 319 – Aviation Fuel Tax
- ORS 835 – Aviation Administration
- ORS 836 – Airports and Landing Fields
- ORS 837 – Aircraft Operations
- ORS 838 – Airport Districts